CHAPTER II

REVIEW OF RELATED LITERATURE
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This chapter deals with the internal review of the literature. It is an attempt to discover relevant material published in the problem area under study. This covers the empirical research studies done previously in the problem area. The studies conducted during the last few decades in the field of achievement that are more relevant and pertinent to the present investigation are discussed in this chapter.

2.1 PURPOSE OF RELATED LITERATURE

Review of related literature, provides a comprehensive understanding about what has already been known about a topic. It forms the basis for subscribing rationale for having chosen the problem for the study. Review of related literature allows the researcher to acquaint himself with the current knowledge in the field or area in which, he is going to conduct his research. It enables the researcher to define the limits of his study. It also helps the researcher to delimit and define his problem. The knowledge of the related literature brings the researcher up-to-date on the work, which others have done and thus state the objectives clearly and concisely.

By reviewing the related literature the researcher can avoid unfruitful and useless problem areas. He can select those areas in which positive findings are very likely to result and his endeavors would be likely to add to the knowledge in a meaningful way. Through the review of related literature, the researcher can avoid unintentional duplication of well established findings. It is no use to replicate a study, when the stability and validity of its results have been clearly established.

The review of related literature gives the researcher an understanding of the research methodology, which refers to the way; the study is to be conducted. It helps the researcher to know about the tools and instruments, which proved to be useful and promising in the previous studies. It also provides an insight into the statistical methods, through which the validity of the results is to be established.

The important specific reason for reviewing the related literature is to know about the recommendations of the previous researchers, listed in their studies for further research.
Good, Barr and Scates (1941) analyzed the purposes of review of related literature as given under.

- To show whether the available evidence material solves the problem adequately without further investigation.
- To provide ideas, theories, explanations or hypotheses valuable in formulating the present study.
- To suggest the research methods to the problems.
- To locate comparative data useful in interpretation of the results.
- To contribute to the general scholarship of the investigator.

2.2 NEED TO KNOW ABOUT RELATED LITERATURE

For any worthwhile study in any field of knowledge the research worker needs an adequate familiarity with the library and its many sources. Only then will an effective search for specialized knowledge will be possible. The search for reference material is a time consuming but very fruitful phase of research programme. Every investigator must know what sources were available in his field of enquiry, which of them, he is likely to use and where and how to find them. (Sukia et al., 1980)

According to Best (1959), practically all human knowledge can be found in books and libraries. Unlike other animals that must start a new life with each generation, man builds up accumulated and recorded knowledge of the past.

Availability of adequate information about educational thought and research does not by itself result in possession of its knowledge by investigator. The investigator may be very keen to possess up-to-date information regarding his field, and may try hard to be posted up-to-date, and yet fails to get enough information due to non-existence of source of such information (Sukhia 1980).

In the field of education, as in the other fields too, the research worker needs to acquire up-to-date information about what has been thought and done in the particular area from which, he intends to select a problem for research. But it is found that generally the extent of important, up-to-date information regarding educational research and ideas possessed by educational workers, is very limited (Sukhia 1980).
The investigator should strive hard to be posted with necessary information, relating to his field of enquiry, basing on which, he has to build up his findings.

There are number of studies relating to the academic achievement done in the past. However, only the literature pertaining to the independent variables used in the present study is referred in the succeeding pages.

Therefore, the studies are presented under the following sub-headings:

- Academic achievement in general
- Achievement in theory
- Achievement in teaching practice and practicals
- Total achievement
- Studies on teacher-trainees
- General teaching competence of pre-service and in-service teachers
- Achievement and attitude towards teaching, teaching profession and teacher training
- Achievement and values
- Achievement and intelligence
- Achievement and personality
- Achievement and management
- Achievement and gender
- Achievement and caste
- Achievement and locality/native place
- Achievement and marital status
- Achievement and educational qualification
- Achievement and methodology
- Achievement and age
- Achievement and annual income of the family
Achievement and father education
Achievement and mother education
Achievement and occupational status of the parents
Achievement and number of members in the family / number of children in the family
Achievement and socio-economic status
Achievement and birth order.
Achievement and religion
Achievement and study habits
Achievement and self-concept
Miscellaneous studies on achievement
Appraisal

2.3 ACADEMIC ACHIEVEMENT IN GENERAL

Academic achievement is of paramount importance, particularly in the present socio-economic and cultural contexts. Obviously, in the school/college, great emphasis is placed on achievement right from the beginning of formal education. The school has its own systematic hierarchy which is largely based on achievement and performance rather than ascription. The school/college performs the function of selection and differentiation among students on the basis of their scholastic and other attainments and opens out avenues for advancement primarily in terms of achievement.

The central aim of all formal educational efforts is academic achievement on the part of the students. Even though, it is desirable to have all-round development as the goal of educational process where academic achievement would be just one of the dimensions; but in most of the educational institutions, academic achievement continues to be the exclusive concern narrowing down the very concept of educational process, nevertheless, it is important to note that achievement in curricular subjects is not an independent phenomenon. Rather it is directly influenced by a number of factors, some of which are personal to the individual while many others are located in
the environment in which learning process takes place. Thus in order to fully understand the concept as well as the process of academic achievement, it is imperative to identify and explore various factors related to academic achievement.

In general terms, achievement refers to the scholastic or academic achievement of the student at the end of an educational programme. It is to this concept that the term achievement is referred here. To maximize the achievement within a given set up, therefore is the goal of every educationist, a teacher or an educational administrator. Research has come to our aid looking into what variables – personal, home, school etc., promote achievement and what are determinants to it.

The present investigation took note of the above facts and attempted to treat some of the prominent intellectual and non-intellectual factors as psychological and sociological factors and coined it as psycho-sociological factors. The influence of certain psycho-sociological factors on academic achievement of B.Ed. students is investigated.

2.4 ACHIEVEMENT IN THEORY

There are theoretical aspects and practical aspects in primary and secondary teacher training courses. They are the two sides of the same coin. Some of the studies related to scholastic achievement of teacher-trainees in theoretical aspects are presented herewith.

Sharma (1937a) made a critical study of compulsory courses in the theory of education offered by universities for the B.Ed. / B.T. degrees. Large number of secondary school trained teachers expressed that subject knowledge helped them most and training helped them least in becoming successful teachers and while nearly 55 percent of the teachers found their training only 'somewhat useful', about 39 percent found it really useful.

Patted (1975) studied 200 B.Ed. students to find out the relation between perceptual factors and success in teacher education course. The study revealed that out of five perceptual factors, self perception and teacher professional perception emerged as significant correlates for success in final theory examination.

Vyas (1982) found that the university theory marks of B.Ed. students could be predicated on the basis of academic achievement, verbal intelligence and teaching
aptitude in case of total sample (N=300); whereas in the case of the male sample, predictors were academic achievement, verbal intelligence, attitude towards teaching and SES. In the case of female sample, the predictors were academic achievement and teaching aptitude.

Gopala Charyulu (1984) reported that multiple regression analysis revealed that SES, attitude towards profession and training, Factor-B, Factor-N and Factor-Q2 of 16 PF were significant with the criterion of achievement in theory of student-teachers of TTIs.

Govinda Reddy (2002) investigated that (1) achievement in practical work and practical examinations, (2) total achievement, (3) study habits, (4) personality factors F,M and Q4 of 16 PF, (5) age, (6) caste, (7) group subjects at intermediate level, (8) SES and (9) region have significant influence on the achievement in theory examination of DIET students, i.e., primary school teacher training students. He also observed that (1) attitude towards teaching profession and training, (2) personality factors A, B, C, E, G, H,L, N, O, Q1 Q2 And Q3 of 16 PF, (3) objective achievement test score, (4) marital status, (5) father education, (6) mother education, (7) brothers education, (8) sisters education, (9) father employment, (10) mother employment, (11) brother employment, (12) sisters employment, (13) family income, (14) place of birth, (15) birth order and (16) sex do not have significant influence on the achievement in Theory examination of DIET students.

Laxmidhar Behera and Sushanta Kumar Koul (2004) observed that there is positive significant correlation between the performance of B.Ed. student teachers (N= 650) in theory and practical.

It is seen that there are very few studies on academic achievement of B.Ed. students in theoretical aspects in relation with psycho-sociological variables. Therefore the relationship between scholastic achievement of B.Ed. students in theoretical aspects and the psycho-sociological variables are studied in the present investigation.
2.5 ACHIEVEMENT IN TEACHING PRACTICE AND PRACTICALS

Practice teaching and practical aspects play an important role in teaching success. Some of the studies relating to practice teaching and practical aspects of teacher-trainees are given below.

Sharma (1973) made an evaluation of teaching programmes of teacher education on 1080 B.Ed. students. His findings revealed that 32 percent of the sample thought that observation lessons are essential. A majority of student sample thought them very useful. Experience of teaching in different schools was not provided. Non-teaching work like maintaining diaries, giving tests etc., was rarely done by the student-teachers and they did not take part in the activities of the practicing schools. The college had no control over the student-teachers and got very little co-operation from them. But, in spite of the above unfavorable circumstances 98 percent student-teachers thought that practice teaching gave confidence and power to adapt teaching to varying conditions helped to understand children and to solve day to day classroom problems.

Patted (1975) studied 200 B.Ed. students to find out the relation between perceptual factors and success in teacher education course. The study revealed that all the five perceptual factors namely self perception, student perception, teacher professional perception, instructional goal perception and instructional role perception were found to be significant correlates of final teaching/practical marks.

Gomathi Mani and Gonsalves (1977) reported that the B.Ed. trainees with better self-concept scored more on practice teaching than the teachers with poor self-concept.

Dhalakia (1980) studied, "effects of observers and feedback upon changing the classroom performance of pupil-teacher". The sample comprised 250 trainees of four randomly selected colleges of education. The sample of observers comprised forty-three teacher-educators and seventeen secondary teachers of practicing schools. The observers' comments on 7,500 practice lessons given by 250 trainees were analysed. For the analysis of comments cicirrelli's category system was used. Two proformas were prepared for collecting information from the observers and the pupil-teachers. Product moment correlation, t-test and analysis of variance were the
statistical techniques used for data analysis. The major findings of the investigation were: (i) the observers gave more negative comments than positive. (ii) The graduate observers gave more comments than the post graduate observers. (iii) The graduate and the post graduate observers did not differ in their grading of the lessons. (iv) The science lessons got more scores than the humanities lessons. (v) The teacher-educators and the secondary teachers did not differ in the number of positive comments but the teacher-educators gave more negative comments than the secondary school teachers. (vi) The college observers were more lenient in giving grades than the school observers. (vii) Pupil-teachers’ performance improved, positive comments increased and negative comments decreased as the number of lessons advanced. (viii) The post graduate pupil-teachers received more positive comments than the graduate pupil-teachers but the two did not differ in negative comments and in achievement scores. (ix) The science student-teachers scored significantly more than the humanities student-teachers in the final scores. (x) The male trainees received more positive comments and the female trainees more negative comments but their achievement scores did not differ significantly. (xi) The urban and the rural trainees did not differ significantly in positive comments but the urban trainees received more negative comments though they scored more than the rural trainees in the examination. (xii) The experience of the trainees was positively related to the achievement. (xiii) The achievement in lessons during the year was positively related to the final annual examination marks.

Gupta (1982) studied input-output relationship of elementary teacher’s training institutions. He reported that the product moment coefficient of correlation between inputs (the quality of teacher-educators, the quality of student-teachers, academic motivation, the teacher’s academic motivation, the teacher’s morale, leadership style, etc.) and output, as practical marks, were statistically insignificant.

Vyas (1982) observed that (i) university practical marks could be predicted by contributions from age, academic achievement, verbal intelligence and personality adjustment in the case of the total sample (N=300) of B.Ed. students; while, age, personality adjustment and SES helped to predict university practical marks in the case of the male sample. Age, academic achievement, verbal intelligence and personality adjustment were significant predictors of university practical marks in the
case of the female sample. (ii) Age, academic achievement, non-verbal intelligence and attitude towards teaching were found to contribute to the prediction of total practical assessment in the case of total sample; while in the case of male sample, significant predictors were age and attitude towards teaching, and in the case of the female sample. Significant predictors were age, academic achievement, nonverbal intelligence, personality adjustment, attitude towards teaching and SES.

Gopala charyulu (1984) reported that SES and attitude towards profession were the only significant predictors of the criterion of practical achievement of student-teachers of TTIs.

Deo (1985) studied the practical programme other than practice teaching in teacher education institutions. The sample of the study consisted of 350 student-teachers and 55 teacher-educators selected randomly from three teacher-education institutions of Delhi. The sample subjects responded on a locally prepared questionnaire having questions about different types of practical work, their objectives and working in the college system, etc. the findings of the study were (i) most of the student-teachers felt that 'lack of time' was a major factor in not being able to achieve the objectives of the practical programme. (ii) The teacher educators opined that lack of sufficient opportunities and lack of time were the cause for non-fulfilment of the objectives of practical programmed. (iii) The student-teachers felt that there could be a large number of practical programmes in the colleges of education, but due to lack of time, lack of proper guidance, lack of sufficient opportunities and lack of feedback from the teachers they were not able to achieve the objectives. (iv) For work experience and socially useful Productive work, sufficient time and guidance were not provided to students by the teachers and also there was no provision for them in the time-table. (v) The student-teachers were not provided facilities for training in preparation of some visual and audio aids. (vi) Physical education and participation in games and sports were taken casually by student-teachers. (vii) Excursions for student-teachers were not arranged by the institutions. (viii) Social work had not been an integral part of the teacher-education programme. (ix) Co-curricular activities were not organized according to the interests and needs of the students. (x) Opportunities for talented students were not provided in the areas of art, library, dramatic and other cultural areas. (xi) There was no provision for
psychology practical which would give student-teachers opportunities for application of theories of learning.

Nirmal Sabharwal (1997) verified whether one or more of five context variables namely, general mental ability, knowledge of subject content, previous academic attainment, attitude to the profession, and anxiety, can predict student teachers' (N=200) performance in practice teaching. Multiple regression analysis of data collected through relevant scales for measuring the independent and dependent variables indicated that the chosen independent variables did contribute significantly to variance in the dependent variable.

Govinda Reddy (2002) reported that (1) achievement in theory, (2) total achievement, (3) attitude towards teaching profession and training, (4) personality factors B, E, M, Q2 and Q3 of 16 PF, (5) objective achievement test scores, (6) father education, (7) mother education, (8) father employment, (9) brothers employment, (10) sisters employment, (11) family income, (12) group subjects at intermediate level, (13) birth order, (14) region and (15) SES have significant influence on the achievement in practical work and practical examinations of DIET students i.e. primary school teacher training students. He also revealed that (1) study habits, (2) personality factors A, C, F, G, H, I, L, N, O, Q1, and Q4 of 16 PF, (3) age, (4) marital status, (5) brothers education, (6) sisters education, (7) mother employment, (8) caste, (9) place of birth and (10) sex do not have significant influence on the achievement in practical work and practical examinations of DIET students.

Prakash Srivastava (2002) collected data on the existing pattern of the teacher training (B.Ed.) in India, and the views of teacher educators, experts, co-operating school teachers/principals and interns (teacher-trainees) were sought for the improvement of internship in teaching programme with the help of questionnaires, opinionnaires and interview schedules. Papers were also invited from educationists to restructure teacher training programme. On the basis of this, he developed 'The prospective model of teacher training'.

2.6 TOTAL ACHIEVEMENT

There are mainly two aspects in primary and secondary teacher training courses. They are theoretical aspects and practical aspects. Total achievement means

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achievement in theoretical aspects plus achievement in practical aspects. Some of the studies reviewed on total achievement of teacher-trainees are shown hereunder.

Wash Burne and Hail (1960) tried to find out the relationship between teacher characteristics and children's growth and found that there was no significant relationship between teacher's scores on the teacher-education examination and any kind of growth on the part of their pupils.

Patted (1975) studied 200 B.Ed students to find out the relation between perceptual factors and success in teacher-education course. The perceptual factors considered were: a) Self-perception, b) student perception, c) teacher professional perception, d) instructional goal perception and e) instructional role perception. The study had the following findings: (i) with reference to assessment of year's work, self perception, students perception, teacher professional perception and instructional goal perception were found to be significantly correlated. (ii) self perception, student perception, teacher professional perception and instructional goal perception turned out to be significant correlates for success in B.Ed examination as a whole.

Pathak (1979) observed that the quality of the output as judged by the examination results of B.Ed. trainees was poor so far as the knowledge foundation of educational theory and practice was concerned; about 71 percent got a third division in theory; however, it was considered satisfactory in respect of competence to teach in the classroom situation.

Gupta (1982) studied input-output relationship of elementary Teachers' Training Institutions. He found that (i) The product moment coefficients of correlation between inputs (the quality of teacher-educators, academic motivation, leadership style, organizational climate, teaching methods, physical facilities) and out-put, as the total marks in the examination, were significant. (ii) The product moment coefficient of correlation between finance as an input and total marks (theory and practical) was not significant. (iii) The multiple regression coefficients with eight variable was 0.796, which showed that these factors played a significant role in predicting the performance.

Vyas (1982) showed that (i) In the case of the total sample (n=300) of B.Ed. students, the significant predictors were age, academic achievement, verbal
intelligence, attitude towards teaching and SES for the criterion of university total marks. In case of the male sample, predictors were age, academic achievement, verbal intelligence, personality adjustment and teaching aptitude. (ii) Age, academic achievement and verbal intelligence had stood out prominently as predictors as far as the criterion variables (university practical marks, total practical assessment, university theory marks, university total marks, self-rating), selected for the study. But the variable, self perception had shown no significant contribution towards prediction as far as these criteria were concerned.

Gopala Charyulu (1984) observed that the co-joint effect of the five predictors namely SES, attitude towards profession, attitude towards training, Factor-N and Factor-Q 2of 16 PF on the criterion of total achievement of student-teachers of TTIS explained only 15.9 percent of the amount of variance.

Goyal et al., (1984) found that (i) Total marks secured by B.Ed. students in their final examination correlated significantly with theory external marks, external evaluation marks and theory marks. (ii) Total marks secured by student-teachers did not show statistically significant relationship with teaching experience scores. (iii) Intelligence, attitude and personality were found to be the best predictors of student-teachers performance in the B.Ed. final examination.

Patil (1984) reported that the correlation between attitude of B.Ed. students towards teaching profession and their achievement (r= 0.16) was positive and significant.

Samsananda Raj and Sreethi. (2000) found that study habits and academic achievement on students are positively and significantly related.

In a study Viswanatham (2000) found that girls do better than the boys, but there is no significant difference between rural and urban students in their achievement.

Battacharya (2001) investigated that (i) Enhancement of learning time in techniques of teaching and evaluation yields higher achievement of prospective teachers. (ii) It is also observed that the dedicated and determined educators perform well with the strategies of increasing academic learning time.
Shinde (2001) found that imparting study skills training may enhance the scholastic achievement of students.

Tilak Raj (2001) reported that better school environment facilitates the development of positive academic motivation and also there was no significant difference between the academic achievement of boys and girls.

Archana and Monasharma (2002) conducted a study on 5th Grade children (N = 26) in Indore. The result found that the instructional material on making skill classification could positively influence the achievement of students on the criterion test.

Vamadevappa (2002) in a study revealed that there is a positive and significant relationship between parental involvement and academic achievement among higher primary students. Good parental involvement leads to higher academic achievement. And achievement of girls is more than the achievement of boys among high parental involvement group.

Govinda Reddy (2002) found that (1) achievement in theory examinations, (2) achievement in practical work and practical examination, (3) attitude towards teaching profession and training, (4) study habits, (5) personality factors B, E, F, M, Q2 and Q4 of 16 PF, (6) father education, (7) mother education, (8) brothers education, (9) family income, (10) caste, (11) group subjects at intermediate level, (12) birth order, (13) SES, (14) region and (15) objective achievement test scores have significant influence on the total achievement of DIET students, i.e., primary school teacher training students. He also reported that (1) personality factors, A, C, G, H, I, L, N, O, Q1 and Q3 of 16 Pf, (2) Age (3) marital status, (4) sisters education, (5) father employment, (6) mother employment (7) brothers employment, (8) sisters employment, (9) place of birth and (10) sex do not have significant influence on the total achievement of DIET students.

