REVIEW OF RELATED LITERATURE

2.1) Research Studies on Students Personality Factors and Academic Achievement

2.2) Research Studies on Students Attitude

2.3) Research Studies on Teacher Effectiveness

2.4) Research Studies on Academic Achievement

2.5) Research Studies on Interactive Effects of Teacher Effectiveness, Students' Personality and Attitude on Students' Achievement.
CHAPTER - II

REVIEW OF RELATED LITERATURE

INTRODUCTION

The literature in any field is the foundation on which all further research work is carried out. The Encyclopedia of Educational Research (1960) rightly pointed out that "The related literature is the embodiment of complete information about the knowledge, which a researcher wanted to know. This helps the researcher to proceed on proper lines to get the required data."

According to J.W. Best (1967) "Familiarity with the literature in any problem area helps the students to discover what is already known, what others have attempted to find out, what methods of attacks have been prominent and what problems remain to be solved."

Practically all human knowledge can be found in books and in libraries. So the research work needs exhaustive use of such libraries where the related literatures are available.

The present study intends to find out the interactive effects between teacher effectiveness, secondary school students' personality and attitude towards science on their academic achievement. Hence, the investigator looks into the related studies in the following fields.
1) Research Studies on Students Personality Factors and Academic Achievement.

2) Research Studies on Students Attitude

3) Research Studies on Teacher Effectiveness

4) Research Studies on Academic Achievement

5) Research Studies on Interactive Effects of Teacher Effectiveness, Students’ Personality and Attitude on Students’ Achievement.

2.1) Research Studies on Personality Factors

Pupil Personality and Pupil Achievement

In the recent past attention has been directed towards the importance of personality variables of pupils in school achievement. Researchers in the past have studied a variety of plausible predictors of academic attainment but there exists no unique set of predictors. Among the non-intellectual predictors the effect of variables like Neuroticism and Extraversion has been explored extensively specially in the United Kingdom. Early studies of Eysenck (1957) revealed that personality variables of extraversion and neuroticism were found to be negatively associated to pupil achievement.

The studies of Child (1964), Entwistle and Cunningham (1968), Eysenck and Cookson (1969), Entwistle and Entwistle (1971) and Honesss and Kline (1974) also reported negative relationship between extraversion, neuroticism and pupil academic achievement.
1) Research Studies on Students Personality Factors and Academic Achievement.

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2.1) Research Studies on Personality Factors

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In India also some of the studies revealed a negative relationship between extraversion, neuroticism and academic achievement (Basu, 1968; Mohan, 1976 and Shrivastav, 1980). A review of important studies is reported below.

Eysenck (1957) studied the relationship between extraversion/introversion, neuroticism and academic attainment of college students.

The main objective of the study was to know the relationship between extraversion and achievement and neuroticism and achievement. The sample of the study consisted of 600 students of London University. The results revealed that:

i) Extraversion was found to be significantly and negatively associated to academic achievement.

ii) Neuroticism was also found to be significantly and negatively related to academic achievement.

A similar study was conducted by Eysenck S. G.B. and Gibson (1965) on school going children.

For this purpose they adopted the Eysenck Personality Inventory (EPI) and constructed Junior Eysenck Personality (JPI) and standardized the same.

The sample of the study consisted of 800 school going children of England between 11+ to 14+ years.

The results revealed that, Extraversion and Neuroticism were negatively associated with academic achievement.
Similar study was conducted by Child (1965) on High School children.

The study was conducted on a sample of 138 urban comprehensive school students and 140 public school students. The data were collected by using Junior Maudsly Personality Inventory, General Anxiety Scale for Children (Taylor), Reminiscence Test Terminal examination (Taylor), Reminiscence Test Terminal examination marks. The statistical techniques used were Mean, SD, Correlation and analysis of co-variance.

The results revealed that:

i) Extraversion/Introversion, Neuroticism and IQ were found to be statistically unrelated.

ii) Positive and significant correlation was found between stable introversion and school attainment.

iii) The neuroticism/anxiety was found to be significantly and negatively related to school attainment.

iv) Introverted and low neurotic/low anxious pupils were found to be superior.

Similar study was conducted by Entwistle and Cunningham (1968) on High school going pupils.

The main objectives of the study were:

i) To know the relationship between extraversion/introversion and school attainment among boys and girls of high school going.
ii) To know the relationship between neuroticism and school attainment of boys and girls.

iii) To know the combined effects of extraversion/introversion and neuroticism and school attainment of both boys and girls.

The hypotheses of the study were:

i) Is school attainment negatively related to neuroticism and positively to introversion as measured by JMPl.

ii) But are the true relationships both non-linear? At the higher levels of attainment do the neurotic introverts form a superior group compared with other personality types irrespective of sex factor?

Sample of the study consisted of 3286 pupils of high schools age between 11+ to 13+ years. The tools used were Junior Personality Inventory, NFER non-verbal test No 1 and 2, Moray House Verbal Reasoning Test-72, Teacher estimates of English and Arithmetic achievement of students. The statistical techniques used were correlation and analysis of co-variance. The main findings of the study were:

i) Neuroticism showed significant negative correlation with school attainment.

ii) Introverted boys and extraverted girls were found to be more successful in school performance.

iii) Girls who are stable extraverts and boys who are stable introverts showed the highest mean attainment.
iv) On the whole extraversion and neuroticism were found to be negatively associated with school attainment.

Another study was conducted by Eysencck and Cookson (1969) on school children.

The objective of the study was to know the relationship between extraversion-neuroticism on academic attainment of school children of age 14+ years. The study was conducted on a sample of 4000 school going children of age 14+ years. The tools used were Junior Eysenck Personality Inventory, Group test of intelligence an Achievement test. The statistical techniques used were Mean, SD, Correlation, analysis of Co-variance and t-test.

The results revealed that:

i) Neuroticism was found to be negatively associated with school attainment.

ii) Extraversion was also found to be negatively associated with school attainment.

iii) Low neuroticism/introverted students achieved higher than other group of students.

A similar study was conducted by Honess and Kline (1974) on high school pupils of Uganda (Blacks). They studied extraversion, neuroticism and academic achievement of high school children. The objectives of the study were:
to know the relationship between extraversion and academic achievement among boys and girls;

ii) to know the relationship between neuroticism and academic achievement among boys and girls; and

iv) to know the combined effect of extraversion/neuroticism on academic attainment of pupils' aged between 14+ to 17+ years.

The sample of the study consisted of 300 black Ugandans from High schools (both boys and girls) with age ranging from 14+ to 17+ years. The data was collected using Junior Personality Inventory, Group intelligence test and an achievement test. The statistical techniques used were, Mean, Correlation and t-test. Main findings of the study were:

i) Extraversion was found to be negatively associated with academic especially among girls. But it was not significantly for boys.

ii) Neuroticism was also found to be negatively and significantly related to academic achievement for both boys and girls.

iii) Low extraversion/low neurotic students achieved higher than rest of other student (for both boys and girls).

Entwistle and Entwistel (1971) studied the relationship between personality factors of extraversion, neuroticism, study methods and academic performance of college studies.
The sample of the study was drawn from 20 colleges. Four hundred and fifty subjects studying in first year were randomly selected. Personality variables of extraversion and neuroticism were identified by administering Eysenck Personality Inventory (EPI). The attitude towards study methods was known through administering the student attitude questionnaire Form A and B. The performance (academic) of the students was known by administering achievement tests. The statistical techniques used were Mean, SD, correlation analysis of variance and t-test.

The results revealed that:

i) The successful students of the college tend to have below average scores of extraversion together with high scores on the study methods.

ii) It was also noted that there is a clear link between good study methods and stability of mind (low neuroticism) though some highly motivated students had higher scores on neuroticism.

iii) Stable minded introverts (low neurotics/low extraverts) have good study habits and are also the most successful students.

A similar study was conducted by Cowell and Entwistle (1971) on technical college students. They carried out a study to determine relationship between extraversion and neuroticism, study attitudes and academic performance in technical college students.
The objectives of the study were:

i) To know the relationship between extraversion and neuroticism and academic performance of technical college students.

ii) To know the relationship between extraversion and neuroticism and study habits of technical college students. The sample of the study was 177 male students of technical college. The tools used were group test of intelligence, Eysenck Personality Inventory, BrownHoltzman Survey of Study habits and attitudes and annual examination marks. The statistical techniques used were correlation and the $x^2$ test. Main findings of the study were;

   i) stable minded students achieved better at the examination;
   
   ii) extraversion was found to be negatively associated with academic achievement, and
   
   iii) stable introverts had distinctly better study methods and achieved higher than other students.

Some investigators like Broadbent (1958), Cortis (1968), Furneaux (1956), Gale (1971) and Warburton (1968) found extraversion was negatively associated with academic achievement and study habits of the students. Davison (1956), Feber (1955), Korchin and Levin (1957), Ramond (1963), Sarson Palola (1960) and Taylor (1956) studied the
relationship between manifest anxiety (neuroticism) and academic success and reported that low anxious students achieved higher than high anxious ones.

Coming to studies conducted in India some Investigators have revealed negative relationship between extraversion/neuroticism and academic achievement. (Basu, 1968’ Mohan, 1976 and Shrivastav, 1980).

Basu (1968) studied the relationship between personality factors and academic performance of second year commerce college students. The hypotheses of the study were:

i) that higher the success of the student lower the extraversion score;

ii) higher the success of the student lower the neurotic scores ;

and

iii) Curvilinear relationship between neuroticism and performance may be related to optimum drive level for a test of given difficulty.

The sample of the study was drawn from Commerce colleges of Calcutta. Totally 260 subjects were involved in the study. Tools used for study were Eysenck Personality Inventory (EPI) and annual examination scores. The statistical techniques used were mean, correlation, analysis of variance and t-test.
The results revealed that:

i. Neuroticism and academic performance were found to be negatively associated.

ii. Extraversion and academic success were also found to be negatively associated at this level.

iii. The mean neuroticism and extraversion scores for the sample chosen were found to be significantly higher than the English or American norms for the EPI, and comparable to those found by Lynn (1959) for English University students.

A similar study was conducted by Mohan (1973) on High school students, college students and University students of Punjab.