The findings of a study by Mandankar (2004) reveals that residence, peer group, curriculum, classroom teaching and evaluation have negative and significant relationship with academic achievement, where as food and co-curricular activities have negative and not significant relationship with academic achievement of school subjects.
Malvinderahuja and Sunitha Goyal (2005) observed high parental involvement leads to higher achievement and low parental involvement resulted in low achievement of adolescents. They also found that high and low parental involvement groups were found to be equal on their educational aspirations.

Rajendher Singh (2005) studied that school atmosphere, socio-emotional adjustments and home environment effect the academic achievement.

Rajendrakumar Yadav (2005) studied relationship between needs and vocational preferences of adolescents and found that the students have high need achievement. The need exhibition is the lowest of all. The students have given highest preference to executive work and least preference to the jobs related to music.

Upayana Singh (2005) studied that the classroom factors play a major role in affecting the students’ academic performance.

Fauziakhan, Visalapatnarn and Ramanade Setty (2006) found from an observation that the Child’s mental age, effort put in the learning at school and home, the educational status of the parents, parental involvement in helping the child learn at home have significant positive correlation with the Child’s academic achievement and also has a multi-factors impact on it.

Dharmaraaja (2007) observed from a study shows that high parental education improves the higher academic achievement than those whose parents’ education is below 10th class.

Manchala (2007) in a study on the achievement of B.Ed. student-teachers found that there was a significant influence of the variables – sex, management of the institution, medium of writing the examinations and socio economic status on their total achievement.

Nimavathi and Gnanadevan (2007) investigated from a study on the relationship between anxiety and academic achievement that there is a significant relationship between the achievement and anxiety of the boys and girls of high school students. (ii) There is a significant difference between the achievement and anxiety of the government and private school students. (iii) There is a significant difference between the achievement and anxiety of the rural and urban high school students.
Subrate Saha (2007) found in a study that gender shows significant difference in the academic achievement. Boy’s scores significantly higher than the girls on the academic achievement.

The above studies revealed that there are very few studies on total academic achievement of B.Ed. students. The total academic achievement of B.Ed. students is taken as one of the dependent variable in the present investigation.

2.7 STUDIES ON TEACHER – TRAINEES

Some of the studies on teacher-training are given below.

Chander (1979) studied, “relationship of attainments in theory subjects in B.Ed. course with attitude as a teacher and teaching efficiency’. The study attempted to investigate the relationship between the attainments in a training course with the teaching efficiency in the classroom and attitude as a teacher. A stratified cluster type of sample comprising 500 trainees was selected from the training colleges of Haryana state. The variables of attitude and teaching efficiency had little to do with the theory courses other than those in educational techniques and psychology.

Agarwal (1980) studied, “motivational factors in the choice of teaching as a profession and its relationship with some other variables”. The sample consisted of 241 B.Ed. trainees of both sexes belonging to rural as well as urban areas at Haryana state. The major findings of the study were: (i) Although there were inter group differences in the factors that motivated the students to join teaching, five factors emerged as most important in order of priority, these were: desire to continue education, possibility of doing good to the country, fondness of teaching, security of job, and parents’ wish fulfillment. (ii) Teaching had been consistently a very popular aspiration from high school through college education. (iii) A majority of all the groups had no relative in the teaching profession; however, teacher spouse influenced the urban girls. (iv) A large majority of the B.Ed. trainees wanted to take up teaching but very few wanted to start their own schools. (v) A large majority of the B.Ed trainees belonged to high socio-economic group. (vi) There was no significant difference in attitude towards teaching of high, middle and low socio-economic status groups.
Vora (1980) studied social maturity of students of colleges of education in the context of some psycho-socio correlates. The final form of social maturity scale was administered to 855 student teachers coming from the urban areas were more mature than the student teachers from the rural area. (ii) The male student-teachers were superior to the female student-teachers in social maturity. (iii) Age had no relation with social maturity. (iv) The commerce graduates were, by and large, more socially mature than the arts science graduates. (v) The higher the socio-economic status, the better was the social maturity. (vi) The size of the family had no relation with the social maturity of the student-teachers. (vii) There was a close and effective relationship between social maturity and emotional stability. The higher the emotional stability, the better was the social maturity. (viii) The self-sufficient group scored higher on social maturity than the dependent group. (ix) The highly suggestible persons were less socially mature than the less suggestible ones. (x) social maturity was not related to the trait of flexibility Vs. rigidity. (xi) The persons having good leadership qualities scored higher on social maturity than those with poor leadership qualities.

Raina (1981) found that (i) The pre-service teachers differed significantly on seven of the sixteen factors assessed by the 16 PF test, namely, A, C, H, L, M, N, Q1 and Q2. (ii) The in-service and the pre-service teachers significantly differed in their attitude towards teaching when taken as a whole. (iii) The pre-service science, arts and commerce teacher differed significantly in their attitude to teaching as measured by Minnesota teacher Attitude Inventory (MTAI). (iv) The pre-service teachers were highest on intellectuality, self-strength, environmental sensitivity, individuality, initiative and artistry as measured by the test of creative potential.

Mishra (1983) reported that (i) there were significant and positive behavioural changes in the B.Ed students as a result of receiving feedback from different sources viz., the students, peers, the supervisors and themselves. (ii) Increasing the number of feedbacks had some facilitatory effect in changing teacher behaviour, but it did not always bring better results. (iii) Self-rating was found to be the most effective source of feedback but peer-rating and student-rating were also effective in changing teacher behaviour.
Lin, Huey-Ling, Gorrel, Jeffrey Taylor and Janet (1999) examined pre service teachers' beliefs in the light of potential cultural differences in perceived efficacy in Taiwan and America. Subjects were 240 pre service teachers at the beginning or the ending points of their teacher education programs in Taiwan and 231 comparable American pre service teachers. Multivariate tests indicated that the pre service teachers in these two countries may have conceptually different expectations of teaching (e.g., parental support, social awareness, individual effort). However, efficacy beliefs of pre service teachers in these two countries showed a similar pattern regarding their capability to adjust to individual children. Findings, suggest that, in both countries, pre service teachers' efficacy beliefs may be influenced by the context of their studies, by their increasing competence and experience as teachers, and by cultural perspectives.

Anil and Sholy Joseph (2000) attempted to find out the interest in teaching of teacher trainees (N=200) undergoing B.Ed. course. The results show that majority of the teacher trainees (N=176) have only an average interest in teaching, a good number (N=86) of them were below average in their interest in teaching. Only 8.71% (N=25) of the trainees had above average interest in teaching. Male (N=94) and female (N=193) trainees did not differ in their interest in teaching. Trainees (N=189) in private colleges had significantly better interest in teaching than those (N=98) in government colleges. Graduate (N=154) and post graduate (133) trainees did not differ in their interest.

2.8 GENERAL TEACHING COMPETENCE OF PRE – SERVICE AND IN – SERVICE TEACHERS

Some of the students related to general teaching competence of pre-service and in service teachers are presented below.

Debnath (1972) has made a study of the problem of measurement of teaching efficiency as well as some of its determinants. His findings through actual classroom observations revealed that academic achievement and professional training were significantly related to teaching efficiency with the coefficient of correlation 0.19 and 0.31 respectively.
GCPI (1977) found that there was no significant difference between mean scores of simulated microteaching and real micro-teaching groups of B.Ed. trainees upon general teaching competence.

Das, et al., (1980) reported that (i) the peers feedback was significantly more effective than self feedback through audiotape in the development of general teaching competence among the secondary (B.Ed.) student-teachers. (ii) The feedback provided by peers and college supervisors and the feedback from peer and audiotape were equally effective in the development of general teaching competence in the secondary student-teachers. Besides, the peers' feedback was equally effective as compared to the feedback from the peers and college supervisors. (iii) Attitude towards teaching and the level of anxiety of the secondary student-teachers were not affected by specific variations in the different components of micro-teaching, namely, the feedback, modeling condition, teaching unit tried out in the study.

Das et al., (1982) studied, "effectiveness of different strategies of integration of teaching skills in developing general teaching competence of student-teachers", with 264 Student-teachers and M.A (Education) students from thirteen colleges of education. The main findings of the investigation were: (i) The summative integration strategy tended to improve the teaching competence as well as the quality of integration of the teaching skills (ii) The additive strategy of integration of the teaching skills did not improve the general teaching competence of the student teachers but tended to improve the quality of integration of the teaching skills (iii) The dyad strategy of integration tended to improve the general teaching competence of the student teachers as well as the quality of integration of the teaching skills but the latter was not significant.

Padmanabhaiah (1986) reported that (i) among eleven personal and demographic variables studied, only five-region, designation, age, experience and size of the family of the secondary school teachers (N=960) could significantly influence the level of teaching effectiveness (ii) the multiple correlation between teaching effectiveness and job satisfaction was 0.078 (iii) all the four variables-job satisfaction, job involvement life satisfaction and family satisfaction-put together could obtain a multiple correlation of 0.109 with teaching effectiveness (iv) out of 35 variables studied only a few possessed significant of correlation with teaching effectiveness.
Prakasham (1986) found that (i) Teachers (n=800) teaching in classes IX, X and XI of different higher secondary schools, in an open school climate were better in teaching competency and teacher effectiveness than those employed in schools with autonomous, familiar, controlled, paternal and closed climates (ii) Teachers working in schools situated in industrial areas were found better in teaching competency than teachers of working in semi-urban and rural areas where as teachers of semi-urban and rural areas were better in teacher effectiveness than the teachers 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. (iii) No significant difference was found in the teaching competency and teacher effectiveness of teachers working in government and non-government schools (iv) No significant difference was observed between male and female teachers on the tests of teaching competency and teacher effectiveness (v) A positive and significant relationship was observed in the teacher effectiveness and teaching competency of teachers in different types of organizational climates.

Mahapatra (1987) observed that (i) the coefficients of correlation between teaching success of B.Ed. students (n=420) and intelligence, attitude towards teaching and vocational interest were 0.38, 0.27 and 0.25 respectively and were significant at 0.01 level of significance, (ii) the coefficient of multiple correlation between teaching success and predictor variables was found to be 0.44 and was significant at 0.01 level (iii) the combined predictive power of all the three predictors in predicting teaching success was found to be 23 percent (iv) among all the three predictors, the contribution of intelligence was 13 percent. Intelligence was considered to be the most influential predictor.

Sukhavant Bajwa (2004) reported that the t-ratios between the mean scores of competency. Based Teacher Training (CBTT) group of student-teachers (N=30) and Traditional training (TT) group on cognitive based teaching competency, performance teaching competency, affective based teaching competency, consequence-based teaching competency and managerial teaching competency are significant at 0.01 level. It is concluded that basic teaching competency training strategy was found to be better in developing the above components of competency than that of TT among student teachers.
2.9 ACHIEVEMENT AND ATTITUDE TOWARDS TEACHING, TEACHING PROFESSION AND TEACHER TRAINING

It is assumed that there is a relation between attitude towards teaching and the scholastic achievement of students in teacher training courses. Attitude towards course content has been identified as an indicator of the students' achievement. Students who possessed favourable attitudes towards the content to be presented in an educational institution have been shown to achieve better than students with poorer attitudes. Some of the studies are given below.

According to Cook et al. (1951), the attitudes of a school teacher are the results of the interaction of numerous factors, including academic and social intelligence, general knowledge and abilities, social skills, personality traits and values, and teaching techniques and therefore, attitudes may afford a key to the prediction of the teaching process of social atmosphere a teacher will maintain in the classroom.

Jayamma (1962) constructed and standardized an inventory for predicting teacher efficiency. Personality variables used in the study were: attitude, aptitude, intelligence, interest, adjustment, etc.

Spaights (1967) concluded from a study that the academic record of students intricately involved in their behaviour with the teacher. But almost all the students agree that teachers' behaviour is the major deciding factor in creating a pattern of behaviour in the class.

NCERT (1971) conducted a study on attitude of teachers towards teaching profession. The major findings of the study were: (i) attitude differed significantly under different management, (ii) the tenure of service did not affect (iii) the attitude of teachers, the attitude of male and female teachers differed significantly, (iv) marital status did not influence the attitude of teachers towards the profession, (v) younger female teachers showed more positive attitude towards the profession, than male teachers, (vi) Experience and positive attitude were inversely proportional, (vii) Teachers with lower educational qualifications were having more positive attitude than teachers with higher educational qualifications, (viii) the attitudes of trained and
untrained teachers did not differ significantly, and (ix) training appeared to be a contributing factor in the development of apparent positive attitudes.

Samanta Roy (1971) while attempting to find the nature of relationship among teacher attitude, teacher adjustment, and teaching efficiency found that the Pearson's r (0.49) between teacher attitude and teacher adjustment was significant, and teacher attitude and teacher adjustment were each related positively to teaching efficiency.

Verma (1972) studied 'Relationship between the parents of interpersonal relation and the value of teachers and students in secondary schools'. The major findings of this study are: (i) the value system of the teachers and students were found to be quite different from each other and the teachers were found to be more concerned with their status and power and less with knowledge and social virtue. (ii) the friendly interpersonal relation between the pairs of individuals was found to be unrelated to the value systems of the paired members (iii) the unfriendly interpersonal relation between the pairs of individuals was not found to be related to the value systems of paired members (iv) the role of value, in its individual capacity as a correlate of interpersonal relations, was found to be dependent on its own native such as affiliate or competitive and its position in the value system of the group and (v) A competitive value was found to be a correlate of period friendly relations when it was low, average and not high. An affiliate value was found to be correlate of pair's friendly relations when it was high or average and now low.

Mehrotra (1973) studied attitude of B.Ed. students towards the teaching profession. Major findings are: (i) full-time course students are less favourable than correspondence course students at the beginning of the course and more favourable at the end of the course. (ii) Women of both correspondence and regular courses are more favourable than men.

Kulshresta (1979) conducted a study on the emerging value patterns of teachers and new trends of education in India. The study aimed at measuring various types of teacher's values in the present socio-cultural environment of schools in India. The value patterns were studied under the broad categories viz., (i) Humanitarian, (ii) Social, (iii) Professional, (iv) Progressjve, (v) Aesthetic, (vi) Economic, (vii) Authoritarian, (viii) Non-Social, (ix) Traditional, (x) Non-Professional, (xi) Non-
Aesthetic and (xii) Extravagant. The investigator found that teachers were more interested in humanitarian value than the other values.

Patel (1979) studied the values of the prevalent value system of the secondary teachers of the schools in South Gujarat. The major findings of the study were:-(i) On social, political, economic and religious values the older teachers scored significantly higher than the younger teachers (ii) On aesthetic and democratic values, the younger teachers scored significantly higher than the older teachers (iii) On theoretical, ethical, philosophical and scientific values, there was no significant difference between the two groups (iv) On religious and aesthetic value, the female teachers scored higher than the male teachers (v) On political values, the male teachers scored higher than female teachers (vi) The rural teachers scored significantly higher on social, political and economic values than the urban teachers (vii) On aesthetic value the urban teachers scored significantly higher than the rural teachers.

GCPI (1981) showed no relationship between academic achievement and attitude towards teaching the teacher-trainees.

Donglar Wiron (1982) made an attempt to study the teaching of values to the college classrooms; faculty and students perception at three contrasting institution. The main objective of this study was whether institutions of higher education had a responsibility to teach values in the college classrooms. The major findings were: (i) the responses of the selected fishermen, seniors and faculty to those questions were remarkably similar on almost all questions (ii) no significant differences were found for any demographic or academic factor, including affiliation with the regionally dominant Mormoijz Church (iii) students and faculty were satisfied with the teaching of values taking place at appropriate level at al institutions (iv) no congruence between what was taking place and what they believed ought to be lacking place and (v) at each institution the value advocacy model was prepared by a majority of the respondents.

Gopala charyulu (1984) found that attitude towards profession and attitude towards training of student-teachers in TTIS influenced theory and total achievement significantly.
Patel (1984) observed that the correlation between attitude towards teaching profession and achievement of B.Ed students was \( r=0.16 \) positive and significant.

Zuber, I. A. (1984) made observations of live interactions and on the existing status of the teachers with regard to the values they hold, the temperamental traits they possess, the degree of adjustment in job they feel, the needs they express and the academic achievement they have at the time of investigation. The study found no significant differences among the three groups of teachers on values except the religious value, which was found in teachers. In relation to need and teaching behaviour, the teachers were not found differentiable on any need variable need autonomy. The results obtained indicated that temperament and teachers behaviour were not differentiable on any of the temperamental traits studied. In case of academic career and teacher behaviour, the former was found not to affect the latter. The findings of the study demonstrated that the teachers' classroom behaviour precisely sets the 'TONE' for classroom instruction.

Okpala, (1985) found that the effect of teachers' attitude towards assessment practices on students' achievement and their attitude towards Physics was positive.

Verma and Tyagi (1988) made an attempt to find whether the sex differences exist in the values of senior secondary school teachers. The findings indicated that male teachers were significantly higher on economic and political values and lower on social values as compared to female teachers.

Mohan Nayyar (1989) in a study wanted to test the mental makeup of student-teachers from various community groups in terms of open-mindedness and closed mindedness. Findings of the study revealed that the most important teacher values according to student-teachers from all categories were justice and fair play, discipline -- role of the school as a change agent, naturalism, honesty, morality and pride in the cultural heritage in India. The correlations between the teacher value scores and the open-mindedness and closed mindedness were not significant in these groups. There was no significant correlation between the teacher value scores and the socio-economic status scores.

Neeta Khanna (1993) compared the students of teacher training stream with the students of general stream on the five human values of truth, righteous conduct,
peace, love and non-violence under similar environment. The results revealed that there are significant differences between the two groups of students on two of the five values viz., truth and love. The inspection of the mean scores shows that the teacher training group has second higher on these two values. The differences of the mean scores of the two groups on the remaining three values viz., righteousness, conduct and non-violence are not significant. Although the hypothesis of significant value differences between the two groups of students has been partially confirmed, it may be said that while the teacher trainees show a clear advantage on the values of truth and love, their mean scores on the remaining three values depict a tendency to be higher. One may surmise that some additional exposure to teacher training curricular or greater contact with school situations likely to develop all the five values significantly ahead of the students of general education streams.

Joseph Murray (1995) studied the moral aspect of leadership in an urban school context. This study investigated morally in the practice of school leadership by posing two research questions: (i) What are the values and morals that are expressed in the language / actions of the school community? and (ii) Are the right features of critical pragmatism evident in the discourse of administration, teachers and students in an urban school setting? The findings demonstrated the multiplicity of values in these urban schools. Administrations expressed caring, justice and moral responsibility. Student values related to justice achievement, behaviour and society. In the interactions, actions were guided by personal, professional and pragmatic values in one situation and educational and democratic in another. The study concluded that morality in the practice of school leadership is shaped by moral values engaged democratic process. Morality affects practice within the context of specific interactions around educational issues. Interactions must involve truthful, honest, communication and fair treatment and adult and children. School leaders must consider the multiplication of values, voices and venue to develop more dynamic and moral strategies of school leadership.

Elavine Leonard (1997) studied the dynamics of school culture through an examination. This qualitative study entailed five weeks of participant of evaluation in an urban multi-cultural elementary school. During this time, each of two teachers was separately observed for two week periods while other school members were observed
throughout the duration of the investigation. This interaction process uncovered communication inconstancy basic assumptions about education. The data revealed that some of the basic assumptions were compatible with the cultural manifestation in the school, while others were in apparent direct conflict. Examining both the similarities and variation in core values provided insight and understanding of school’s culture.

Aviassor (2000) made a study on value accessibility and teachers’ ability to encourage independent and critical thought in students. He examined whether teachers educational values predict their behaviour and students attributes when these values function as chronically accessible, positively valence categories, which are linked discriminately to perceptions of specific behaviours. The findings discriminate the theoretical usefulness of the nation of discriminate accessibility of value and suggest that, as part of teacher education programs, it is important to strengthen teachers’ inclinations to examine the contribution of concrete actions to the realization of abstract values.