The main objectives of the study were:

i) to know the relationship between extraversion and neuroticism on academic achievement of high school, college and University students;

ii) to know the relationship between the extraversion/neuroticism and vocabulary of pupils at various levels; and

iii) To know the relationship between extraversion/neuroticism and age sex of the pupils.
Sample for the study consisted of 300 (boys and girls) taken from schools, colleges and University departments of Punjab. The youngest age group was between 11+ to 15 years, represented by 100 subjects from schools (both boys and girls), 100 subjects from colleges and 100 subjects from University of Punjab. Tools used for the study were Eysenck Personality Inventory (EPI), Junior Eysenck Personality Inventory (JEPI accepted Hindi version), standard progressive matrix (SPM), Vocabulary test-A for age group 20 to 25 years (Mill Hill Vocabulary scale), Vocabulary test-C for age group 10 to 15 years. The statistical techniques employed were Mean, SD, correlation, t-ratios, F-ratios and zone analysis. Main findings of the study were:

i) Neuroticism was found to be negatively associated with academic achievement at all the three stages (school level, college level and University level);

ii) Extraversion was also found to be negatively associated with academic achievement;

iii) Low neurotic students tend to be better on vocabulary at all levels;

iv) Intelligence and extraversion were found to be unrelated. But intelligence and neuroticism were found to be negatively associated;
v) It was also found that extraversion and neuroticism were unrelated to each other.

A similar study was undertaken by Shrivastava and Srivastava (1978) on college students (Arts and Science). They conducted a study to predict academic achievement through personality traits. The main objectives of the study were to know the relationship between extraversion/neuroticism and academic achievement of arts and science college students.

The subjects of the study consisted of 250 science and 250 arts college students. The tools used were, Eysenck Personality Inventory, Group Intelligence Test and Achievement Test. The statistical techniques used were correlation, multiple regression analysis and t-test.

The results revealed that:

i) Neuroticism was found to be negatively associated with academic achievement for both arts and science students;

ii) Extraversion was also found to be negatively associated with academic achievement;

iii) Low neuroticism/low extraversion favoured the academic success of the students both in arts and science faculty.

Deshpande and Lodhi (1980) conducted a study to determine the relationship between academic achievement and some psychological variables. The major hypotheses of the study were:
i) High achievers (HA) would have high scores on intelligence test than the low achievers (LA).

ii) High achievers would have low anxiety than the low achievers.

iii) High achievers would be few less extraverts than the low achievers.

The sample of the study was 120 XI class student of a higher secondary school in Poona. The student sample consisted of 60 high achievers (scoring between 75% to 92% of marks in S.S.C. examination) and 60 low achievers (scoring between 33% to 50% of marks in S.S.C examination). Tools employed for the study were Kothurkar’s Group Test of Mental Ability, Eysenck Personality Inventory (EPI), Prayag Mehetha’s Achievement values and Anxiety Inventory (AVAI) and Marathi adaptation of Taylor’s M.A.S. The statistical techniques used were, Mean an SD and Analysis of variance.

The results revealed that:

i) High achievers were found to be more intelligent than low achievers;

ii) High achievers were found to be less anxious/low neurotic than low achievers;

iii) High achievers were found to be low extraverts.
Another set of investigators have reported neuroticism to be negatively associated with achievement whereas extraversion was positively associated with academic achievement. (Elliott, 1970; Orme, 1970 and Rushton, 1966).

In India, Vohra (1981) and Husain (1976) have reported negative relationship of neuroticism and positive relationship of extraversion with school attainment.

Rushton (1966) studied the relationship between personality characteristics and scholastic success in eleven year old children. The objectives of the study were:

i) To investigate the relationship between personality variables of extraversion, neuroticism and cognitive ability of eleven year old pupils;

ii) To know the relationship between personality variables of extraversion, neuroticism on academic achievement of eleven year old pupils.

The study was conducted on a sample of 458 boys and girls of school going. Tools used for data collection were: Children’s Personality questionnaire, Moray House Verbal Reasoning Test No. 63, Moray House Arithmetic Test No. 30 and Moray House Spatial Test No. 2 and Teachers’ rating scale of fourteen personality and ability traits. The statistical techniques used were Mean, SD, Correlation, analysis of variance and t-test. The results revealed that:
i) The second order factor of anxiety clearly has a negative correlation with verbal reasoning arithmetic ability, English and school academic records.

ii) It was also found that extraversion correlates positively with verbal reasoning, arithmetic, English and school examinations.

iii) At this young age extraversion was found to be favourable for academic success.

Another study was conducted by Elliott (1970) on school going children. He studied the effect of personality factors of extraversion and neuroticism on scholastic attainment of school going children.

The main objective of the study was to know the relationship between reading attainment, intelligence and extroversion/neuroticism in school going children of 13+ years. Sample for the study was drawn from fourteen primary schools (N=900) and three groups were formed with the following characteristics: (a) Mental age restricted IQ: (b) Chronological age restricted (Cl) and (c) Reading age restricted (Standard). The tools used for the study were:

i) Shonell graded word reading test-1960, (ii) Junior Eysenck Personality Inventory, (iii) Moray House picture intelligence test and
Achievement test. The statistical techniques used were correlation, zone analysis and analysis of variance.

The following results were obtained:

i) Neuroticism was found to be negatively associated with attainment and reading ability of the students.

ii) Extraversion and reading ability and attainment were found to be significantly and positively associated, when the mental age was held relatively constant.

iii) There was no significant correlation found between I.Q and extraversion when the attainment level and CA of the sample were held relatively constant.

iv) Neuroticism and I.Q. were found to be negatively associated.

Orme (1970) conducted a similar study on primary school children. He studied the relationship between personality factors of extraversion/neuroticism and ability and achievement in primary school children.