Meera (2000) examined that the attitude of secondary school students (N=750) towards English Teachers and Teaching had significant relationship with achievement in English.

Ogunwuyi (2000) found significant casual relationship between the teachers’ attitude and students’ achievement in Integrated Science.

Sava (2001) reported, the organizational climate in schools, teachers' ideologies, and their level of burnout (outcome of stress) could harm teacher student relationships. Affected teacher-student relationships can in turn cause teacher-conflict-inducing attitudes.

Govinda Reddy (2002) found that attitude towards teaching profession of DIET students has significant influence on their total scholastic achievement. He also reported that attitude towards teacher training of DIET students has significant influence on their total scholastic achievement.

Igwe (2002) stipulates that for teaching and learning of science to be interesting and stimulating, there has to be motivation on the part of both the teacher and the learner so as to ensure the development of positive attitude and subsequently

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maximum academic achievement. It has been observed that teachers teach science in a way that merely requires the pupils to listen, read and regurgitate. This depicts negative attitude to teaching. Several research findings have confirmed the hypothesis that teachers' attitude either towards science or towards science teaching affect their students' achievement in and attitudes towards science.

Ramesh (2002) made a study on professional ethics for teachers and concluded that teaching profession is a responsible profession and values like mutual dependence, co-operation, realization of one's duties and responsibilities should be developed right from the early stages.

Kennedy and Kennedy (2004), teachers with a dismissing (avoidant) attachment style may have difficulty recognizing their own lack of warmth, trust and sensitivity in their relationships with their students. These teachers may have unrealistic expectations for their students' maturity and independence, as they themselves may have learned to be overly self-reliant and distant in their own interpersonal relationships. Teachers with a dismissing status may generally respond to students by distancing themselves, demonstrating a lack of warmth and understanding.

Thomas Narone (2004) studied moral dimensions of teacher-student interactions in Malaysian secondary schools. The purpose of the study was to examine the norm conformity and value perceptions of Malaysian secondary school students. To measure the value-based social norms, a values behaviour questionnaire was administrated to approximately 400 Malaysian adolescents. The results showed a self-reported high degree of conformity to social norms. In order to increase understanding of the moral dimensions of schooling, semi-structures interviews were conducted with teachers and students, which gave voices to teachers and students as moral agents. The results indicate that some students view school rules as too rigid and undermining the moral development schooling is trying to promote. The research also shows that the implicit values of respect, justice and fairness are central in Malaysian students' relationships with their teachers. This research shows that teachers and students as active contributors of moral meaning and recommendations that policymakers, when thinking about moral education reform consider these views.
Manchala (2007) in her study on the academic achievement of the B.Ed. students found that there was significant influence of attitude towards teaching profession on their academic achievement.

Affizal Ahmad and Rafidah Sahak (2009) found that the teacher – student relationship is very important for schoolchildren. Children spend approximately five to seven hours a day with a teacher for almost 10 months. A positive relationship between the student and the teacher is difficult to establish, but can be found for both individuals at either end. The qualities for a positive relationship can vary, making a learning experience approachable and inviting the students to learn. A teacher and student who communicate well and show respect in the classroom, if the teacher shows interest in teaching, will establish a positive relationship in the classroom. Teaching becomes difficult if there is no proper communication between teacher and students. Teachers need to continuously monitor students in order to be aware of any difficulties students are having. Understanding the students’ problems, fear, or confusion will help teachers better understand students' learning difficulties. Once the teachers becomes aware of the problems, they will have more patience with students, making them feel secure or less confused when learning is taking place in the classroom. Communication between the student and the teacher serves as a connection between the two, which improves the classroom atmosphere. Of course, teachers will not understand every problem of every student in their classrooms, but will acquire enough information for those students who are struggling with specific tasks. This was supported by the earliest significant body of research, which indicates that “academic achievement and student behaviour are influenced by the quality of the teacher and student relationship.” The more that teachers connect or communicate with their students, the more likely they are to be able to help students learn quickly and at a high level.

Philias Olatunde (2010) found that the learning of mathematics depends on the way it is presented to the learner, the way the learner actively interacts with the learning experiences presented to him and the environment within which the learning takes place. With the current increase in scientific knowledge the world over, much demand is placed and emphasis is laid on the teacher, the learner and the environment in the whole process of teaching and learning of mathematics. Teachers' attitude
towards the teaching of mathematics plays a significant role in shaping the attitude of students towards the learning of mathematics. Teachers' attitude towards science is a significant predictor of pupils' science achievement as well as their attitude towards science. Students' positive attitude towards science could be enhanced by teachers' enthusiasms, resourcefulness and helpful behaviour, teachers' thorough knowledge of the subject matter and their making science quite interesting. All these factors could also be applicable to mathematics learning since mathematics is regarded as the language of science. It is on this premise that the attitude of the teacher, his/her disposition to the subject, students, classroom environment could make or unmake the attitude of the students towards the learning of mathematics. The attitude of the mathematics teacher can mould the attitude of the students to want to learn or not. Hence the mathematics teacher should be psychologically prepared to teach the subject given that every other requirement is met.

It is observed from the above there are very few studies showing the relation between academic achievement and attitude of teacher trainees towards teaching profession and teacher training. Therefore attitude towards teaching profession is taken as variables in the present investigation.

2.10 ACHIEVEMENT AND VALUES

It is assumed that there is a relation between values and the academic achievement of students in teacher training courses. Values as an indicator of the students' achievement. Students who possessed favourable values to be presented in an educational institution have been shown to achieve better than students with poorer attitudes. The following are some of the studies reviewed on this aspect.

Pyari (1980) conducted a study on the relationship between feeling security, in security family attachment and values on educational achievement. It was concluded that the relationship between security-insecurity scores and the educational achievement scores was negative and significant, and the relationship between the security insecurity scores, the family attachment and values scores was positive.

Saraswati (1982) made an attempt to examine the relationship of self-concept measures with adjustment, values, academic achievement and socio-economic status
of boys and girls. It was found that boys and girls differed significantly with regard to possession of values significantly influenced the achievement of students.

Indra (1991) made an attempt to find out the relationship of socio-economic status and certain demographic factors and religion with the academic achievement. Findings of the study revealed that students belonging to different social classes differed significantly in their academic achievement. Hindu, Muslim and Christian students differed in their academic achievement family size of the students and had its effect on the academic achievement of the students.

Chand (1992) conducted study to examine the personal values of adolescent boys and girls in relation to SES and Academic Achievement. Findings revealed that there was no significant correlation between SES and religious, democratic, economic, knowledge, hedonistic, power and family, prestige values.

Sati (1992) compared the needs, values, aspirations and adjustments of SC and Non SC secondary schools in relation to their academic achievement. Sample of the study consisted of 200 students from each group. The findings of the study revealed that the SC boys and girls did not differ in their values and educational aspirations SC students had higher theoretical, political, order autonomous, affiliation nurturance and endurance needs than Non-SC students. High achieving SC boys had higher theoretical values than low achieving boys though low achieving boys had higher economic values.

Balasubramanian (1994) attempts to study the relations that exist between pupil’s academic achievement in English and achievement values and achievement anxiety. The sample of the study comprised 600 students covering 220 male students and 380 female students, studying XII standard. The finding showed that the higher level achievement values influenced better pupil’s academic achievement in English. Pupils did not differ in the level of achievement values with respect to their sex, medium of instruction, locality and size of management of the school. Medium instruction, locality of the school and sex of the pupils and certain effect on pupil’s academic achievement. But the nature of management of the school had no significant influence on pupils academic achievement.
Owens, Vicki Lynne (1994) tried to evaluate the relationship between values and academic achievement. The seventh grade students in Kampala, Uganda, east Africa were taken as sample. The students' personal values and their perception of their schools values were measured using a cross-cultural adoptions of the Rokeach value survey with a nine point Likert scale. The three hypothesis in this study were: i) there will be significant difference, in each of the personal values clusters among the our levels of academic achievement ii) there will be significant differences in the perception of school values among the four levels of academic achievement and iii) the disparity between personal values and school values will be significant correlates of academic achievement. The analyses of first two hypotheses found relationship between certain value clusters and the quartile ranking of students on Uganda's primary learning examination (PLE). Analysis of the third hypothesis uncovered a small but significant correlation between values disparity and academic achievement ($r=351, p=001$).

Mahamood Ali (1998) examined the relationship among personal values, career aspirations, socio-economic status, academic achievements and educational choice. Researcher conducted the study on 500 samples (250 male and 250 female). The finding of the study reveals that the academic achievement correlated significantly and positively with socio-economic status, knowledge value and occupational aspirations and negatively with power value. In the case of arts and science group's academic achievement was correlated significantly with socio-economic status but in the case of commerce group these variables were found to be uncorrelated.

Susan, Jacob and Anupama Shah (1998) studied the selected desirable characteristics and values of home science students in the state of Gujarat. The main objective of the study was to find out the differences in the characteristics and values among the respondents from different universities. The sample consisted of six hundred final year students of under-graduation from fifteen colleges offering Home Science Programme under ten different universities in Gujarat. The tools for the study consisted of a questionnaire, a standardized scale, a check list, rating scales and situational tests. The statistical methods such as percentages, ANOVA and correlation were employed for the analysis of data. The findings were: the respondents with high
academic achievement had higher level of all characteristics and values than the low achievers, ii) the respondents with mothers having higher level of education had higher level of self-esteem, fearlessness and values for gender equality and feminism than their counter parts, iii) the respondents belonging to high SES group had higher level of self-esteem, fearlessness and values for gender equality than their counter parts, iv) the respondents with higher vocational aspiration had higher level of schedule caste students. Variations with regard to possession values were found with regard to caste on theoretical, economic and aesthetic values. No relationship was found between possession of values and achievement of the students. Variations with regard to possession of values were found with regard caste on theoretical economic and aesthetic values. No relationship was found between possession of values and achievement of the students.

Reddy and Reddy (2004) carried a study on ‘Life Values: A Study on M.B.A. Students’. The main aim of the study is to study the relative importance of the students attached to different value domains. The sample comprised 104 students pursuing M.B.A. programme in the University of Madras and they were administered a questionnaire consisting of 23 value items. The collected data was treated with Z-test. The major findings of the study were given below.

1. There is no significant difference in mean importance ratings between any of the pairs of value domains.
2. There is significant difference in mean importance ratings between each value domain in first layer and each domain in second layer.
3. With the value domain in the first layer having significantly higher importance ratings compared to the value domain in the second layer.

Shamshuddin (2004) carried out a study on ‘Values and Academic Achievement’. The total sample of the study was 960 DIET students in three regions of Andhra Pradesh namely; Coastal Region, Rayalaseema Region and Telangana Region. Personal Value Questionnaire, Objective Achievement Test and Personal Information Sheet were used. The major findings of the study were:

1. Male students belonging to Coastal region have obtained high value pattern scores on social and health values whereas male students representing
Rayalaseema region have scored high value pattern scores on social, economic and health values, whereas male students representing Telangana regions have scored average value pattern scores on all values.

2. As for region wise distribution is concerned, female students belonging to Coastal region have obtained high scores on economic and hedonistic values, female students of Telangana region have secured high scores on health value and female students belonging to Rayalaseema region have secured high scores on economic, knowledge and hedonistic values.

3. In case of male students whose parents were in the higher income group, male students have secured high score on health value.

4. The achievement scores of students are more or less normally distributed. The mean, median, and mode of the distribution are 343.43, 342.56 and 334.56. The maximum score is 500 and the mean scores obtained by the students are more than average.

Talesara (2004) made a study on ‘Development of Values through Jeevan Vigyan: An Experimental Study’. The main objectives of the study were:

1. To study different values in middle class students studying in Class VIII.

2. To compare the development of values between general students and students gone through Jeevan Vigyan.

3. To compare values of urban and rural areas students and to identify differences in respect of values of government school and non-government school students.

Sample consisted of Class VIII students of Udaipur District. A pilot study was for collection data. Statistical techniques like questionnaire were used efficient of correlation were computed. The main finding of the study is students could not only be benefited from Jeevan Vigan Programme but also teachers, curriculum and surrounding would be conductive facilitating the teaching-learning process.

Vijayalakshmi (2006) studied on ‘Prioritisation of Secondary School Children’s Values by their Parents and Teachers’. She observed that values are very important for all human beings, mainly for students and teachers. The main objectives
of the study are: To find out the difference in prioritising values by the parents (whose children studying at secondary level) and teachers (who are handling the classes at the secondary level). A sample of 40 teachers (20 male and 20 female) and 40 parents (20 male 20 female) from both rural and urban areas were selected at random. The survey method was used. The subjects were provided a list of 40 values in three alternatives, viz. most important, important and less important, and were asked to mark their preferences. The data provided by the parents and teachers were analysed. The main findings were:

1. All categories of teachers and parents gave more importance to only 5 values, namely worthiness, sympathies, discipline, equality and caring.

2. Hundred per cent of teachers gave priority to open mindedness, practicality, and academic bent of mind, self-reliance, forgiveness, obedience and creativity.

3. Hundred per cent of parents gave priority to the values namely honesty, truthfulness, cleanliness, duty mindedness, love, kindness, spirituality, humanity, aesthetics, morality, punctuality, cooperation and objectivity.

4. There was light difference ranging from eighty one per cent to ninety seven per cent in the preference of values of teachers and parents, viz. empathy, food, organizational capacity, leadership, appreciation, optimism, friendliness, tolerance, being fair and frank, protest against wrongs, loyalty, patriotism, sociability, intellectual efficiency, self-control, self-awareness, self-esteem, self-confidence, justice, dependable, purity of thought, civic scene, charity, accountability and rationality.

5. The difference in the values was observed between rural and urban teachers as well as parents, male and female teachers as well as parents, educated and uneducated parents, above 40 years and up to 40 years age group of parents and teachers, rich and poor parents, parents having small and big families and teachers teaching arts and science subjects.

Nagarjuna, T. I. (2009) has concluded that the value oriented education has significant influence on the achievement of DIET students.
Yella Reddy, B. (2009) has concluded that the academic achievement has significant influence on the reasoning of moral judgment of intermediate students.

Jaya Rami Reddy, B. (2010) has concluded that the value oriented education has significant influence on the achievement of B.Ed. students.

It is observed from the above that there are very few studies showing the relation between academic achievement and values. Therefore values are taken as variable in the present investigation.

2.11 ACHIEVEMENT AND INTELLIGENCE

Intelligence of a student plays an important role in his / her academic achievement. A few studies are comprehensive, while a few others have concentrated on specific aspects of intelligence assessment. Some of the studies showing the relationship between intelligence and academic achievement are given below.

Mc Candles, Boyd (1956) conducted a study on 4th, 5th and 6th class students and found that correlation between anxiety and intelligence was negative. In sixth grade girls, the anxiety scores were found related to intelligence. The anxiety scores made a small additional contribution to the successful prediction of academic achievement.

Sarason (1959) found that the relationship of scores on several personality tests and subjects performance on a word association test was studied. It was found that high anxious groups given the experimental instructions showed lower commonality scores and greater discrepancies in response between the two word association test administrations than the other subjects in the experiment.

Ruebush (1960) provided that anxiety scale and intelligence test were administrated to 280 sixth-grade boys. 48 subjects divided into 12 groups in a design were individually administrated an embedded figures task. The task items ranged from extremely easy to extremely difficult. These scores were derived from the criterion task for each subject. Three predictors were made (a) highly cautious subjects do better than low cautious subjects on the criterion task, (b) HA subjects obtain higher cautiousness scores than LA subjects, (c) the performance of HA subjects on the criterion task is superior to that of LA subjects. The first two
predictions were confirmed. The third prediction was confirmed for subjects at the low and medium I.Q. levels.

Philips (1962) tested utilizing a sample of 759 adolescents classified into 8 sub samples involving two levels of anxiety and social class on both sexes. The results support two major findings of previous research i.e., female had higher anxiety scores than males and highly anxious subjects had lower achievement and intelligence scores.

Brody, Nathan (1964) studied that 15 subjects who scored high on the Taylor’s Manifest Anxiety scale and 15 subjects who scored low on the Manifest Anxiety scale were given a word associate task. The highly anxious subjects tended to have sets of word associates lower in inter subjects variability than the non-anxious subjects for stimulus words that elicited sets of word associates that are low in variability. High anxious subjects tended to give sets of word associates higher in inter subjects’ variability than non-anxious subjects for stimulus words that elicited sets of word associates that are in inter subjects’ variability.

Sarason and Zimbardo (1965) states that reports of a longitudinal study of test anxiety and its effects show that generally extreme changes in anxiety status were related to reciprocal changes in intelligence and achievement test status and changes in anxiety level were also related to changes in defensiveness and the tendency to lie. The test anxiety scale for children was a reliable and valid indicator of changes in anxiety status.

Allen (1973) gave a program for the treatment of test anxiety, by group administrated and self administrated relaxation and study counseling. Their self report anxiety and academic performance data, collected before and after therapy indicated that both modes of therapeutic interventions are equally effective in reducing anxiety and improving grades. In a study on skill counseling, an attempt was made to encourage students to become more autonomous learners. Study skills counseling helped to improve performance and also helped on reducing test anxiety.

Singal (1975) reported that anxiety contributes towards the adjustment of an adolescent in the home, society and emotional areas but its contribution in areas of health and school was found to be insignificant. It may also be pointed out that in all
the areas of adjustment, the mean adjustment is almost the same i.e., adjustment increases with the decrease in anxiety. He also shows that with the increase in anxiety, the social adjustment decreases.

Chandra and Kundu (1981) conducted a study on first and second year home science students and concluded that anxiety had no effect on the performance of the subjects. Anxious as well as normal subjects can excel equally.

Graval and Karipal Kaur (1982) show that a group with the high level of anxiety shows poor academic performance in mathematics which a group with low level of anxiety tended to achieve higher. On the other hand a group with the high achievement performance much better than a group with low achievement and vice-versa. It was finally concluded that subjects with low anxiety and high motivation have better academic achievement in mathematics than any other combination of anxiety and motivation.

Sunitha Sharma (1985) showed that the high achievers of scientific stream possess a lower level of anxiety and they are significantly different from the achievers of scientific stream when their verbal intelligence was held constant.

Dwivedi (1988) conducted a study on 150 secondary school students and concluded that the high test anxiety performed better on the criterion test than the students belonging to the low test anxiety group. There exists a positive relationship between intelligence and performance on a linear programme. There is little interaction between intelligence and test anxiety in relation to performance on a linear programme.

Anita Gupta (1989) conducted a study on 150 secondary school girls and found that regardless of intelligence and stressor conditions; high and low anxiety school girls do not differ significantly in their performance. Irrespective of trait anxiety and stressed conditions, high intelligent school girls perform significantly better than their low intelligent counterparts. Under reassuring instructions, school girls perform better than those under ego-stress instructions. However, this is irrespective of their anxiety levels and stress conditions under which they learn.

Singh and Broota (1995) conducted a study on 60 students of X class of a school in North Delhi and found that the high test anxious students have poor study
habits which lead to their poor performance in the examination. Intervention like study skill counseling reduces the test anxiety of high test anxious students and improves their academic performance as compared to control group.

Sarala Devi and Devaraj (2001) found that girls were having more anxiety levels than boys. In case of class XII, M.Sc. and Vocational students, where as in the case of X class girls, they were having less anxiety than boys and this might to be true for the interaction of other psychological variables in class X girls. In case of girls stress-anxiety relationship was more than boys.

Nagaraju (2002) conducted a study on 224 X class students and reported that (i) the correlation between anxiety and achievement is negative and significant, (ii) the correlation between anxiety and intelligence is negative and significant and (iii) the correlation between achievement and intelligence is positive and significant.