The objectives of the study were:

i) to know the relationship between the neuroticism/extraversion and school attainment in primary school children.

ii) to know the relationship between intelligence and achievement in primary school children.
The sample of the study was 400 primary school children of age between 12+ to 13+ years. Tools used for the study were Junior Personality Inventory, Group intelligence test, Achievement test and S.E.S. scale. The statistical techniques employed were, Mean, SD, Correlation, Analysis of variance and t-test. The results revealed that:

i) Intelligence and school attainment were found to be significantly and positively associated.

ii) Neuroticism was found to be negatively associated with school attainment.

iii) Extraversion was found to be positively associated with school attainment.

Vohra (1981) wanted to determine whether academic achievement was a function of neuroticism and extraversion. His study aimed to know:

i) Whether the personality variables such as extraversion/neuroticism were related to the academic success of pupils studying in high schools;

ii) The unique contribution of neuroticism and extraversion towards variance of academic success.

The sample of the study consisted of 230 IX standard students with mean age group of 14+ years. Tools used for the study were Junior Personality Inventory and Classroom test in mathematics. The statistical techniques used were mean, SD, correlation, t-test and analysis of
variance. The results revealed that:

i) Neuroticism was found to be negatively associated with academic achievement of pupils;

ii) Extraversion was found to be positively associated with academic achievement;

iii) Extraversion and neuroticism were two predictors, but they could not be thought of as the sole predictors.

Husain (1976) conducted a study of academic attainment in relation to level of aspiration and anxiety. The objective of the study was to know the relationship between anxiety and levels of aspiration on academic attainment. The sample of the study considered of 250 undergraduate students (college students of Alligarh). The tools used were Sinha Anxiety Scale, Absari's L.A. coding test and annual examination marks. The data was analyzed using correlation, t-test and analysis of co-variance.

The results revealed that:

i) Anxiety was found to be negatively associated with academic achievement.

ii) Level of aspiration was found to be positively associated with academic achievement.

Another set of investigators have reported negative association of neuroticism and academic attainment. At the same time they have also
reported that extraversion was unrelated to achievement (Davidson, 1962; Eysenck, 1961; Levin, 1962).

Some Indian studies have also revealed similar results (Gupta, 1971; Mohan, 1968; Shankar and Brar, 1972).

Eysenck (1961) studied the relationship between extraversion/neuroticism and academic performance of school children. The objective of the study was to know the relationship between extraversion/neuroticism and academic achievement of school children of 13+ years. The sample of the study was 300 middle school children with an average age of 13+ years. The tools used were Junior Personality Inventory and school achievement test. The statistical techniques used were Mean, SD, correlation, analysis of variance and t-test. The results revealed that:

i) Neuroticism was found to be negatively associated with school achievement.

ii) Extraversion was found to be unrelated to achievement.

A similar study was conducted by Davidson (1962) on high school students. The aim of the study was to know the relationship between extraversion/neuroticism and academic achievement of high school pupils of 14+ years.

The sample of the study consisted of 250 pupils (both boys and girls) of Manchester Municipal Corporation schools of average age 14+ years. The tools used were Junior Personality Inventory and annual examination marks of the pupils. The statistical techniques used were
correlation, analysis of variance and t-test. The results revealed that:

i) Neuroticism was found to be negatively associated with academic achievement.

ii) Extraversion was found to be unrelated to academic achievement.

Levin (1962) studied the relationship between extraversion/neuroticism and academic achievement of high school going pupils.

The objective of the study was to know the relationship between extraversion/neuroticism on academic attainment of high school students of average age.

The sample of the study consisted of 350 school going pupils of average age 13+ to 14+ years. Tools used for the study were Junior Personality Inventory and school examination marks. The statistical techniques used were correlation, t-test and analysis of variance. The results revealed that:

i) Neuroticism was found to be negatively associated with academic attainment.

ii) Extraversion was found to be unrelated to academic attainment.

Mohan (1968) conducted a study on relationship between extraversion/neuroticism and academic achievement of pupils.
The objective of the study was to know the relationship between extraversion/neuroticism and academic achievement of high school pupils of age between 13+ to 15+ years. The sample of the study was 200 high school going pupils of Patiala district of Punjab. The tools used for the study were the Hindi version of Junior Personality Inventory and achievement test. The statistical techniques used were correlation, t-test and analysis of co-variance. The results revealed that:

i) Extraversion was not found to be significantly related to academic attainment.

ii) Neuroticism was found to be negatively related to academic achievement.

A similar study was conducted by Gupta (1971) on college students. He conducted a study to determine the relationship between extraversion, neuroticism and adjustment and achievement of college students.

The main objective of the study was to know the relationship between extraversion, neuroticism and adjustment as well as achievement of college students. The sample of the study was 250 college students of Bhubaneswar, Orissa. Tools used were Eysenck Personality Inventory, Bells adjustment inventory and achievement test. The statistical techniques used were Mean, SD, correlation, analysis of co-variance and t-test.
The results revealed that:

i) Neuroticism was found to be negatively associated with achievement.

ii) Extraversion was not found to be significantly related and adjustment.

iii) There was positive relationship between extraversion and adjustment.

iv) No significantly relation was found between neuroticism and adjustment.