Rajpal and Sinha (2002) conducted a study on 156 women and tested the three dimensions of physical, interrelation and psychological as well as total anxiety were estimated. They found that non-working women experienced significantly higher anxiety, especially with regard to the physical dimension, relation to other worries about health. The age dependence status and marital status do not have a significant influence on the experience of anxiety.

Shenaz and Jatwani (2002) conducted a study on 200 samples from the people of Bhuj and Ahamdabad. The findings are as – (i) people of Bhuj have more fear of anxiety than the people of Ahamadabad, (ii) residents of low rise building have more fear than that of high rise buildings, (iii) as compared to males, females have more fear on all the three levels of anxiety and (iv) level of fear for ‘near and dear’ is more prominent as compared to that of themselves and security of material possessions.

Mishra (2007) surveyed the correlated academic achievement of high school students. In order to assess the academic achievement, no test was used by the investigator. The average of total marks of the annual marks of each subject was taken to represent the academic achievement. The main findings of the study are: (i) intelligence was significantly correlated with the academic achievement for both boys and girls, (ii) the correlation between intelligence and academic achievement was higher in case of girls than those of boys, (iii) the socio-economic status was not
significantly related with the academic achievement of boys and girls, (iv) the personality factors except self-sufficiency were not significantly related with the academic achievement of both boys and girls, (v) the personality factor self-sufficiency was significantly related to achievement only in the case of boys.

Sankaraiah (2009) investigated that Intelligence and anxiety levels of the B.Ed students are significantly correlated with their academic achievement.

It is observed from the above that there are very few studies showing the relation between academic achievement and intelligence. Therefore intelligence is taken as variable in the present investigation.

2.12 ACHIEVEMENT AND PERSONALITY

Personality of a student plays an important role in his / her academic achievement. Some Indian researchers have attempted to isolate the personality structure of good and poor students. A few studies are comprehensive, while a few others have concentrated on specific aspects and dimensions of personality assessment. Some of the studies showing the relationship between personality and scholastic achievement are given below.

Cattell, Sealey and Sweeney (1966) claimed that high school personality questionnaire (HSPQ) was predicting the school achievement of the students.

Vyas (1982) observed that personality adjustment was significantly related to university practical marks.

Anuradha Joshi (1990) reported that the personality of class IX students effected the academic achievement. The extroverts were found to benefit significantly more through the developed instructional strategy, as compared to the introverts.

Vijaya Kumar Sethi (1990) studied the personality patterns of high achieving and low achieving students in professional courses (Engineering, Medicine and Teaching) The major findings are high and low achieving students taken together differed significantly from each other on personality factors of Lower – higher scholastic mental capacity (Factor-B); emotional instability (Factor-C); experience conscientiousness (factor G); shyness – venturiveness (H); placidity – apprehensiveness (factor O) and Low- High ergiction (Factor-Q1). High achieving students were found to differ significantly from each other, on personality factors of
Lower - higher scholastic mental capacity (Factor - B) des urgency - surgancy (Factor - F) and tough mindedness-tender mindedness (Factor - I). Low achieving students were found to differ significantly from each other on factors of reserved ness-outgoingness (Factor - A), Low -Higher scholastic mental capacity (Factor - B), tough mindedness-tender minded ness (Factor - I); trust placement suspiciousness (Factor - L) and Lower-higher ergictension (factor Q4).

Mavi and Iswar Patel (1997) explored the relationship between academic achievement and selected personality variables of IX grade students. The personality variables are Personality adjustment, intelligence, self-Concept and level of aspiration. It was found that there was a weak relationship between the personality variable and academic achievement, in the case of tribal students. The non-tribal students, scored higher than the tribal, overall.

Koteswara and Ramachandra Reddy (1998) reported that all the 14 factors of HSPQ have significant influence on reading achievement in Telugu language high school students. Students whose personality characteristics for out-going, more intelligent, emotionally stable, excitable, assertive happy-go lucky, superego strength, venturesome, tense minded, doubting, apprehensive, self-sufficiency, controlled and tense, performed significantly better on reading achievement in Telugu language, than the students, whose personality characteristics were observed as less intelligent emotionally less stable, phlegmatic, obedient, sober, moral standards, shy tough minded, vigorous, placid, group dependent, undisciplined and relaxed.

Panchanadhan (1999) found that maintaining emotional balance, among students, through a psychologist by using auto counseling increased their academic performance.

Nateson and Susila (2000) indicated that the chosen personality factors (Cattell’s children personality questionnaire) are not significantly influencing the achievement of V standard boys (N = 300) and girls (N =300) in the age group of 9 to 10 years studying in the schools.

Govinda Reddy (2002) investigated that, factors B, E,F,M,Q2 and Q4 of 16 PF have significant influence on the total scholastic achievement of DIET students.
Kagade (2002) observed that there was no significant relationship between educational adjustment, home adjustment, and educational achievement of pupils (N=1941) studying classes VIII and IX. There was a significant relationship between social adjustment and educational achievement.

Ayodhya (2007), while studying the emotional problems of school children and their relation to life events and school achievement found that secondary school children had high rate of emotional problems. Boys had high life event scores and more number of events Boys out numbered girls in decreased scholastic achievement. The emotional problems found were of minor nature. Emotional problems did not have influence on scholastic achievement in the present study. Life events too did not have influence on scholastic achievement. No difference was found with regard to socio-demo-graphic factors and emotional disorders, scholastic achievement No association was found between scholastic achievement and intelligence


Subramanyam, K. and Sreenivasa Rao, K. (2008) while studying to assess the impact of gender on emotional intelligence and academic achievement of secondary school pupils concluded that. There is significant difference between boys and girls with regard to their emotional intelligence. There is no significant difference between boys and girls with regard to their academic achievement. There is no relation between academic achievement and emotional intelligence

Anca Munteanu and Iuliana Coatea (2010) showed that psychological personality type does not significantly influence school performance, meaning that students, even if have or not these personality features can have similar school achievements. Energetic pattern of personality and emotional pattern are not conditions for school performance in adolescents.
Martinsen and Swanberg (2010) showed that conscientiousness and openness were mediated by the strategic and an indirect effect on achievement through the surface approach.


Siddi Raju (2010) investigated that the computed values of ‘F’ for the Personality Factors namely (i) Factor (B): Less Intelligent vs. More Intelligent; (ii) Factor, (D): Phlegmatic vs. Excitable; (iii) Factor (E): Obedient, Mild, Conforming, submissive vs. Assertive, Independent, Aggressive, Stubborn, Dominant; (iv) Factor (H): Shy VS. Venturesome (v) Factor (I): Though Minded VS. Tense Minded and (vi) Factor (Q₃): Undisciplined Vs controlled are far greater than the critical value of ‘F’ (4.60) for 2 and 1797 df at 0.01 level of significance. Hence the above personality factors have significant influence on the scholastic achievement of IX class students in physical sciences. It is found that the computed values of ‘F’ for the Personality Factors namely; (i) Factor(A): Reserved vs. outgoing and (ii) Factor (F): Sober Vs. Happy - Go-Lucky, Gay Enthusiastic, Impulsively lively are greater than critical value of ‘F’(2.99) for 2 and 1797 df at 0.05 level of significance. Hence the above personality factors have significant influence on the scholastic achievement of IX class students in physical sciences. It is found that the computed values of ‘F’ for the Personality Factors namely; (i) Factor (C): Emotionally Less Stable vs. Emotionally Stable (ii) Factor (G): Moral standards Vs. super ego-strength (iii) Factor (J): Vigorous Vs Doubting (iv) Factor (O): Placid Vs Apprehensive (v) Factor (Q₂): Group dependent Vs self-sufficient and (vi) Factor (Q₄): Relaxed Vs Tensed are less than the critical value of ‘F’ (2.99) for 2 and 1797 df at 0.05 level of significance. It is concluded that the above personality factors do not have significant influence on the scholastic achievement of IX class students in physical sciences.

It is observed from the above that there are very few studies showing the relation between academic achievement and personality. Therefore personality is taken as variable in the present investigation.
2.13 ACHIEVEMENT AND MANAGEMENT

The management of the school in which the student studies may have some impact on the academic achievement. Some of the studies conducted earlier in this direction are presented here under.

Jagannadhan (1983) investigated into the type of the school and academic achievement and found that pupils of V, VI and VII classes in Govt. schools achieved the highest mean (58.50) academic achievement followed by Panchayat Raj (49.81), Private (45.99) and municipal (45.02) schools. The F test (17.17) revealed that the means differed significantly at 0.01 level.

Jyoti Rathore (2000) revealed that the mean scholastic achievement of children (N=500) from Formal Primary schools in Science was better than children (N=500) studying in Non-formal education centers.

Manoranjan Panda (2002) reported that the mean academic achievement of IX class Pupils in the schools managed by SC and ST Development corporation, Govt and Non-Govt differ significantly from one another at 0.01 level. The achievement of pupils (N=370) in Non-Govt schools is better than the pupils (N=140) from Govt schools. The achievement of pupils from Govt schools is better than that of Pupils from (N=40) SC and ST Development Department schools.

Gnanasundaratharasu and Vincent De Paul, S. (2002) found that due to video assisted instruction, there is no significant difference in the mean achievement scores in Social Science among the pupils of Govt and aided Primary schools.

Manjuvani and Mohan (2002) investigated that there is no significant difference in the academic achievement of i) adolescent girls studying in single sex (N=95) and co - education (N=98) schools. ii) Adolescent boys studying in single sex (N=95) and co - education (N=101) schools. iii) Adolescent boys and girls studying in single sex schools and in co-education schools.

Anice James and Marice (2004) investigated into the academic achievement in Science among XI standard students (N=470) and found that students from matriculation (N=196) schools and State Board (N=270) schools have no significant difference in their achievement scores in Science.
Laxmidhar Behera and Sushant Kumar Roul (2004) reported that type of the institution (coeducational and women) did not exert any influence on the achievement of BEd students.

Srinivasan and Arivudayappan (2004) reported that the achievement level of Aided Schools and Govt Higher Secondary Schools is greater than Panchayat union Middle School and Govt High Schools.

Subrahmanyam (2007) observed that the type of management influenced the level of achievement of the students. The students of Private management schools obtained higher mean achievement score than the students of Government schools.

Krishna Reddy, D. (2008) concluded that the academic / scholastic Achievement of 10th class Students has significant influence on their management.

Padmini (2010) investigated that management has significant influence on the scholastic achievement of IX class students in biological sciences.

Siddi Raju (2010) investigated that management has significant influence on the scholastic achievement of IX class students in physical sciences at 0.01 level of significance.

It is observed from the above that there are very few studies showing the relation between academic achievement and management. Therefore management is taken as variable in the present investigation.

2.14 ACHIEVEMENT AND GENDER

In a male dominated society, female are deprived in all aspects in the society. Pre - determined notion of Parents, Partiality in treatment, restrictions in their mobility, lack of freedom, Social evils like dowry system, have been the biggest impediments in the progress of the girls in the field of education. Gender is one of the important variables in the academic achievement.

The following are some of the studies reviewed on this aspect.

Farquhar (1963) observed no significant relationship between academic achievement and sex of XI grade High School students.
Pavithran and Feroze (1965) found that there is no marked difference between boys and girls in the scholastic achievement of X class pupils. Both are more or less on the same levels of achievement.

Balasubramanian and Feroze (1966) found that there existed no significant difference in the achievement of boys and girls of urban locality, while there was some marked difference in the achievement in mathematics between boys and girls of rural areas of X class.

Padmanabhan Nayar and Visveswaran (1966) found that there was significant difference between the achievements of urban boys and girls of X class. But however, they found that there existed a marked difference in the achievement of rural boys and girls.

Gupta (1968) observed no significant differences between boys and girls of 9th class in three variables (i.e.) academic achievement, intelligence and economic status.

Har Govinda Gupta (1968) observed that except, in the high intelligence group of VIII class Pupils, a significant relationship between academic achievement and sex appears to exist in both the moderate and low intelligence groups.

Satyanandam (1969), Panchanathan and Shanmuga Ganesan (1992) found that sex had no bearing on the academic achievement.

Vasantha Ram Kumar (1969) found that there existed significant differences in the achievement of boys and girls.

Aggarwal (1974), Sharma (1976), Tiwari (1980) and Dubey (1982) have found that girls perform better than boys in all the school subjects.

Rangaswamy and Visveswaran (1977) found that there was no significant difference in the achievement of sports men and non sports men in SSLC (XI class) Pupils examination. However they said that girls who participate in sports are better achievers than boys, sex difference is however not significant in case of non sports boys and girls.

Roach (1979) conducted a study on 206 boys and 212 girls from 5(five) urban elementary schools in Jamaica and found that the girls scored significantly higher than boys on a mathematics achievement test.
Dhalakia (1980) found no significant difference in the achievement of male and female teacher trainees.

Aruna (1981), Chanda and Sunanda Chandira (1985) have reported that boys had better achievement than girls.

Asud Ulla Khan et al. (1982) showed that sex of Pre-university students (XII class) was found to be not effective in bringing about any variation in the scholastic achievement.

Gupta (1983) found that girls on the whole, had better achievement motivation than boys and had higher academic achievement than boys. The relationship between achievement motivation and academic achievement is positive and significant.

Jagannadhan (1983) reported that sex does not have any significant influence on the academic achievement of V, VI and VII class pupils.

Skaalvik (1983) conducted a study on 348 children in five different class levels and found that the 4th to the 8th class level low academic achievement was associated with low self-esteem and with strong perceived parental pressure for boys, but not for girls. At the 8th class level low achievement was associated with low perceived value of the school for the girls while the girls while there was no such relationship for boys. The results supported the hypothesis that academic achievement has different effects for boys and girls.

Gopala Charyulu (1984) found no difference in the achievement levels between male and female teacher Trainees (TTIs).

Singh (1984) found that the study habits of boys and girls differed significantly at different levels of academic achievement.

Watkins, Hattie and Astilla (1984) showed that there existed significant influence to sex, self-concept and intelligence on academic achievement of pupils.

Quraishi and Bhat (1986) conducted a study on 200 undergraduate students of M.S. University of Baroda and found that sex has a significant effect on academic achievement.
Rama Swamy (1990) observed no significant difference between boys and girls of high and low achievers.

Verma and Gupta (1990) revealed that VIII class boys belonging to the high environment group achieved significantly greater mean than boys belonging to the low environment group. However no significant differences were found in the case of girls of high, medium and low environment groups.

Bhujendra Nath Panda (1991) observed that 9th and 10th class boys of rural areas and urban girls were better in academic achievement than their counter parts.

Vijaya Lakshmi and Hemalatha Natesan found that XI class girls (N=50), (1992) have better mean academic achievement than boys (N=50) which is significant at 0.01 level.

Rama Rao and Sinha (1993) reported that the performance of girls in examinations at all levels of higher education was much better than that of boys.

Stella and Purushiotham (1993) showed that there is no significant difference between the study habits of under achieving boys and girls.

Rawat and Leela (1995) showed that there was no significant difference between the study habits of boys and girls and their academic achievement.

Mishre (1997) found that (i) Intelligence is significantly correlated with academic achievement, for both 10th class boys (N=50). (ii) The correlation between intelligence and academic achievement is higher in case of girls than that of boys. (iii) The SES is not significantly related with the academic achievements of boys and girls. (iv) The personality factors viz., neurosis introversion-extroversion and dominance-submissiveness are not significantly related with the academic achievement of both boys and girls. (v) The Personality factor self-sufficiency is significantly related to achievement only in case of boys.

Narayana Koteswara and Ramachandra Reddy (1998) revealed that high school girls (N=648) are better than boys (N=448) in reading achievement.

National Science Board, (1998), During the past decade, there has been a concerted effort to find out why there is a shortage of women in the science, math, engineering, and technical fields (AAUW, 1992). In 1995, 22% of America's
scientists and engineers were women, compared to half of the social scientists. Women who do pursue careers in science, engineering, and mathematics most often choose fields in the biological sciences, where they represent 40% of the workforce, with smaller percentages found in mathematics or computer science (33%), the physical sciences (22%), and engineering (9%).

Gilson, Judith (1999) observed that large differences were not found in mathematics achievement, quantitative ability of 8th grade girls from single sex schools or girls from Co-educational schools.

Peter Kutnick, (1999) exploring female attainment and male underachievement in representative samples of students from the islands of Barbados and St. Vincent. It also reports findings from case studies of secondary classrooms in various stratified schools in Trinidad. In reporting these findings, the paper will show that simplistic gender-based, matrilineal and male marginal explanations are not adequate explanations for school attainment. A more adequate explanation requires a complex methodological approach which draws upon quantitative and qualitative studies and the ability to integrate school-based, cultural and home factors. Findings show that, generally, girls attained at higher levels than boys, but this is qualified by type of school attended, pre-school attendance, with whom the student lives and occupations of mother and father.

Sood (1999) in her study found that although girls achieved somewhat higher than boys, yet insignificant differences exist in their mathematical achievement.

Jyoti Rathore (2000) revealed that the mean scholastic achievement of boys (N=500) of primary level in Environmental studies (Science) is significantly better at 0-01 level than the girls Education Centers.

Natesan and Susila (2000) reported that there is a significant difference at 0.01 level in the scholastic achievement of V standard boys (N=300) and girls (N=300) in Environmental Science.

Casey, Nuttall, & Pezaris (2001) investigated that part of the explanation can be traced to gender differences in the cognitive abilities of middle-school students. In late elementary school, females outperform males on several verbal skills tasks: verbal reasoning, verbal fluency, comprehension, and understanding logical relations
Males, on the other hand, outperform females on spatial skills tasks such as mental rotation, spatial perception, and spatial visualization (Voyer, Voyer, & Bryden, 1995). Males also perform better on mathematical achievement tests than females. However, gender differences do not apply to all aspects of mathematical skill. Males and females do equally well in basic math knowledge, and girls actually have better computational skills. Performance in mathematical reasoning and geometry shows the greatest difference (Fennema, Sowder, & Carpenter, 1999). Males also display greater confidence in their math skills, which is a strong predictor of math performance.

Govinda Reddy (2002) found that sex does not have any significant influence on the academic achievement of DIET students. (N=600)

Jacobs, (2002) investigated that most studies show that, on average, girls do better in school than boys. Girls get higher grades and complete high school at a higher rate compared to boys Standardized achievement tests also show that females are better at spelling and perform better on tests of literacy, writing, and general knowledge. An international aptitude test administered to fourth graders in 35 countries, for example, showed that females outscored males on reading literacy in every country. Although there were no differences between boys and girls in fourth grade on mathematics, boys began to perform better than girls on science tests in fourth grade. Girls continue to exhibit higher verbal ability throughout high school, but they begin to lose ground to boys after fourth grade on tests of both mathematical and science ability. These gender differences in math and science achievement have implications for girls' future careers and have been a source of concern for educators everywhere.

Panda (2002) observed that V class boys (N=478) and girls (N=404) studying in Urban, Rural and tribal areas did not differ in their achievement in all the school subjects.

Suneetha and Mayuri (2002) reported that gender was found to be more important variable than IQ in deciding the high academic performance, as more girls were found among top ranking students of classes IX and X.
Gakhar and Aseema (2004) found no significant difference in the academic achievement of boys and girls of X class, in their Previous annual examination (Class IX).

Halpern, (2004), investigated that the poorer mathematical reasoning skills exhibited by many female adolescents have several educational implications. Beginning at age 12, girls begin to like math and science less and to like language arts and social studies more than do boys (Kahle & Lakes, 2003; Sadker & Sadker, 1994). They also do not expect to do as well in these subjects and attribute their failures to lack of ability (Eccles, Barber, Jozefowicz, Malenchuk, & Vida, 1999). By high school, girls self-select out of higher-level, “academic-track” math and science courses, such as calculus and chemistry. One of the long-term consequences of these choices is that girls lack the prerequisite high school math and science courses necessary to pursue certain majors in college (e.g., engineering, computer science). Consequently, the number of women who pursue advanced degrees in these fields is significantly reduced.

Mohammad Khayyir and Philip R. Delacey (2005) found that girls academic achievement was higher than boy’s academic achievement.

Khemchandani (2008) compared academic achievement of boys and girls at secondary school certificate examination of Maharastra Board. The main findings of this study were:- (i) significant difference existed between boys and girls at pass and fail, (ii) no significant difference existed between boys and girls in achieving first class, second class and pass class also.

Pavola Sapiyonia (2008) stated that - A research group from Kellago school of management of North Western University headed by professor Pavola Sapiyonia conducted a study on the Proficiency in mathematics of boys and girls below the age of 15 years over 40 countries. The research group made a study on 2.70 lakhs students. The details of the study were given, by “Daily Telegraph”. As per the details given; in the worldwide average rate of efficiency in mathematics, girls average rate is 2% higher than boys. In Britan girls, average rate of scoring is 0.7% less than boys. Where there is no much encouragement for girls education, like in Tourkey, the girls average performance is 4% less than boys. If equal opportunities are given, the difference in scoring between boys and girls can be reduced.
Pondey and Md Faiz Ahmad (2008) conducted a study on a sample of 621 students of XI standard (Male adolescents = 417 and Female adolescents = 204) in Azamgarh (Dt), Bhihar (State) and found that there was no significant difference between male and female adolescents on the measures of academic performance.

Subramanyam and Srinivasa Rao (2008) revealed that boys and girls did not differ significantly in academic achievement.


Noorjehan & Wajiha (2009) concluded that many factors like mathematical creativity, attitude towards Mathematics and achievement motivation and low level of anxiety, influence the academic achievement in mathematics at secondary stage and recommend the inclusion of curricular and co-curricular programs to improve performance in mathematics.

Sam Willam Bassey and Joshua (2009) concluded that there is a significant gender differences in rural students of mathematics achievement in cross river state Nigeria.

Umadevi (2009) concluded that there is a positive relationship between emotional Intelligence and academic achievement. Male and female, arts and science students do not differ in emotional intelligence and academic achievement.

Chandran & Lim (2010) concluded that cognitive ability, gender, pre-maturity and social factors contribute to poor academic achievement during the early school years.

Padmini (2010) studied that sex has significant influence on the scholastic achievement of IX class students in biological sciences.

Siddi Raju (2010) investigated that sex has significant influence on the scholastic achievement of IX class students in physical sciences at 0.01 level of significance.
It is observed from the above that there are very few studies showing the relation between academic achievement and gender. Therefore gender is taken as variable in the present investigation.

2.15 ACHIEVEMENT AND CASTE

The caste of the student may have some impact on the academic achievement. Some of the studies conducted earlier in this direction are presented here under.

Nair (1974) aimed at finding out the impact of certain sociological factors like family background, caste, religion and sex on the teaching ability of teachers. He revealed that religion was found to be not affecting the teaching ability of teachers.

Dubey and Mishra (1977) have reported that the school environment was significant predictor of academic achievement among upper caste, backward caste and the S.C and Muslim girls.

Asud Ulla Khan et al. (1982) found that religion of per-university students (XII class) was found to be not effective in bringing about any variation in the scholastic achievement.

Jagannadhan (1983) observed that the academic achievement of forward caste pupils of V, VI and VII classes is significantly better than that of backward caste pupils.

Gopala Charyulu (1984) found that different castes of student teachers of TTIs had, same achievement of three variables, Theory, Practical and total achievement.

Kumara Swamy (1992) found that caste of the adult learners did not have any influence on their academic achievement in the case of reading, writing, arithmetic (3Rs) as well as total achievement.

Sing (1993), Mehara (1992) and Lidhoo and Khan (1990) have found that the academic performance of upper castes was significantly higher than that of scheduled castes, scheduled Tribes and Back ward castes.

Jayachandrama Naidu (1998) observed that the influence of caste is not significant on the academic achievement of learners N=300 of formal education; where as caste has significant influence on the academic achievement of learners (N=300) of non-formal education and the total sample is (N=600).
Dubey and Mishra (1999) made a study to find the determinants of academic success of scheduled caste (SC), Backward castes (BC), Muslims (MS), upper castes (UC) and rural high school boys (N=400). Results suggest that there was no consistency in the predatory of academic success across the four groups.

Dash (2002) reported that ST students had the lowest percentage of passes in Higher Secondary Certificate (HSC) examinations in the state of Orissa. A considerable number of X class students of high schools, managed by Tribal welfare Department, Govt. of Orissa were detained, and were not allowed to take H.S.C. examination.

Govinda Reddy (2002) found that caste is not significant on the achievement in Theory and total (Theory and practical) achievement of DIET students. (N=600)

Manjula (2002) revealed that the achievement of Tribal students was low, except in language and mathematics, which was only on border line of average performance.

Manchala (2007) in her study on the academic achievement of the B.Ed students found that there was no significant influence of caste / community on their academic achievement.

Krishna Reddy, D (2008) concluded that the academic / scholastic Achievement of 10th class Students has significant Influence on their caste.

Padmini (2010) investigated that caste has significant influence on the scholastic achievement of IX class students in biological sciences.

Siddi Raju (2010) investigated that caste has significant influence at 0.01 level on the Scholastic Achievement of IX class students in Physical sciences.

It is observed from the above there are very few studies showing the relation between academic achievement and caste. Therefore caste is taken as variable in the present investigation.

Hence the investigator is interested in knowing the effect of caste on the achievement of marks in various subjects and particularly in mathematics at secondary level. Hence caste is included, as one of the variable in the present study.
2.16 ACHIEVEMENT AND LOCALITY / NATIVE PLACE

This variable is a neglected one in educational research, particularly on the influence of locality on achievement. As the investigator is interested in locality is included as one of the variables in the present study to examine its impact on the achievement. Some of the earlier studies in this direction are presented below.

Pavithran and Feroze (1965) observed that, the scholastic achievement of urban students of X class is significantly better than rural students in all the subjects.

Rao (1976) studied self – Perception, achievement motivation and academic performance of the prospective secondary school teachers. The finding revealed that there was a significant difference between the achievement scores of rural and urban students, the latter were scored higher.

Jagannadhan (1983) concluded that the Pupils of V, VI and VII classes from urban areas had better achievements than rural pupils.

Vendal (1994) revealed that the urban pupils of 6th, 7th and 8th class (N=442) differ from one another on comparative family and the figurative relationship (idioms, metaphors and proverbs). The results also show significant interaction between urban and rural background and level of academic achievement is also found with regard to mastery of each one of the semantic concepts.

Narayana Koteswara and Ramachandra Reddy (1998) showed that there is locality influence on reading achievement of high school pupils. Pupils in residential schools performed better than pupils rural and urban. Among the three groups pupils in rural areas were the lowest in achievement.

Salim Kumar (1998) reported that locality has significant influence on the achievement in biology of secondary school pupils (N=700) at 0.01 level.

Krishna Moorthy (1999) found that locality has caused no significant difference in respect of academic achievement in History.

Dharma Raja et al. (2000) investigated that the higher secondary students of urban (N=124) and rural (N=103) areas did not differ significantly in computer achievement.
Jyothi Rathore (2000) found that the mean scholastic achievement of rural pupils at primary level in Environmental Studies (Science) is significantly better at 0.01 level than the urban pupils studying at Formal Primary Schools and Non-Formal Education Centers.

Prakash (2000) in his study concluded that urban students were better in their mathematical achievement when compared to the rural students.

Naresh Kumar Gupta (2002) reported that the achievement of majority of V class pupils (N=946) in slum area schools has been observed to be unsatisfactory, not only in mathematics but also in all other subjects.

Panda (2002a) revealed that V class rural students had shown better performance in all the school subjects, when compared to their urban and tribal classmates. (N=887)

Anice James and Marice (2004) studied the academic achievement in science among XI standard students (N=470). Students hailing from rural (N=199) and urban (N=271) areas have the same type of academic achievement in Science.

Gakhar and Aseema (2004) found that X class rural students significantly achieved better in their annual previous examination (IX class), than the urban students.

Panchalingappa (2004) concluded that there is no significant difference between rural and urban high school pupils of Devadasis in respect of their academic achievement.

Viswanathan (2004) investigated that (i) Boys (N=160) and girls (N=69) of XI standard in History. (ii) Boys (306) and girls (N=185) studying in urban schools differ in their achievement in History. The girls perform better than the boys. (iii) There is no evidence to show that the pupils studying in rural and urban schools differ in their achievement in history. Sexena (1960), Williams (1979), Chakrabarti (1988), Ajeh (1993) and Rangappa (1995) have reported that the urban students had higher achievement than the rural students. But Ojha (1979) observed that the rural boys had better performance than urban boys.
Sura Prasad Pati and Saudamini Acharya (2005) concluded that extensive use of visual aids has a positive significant impact on the academic achievement of rural pupils.

Manchala (2007) found that locality / native place has a significant influence on the scholastic achievement of B.Ed students.

Subrahmaniam (2007) observed that the students who were studying in Urban area schools had better achievement score than the students who were studying in Rural area schools.

Krishna Reddy, D (2008) concluded that the academic / scholastic Achievement of 10th class Students has significant influence on their locality.

Padmini (2010) investigated that locality has significant influence on the scholastic achievement of IX class students in biological sciences.

Prabhu Swamy (2010) revealed that Government D.Ed. College trainees have scored that better marks in fill up the blanks type, classification type and true / false type. Also they have scored better in total performance. Rural area D.Ed. trainees scored better marks in multiple choice type, Match the following type and over performance. Urban area students have scored better marks in classification type and true/ False. So Locality has significant influence on the marks scored.

Siddi Raju (2010) investigated that native place has significant influence at 0.01 level on the Scholastic Achievement of IX class students in Physical sciences.

It is observed from the above there are very few studies showing the relation between academic achievement and locality / native place. Therefore locality / native place is taken as variable in the present investigation.

2.17 ACHIEVEMENT AND MARITAL STATUS

It is assumed that marital status may be revealed to academic achievement of teacher trainees.

Shamshuddin (1996) observed that marital status of the secondary school teachers influenced in making a selection of teaching career in view of increasing the burden of the family.
Govinda Reddy (2002) found that marital status of the DIET students (primary school teacher training students) does not have significant influence on their academic achievement in theory, practical and in total also.

Manchala (2007) in her study on the academic achievement of the B.Ed students also proved that the marital status of the students do not have significant influence on their scholastic achievement.

It is observed from the above there are very few studies showing the relation between academic achievement and marital status. Therefore marital status is taken as variable in the present investigation.

2.18 ACHIEVEMENT AND EDUCATIONAL QUALIFICATION

It is assumed that the educational qualifications may have relation with the academic achievement. Some of the studies on this aspect are:

Jayamma (1962) found that 'training' only does not influence the professional success of teachers at primary level, but qualifications could add professional success.

Hall (1964) concluded that fully qualified teachers were more effective when students' achievement scores were observed.

Howkins and Stoops (1966) reported that the training appeared to have no significant influence over either formal or informal evaluation for measuring teacher competence.

Gupta (1968) revealed that the efficiency in teaching increased with greater academic qualifications and training among secondary school women teachers.

Dhalakia (1980) found that in teaching practice of the teacher trainees, the post-graduate teacher trainee received more positive comments than the graduate teacher trainee. But in contrary, Patil (1984) also observed that there was no significant difference between the academic achievement of the graduate and post-graduate student-teacher in the compulsory paper of B.Ed course.

It was found in a study on the academic achievement of B.Ed students by Manchala (2007) that educational qualifications of the student-teachers have significant influence on the achievement in practical work and do not have significant influence on the achievement in theory and total achievement.
Sankaraiah (2009) investigated that educational qualification of the B.Ed students are significantly correlated with their academic achievement.

It is observed from the above that there are very few studies showing the relation between academic achievement and educational qualification. Therefore educational qualification is taken as variable in the present investigation.

2.19 ACHIEVEMENT AND METHODOLOGY

There may be a relation between the methodology / subject of teaching of the student-teachers (teacher trainees) and his/her academic achievement. Some of the related studies are given below.

Dhalakia (1980) found a significant difference in the level of achievement between the student-teachers who teaches science subjects and humanity subjects. The student-teachers teaching science subjects scored significantly higher achievement compared to the student-teachers teaching humanity subjects.

Pillai (1983), in his study on the evaluation in colleges of education found that – (i) among the different optional subjects offered in the colleges of education the B.Ed student-teachers of English scored top in their level of achievement, (ii) The student-teachers achieved best in two aspects of evaluation viz., types and techniques of evaluation among the five aspects studied and they were poor in the construction of tests, (iii) the academic performance of mathematics student-teachers in evaluation was significantly superior to that of student teachers in Tamil and History.

Balasubrahmanian and Sivakumar (2001) observed that – (i) there exists a significant difference in the academic achievement of the student-teachers teaching of Tamil and English and teaching of English and Mathematics, (ii) there is no significant difference between general subjects and methodology subjects.

Laxmidhar Behera and Sushant Kumar Roul (2004) investigated that there is a significant difference in the level of academic performance of Arts background and Science background B.Ed student-teachers. It is also found that the Science background student-teachers obtained higher achievement compared to the Arts background student-teachers.
In is concluded in the study by Manchala (2007) that methods of teaching in another subject has significant influence on the scholastic achievement of the B.Ed students.

Sankaraiah (2009) investigated that methodology of the B.Ed students are significantly correlated with their academic achievement.

It is clear from the above reports that there are very few studies showing the subject / methodology of teaching of the teacher trainees with their academic achievement. Therefore, subject teaching or methodology of the subject is considered as one of the variable in the present investigation.

2.20 ACHIEVEMENT AND AGE

Age of the students may have some relationship with their scholastic achievement. Some of the related studies are presented here.

Srivastava (1967) found that the relationship between the age and academic achievement is insignificant.

Har Govinda Gupta (1968) reported that no significant relationship existed between the age of the pupils and their academic achievement.

Asud Ulla, Prakasham et al., (1982) revealed that the age of the pupils was found to be not effective in bringing any variation in scholastic achievement.

Vyas (1982) reported that age of B.Ed. students was significantly related to the criterion variable, supervisor's ratings in the case of the total sample (N=300). It was also significantly related to criterion variables, university practical marks and total practical assessment, in the case of total and male sample. But age was not significantly related to the criterion variables, self-rating, university theory marks and university total marks, in all the categories of the sample.

Quraishi and Bhat (1986) found that there is no significant relationship between the age and academic achievement.

Shamshuddin (1996) observed that the mean age of secondary school female teachers (N=64) was found to be 26.5 years and 28.8 years in case of male teachers (N=136).
Dowson et al., (1999) observed that age, gender, cultural background and socio-economic status are strongly related to differences in relations between middle school students' academic motivation, cognition and achievement.

Biswa(2001) investigated into the relationship between the age and academic achievement of distance education learners and found that age has no effect on their performance.

Govinda Reddy (2002) found that there is no significant relationship between the age and total marks.

Suneetha and Mayuri (2002) found that age has significant influence on academic achievement.

Manchala (2007) found that age has significant influence on the academic achievement.

Banarugn (2009) showed that age has significant relationship with academic achievement. Age \( r = 0.33, P < 0.01 \) was inversely related with respondents academic achievement.

Sankaraiah (2009) investigated that ‘Age’ of the B.Ed student has significant influence on the academic achievement of them. Young students (22 years and below) exhibited low achievement than the elder students.

Fayegh Yousefi & Rumaya Juhari (2010) studied that Age and academic achievement were significantly correlated.

Junani & Redzuan (2010) studied that age and academic achievement were significantly correlated \( r = 0.23, p < 0.000 \).

It is observed from the above that there are very few studies showing the relation between academic achievement and age. Therefore age is taken as variable in the present investigation.

2.21 ACHIEVEMENT AND ANNUAL INCOME OF THE FAMILY

Annual income of the family may have some impact on the scholastic achievement of students. Studies related to annual income and achievement, conducted earlier are presented here under.
Fraser (1959) found higher correlation between income and scholastic achievement ($r = 0.44$), than between income and IQ ($r = 0.35$).

Wiseman (1964) did not find any significant influence of father's income on the brightness of the child in the school.

Gopal Rao (1965) found a significant and positive correlation between economic status and scholastic achievement ($r = 0.39$).

Har Govinda Gupta (1968) found that except in the high intelligence group, a significant relationship between VIII class pupil's academic performance and their father's income seems to exist, in the moderate and low groups. In her study, Fraser (1956) found higher correlations between income and scholastic achievement ($r = 0.44$) than between income and I.Q ($r = 0.35$). But Wiseman (1964) did not find a significant association between father's income and brightness of a child in the school. Gopal Rao (1965) found a significant and positive correlation between economic status and scholastic achievement ($r = 0.39$).

Jagannadhan (1986) conducted a study on high school pupils and found that father's income had much impact on the academic performance.

Vijay Kumar Sethi (1990) observed that the parents of achievers of all four courses engineering, medicine, law and teaching were generally had better income than those of low achieving students. Both low and high achieving students also revealed the courses to be difficult. The analysis of responses showed that a fairly high percentage of high and low achieving students would enter into some other professions, if given a chance.

Bhujendra Nath Panda (1991) found that IX and X class students with high income parents were better in their academic achievement, than those of students with low income parents. The studies of Chopra (1964) and Khanna (1980) strengthened the above findings.

Jayachandrama Naidu (1998) found that the influence of father's income is not significant on the academic achievement of learners from formal education ($N=300$); where as mother's income has significant influence on the academic achievement of learners of non-formal education ($N=300$) and total sample ($N=600$).
Krishna Moorthy (1999) observed that the economic conditions of the family has caused no significant differences in respect of academic achievement in History of the second year higher secondary students.

Govinda Reddy (2002) found that the family income has significant influence on academic achievement of DIET Students \((N = 600)\).

Selvam and Sundara Valli (2002) conducted a study on 300 higher secondary students and found that the academic achievement has significant relationship with their economical, educational and vocational problems.

Krishna Reddy, D (2008) concluded that the academic / scholastic Achievement of 10th class Students has significant influence on their annual income.

Ekber Tomul and Kzim Celik (2009) investigated the effects of family variables (education of the parents and family income) on the academic achievement (in mathematics, reading skills and science) of 15 years – old students in Turkey with respect to regional diversity. The study was carried out based on the data obtained from the PISA 2006 research in Turkey. The independent variables of the research are education level of the parents, and average annual income; the dependent variables the students' proficiency levels in science, mathematics and learning skills. Family variables affect students academic achievement in mathematics most and their reading skills least. As regional developmental levels decreases, effects of family variables on academic achievement decreases as well.

Sanandaj and Jouhari (2010) showed that family income significantly affected academic achievement \([(F(2) = 19.17; p = 0.000)].

Siddi Raju (2010) investigated that annual income has significant influence at 0.01 level on the Scholastic Achievement of IX class students in Physical sciences.

It is observed from the above there are very few studies showing the relation between academic achievement and annual income of the family. Therefore annual income of the family is taken as variable in the present investigation.

2.22 ACHIEVEMENT AND FATHER EDUCATION

Education of the father may have some influence in the academic achievement of the pupils. General assumption is that educated fathers would assist their children.
in their studies in the form of counseling and guidance. Hence there may be some relationship between the academic achievement and father's education. Some of the studies reviewed in this regard are given below.

Fraser (1959) found that there exists significant relationship between academic achievement and father's education.

Pavithran and Feroze (1965) found that there is no significant relationship between the scholastic achievement of 10th class pupils and the education level of the fathers or other members of the family.

Har Govinda Gupta (1968) observed that in the case of all the three (i.e.) high, moderate and low intelligence groups of VIII class pupils, no significant relationship seem to exist between subjects’ academic progress and their father's education.

Sarma (1984) found that father's and mother's education is highly associated with the scholastic achievement.

Jagannadhan (1986) found that high school pupils' academic performance and father's education are significantly related.

Vijaya Kumar Sethi (1990) found that father's education has got much impact on the academic achievement of their sons and daughters studying in professional course (or) engineering, law, medicine and teaching.

Shamshuddin (1996) found that most of the secondary school male teachers were from families where fathers were not highly qualified, whereas most of the female teachers were from families with highly qualified fathers.