Another set of investigators have reported neuroticism to be positively associated with academic achievement. Barton (1974) and Robinson (1966) showed that neuroticism facilitate academic success. Singh (1981) found that academic success of male ninth class students was positively correlated with neuroticism. Furneaux (1956) found a positive relationship between neuroticism, and attainment for university students. Lynn and Gordon (1961) reported that neuroticism was advantageous to educational success at college level.

**Indian Studies:**

Shukla's (1956) study revealed a list of qualities which constituted good teaching personality. The qualities were intelligence, cheerfulness, sociability, politeness, sense of humour, cooperativeness, self-confidence, reasoning ability, organizing ability, teaching ability, ability to maintain
discipline, ability to get on well with pupils, higher educational qualifications, scholarship, knowledge of the subject, capacity to take pain, concentration, experience in teaching, desire to cooperate with parents, proficiency in the medium of instruction, love and sympathy for pupils, interests in extra curricular activities pleasing manners, sense of responsibility and a good moral character.

Quarishi (1972) studied the personality, attitudes and classroom behaviour of teacher. The sample of the study consisted of 200 teachers drawn from twenty-one secondary schools. Flanders Interaction Analysis Category System was used for observing and recording teachers' classroom verbal behaviour. Thurstone temperament schedule was employed to assess the personality traits, and Attitudes scale constructed by Wandt, Glassey and Patel were adapted to measure attitudes. Pearson's product moment correlation technique, stepwise regression analysis and 't' test technique were used for analysing the data. Among other things, the study revealed that: (i) Teacher's verbal behaviour in the classroom was related in a small measure to their personality and attitude; and (ii) Teachers' attitude towards democratic classroom procedure correlated significantly.

Kaul (1972) studied the differentiating personality traits and behaviour of teacher. The main findings of the study were: (i) The popular teachers distinguished themselves as more outgoing, intelligent, emotionally more stable, sober, conscientious, venturesome, tough
minded, shrewd, placid, controlled and relaxed; (ii) They were significantly high on theoretical, social, political and religious values and were significantly low on economic and aesthetic values; and (iii) They had favourable attitude towards teaching and they were effective in their work as teachers.

**Lulla (1974)** studied an investigation into the effects of teacher's classroom behaviour on pupil's achievement.

The sample comprised 1,800 pupils of class VII. As all students were drawn from corporation schools, they usually came from middle and lower middle class homes with similar cultural background. The tools used were: (i) The Flanders Interaction Analysis Category System (FIACS); (ii) The Desai - Bhatt Group Test of Intelligence for age group 12-18; (iii) An Achievement Test in Geography for grade VII; and (iv) An Achievement Test on the unit 'The Arab Countries'. Among other things, the study revealed that: (i) The pupils who were taught by the teachers trained in using indirect behaviour scored higher, as compared to their counter-parts studying under the teachers who were not provided any training; (ii) It was also implied that the indirect teacher behaviour may raise the interaction potential of the classroom climate resulting in free communication and open interaction between the teacher and the group of pupils; and (iii) It was found that such an atmosphere not only stimulated the learner in learning but also provided a congenial climate to the teacher for conducting his teaching.
Raijiwala (1976) studied changing teacher behaviour in the teaching of science on pupils.

The study was conducted on seven grade classes of Surat Municipal schools of which five classes were experimental and two formed the control groups. Fifteen teachers were trained through Flanders' Interaction Analysis Category System (FIACS) to increase the indirect behaviour. FIACS was used to measure teacher behaviour. Pareek's Pre-Adolescent Adjustment Scale was used to measure pupil's adjustment with teacher, school, peer, father, and adjustment in general, and Pareek's Pre-Adolescent Initiative Scale was used to measure initiative.

Among other things, the study revealed that: (i) The training in FIACS modified the teachers' indirect behaviour positively; (ii) Mean difference between pre and post observations on the if d ratio was significant at 0.01 level in the case of experimental group; (iii) the training and feedback given to the teachers of the experimental group affected pupils' adjustment, class-room trust, and initiative level positively; and (iv) The training and feedback given to the teachers of the experimental group affected the academic achievement of the pupils in science positively and significantly.

Singh (1976) examined the relationship between some personality factors of Teachers and the effectiveness of teaching.
The major findings of the study variable and teaching effectiveness were: (i) The needs of superior, average and inferior teachers were, clearly distinct from one another and superior teachers were distinct from the other two in cognition, dominance, autonomy and construction; (ii) The inferior teachers were distinct from the other two by their need of acquisition; (iii) The inferior teachers did not seem to possess the need of exhibition, which was most prominent in the average teachers. The other most prominent needs of the average teachers were exposition and play; (iv) Prominent needs of inferior teachers were succourance, deference and play; (v) The most prominent needs of superior teachers were nurturance, achievement and counteraction; (vi) The organization pattern of superior teachers was generally logical and that of inferior teachers was emotional; (vii) The interpersonal relations as regards social behaviour were high in superior teachers but very low in inferior teachers; (viii) The inferior teachers lacked self-confidence in teaching and in solving problems; the average teachers had self-confidence but had adjustment problems; (ix) The superior teachers had more of imagination, while the inferior ones were weak in it; (x) The average teachers were more entangled in family problems and were more sensitive to them but the inferior teachers were less sensitive to such problems; (xi) The superior teachers were less entangled in family problems and were able to solve them quickly; and (xii) The superior teachers used literary language more than the average and inferior teachers.
Gupta (1977) investigated into the relationship between personality characteristics, adjustment level, academic achievement and professional attitude of successful teachers.