Krishna Moorthy (1999) found that there is significant relationship between father's education and the academic achievement in history of second year higher secondary students. This gets support from earlier studies: Chatterjee et al., (1971), Khanna (1980) and Rajput (1985).

Grouws Douglas, A. - Cebullakristin, J. (2000) stated that there is a positive relationship between educational level of the parents and students' performance in mathematics. But there is a considerable overlap in the performance of students from different educational background. In fact many students whose parents had a high school education or less scored higher than students whose parents had a university
Students whose parents were university educated, performed about two-thirds of a proficiency level higher than those whose parents had no more than high school education. However there is one important nuance to add to this finding. Students whose parents worked in an occupation that required advance mathematics skill, in fact, performed almost one proficiency level higher than students whose parents had similar education levels and income but whose occupation did not require advanced mathematics.

Barbara, Rupa Das (2002) reported that backward caste children of literate parents scored higher than the children of illiterate parents. The academic achievement of first generation learners (i.e.) children of illiterate parents was found to be the lowest. The achievement of girls was found to be comparatively better than that of boys.

Chakrabarthi, Sharmistha (2002) observed the education level of the family influenced female learners (N = 320) literacy achievement attending to literacy centres.

Gnanasundararatharasu and Vincent De Paul, S. (2002) found that due to video assisted instruction, there is no significant difference in mean achievement scores in social science among the primary school pupils of parents with below metric and those of above metric.

Govinda Reddy (2002) investigated that Father's education and mother's education have significant influence on the academic achievement of B.Ed. students. Brother's education has significant impact on the total academic achievement of DIET students.

Krishna Reddy, D (2008) concluded that the academic / scholastic Achievement of 10th class Students has significant influence on their father's education.

Sankaraiah (2009) investigated that father education of the B.Ed. students are significantly correlated with their academic achievement.

Moula (2010) studied relationship between academic achievement motivation and home environment among standard eight pupils. He found that there is significant
relationship \( r = 0.15 \) between father's education and academic achievement motivation.

Padmini (2010) investigated that father education has significant influence on the scholastic achievement of IX class students in biological sciences.

Siddi Raju (2010) investigated that father education has significant influence at 0.01 level on the Scholastic Achievement of IX class students in Physical sciences.

It is observed from the above there are very few studies showing the relation between academic achievement and father education. Therefore father education is taken as variable in the present investigation.

### 2.23 ACHIEVEMENT AND MOTHER EDUCATION

Educational status of the mother may have influence on the scholastic achievement of the students. If mother is educated, it would have an impact on the child's performance. Some of the studies reviewed are presented hereunder.

Pavithran and Feroze (1965) found that there is no significant relationship between scholastic achievement and educational status of the mother in the case of 10th class students.

Har Govinda Gupta (1968) found that there is no significant relationship between academic achievement of pupils and their mother's education.

Ranga Swamy and Visveswaran (1977) reported that no definite pattern of relationship between the academic achievement of pupils and educational status of parents is noticed.

Sarma (1984) showed that mother's education is highly associated with the academic achievement of their sons and daughters.

Vijaya Kumar Sethi (1990) revealed that the parents of high achieving students of all the four professional groups (i.e.) engineering, law, medicine and teaching are better qualified than those of low achieving students.

Bhujendra Nath Panda (1991) concluded that 9th and 10th class pupils with college educated mothers are having better academic performance than illiterate or elementary class educated mothers.
Krishna Moorthy (1999) revealed that there is significant relationship between academic achievement and education of mother.

Borbora and Rupa Das (2002) reported that backward classes children of literate mothers showed better academic achievement, than the children of illiterate mothers.

Chakrabarthi, Sharmistha (2002) observed that educational level of the mother's influenced female learners' literacy achievement attending the literacy centres.

Gnanasundararatharasu and Vincent De Paul (2002) inferred that due to video assisted instruction, there is no significant difference in mean achievement scores among the primary school pupils whose mother's qualification is below metric and those above metric.

Govinda Reddy (2002) investigated that mother's education has significant effect on the academic achievement of B.Ed. students both in theory and total achievement.

Hijazi and Naqvi (2006) conducted a study on the student performance by selecting a sample of 300 students (225 - males, 75 - females) from a group of colleges affiliated to Punjab University of Pakistan. It was found that factors like Mother's education and Students family income are highly correlated with the student academic performance.

Manchala (2007) found that, mother's education has significant influence on the scholastic achievement of B.Ed. students.

Krishna Reddy, D. (2008) concluded that the academic / scholastic Achievement of 10th class students has significant influence on their mother's education.

Sankaraiah (2009) investigated that mother education of the B.Ed students are significantly correlated with their academic achievement.

Moula (2010) found that there is significant relationship (r = 0.14) between mother's education and academic achievement motivation of standard eight pupils
Siddi Raju (2010) investigated that mother education has significant influence at 0.01 level on the Scholastic Achievement of IX class students in Physical sciences.

It is observed from the above that there are very few studies showing the relation between academic achievement and mother education. Therefore mother education is taken as variable in the present investigation.

2.24 ACHIEVEMENT AND OCCUPATIONAL STATUS OF THE PARENTS

Academic achievement of students may vary depending upon the occupation of parents. Some of the earlier studies are shown hereunder.

Pavithran and Feroze (1965) found that the occupational status of the parents highly accelerates the scholastic achievement of X class students.

Har Govinda Gupta (1968) found no significant relationship between academic achievement and occupation of the father in the case of VIII class students, except in the case of moderate intelligent group. Other research studies namely Fraser (1959), Alexander (1965) and Smith (1966) corroborate these results. The students in the high intelligence group reported their mothers. The students are employed in any occupation. In the low group there seems to exist no significant relationship between the subject’s academic performance and their mother’s occupation. Only in the moderate group, a significant relationship seems to exist. Such a phenomenon is difficult to explain. Further research alone may solve this tangle and identify underlying currents.

Ford Dawson (1970) found that the employment of mother’s had no effect on the achievement of children either in a positive or negative direction.

Rangaswamy and Visvesvaran (1977) reported that no definite pattern of correlation could be noticed between the academic achievement and occupational status of the family of XI class students.

Jagannadhan (1986) found much impact of father’s occupation on the achievement of students.

Bhujendra Nath Panda (1991) observed that 9th and 10th class pupils (N=280) with skilled professional parents were found to be better in their academic achievement when compared with their counterparts.
Shamshuddin (1996) found that only a small percentage of both secondary school male and female teachers (N=200) indicated business, legal and medical indicated that their fathers were either in service or farming/ cultivation.

Ayishabi and Moly Kuruvilla (1998) found that there is no significant difference between mean scores of achievement motivation of pupils of IX standard of working and non-working mother’s, for the total sample (N=871). The findings are congruent with the findings of Stein (1973) and Bal (1988) who found a positive effect of maternal employment on the achievement motivation of adolescent and college going children.

Jayachandrama Naidu (1998) found that the influence of father’s occupation is not significant on the academic achievement of learners from formal education (N=300); whereas father’s occupation has significant influence on the academic achievement of learners from non-formal education (N=300) and the total sample is (N=600).

Goswamy; Minakshi (2002) found that children studying IX class with working mother’s were more achievement oriented than the children of non-working mother’s. Boys with working mothers were most achievement oriented than girls with working mothers.

Govinda Reddy (2002), reported that the employment of father, brothers and sisters have significant effect on the academic achievement of B.Ed. students in practical work and practical examination (N=600).

Panda (2002a) investigated that father’s occupation did not have any significant impact on the learning achievement of V class pupils (N=882) in rural, urban and tribal primary schools.

Krishna Reddy, D (2008) concluded that the academic / scholastic Achievement of 10th class Students has significant influence on their parents’ occupation.

Sankaraiah (2009) investigated that mother occupation of the B.Ed. students are significantly correlated with their academic achievement.
Moula (2010) found significant relationship ($r = 0.22$) between father's occupation and mother occupation and academic achievement motivation of standard eight pupils.

Siddi Raju (2010) investigated that father occupation and mother occupation has significant influence at 0.01 level on the Scholastic Achievement of IX class students in Physical sciences.

It is observed from the above that there are very few studies showing the relation between academic achievement and occupational status of the parents. Therefore occupational status of the parents is taken as variable in the present investigation.

2.25 ACHIEVEMENT AND NUMBER OF MEMBERS IN THE FAMILY / NUMBER OF CHILDREN IN THE FAMILY

It is assumed that the size of the family (i.e.) the total number of persons in the family/number of children in the family may have some impact on the studies of the children and hence on the academic achievement. Some of the earlier studies are presented hereunder.

Bhujendra Nath Panda (1991) observed that IX and X class pupils coming from small families were better in their academic achievement, when compared to that coming from big families.

Shamshuddin (1996) found that the average number of children was three in case of secondary school male teachers ($N=136$) and two children in case of female teachers ($N=64$). It was also found that almost all the teachers had joint families and they also supported joint family system.

Jayachandrama Naidu (1998) reported that family size has no significant influence on the academic achievement of learners from formal education centers ($N = 300$); whereas family size has significant influence on the academic achievement of total sample (i.e.) formal and non-formal education learners ($N = 600$).

Manchala (2007) found that there would be no significant influence of total children to the parents on the scholastic achievement of B,Ed. Students.
Krishna Reddy (2008) found that there would be no significant influence of total children to the parents on the scholastic achievement of X class students in mathematics.

Tenibiaje Joseph (2009) found that there is no significant difference between family size and academic achievement of students in higher institution.

Moula (2010) found significant relationship \((r = 0.26)\) between family size and academic achievement motivation of standard eight pupils.

Padmini (2010) investigated that number of members in the family has significant influence on the scholastic achievement of IX class students in biological sciences.

Siddi Raju (2010) investigated that total number of children in the family have significant influence at 0.01 level on the Scholastic Achievement of IX class students in Physical sciences.

It is observed from the above that there are very few studies showing the relation between academic achievement and number of members in the family / total number of children. Therefore number of members in the family / total number of children is taken as variable in the present investigation.

2.26 ACHIEVEMENT AND SOCIO - ECONOMIC STATUS

Socio-economic status of a family plays an important role in different aspects of an individual’s life. There may be some significant relationship between the SES and academic achievement of an individual. Some of the earlier studies made, on the relationship between SES and academic achievement of the students are presented here with

Rossi (1950), Gopal Rao (1956), Wash Burne (1959), Saini (1968), Lincoln (1969) and Srivastava et al. (1980) found significant relationship between academic achievement and socio economic status.

Thorndike (1952), Cattell et al., (1966), Meller (1970), Ahuwalia and Deo (1978) and Venkaiah (1980) found either negative or very low correlation between academic achievement and SES.
Pavithran and Feroze (1965) found that the relationship between economic status of the family and scholastic achievement of X class students is extremely low and almost negligible. There is no any conclusive evidence of either favourable or unfavourable influence of economic status of the family on the academic achievement.

Rao (1965); Srivastava (1967), Bernstein (1968) Sudamma (1973), Ahuliwalia and Shyam (1975) and Sharma and Bhargava (1980) found very little and negligible impact of SES on the academic achievement.

Gupta (1968) revealed that the students of 9th class with higher economic status and mental ability were better in their scholastic achievement, compared to those with lower SES.

Anand (1973) observed the relationship of SES and academic achievement. He found that the relationship between the two existed even when the influence of intelligence of non-verbal as well as verbal types were partialled out. He revealed that there was some impact of socio-economic status of family on the mental abilities as well as academic achievement of students of classes VIII, IX and IX.

Mennon (1973) studied experimentally the personality characteristics of high and under achievers. In this study, it is revealed that over achievement and under achievement was found to be influenced by socio-economic and demographic characteristics.

Rangaswamy and Visvesvara (1977) claimed that no definite pattern of correlation could be found between socio-economic status and academic achievement.

Asud Ulla khan et al., (1982) showed that SES of pre-university students (XII class) was found to be not effective in bringing about any variation in the scholastic achievement.

Shakiba –Nejad et al. (1983) observed a strong positive correlation between SES and academic achievement of the students.

Lal Singh (1984) found that there is no effect of socio-economic status on the academic achievements of XI class students (N = 200), when the students have intellectual ability. But high intellectual ability offsets any deficiency which may be created by lower socio-economic status group. (ii) As the intellectual ability decreases
from above average to below average, the affects of socio-economic conditions on academic achievement increases greatly.

Jagannadhan (1986) conducted a study on V, VI and VII class students and found that SES had got much impact on the academic performance.

Quaraishi and Bhat (1986) conducted a study on 200 undergraduate students of M.S University Baroda and found that socio-economic status has a significant effect on academic achievement.

Ramana Sood (1990) found that there is no significant effect on academic achievement of Pre-Engineering students (N = 120) and their socio economic status.

Vijayalakshmi and Hemalatha Natesan (1992) found a positive relationship (r =0.46) between academic achievement and SES of IX class students (N =100) which is significant at 0.01 level.

Marcon, Rebecca (1999) observed that SES was found to be an important factor in the academic performance, with poorer performance noted for lower income students.

Young, Deirdre (1999) revealed that SES had certainly some impact on the overall performance of students. They found the effect of other variables like self concept, class – room environment also, when they conducted a survey on 3397 also, covering 28 rural and urban schools in Australia.

Saxena (2001) revealed that the students, who secured first division in High school examination, belong to the middle socio-economic status, indicating that the SES had only a little effect on the academic achievement.

Karl, R. and Pyari, A. (2004) investigated into the relationship between family climate and income and academic achievement. Their findings are the achievement of the students having favorable family climate. The study finds in congruence with many research findings (Hari Krishna, 1992; Garg, V.P. 1992) that student achievement is found to be affected by the income status of the family.

Krishna Reddy, D (2008) concluded that the academic / scholastic Achievement of 10th class Students has significant influence on their socio – economic status.
Padmini (2010) investigated that socio-economic status has significant influence on the scholastic achievement of IX class students in biological sciences.

It is observed from the above that there are very few studies showing the relation between academic achievement and socio-economic status. Therefore socio-economic status is taken as variable in the present investigation.

2.27 ACHIEVEMENT AND BIRTH ORDER

Birth order means, the child born first, second, third and so on. Birth order may have some relationship with the academic achievement of the students in mathematics. The investigator included Birth order as one of the variables in the present study. Some of the earlier studies are presented hereunder.

Jagannadhan (1983) found that the birth order of V, VI and VII class pupils did not have any significant influence on their academic achievement.

Bhujendra Nath Panda (1991) found that birth order of IX and X class students did not have any significant influence on their academic achievement.

Govinda Reddy (2002) revealed that the birth order of DIET students have significant influence on the academic achievement in practical and in total achievement.

Manchala (2007) in her study on the academic achievement of the B.Ed students found that there was no significant influence of birth order on their academic achievement.

Krishna Reddy (2008) found that birth order did not have significant influence on scholastic achievement of X class students in mathematics.

Tenibiaje Joseph (2009) found that family size and birth order have no significant influence on academic performance of pre degree students of the University of Ado-Ekiti, Nigeria.

Padmini (2010) investigated that birth order has significant influence on the scholastic achievement of IX class students in biological sciences.

It is observed from the above that there are very few studies showing the relation between academic achievement and birth order. Therefore birth order is taken as variable in the present investigation.
Cultural background of the students may have some influence on the academic achievement of the students. Community / religion may also have some impact on the scholastic achievement. With this view, studies related to community / religion and achievement are presented hereunder.

Nair (1974) aimed at finding out the impact of certain sociological factors like family background, caste, religion, and sex on the teaching ability of teachers. He revealed that religion was found to be not affecting the teaching ability of teachers.

Asud Ulla Khan et al., (1982) found that religion of pre – university students (XII class) was found to be not effective in bringing about any variation in the scholastic achievement.

Radhamohan (1998) reported that there is significant difference in the high school student’s academic achievement belonging to different religions (viz.,) Hindu, Muslim and Christian.

Kobal-Palcic et al., (1999) showed that French pupil’s scholastic achievement was more, when compared to that of Slovenian pupils.

Krishna Moorthy (1999) observed that there was no significant difference on the achievement, in History of second year higher secondary students (N= 455).

Regnerus, Mark (2000) analyzed religious socialization as it relates to schooling success. Results indicates that respondents’ participation in church activities is related to heightened educational expectations, and that these more intensely religious students score higher on standardized Maths/ reading tests, even while controlling for a variable that often show religious effects to be spurious.

Selvam and Sundara Valli (2002) conducted a study on 300 higher secondary students and found that the academic achievement has significant relationship with their religious attitude.

Manchala (2007) found no significant influence of religion on the academic achievement of B.Ed student - teachers.

Krishna Reddy, D (2008) concluded that the academic / scholastic Achievement of 10th class Students has significant influence on their religion.
Benjamin Mc. Kune and Hoffmann (2009) indicate that the association between adolescents, religiosity and academic achievement is largely due to family, social capital, but the association between academic achievement and religious homogeneity between parents and adolescents is largely independent of family and community social capital. In particular the highest achievement is predicted when parents and adolescents report similar levels of religiosity. The lowest achievement is predicted when parents report high religiosity and adolescents report low religiosity.

Sankaraiah (2009) investigated that religion of the B.Ed students are significantly correlated with their academic achievement.

Padmini (2010) investigated that religion has significant influence on the scholastic achievement of IX class students in biological sciences.

Rohani & Ahmad Tornizi (2010): Studied that illustrated and identified significant relationship between students beliefs about importance of mathematics and beliefs on one's ability in mathematics with mathematics achievement.

Siddi Raju (2010) investigated that religion have significant influence at 0.01 level on the Scholastic Achievement of IX class students in Physical sciences.

It is observed from the above that there are very few studies showing the relation between academic achievement and religion. Therefore religion is taken as variable in the present investigation.

2.29 ACHIEVEMENT AND STUDY HABITS

Individual study habits play an important role in determining the academic achievement of pupils in different subjects. The students performance in the classroom depends upon several factors namely, the interest in the subject, study facilities, own study habits and so on. Some of the studies reviewed showing the relation between academic achievement and study habits are presented hereunder.

Most of the previous investigators pointed out that there is much impact of study habits on the academic achievements.

In this connection, it is worth mentioning the former president A. P. J. Abdul Kalam's views, on inculcating good reading habits in children and youth of the country.
He inaugurated a book fair held in Delhi and told the people to encourage their children and students with the advice that if they give one hour a day exclusively to book reading, they will become a knowledge centre in a few years. To acquire the habit of reading is to construct for you a refuge from almost all of the miseries of life. Reading is certainly one of the best experiences, a child can have and habits developed at a young age stay with a person for the rest of his life. What a gift for a child! There is more treasure in books than in all the pirated loot of Treasure Island. The more that you read, the more things you will know. The more that you learn, the more places you’ll go. Students who score higher on “tests, tend to come from schools which have more library resources, staff and more books, periodicals and videos, and where the instructional role of the teacher librarian involvement in co-operative programme planning and teaching is more prominent”

A wonderful thing about a book, in contrast to a computer screen, is that you can take it to bed with you. Reading is to the mind, what exercise is to the body. The brains of the next generation need to be sharpened so that we can make our dream to be one of the best in world come true.

Some of the studies already made previously on the relation between the academic achievement and study habits of the individuals are presented here under.

Cuff (1937) used a questionnaire to survey the study habits of grades IV to XII students. Half of the total students (samples) were defective in their achievement due to lack of study habits.

Woodruf (1940) found that study habits failed to show some definite relationship with academic achievement.

Gorden (1941) found that the coefficient of correlation between scores on study habits and course grades was higher when students were tested late in the semester than when tested at its beginning.

Wrenn and Hamber (1941) found that there existed relationship between the study habits and academic achievement in general.

Mary Esther (1945) found that there existed statistically significant differences in the achievement of most successful students with good study habits and least successful students with poor study habits.
Burnet (1951) reported that the student who has taken the course "How to study" increased their scores, as compared with those who had not taken the course.

Carter (1953) administrated study method test on 129 seniors in a California college Preparatory high school. In Pre-instance, a correlation with mid-term test score was 0.40 and in the post-instance the correlation with the senior year grade averages was 0.60.

Brown and Holtzman (1955), Patel (1981), and Chauham and Sing (1982) found that there exists significant relationship between study habits and academic scores among school going children.

Corter (1955) found a moderate positive linear relationship between the study habits and academic achievement.

Nortan (1959) conducted an investigation into the relationship between study habits and achievement in general science and found that there existed no relationship between them.

Diener (1960) obtained the similarities and differences between over achieving and underachieving students and observed that the two groups differed significantly in their study habits, indicating a positive relationship between them.

Sinha (1960) found significant relationship between study habits and scholastic achievement. Jammur (1961) found a correlation of 0.51 between study habits and achievement.

Brown and Dubois (1964) revealed that there existed a moderate positive relationship between the study habits and academic scores.

Richard and Verginia (1967) found a positive relationship between good study habits and achievement.

Samuel and Rao (1967) conducted a study on a sample of 500 pre-university course (P.U.C) students and showed that there is a significant positive relationship between the study habits and academic achievement.

Aggarwal and Saini (1969) found that the coefficient of correlation between the study habits score and scores on achievement in mathematics of VIII and IX class
students came to be + 0.014. Although this index seems to be quite poor, it was found significant at 0.05 level of confidence.

Krishna Moorthy and Rao (1969) conducted a study on 300 students. They observed that there existed significant correlation between study habits and academic achievement of urban students.

Sinha (1972) found that there is significant relationship between study habits and scholastic achievement.

Marentic-Pozaranik (1974) found positive relationship between study habits and scholastic achievement of IX Class pupils.

Girija, Bhadra and Ameerjan (1975) made a study on the relationship between the study habits and academic achievement of first and final year students of under graduates of university of Agricultural sciences, Bangalore. They found the two groups differed significantly with regard to their study skills and achievement.

Asha Bhatnagar (1980) made a study on 600 students of X class of Delhi and found that there existed a positive relationship between the study habits and academic achievement.

Tuli (1980), Patel (1981), Chopra (1982) found that there was a positive relationship between study habits and academic achievement.

Chopra (1982) identified that the study habits were positively related to academic achievement.

Aruna (1984) found that study habits of X class Pupils have significant influence on their scholastic achievement in all the subjects.

Premalath Sarma (1986) reported that the underachieving rural girls significantly differ in their study habits from high achieving rural girls of IX and X class students.

Harbans Singh (1989) showed no significant differences in the study habits at different levels of achievement of X class scheduled caste pupils (N= 300). But boys were found to have significantly better study habits than girls.

Deb and Gravel (1990) reported that the study habits and the academic achievement of B.Sc. final year students are positively related.
Ruth Lee (1992) revealed that the development of study skills in IX and X class students resulted in improvement of grades.

Chitra, Thiagarajan and Santhana Krishnan (1993) found that the academic habits and achievement were positively related to intelligence of higher secondary students.

Rama Murthy (1993) found that despite the students possessing good intelligence, their academic achievement hampers due to the absence of good study skills.

Stella and Purushiotham (1993) showed that there is no significant difference between study habits of under achieving boys and girls.

On Tsk Ka and Wat Kins (1994) found that the study habits are significantly correlated with school grades of first year school students in Hong Kong.

Rawat and Leela (1995) found that there was no significant difference between the study habits of boys and girls and their academic achievement.

Patel, M.R. (1996) revealed that 1. The achievement scores of the pupils having high and low general ability were significantly different. 2. Those pupils who had good study habits did get significantly more achievement scores than those who had poor study habits. 3. It was found that sex and study habits interacted significantly in explaining achievement scores.

Varma (1996) found that the academic achievement in mathematics and general science is more or less same in the case of students with good study habits and students with poor study habits.

Gordan Darlene (1998) found that the students having good study habits possessed good achievement. Venden Hurl et al., (1998) showed that the study habits of medical students were correlated with their academic achievement.

Kumar, Anil (1998) reported that there existed a significant positive correlation between academic achievement and study habits.

Verma, S and Kumar R. (1999): found that 1. The achievement in mathematics was positively and significantly correlated with the study habits of the
Students. 2. Overall achievements were significantly and positively related to the study habits of students.

Sam Sananda Raj and Sreethi (2000) found that study habits and academic achievement of students are positively and significantly related.

Kumar and Kamala (2001) investigated that the successful learners who scored 35 percent and above marks in science interest and scientist attitude than the unsuccessful learners of higher secondary schools.

Nagaraju (2002) concluded that the academic achievement of the pupils in X class public examination in all the school subjects and total academic achievement have significant influence on study achievement have better study habits. There is perfect positive correlation between the academic achievement and study habits of the pupils (N=1800).

Archana and Monasharma (2002) conducted a study on 26 Grade-1 children in Indoor. The results found that the instructional material could positively influence the achievement of students.

Govinda Reddy (2002) found that study habits of a DIET student have significant influence on achievement.

Vamadevappa (2002) found that there existed positive and significant relationship between study habits and achievement of Pre – University students in Biology subject.

Naveen Kumar Reddy (2003) reported that study habits and academic achievement are positively and significantly related.

Bhaskara Rao, Somasurya Prakash Rao and Bhuvaneswara Lakshmi (2004) have identified a positive relationship between study habits and academic achievement.

Guravaiah (2004) investigated into the academic achievement of X class students in all the school subjects and found that study habits of pupils do not have any significant influence on the scoring.

Lakshmi (2004) identified positive relationship between study habits and achievements of a DIET student.
Rajani (2004) observed that the academic achievement of Intermediate students (N=1200) in all the subjects including group subjects is positively related to their study habits.

Manchala (2007) showed that all the ten areas of study habits inventory have significant influence on scholastic achievement of B.Ed students. Better study habits is associated with better scholastic achievement.

Ramana sood and Dalvinder Kumar (2007) found that learners having good study habits have better academic achievement.

Krishna Reddy, D (2008) concluded that the academic / scholastic Achievement of B.Ed. Students has significant influence on their study-habits. It is inferred that the students who have good study-habits can achieve the good academic results.

Prabhakar, G (2008) concluded that the academic / scholastic Achievement of B.Ed. Students has significant influence on their study-habits. It is inferred that the students who have good study-habits can achieve the good academic results.

Nalini and Ganesha Bhatta (2009) found significant relationship between study habits and academic achievement.

Padmini (2010) investigated that study habits has significant influence on the scholastic achievement of IX class students in biological sciences.

Siddi Raju (2010) found that all the seven areas of study habits and total score on study habits have significant influence at 0.01 level on the scholastic achievement of IX class students in Physical sciences. It is observed that the students with better study habits achieved significantly better in physical sciences.

It is observed from the above that there are very few studies showing the relation between academic achievement and study habits. Therefore study habits is taken as variable in the present investigation.

2.30 ACHIEVEMENT AND SELF-CONCEPT

Self-concepts play an important role in the life of pupils. Muktha Rani Rasthogi's (1974) self-concept scale is adopted in this study to examine the impact of self-concepts on the achievement of B.Ed. students. Some of the earlier studies
showing the relationship between academic achievement and self-concept are presented hereunder.

Mac Aulay, Dolina (1990) reported that there is a positive significant relation between academic achievement and home environment.

Mc Robbie and Fraser (1993) found that there existed a positive relation between academic achievement and home environment.

Martin (1995) concluded that there was a significant relationship between academic achievement and home environment.

Walf Richard (1996), Marjoribanks (1996), Walberg and Paik (1997) reported that there existed positive significant relationship between academic achievement and home environment.

Basantha and Mukhopadyaya (2001) indicated that the achievement of secondary school rural students was significantly related to their home environment. Both home environment and school environment were significantly related to each other.

Malvinder Ahuja (2006) studied the impact of parental involvement and self-concept on academic achievement of ninth class students (N= 100). The findings indicated that (1) self-concept and parental involvement were associated with each other; (2) self-concept and academic achievement of students were independent of each other; (3) academic achievement of high and low parental involvement groups were not significantly different; and (4) there was an interaction effect of self-concept and parental involvement on academic achievement of ninth class students.

Saritha (2006) studied the differences in Psychosocial problems of adolescent children of working and non-working mothers (N=415). She reported that intensity of psychosocial problems was found to be lesser in the adolescents of working mothers as compared to those with non-working mothers in relation to their level of self-concept.

Gordan Darlene (2007) found that the students having good high self-concept possessed good achievement.
Kumar (2007) in his study concluded that there existed a significant positive correlation between academic performance and the level of self-concept.

Anuradha Joshi (2008) found that the personality of class IX students effected the self-concept. The extroverts were found to benefit significantly more through the developed instructional strategy, as compared to the introverts.

Knapp et al. (2008) found that the level of self-concept on reading comprehension and attitudes toward reading were significantly improved when readers participated in a 10 week apprenticeship in reading to enable the students to accomplish the authentic task of reading a personally interesting book beyond his/her independent capabilities.


Venden Hurl et al. (2008) showed that the self-concept of medical students was correlated with their level in academic achievement.

Corlos and Rodriguez (2009): Found that high students academic self-concept and unambiguous out come expectations encourage critical thinking, reflective approaches and academic performance.

Dickinson et al. (2009) found from a study which examined the relationship between study time and test scores that time spent organizing had a stronger relationship with course test scores (N= 113 undergraduates) in relation to their level of self-concept.

Padmini (2010) investigated that self concept has significant influence on the scholastic achievement of IX class students in biological sciences.

Philias Oulatunde (2010) showed that students of secondary schools have good self-concept of themselves in performing well in mathematics.

Siddi Raju (2010) found that the computed values of ‘F’ for the self-concepts namely (i) Health and sex appropriateness(SC1) (ii)Abilities (SC2), (iii) Worthiness
(SC₅), (iv) present-past-future (SC₈), (v) Beliefs and convictions (SC₇), (vi) Emotional Maturity (SC₁₀) and (vii) Self-concepts total score (SC₁₇), are far greater than the critical value of ‘F’ (4.60) for 2 and 1797 df at 0.01 level of significance. It is clear from the mean values that who are better in Health and Sex appropriateness, Abilities, Worthiness, Present -Past -Feature, Believes and convictions and total self - concept are also significantly better in scholastic achievement of IX class students in physical sciences. It is found that the computed values of ‘F’ for the Self –Concepts namely (i) Self confidence (SC₃) and (ii) Sociability (SC₈) are greater than the critical value of ‘F’ (2.99) for 2 and 1797 df at 0.05 level of significance. The areas of self-concepts namely (i) Self acceptance (SC₄) and (ii) Shame and Guilt (SC₅), do not have significant influence at 0.05 level on the scholastic achievement of IX class students in physical sciences.

It is observed from the above that there are very few studies showing the relation between academic achievement and self – concept. Therefore self concept is taken as variable in the present investigation.

2.31 MISCELLANEOUS STUDIES ON ACHIEVEMENT

Some of the miscellaneous studies related to academic / scholastic achievement are given herewith:

Mishra et al., (1960) found that children coming from high home environment achieve better in schools than their counter parts coming from low family environment.

Morrow and Williamson (1961) while analyzing the back ground of the family factors responsible for higher achievement of physically challenged group children, concluded that more congenial home environment, less parent domination and sympathetic parental encouragement, have been found to be responsible for achievement of children.

Husen (1967); Dave and Dave (1971) found that poor academic achievement was due to the low educational standards of their parents.

Long and Resh (1976) could not find significant differences between father’s income and child’s level of abstract achievement.
Sharama (1977) made an attempt to examine the achievement of children in relation to the school system. He found that children of the recognized private schools achieved higher scores in Arithmetic than those of the corporation schools.

Hilde Brand and Patricia (1978) have shown positive relationship between educational environment and child’s performance in Biology.

Sudha R. Sinha (1980) in the study “Effect of school system on the competence of secondary school students”, investigated into the difference between the system of private and government schools and how it influenced the competence of its students. Three aspects of the system were, examined- the material, organizational and human relations. The findings revealed that despite less physical facilities and higher workload, the private schools had better organizational structure and more competent students than the government schools.

Head, John (1981) found that extraverted boys and introverted girls did well within their own sex group, when they were given mathematics activities. Students studying in private schools had better achievement than those studying in government schools. This achievement was due to the strict supervision by the principal and managements of private schools, better teacher- pupil interaction, good educational environment, teacher’s special care of the weak students, teachers interest in the study of the children and sense of security and guidance and counseling in private schools.

Chopra (1982) found that student’s achievement was not significantly different in different organizational climate of schools even at 0.05 level. There was no significant relationship between students’ achievement and teachers’ job satisfaction.

Vyas (1982) reported that age, academic achievement, verbal intelligence, non-verbal intelligence and SES contributed to the supervisors rating in case of a total of 300 male samples of B.Ed. Students.

Lalithanhawla (1983) studied the causes of failures in science and mathematics among high school students of the Mizoram state and found that general standard of achievement in science was 33.24% as compared to 27.86% in mathematics. Students from urban areas and from privately managed schools and older schools did better than those in rural areas and government schools and newly
established schools. The provision of good library, laboratory and special coaching classes are not related to the students’ achievement in these subjects.

Chadha and Sunanda Chandana (1990) observed that there is a positive and significant correlation at 0.01 level between creativity and intelligence of XI grade students', when the effect of scholastic achievement is partialed out. There is a positive and significant correlation at 0.01 level between intelligence and scholastic achievement when the effect of creativity is partialed out. There is negative and significant correlation at 0.01 between creativity and scholastic achievement when intelligence is partialed out.

Mac Aculay, Dohina (1990) reported that there is a positive significant relation between academic achievement and home environment.

Venkataiah and Jayachandrarama Naidu (1990) reported that there is significant difference between academic achievement of dropouts \( N=39 \) and Non-Starters \( N=261 \) at Non Formal Education Centers (NFE). The dropouts from formal primary schools are superior to non starters in their academic achievement as NFE centers.

Cobb, P. et al., (1991) found that students number sense was improved by a problem centered curriculum that emphasized students interaction and self generated solution methods. Students also demonstrated increased persistence in solving problems.

Yeh- Hsiang-Yeng (1991) reported that weak but positive correlation existed between achievement motivation and academic achievement. There is no significant difference in the achievement of boys and girls in the case of Govt and private schools. Urban students are better than rural students in respect of their achievement in Biology.

Kumara Swamy (1992) investigated that variations in the amount of General Ability possessed by the adult learners significantly effects their achievement.

Vyas (1993) found that academic failure was associated with lower affiliation, teacher control, rule clarity and teacher support variables.

Martin (1995) concluded that there was a significant relationship between academic achievement and home environment.
Varghese (1995) found that the achievement scores showed a systematic improvement with improvement in facilities of school and that the difference in the mean achievement scores between the learners in the last facility schools and the best facility schools was very large in both in Hindi and Mathematics.

Shui Feng (1997) conducted a study on the influence of family factors on the academic achievement and concluded that children's academic achievement has been shown to be influenced by many family factors. It indicated that authoritative parenting and children's academic achievement were significantly correlated.

Slemmer, Gerald (1997) found that required tutoring seemed to be an effective way of improving the academic achievement of marginal students of 10th, 11th and 12th grades.

Wal Berg and Paik (1997), Marjoribanks (1996), Walf Richard (1996), Martins (1995), Mc Robbie and Fraser (1993) and Mac Aculay (1990) reported that there is a positive significant relation between academic achievement of students and their home environment. Private Schools and Government Schools. Private Schools and Government aided Schools. Private Schools and Cooperation Schools and there is no significant difference between the students of Government Schools and Government aided Schools, Government Schools and Corporation Schools and Government aided Schools and Corporation Schools. It also shows that educational Qualifications of parents have a powerful bearing on the interest of the students in mathematics.

Kumar, Anil (1998) in his study concluded that there existed a significant positive correlation between academic performance and study habits.

Narayana Koteswara and Ramachandra Reddy (1998) showed that there is locality influence on reading achievement of high school pupils. Pupils in residential schools performend better than pupils in rural and urban. Among the three groups pupils in rural areas were the lowest in achievement.

Krishna Moorthy (1999) found that locale of school has caused no significant difference in respect of academic achievement in history of the second year higher secondary students (N=455). Having Parent - Teacher Conferences, Meeting Parents at PTO meetings. Using Educational Psychology for providing a model to parents in
assisting their offspring in homework. 'Integrating human relations and curricular improvement in Teaching-Learning situations.'

Molia M. S. (1999) showed that the use of inductive thinking models improved the achievement of the students in mathematics.

Wood (1999) found that whole-class discussion works best, when discussion following individual and group work improves student's achievement.

Devi and Mayuri (2000) revealed that 1. Family factors were not found to be critically important for the achievement of residential school children. 2. School factors like, qualified teachers, good physical facilities and classroom organization, checking of the curriculum and subject matter, time maintenance, impressive method of teaching and teacher-student interaction contributed significantly to the academic achievement.

Dhall, G. D.; Gautam, S. K. S.; Autar, Ram and Sankar, M. (2000) revealed that the teaching of students with low achievement with remedial materials prepared after diagnostic test increased their achievement.

Dharma Raja et al., (2000) investigated that the higher secondary students of urban (N=124) and rural (N=103) areas did not differ significantly in computer achievement.

Jyothi Rathore (2000) found that the mean scholastic achievement of rural pupils at primary level in Environmental Studies (Science) is significantly better at 0.01 level than the urban pupils studying at Formal Primary Schools and Non-Formal Education Centers.

Panda (2000) found that rural students exhibited better performance in all the school subjects as compared to their urban and tribal classmates. Boys and girls studying in different areas did not differ in their performance in all the school subjects. Father's occupation and tuition did not have any significant impact on the learning achievement in all the three areas. Rural students performed better in all the school subjects where infrastructure facilities were available in the schools compared to the schools with less facility.

Prakash (2000) in his study conclude that urban students were higher in their mathematical achievements as compared to rural students.
Ravindra, Basavaiah D. and Basti' (2000) showed that Boys were found good in abstract thinking and symbolizing concepts in mathematics, where girls were good in logical thinking and mathematical modeling. Both males and females have the same level of liking for mathematics. Both males and females have the same level of perception of mathematics. Males stated that "social factors do not favor girls to go for higher studies in mathematics" as the main reason for not having top level women mathematicians. But females stated that "Vocational interests of women are different" as the main reason.

Alam, A.M. (2001) showed that the academic achievement of normal children was found to be significantly higher than that of learning impaired children in both boys and girls when taken together and when taken separately. The normal students were found to be higher in academic achievement.

Basantha and Mukhopadyaya (2001) indicated that academic achievement of secondary school rural students (N=320) was significantly related to their home environment, but the school environment was not significantly related to academic achievement, where as both school environment and home environment were significantly correlated to each other.

Elegbeleye and Akoda (2001) investigated that there existed a significant difference between the academic performance of pupils (N=150) of secondary schools from single and double parenting background. Academic performance of children of mother present was significantly better than children of mother absent.

Rose and Elizebath (2001) examined the patterns of academic progress and outcome in different inner city school settings for African American and White, lower, middle and upper socio-economic strata students. They revealed that the overall academic out comes were higher for gifted students enrolled in the programme sometime during their school career than for general education students.

Soundaravalli (2001) found that the academic achievement of standard XII students (N=300) had significant relationship with physical problems and family problems scores.

Agarwal, Archana (2002) found that significant positive relationship was found between academic achievement and intelligence. Academic achievement was
found to be positively related with their socio-economic status. There was significant negative relationship between the academic achievement and size of the family. Significant negative relationship was found between academic achievement and birth order. The study has no reference.

Anuradha and Bharati (2002) found that a trend of negative association was observed between III, IV and V classes children (N=300) academic achievement and their amount of T.V watching. Watching only a selected programmes improved children’s academic achievement significantly rather than watching all the programmes.

Arya, Kalpana, and Kistwaria (2002) found that the involvement of adolescent daughters in the household activities of employed home makers was more than corresponding non-employed home-makers. A majority of the adolescent daughters of non-employed mother’s devote more time for their studies in comparison with the corresponding employed mother’s. A higher percentage of the adolescent daughters of employed mother’s were not participating in co-curricular activities than that of the other respondents. The study cites 6 references.