The data were collected with the following tools; Cattell16 PFQ, Bell's Adjustment Inventory, Minnesota Teacher Attitude Scale and a tool to measure teaching success. The main findings of the study were: (i) success in teaching was significantly related to personality factors, A, B, C, F, G, H, I, L, N, 0, Q3 and Q4; (ii) Adjustment in various fields of life, like home, health, social, emotional total adjustment and professional attitude (iii) The personality characteristics, adjustment-home, health, social, emotional, professional and total adjustment, attitude towards teaching and sex were found to be the determinants of success in teaching; (iv) Also it was concluded that the factors as a group were better indicators of teaching success than individual factors.

Singh (1978) studied the relationship between teachers' personality, teaching success and behavioural changes in students.

The sample comprised of 135 permanent male teachers with a minimum of three years experience in teaching and 2839 boys of Class IX of the secondary and higher secondary schools of Udaipur. The tools used were: Teaching Success Rating Scale, Information Schedule, Interview Schedule, Critical Incidents Blank, Behaviour Change
Questionnaire constructed by investigator; Allport Vernon - Lindzey Study of Values 16 PF, Incomplete Sentences Blank and Rorschach Inkblot Test.

The major findings of the study were: (i) The theoretical and social values were positively related to teaching success but the economic and aesthetic values were negatively related; (ii) The highly successful teachers were assertive, venturesome, controlled, emotionally, stable and trusting; (iii) The highly successful teachers were better adjusted than the average and low teachers while the average successful teachers were better adjusted than the low successful teachers; (iv) Positive attitude towards family, a sense of identification with the people, place and profession and a growing concern for the school, students and studies were helpful in making a teacher successful; (v) The highly successful teachers possessed better intellectual capacity and efficiency, had higher creative potential and level of aspiration, showed more introversion and better adjustment than the average and low successful teachers; (vi) The highly successful teachers were able to induce learning, develop interests and foster desirable attitudes in their students; and (vii) The unsuccessful (low successful) teachers contributed significantly to developing aversion to the subject, creating misunderstandings and fostering undesirable attitudes and producing little subject learning.
Goel (1978) studied the behaviour pattern of extrovert and introvert teachers.

Stratified purposive sampling technique was employed to select 100 extrovert and 100 introvert teachers from a distribution of 400 teachers. The Mandsley Personality Inventory (Hindi version) adapted by Jalota and Kapoor was used to identify extrovert and introvert teachers. The Flanders Interaction Analysis Category System (FIACS) was used to observe the classroom behaviour of the teachers. The intra-raters reliability was estimated by Scott's formula and was recorded to be 0.899.

The study revealed that: (i) Extrovert teachers seemed to have greater interchange of classroom events than introvert teachers; (ii) Extrovert teachers had larger transition from pupil response to the categories of teacher praise, encourage, 'acceptance' and 'questions' as compared to introvert teachers; (iii) Introvert teachers seemed to have greater content emphasis, whereas, extrovert teacher seemed to provide more opportunity for 'pupil participation, introvert teachers are more transition from response' to 'pupil direction'; (iv) Extrovert teachers' tendency was to break the silence or confusion by asking question more frequently, whereas, introvert teachers' tendency was to give direction in the same state of situation; and (v) It appeared that the extrovert teacher had all the seven interaction models of critical teaching behaviours while introvert teachers had only first four models of teachers behaviour.
Dileep Kumar (1979) studied the personality characteristics of innovative and non-innovative teachers and concluded that innovative teachers were young, active and outgoing individuals and less depressive in mood.

Sansanwal and Gurpal Jarial (1979) examined the personality differences among high and low creative teacher-trainees. The four factors of Cattell 16 PF where the high creative teacher-trainees significantly differed from low creative group were: B+, F+, L-, Q4-

Kirkiri (1981) studied the impact of objective based lesson plans on the classroom verbal interaction behaviour of teachers and on the pupils' achievement in mathematics.

The sample comprised of forty-six pupil-teachers studying in the first year in the Basic Teachers Training Institute, Bijalpur, Indore, and seventy-two pupils of Class VI studying in schools situated in the city of Indore. The teachers were observed by using FIACS, objective based lesson plans were also developed in collecting data.

The main findings of the study were: (i) There was no significant effect of assignment on the pupils' achievement; (ii) Teaching with the help of the objective-based lesson plans did not significantly affect the mean gam achievement; (iii) The manner in which the instructional material was used affected the classroom climate; (iv) Indirect teacher's behaviour did not help in increasing the achievement level; (iv) The
setting up of systematic objectives yielded better results; (vi) The teachers' behaviour was a stronger function of teachers and the teaching method than that of the class groups; (vii) The responsive behaviour of teachers was independent of differences between the teaches as well as differences between the classes.

Wangoo (1984) studied the teacher personality correlates and scholastic competence as related to teacher effectiveness. The sample consisted of 500 teachers drawn from higher secondary schools of Srinagar district and its outskirts (Jammu and Kashmir State), teaching science, mathematics and English to pre-university classes. The tools used were: Cattell's 16 PF Questionnaire (adults, form - A) to assess personality, Raven's Advanced Progressive Matrices (APM - set II) to test Scholastic Competence, Principal's Comment Check List (PCCL) evolved by the investigator, and student's Comment Check List (SCCL) also evolved by the investigator.