Basantha, J. M. and Mukhopadyaya, D. (2002) revealed that Psycho-social constraints and academic achievement of high school students are negatively correlated with each other.

Gnanasundaratharasu and Vincent De Paul, S. (2002) investigated that due to Vedio assisted instruction, there is no significant difference in mean achievement in social science between rural and urban pupils at primary level.

Goel, Swami Pyari (2002) in their study on the relationship of achievement and feeling of security, family attachment found that Low achievement had a positive relationship with the feelings of security; where as the average and high achievement had a negative relationship with the feeling of security. Family attachment and achievement scores were negatively related. A related factor responsible for higher educational achievement was parental attitude. Feelings of security- insecurity were significantly and positively related to the family attachment. Theoretical, aesthetic and religious values were positively related with achievement score, but economic and political values were negatively related with achievement score. Social value had a
positive relationship with the average achievements but the low and high achievements were negatively correlated. There was no difference in value pattern of low and average achievers where as high achievers gave the first preference to theoretical, value, than to social, political, economic, aesthetic and religious value.

The study has eight references

Govinda Reddy (2002) examined that (i) Region (Andhra, Telengana and Rayalaseema) has significant influence on the academic achievement of DIET students (N=600) at 0.01 level. Andhra students (N=240) performed better than the Telengana students (N=240) performed better than Rayalaseema students (N=120) (ii) Place of birth does not have significant impact on the academic achievement of DIET students.

Hamingthanzuala (2002) found that students of X standard who had higher interest in business were found good at English, social science and in overall academic performance.

Mohanty (2002) conducted a survey to see whether components of family environment bear any relationship with academic achievement of gifted, underachievers and his findings were the mean score of boys was higher than that of girls. The boys scored higher on cohesion, intellectual cultural organization, Moral and Religious emphasis, while the girls scored higher on conflict, achievement orientation and organization of components of family environment scale (FES). Inutility the underachievers' academic achievement was significantly related with all components of FES except active Recreational organization. For underachieving boys no correlation between a component of FES and academic achievement was found to be significant. However in the case of underachieving girl's cohesion, Independence and control components of FES were found to be correlated significantly with academic achievement.

Naresh Kumar Gupta (2002) reported that achievement of majority of V class pupils (N=946) in slum area schools has been observed to be unsatisfactory not only in mathematics but also in language environmental science and social science.
Panda (2002a) observed that V class pupils (N=882), who were taking midday meal, free Uniform, Scholarships and free textbooks as incentives performed well when compared to that of not receiving any incentives.

Sharma, S. Nidhi (2002) in their study examined the effect of parental involvement and Aspirations on academic achievement of +2 students found that. Parents of high and low achieving students exhibited differentiated behavioral profiles with regard to some dimensions of parental involvement. Parents of high achieving students often provided academic guidance to their and also planned various cultural activities such as arranging picnics, dance show and other festivals. Achievement scores of children belonging to high, average and low groups of parental educational aspirations were not equal. The academic achievement scores were different for children belonging to different parental involvement groups. High parental involvement group, scores higher on educational aspirations as compared to their counter parts in the low parental involvement group. Higher parental involvement resulted in higher occupational aspirations of students. High, average and low parental occupational aspirations groups yielded unequal levels of learning styles.

Vamadevappa, H.V. (2002) conducted a study to find out the relationship between parental involvement and academic achievement. His findings were There was positive and significant relationship between parental involvement and academic achievement. There was a significant difference in the achievement scores of boys and girls of high parental involvement group. There was no significant difference in the achievements of boys and girls of high parental involvement group. There was significant difference between high achievers and low achievers with respect to the parental involvement. There was no significant difference between boys and girls in their academic achievement.

Guest and Schneider (2003) conducted research on what influence various social factors had on the relationship between extracurricular activities and academic performance. They found that most of the studies previously conducted on the relationship between these two factors had not taken into account the meaning that participation in extracurricular activities "[held] for individual participants within distinct social contexts". They believed that every school and community assigned certain values to the various activities, putting more importance on some over others.
The value that is placed on each activity affects the relationship between that specific activity and academic performance.

Nwankwo and Kemjika (2003) found that the relationship between test anxiety and academic achievement were inversely proportional at secondary levels.

Prakash (2003) found that the ascendance, vigorous and persistent temperaments were significantly related with mathematics achievement in girls and total sample among boys, the ascendance, accepting, vigorous, cooperative and tough-minded temperaments were significantly and positively correlated with mathematics achievement. Girls with low sociability appeared significantly higher in mathematics achievement than girls with higher sociability at high memory level only.

Rahaman M.H. (2003) in his comparison of achievement in mathematics of eighth grade students of different ethnic groups of Nepal found that there was significant difference among the four ethnic groups with regard to the over all achievement in mathematics. Tamang students were found to be the best among the four groups in over all achievement in mathematics. Ethnic groups significantly differed from each other with respect to the achievement on knowledge, skill, comprehension and application levels. No significant difference was found between Tamang and Magar groups in knowledge. Sarkari children were found to be the lowest achievers on knowledge among all ethnic groups. The study cited two hundred nineteen references

Upadhya (2003) found that constructivism was found to be a better technique of teaching mathematics.

Anice James and Marice (2004) studied academic achievement in science among XI standard students (N=470). Students hailing from rural (N=199) areas have same type of academic achievement in Science.

Bhaskar Rao, Somasurya Prakash Rao and Bhuvaneswara Lakshmi (2004) have identified a positive relationship between study habits and academic achievement.

Bose, S. and Joshi V (2004) studied the effect of parents involvement in the achievement of students and found that Children whose parents were involved in their education led a disciplined life at home and had better academic achievement at
school. Involvement of parents was also reflected in the activities that a child pursued in his leisure time. It was found that parents could not reinforce the things, the children learnt at school and some children attended tutorials. Tutorials did not help the children in performing better, rather the children who attended school regularly and received proper care at home, fare better. The study also found that home environment that indoctrinates children into a disciplined life and healthy life style ensures better academic achievement.

Gakhar and Aseema (2004) investigated that Shahpur Nagappa and Panchalingappa (2004) while investigating the influence of the study habits, family climate adjustment and academic achievement of Devadasi, children of Karnataka state, found that there is no significant difference between boys and girls children of Devadasi with respect to family climate. There is no significant difference between boys and girls children of Devadasi in respect of their academic achievement. There is no significant difference between rural and urban children of Devadasi in respect of their academic achievement. There is no significant difference in interaction effects of sex and location in terms of academic achievement of Devadasi children. There is no significant difference between boys and girls children of Devadasi in respect of academic achievement. There is no significant difference between boys and girls children of Devadasi in respect of their study habits.

Kumar, S. and Anita (2004) from their findings revealed that both the variables self-learning module and classroom environment can not be ignored in respect of their effect on achievement. There was no interaction between mode of teaching and classroom environment.

Madankar (2004) observed that Residence, Peer group, Curriculum, Classroom teaching and Evaluations have negative and significant relationship with academic achievement, where as 'food' and 'co-curricular activities' have negative and not significant relationship with academic achievement of school subjects.

Mehera (2004) found that Achievement in mathematics was significantly related to major learning environment, attitude towards the subject, mathematics. No sex-wise difference was found in achievement of students in mathematics.
Sensarma (2004) while attempting to determine the relationship between class-room interaction variables of different branches of mathematics and mathematics achievement and attempting to predict the achievement from interaction variables concluded that. Higher values of Praise, acceptance of pupil's ideas, asking questions by teacher, pupil’s response and the rate of class-room transaction are associated with higher pupil’s achievements in mathematics. Teacher’s tendency to react to the ideas and feelings of pupil’s is positively and significantly related to the better achievements in algebra, arithmetic, and geometry. Velocity of class-room transition is positively and significantly related to the achievement in algebra, arithmetic and geometry separately. The pupil’s initiation is negatively associated with mathematics achievement in all the branches, algebra, arithmetic and geometry.

Sirohi (2004) investigated that All under-achievers indicated deficiency in study habits98.70% of the under achievers tend to possess unfavourable attitude towards teachers and needed guidance.97.50% of the students had poor concentration 92.50% of students indicated deficiency in school and home environment.72.80% of them faced mental conflicts72.80% of underachievers were low in self confidence24.60% of them indicated deficiency in attitude towards education

Uma, S. (2004) on studying the role of computers in the performance found that 1. The achievement scores improved in the test conducted after the revision of the lesson by ‘teacher’. 2. Thoroughly revising the lesson through computers has increased their performance; the best scores are when the revision is by the Teacher and when computers are not used. 3. some of the interesting points observed by her are (i) Learning through computers was high with below average students than with good students. (ii)The attention span and interest duration of the slow learners is comparatively, less than that of very good students. (iii) Very good and good students have better reading and comprehension skills. Thus they were fast on the computers. The below average students took time to read and comprehend. Thus they usually took more time to complete the work on computers.

Viswanathan (2004) investigate that (i) Boys (N=160) and girls (N=69) of XI standard studying in rural schools do not differ in their achievement in History. (ii) Boys (306) and girls (N=185) studying in urban schools differ in their achievement in History. The girls perform better than the boys. (iii) There is no evidence to show that
the pupils studying in rural and urban schools differ in their achievement in history. Sexena (1960), Williams (1979), Chakrabarthi (1988), Ajeh (1993) and Rangappa (1995) have reported that the urban students had higher achievement than the rural students. But Ojha (1979) observed that the rural boys had better performance than urban boys.

Arockiadod (2005) studied the correlation between study habits and academic performance of college students (N=025) He reported that the academic performance of college students in influenced by study habits.

Avinashilingam N.A.V and Sharma.G (2005) made a study to find out the factors influencing the student's academic achievement. Their findings are it was found that classroom factors play a major role in affecting the student's academic performance. This is followed by the environmental factors and developmental factors. The student's inner urge, the competency of teachers no physical distraction and contacts with like minded colleagues make a student more competent to succeed in life.

Darling, Caldwell, and Smith (2005) conducted a longitudinal study concerning extracurricular activities and their effect on various aspects of development, including academic performance. A survey containing a list of twenty different extracurricular activities was distributed to students; they were asked to check which extracurricular activities they participated in that year. Demographic questions, such as their favorite activity, gender, and ethnicity were asked in order to take the social factors and influences into account when calculating the results. The students were also asked what their academic goals were and their grade point average. The results showed that the students who participated in school – based extracurricular activities had higher grades, higher academic aspirations, and better academic attitudes than those who were not involved in extracurricular activities at all. The students who did not participate in any extracurricular activities showed the poorest adjustment as far as grades, attitude toward school, and academic aspirations, while non-sport extracurricular activities showed the most positive adjustment, with sports related extracurricular activities in the middle.

Dwivedi, R.D. (2005) conducted a study to compare the educational achievements of students belonging to different categories of schools, according to
their environment and found the following. The students from schools with enriched environment had significantly better academic achievement than students from poor school environment. The students who were high approval seekers had significantly greater achievement than the students who were low approval seekers. Academic achievement of students of the urban schools was significantly higher than that of the schools of the rural schools.

Gurubasappa (2005) while studying the effects of adjustment and mental ability on scholastic of secondary school children, concluded that the well adjusted children's achievement in school is high the children with better mental ability will definitely achieve high. The product of learning academic achievement of students is certainly influenced by some psychological factors like adjustment and mental ability.

Kimiko Fujita (2005) found that the results of the One-dimensional Chi-square test suggest that participation in extracurricular activities improves academic performance; participation in musical performance does not improve academic performance; athletic participation improves academic performance; watching television improves academic performance; and participation in community service improves academic performance among the junior high students attending Walnut Creek Christian Academy.

Manas Ranjan Panigrahi (2005) while studying the influence of intelligence and socio-economic status on academic achievement of high school students concluded that there exist a significant and positive correlation between academic achievement and intelligence. It is also found that high intelligence leads to better academic success. There exists a low positive correlation between academic achievement and socio-economic status. It is observed that high socio-economic background might not always facilitate high academic success. It is found that there is no significant difference between boys and girls with respect to academic achievement. The students having higher intelligence are high achievers in academic performance than students having low intelligence. High socio-economic status has effected the girls greatly to be very conducive to high achievement and vice-versa is the case with boys. The girls of high socio-economic status are high achievers in academic performance than boys of high socio-economic status, boys of low socio-economic status and girls of low economic status.
Manoranjan Panda (2005), in his study on correlation between academic achievement and intelligence of class IX students concluded that there is significant difference in academic achievement of students studying in different categories of schools. There is no significant difference in intelligence of students studying in different categories of schools. There is low relationship between academic achievement and intelligence in different categories of schools. The findings of the study clearly state that there is little significant relationship between academic achievement and intelligence in schools of Dhenkanal district of Orissa state.

Neetha George, Dr. Anitha Ravindran (2005) revealed that there is a linear relationship among accuracy in time perception, coping styles and level of academic achievement. In other words time consciousness or punctuality is a quality that would enhance the academic achievement. They suggested that these results can be considered in helping low achievers.

Periaswamy (2005) showed that the teaching and learning of addition and subtraction through activity based learning materials (TLM) improves academic achievement of IV standard pupils (N=30). A significant relationship was found between student's perception of teacher's attitudes towards them and their academic achievement. A significant relationship was found between the academic achievement of students and their self-perception.

Satya Prakash and Patnaik, S.P. (2005) made a study to find out the effect of cooperative learning and found the following. There was positive effect of cooperative learning on achievement motivation. Cooperative learning has a positive effect on achievement in biology in terms of understanding, Knowledge and application of objectives as well as total achievement.

Sindhu I.S (2005) revealed that better liking of teachers contributed to better achievement of boys.

Malvinder Ahuja (2006) studied the impact of parental involvement and socio-economic status of the family on academic achievement of IX class students. Their findings indicated that 1. Socio-economic status of the family and parental involvement were associated with each other 2. socio-economic status and academic achievement of students were independent of each other 3. Academic achievement of
high and low parental involvement group were not significantly different. 4. There was an interaction effect of socio-economic status and parental involvement on academic achievement of IX class students.

Ayodhya (2007) revealed that 1. Emotional problems did not have any influence on the scholastic achievement in the present day. 2. Life events did not have any influence on the scholastic achievement. 3. No difference was found with regard to socio demographic factors and emotional disorders, scholastic achievement and life events. 4. No association was found between scholastic achievement and intelligence.

Manchala (2007) showed that all the ten areas of study habits inventory have significant influence on scholastic achievement of B.Ed. students. Better study habits are associated with better scholastic achievement.

Annakkodi (2008), in her study entitled “study of scientific attitude of pupils of class XI and their achievement in Science, concluded that There was positive significant difference in the scientific attitude of students in relation to their achievement in Science. It was found that there was a high significant difference in the scientific attitude of students based on their type of school, the corporation school students show high mean value of scientific attitude when compared to Government aided schools. It was found that there was high positive significant difference in the scientific attitude of rural and urban students. It was found that there was a significant difference in the scientific attitude of students based on their Gender.

Kasinath (2008) conducted a study on interactive effect of Mental Health, School Adjustment and SES on Academic Achievement. The major findings are: (i) performance of the students with good mental health was better in the school subjects, (ii) the comparison of mean values indicated that students who were well adjusted perform better in their school subjects, (iii) the achievement in science and mathematics was depended on the influence of SES of students, (iv) the academic achievement was influenced by the interaction effects of school adjustment and SES of students and (v) academic performance of the students was depend on their adjustment with the school and SES background.

Krishna Reddy, D (2008) concluded that the academic / scholastic Achievement of 10th class Students has significant influence on their separate room
for study. Hence it is concluded that students having separate study room will have better achievement. The number of hours of study at home has significant influence on the scholastic achievement of 10th class students in mathematics. The variable "works at home" has significant influence on the scholastic achievement.

Lekhi and Kaur (2008) conducted a study on ‘intelligence, achievement motivation and study habits as correlates of achievement’. The sample of the study consisted of 100 students randomly selected from four English medium schools of Punjab. The students of class 10th were taken for the study. The findings of the study were: (i) intelligence, achievement and study habits correlated positively with the academic achievement of the students, (ii) academic achievement of high intelligence students was significantly high in their academic achievement and (iii) students having good study habits had better academic achievement as compared to those having poor study habits.

NCERT (2008) conducted a mid-term national survey to gauge the learning achievement of class V children. The survey covered Eighty four thousand, three hundred and twenty two (84322) students, fourteen thousand, eight hundred and ten (14810) teachers and six thousand, eight hundred and twenty eight (6828) schools, across, two hundred and sixty six (266) districts, in the country. The survey tested the learning achievement of class V level students in mathematical, environmental studies and languages. It concluded that 1. Mother's education is important than father's education. 2. The schools that enjoyed better infrastructure and facilities like T.V, computer, more number of teachers and community participation contributed ten Percent (10%) more in (E.V.S) Environmental studies, eight point four (8.4%) percent better in mathematics and Nineteen point six (19.6%) percent better in languages.

Pandey and Manikhur (2008) conducted a study to find out the relationship between SES and academic achievement of adolescent students. The results of this study revealed a significant relationship between academic achievement and socio-economic status. However, significant differences were observed between academic achievements of adolescents belonging to high and low SES.

Panday, S.N., Md. Faiz Ahmed (2008) conducted a study on a sample of 621 students of XI standard Male Adolescents (417) and Female Adolescents (204) and
found that there is no significant difference between male and female adolescents on measures of achievement motivation.

Rajamanikham and Vasantha (2008) conducted study on the relationship between student adjustment problems and their academic achievement. The findings: (i) there was a significant positive correlation between adjustment and achievement, (ii) the scores of the students on their adjustment gradually decreased as the qualification of the parent increased while achievement scores gradually increased as the qualification of the parents increased, (iii) the different sibling groups differed significantly on the academic achievement, (iv) it was found that as the number of siblings decreased, the achievement score increased.

Subramanyam and Sreenivasa Rao (2008) established that there is no significant difference in the achievement of boys and girls with regard to their emotional intelligence.

2.32 APPRAISAL

From the brief review presented in the foregoing pages it may be seen that a few studies have been carried on, in the area of academic achievement at B.Ed. level. A gain by and large, except on a few variables the results obtained are not coinciding, which necessitates, further exploration in this area. Further, studies on the relative impact of each of the several independent variables that effect academic achievement are rare to find.

Achievement is considered as a key factor for personal progress. The whole system of education revolves around academic achievement. Academic achievement depends on a number of variables. Certain researchers found gender, literacy level of the family and family income contribute significantly to academic achievement. A great deal of research work has been done to assess the relationship of academic achievement with intelligence, personality and other variables.

The importance of academic achievement has raised several important questions for educational researchers. What factors promote academic achievement among the students? How far do the different factors contribute to the academic achievement? Many factors have been hypothesized and researched upon.
It may be seen from the brief review of literature presented in this chapter that a number of studies have been carried out on the relation between academic achievement and other variables. The studies yielded contradictory results on the relation between different personal and demographic variables and academic achievement. Therefore it is difficult to summarize the conclusions of these studies as they have concerned themselves about a wide variety of aspects of achievement of the student-teachers in relation to different variables.

Although personality and intelligence are also important from the educational point of view, these areas have much explored in the level of academic achievement. The results of even the few studies present a confusing picture with contradictory results.

Review of related literature reveals that an extensive study of influence of psycho-sociological factors on the academic achievement especially of the B.Ed. students. It is needless to say that a very few studies have been conducted to study the academic achievement of teacher training students specifically on B.Ed. students and whatever studies exists, none of them is comprehensive enough so as to enable one to draw any conclusive result. It is an attempt to see the relationship between presage and product variables of academic achievement.

Under these circumstances, it is quite reasonable to say that there is a great need to conduct more and more similar studies. Hence, the investigator was made to move in this direction and conduct the investigation in which the academic achievement could be studied in comparison with personality, values and intelligence of B.Ed. students. This resulted, finally, into the statement of the present problem whose procedure of investigation is described in the following chapter.