Among other things, the major finding was: Personality adjustment, democratic leadership, a high degree of intelligence and emotional control were the main characteristics that with teacher effectiveness.

Malik (1984) made a comparative study of personality factors and teaching environments of successful and unsuccessful science teachers in selected schools of Rajasthan. The study was confined to 72 higher
secondary schools located in seven major cities of Rajasthan. Initially 205 science teachers with a minimum experience of three years were selected. The student sample consisted of 3450 science students. In order to measure teaching success of science teachers, the investigator constructed a Science Teaching Success Rating Scale. Besides this tool, a bio-data form and a Hindi version of Learning Environment Inventory were adopted.

The major findings were: (i) Some personality factors were significantly related with teaching success which was positively correlated with intelligence, emotional stability, tender mindedness, suspiciousness, self-sufficiency, placidity and relaxedness; (ii) Successful science teachers had clarity of goals and their students; (iii) Teaching success was positively correlated with dimensions of formality, goal direction, satisfaction, democracy, diversity and cliqueness; (iv) Teaching success was negatively correlated with dimensions of friction, difficulty, apathy and disorganization; (v) The classroom atmosphere of unsuccessful science was full of tension, quarrelling among students, confusion in class activities, lack of affinity with class work, and there was favouritism; (vi) Some significant correlation, either positive or negative, was found between the classroom learning environment and personality factors; and (vii) Personality, learning environment, concomitants of teaching success (physical environment, democracy,
goal direction, satisfaction, formality), age and experience were some of
the factor patterns associated with science teaching.

**Yagirirajan (1985)** studied competency, personality, motivation and
profession perception of college teachers. Tools used were, Teacher
Competency Rating Scale developed by the investigator on the Stanford
Teacher Competency Appraisal and

Teacher Rating Scale, A Self-Actualising Person Inventory
structured by the investigator, Cattell's 16 PF Questionnaire, Tuckman's
Teacher Feedback From and Patted's Teaching Profession Perception
Scale.

The main findings were: (i) Teacher Competency was related to
intelligence, emotional stability, conscientiousness, tender mindedness,
trusted nature, placid nature, self-sufficiency and relaxedness factors of
Cattell's 16 PF Questionnaire; (ii) It was significantly related to creativity,
dynamism, organised demenour and warmth and acceptance, self
actualization and profession perception of teachers; (iii) The more
competent teachers significantly differ from the less competent teachers
in all the above variables; and (iv) Those variables that correlated
significantly with teacher competence, inter-correlated with one another
significantly.

**Roy Neelam (1989)** studied change in verbal behaviour of teachers
and its effects on student achievement.
The sample of this study consisted of randomly selected 80 student-teachers from two randomly selected primary teacher education colleges, 40 each in the experimental group and the control group. The tools used were Flander’s Interaction Analysis Categories, and an Achievement Test in Social Studies standardised by the investigator. The mean, SD, and 't' test were applied for testing the hypotheses.

The study revealed that: (i) The student teachers trained in interaction analysis were found to be significantly better in the use categories two through nine; and (ii) There was no significant difference in achievement among students who were taught by two sets of teachers.

Thamilmani (1990) studied the teacher competency and teacher personality in relation to achievement of high school students in science. The sample included 450 students of standard IX and 50-science teachers from various higher secondary schools in Madhurai. The tools used were: Students Ratings on Teacher Competency (SRTC), Students' Rating on Teacher Personality (SRTP), Teacher Competency Self Appraisal Scale (TCSAS) and Students Achievement Test (SAT) which were developed by the researcher. Pearson’s product-moment correlation and 't' test were used for statistical analysis.

Among other things, the study revealed that: (i) Teaching competencies of science teacher were related to the academic achievement of high school students; (ii) Teacher personality was not related to students' academic achievement in science; and (iii) Both male
and female science teachers were similar in their teaching competencies and personality, human relation and interpersonal skills.

**Yadav and Ghamandi Lal (1992)** studied the impact of teacher training on certain personality characteristics of trainees.

The study was longitudinal. In the first phase the sample was 383, in the second phase it was 400, the candidates present in both the phases were 300. So the total sample included 300 teacher trainees. The tools used in this survey included the Self-concept Inventory of R.P. Bhatnagar, the Social Maturity Scale of Nalini Rao, and the Teacher Attitude Inventory of S.P. Ahluwalia.

Among other things, the study revealed that: (i) All the dimensions of self-concept increased through teacher training except the feeling of inadequacy, which decreased through this programme; ii) Social maturity of the teacher-trainees increased in all the dimensions except for self-direction, personal adequacy and enlightened trust; and (iii) The teachers' training had a significant influence on their self-concept, social maturity and attitude towards the teaching profession. (v) While the attitude of male teachers was positively correlated with empathy, ego ideal and neurotic traits of personality, it was negatively correlated with other personality traits; and (vi) While there was positive correlation between the attitude of government school teachers and their personality traits such as empathy, ego ideal and neuroticism, it was negatively correlated with personality traits.
Foreign Studies

Bush (1942) studied that the teacher-pupil relationship was the most important factor as the cause of successful teaching. He reported surprising inconsistencies between teacher's perceptions of their report with students and actual attitude of those students towards the teachers. He concluded that, generally speaking, those teachers who knew most about their students and who were sympathetic and accepting with respect to individual abilities and needs of children had the best chance of establishing good relationship with a majority of students in their classes.

Jensen (1951) employed the technique of critical incidents to determine the behaviour patterns of good and poor teachers. He collected reports from qualified persons - supervisors, teacher educators, student teachers, public school teachers and principals, and formulated a set of critical behaviour that appeared to be associated with effective and ineffective teachers. It was indicated, for instance, that effective teachers rated low with respect to overall classroom behaviour) tended to be restrictive and critical in their appraisal of other persons; to prefer activities which did not involve close personal contacts; to express less favourable opinion of pupils, to manifest less high verbal intelligence; to show less satisfactory emotional adjustment and to represent older age groups.
Beckman (1993) studied the personality characteristics of effective teachers.

The purpose of this study was to compare personality characteristics, as measured by the Gregore Mind Style Delineator and the Myers-Briggs Type Indicators, of those teachers identified as exhibiting effective teaching performance as measured by the Pre-Teacher Assessment Model of Indian University of Pennsylvania, a Principal’s Rating Form, a Participant’s Rating Form, and a Student’s Rating Form.

The data were collected on fifteen adult volunteers. Each received a total teacher effectiveness score. For the purposes of this study, effective teaching was defined in terms of planning and organizing, sensitivity, initiative, and innovativeness. Analysis of variance with post how procedures demonstrated that teacher performance was affected by the participant’s years of experience, their level of education, and the participant’s school district’s socio-economic status.

In addition to these demographic factors, analysis of variance and regression analysis revealed that the randomness variables within the ordering dimension of the Gregore Mind Style Delineator made a significant impact on the teaching dimensions of sensitivity, initiative, innovativeness and total teacher effectiveness. Portfolio documentation enhanced the qualitative analysis to interpret and explain the
quantitative results. It was concluded that the Gregore Mind Style Delineator ordering variable of randomness significantly impacted effective teaching.

2.2) Research Studies on Attitude of the Students and Academic Achievement.


The present investigation sought to study the attitudes of Primary Basic teachers towards community life and craft, and a positive change in their attitudes towards community life and craft.

Out of the seventy nine institutions of Gujarat, eight Primary Basic teacher training institutes were selected on the basis of stratified sampling. In all, twelve attitude scales were constructed on the Likert mode to measure attitudes towards community life and craft – six of them related to community life and the other six to craft. In the initial stage, questionnaires with open-end questions were sent t 221 student teachers, craft teachers and educators. On the basis of this data, the new forced, choice-cum-open-ended questionnaires were prepared. The students of 1966-67 batch were administered all the scales, once in the beginning and again at the completion of the training. The students of 1967-68 were given a remedial programme in addition to the pre-
administration and post-administration of the scale. The attitudes of 1966-67 and 1967-68 batches were compared.

The following were some of the salient findings: (i) the student teachers who opted for carpentry had more favorable attitudes towards the community life than those opting for spinning and weaving. (ii) The student teachers opting for spinning and weaving had more favourable attitude towards community life than those opting for agriculture. (iii) The women student teachers had more favourable attitude towards community life than the male student teachers. (iv) The student teachers with no remedial programme had less favourable attitudes than the student teachers who were given the remedial programme. (v) The student teachers showed more favourable attitudes towards community life and craft than the experienced student teachers. (vi) The remedial programme affected the attitudes in varying degrees. Some student teachers showed an increase in their scores, while some showed a decrease.


The main objectives of the study were: (i) to measure attitudes, job satisfaction, adjustment and professional interests of teacher-educators of different categories based on sex, age, qualification and experience, (ii) to find out the difference in attitude, job satisfaction, adjustment and
professional interests among groups of teacher-educators based on sex, age, qualification and experience, (iii) to find out the relationship among attitude, job satisfaction, adjustment and professional interests as independent variables.

The sample consisted of 314 teacher-educators working in thirty-eight institutions, which included men and women of different age groups processing different qualifications and teaching experience. The tools used were a self-constructed attitude scale, Indiresan’s Job Satisfaction Inventory, Bell’s Adjustment Inventory and self-developed inquiry form for professional interests of teacher-educators. Mean, standard deviations, t-test analysis of variance, product moment correlation, multiple linear regression analysis were used for statistical interpretation.

The major findings of the study were: (i) A large majority of the teacher-educators were favourably inclined towards their profession and were satisfied in the job. However, they were not well adjusted and had low professional interest. (ii) The attitude and job satisfaction of different groups did not differ significantly. (iii) A majority of the teacher-educators had low interest in the profession. (iv) Emotional stability among the teacher-educators increased with age. (v) Professional interest among teacher-educators increased with teaching experience in a school. (vi) Attitude, job satisfaction and occupational adjustment among teacher educators were associated with one another, whereas social and
emotional adjustment and professional interests were not related with other variables. (vii) Job satisfaction could be predicted by attitude and occupational adjustment but not by other variables.


Problem: This study is a comparison of self concept attitude, adjustment and achievement between male and female Scheduled Castes/Scheduled Tribes student-teachers. The study, also attempts to find out whether there is a relationship between these psychological variables and the achievement of Scheduled Castes/Scheduled Tribes and non-Scheduled Castes/Scheduled Tribes student-teachers.

Objectives: (i) To study the difference between Scheduled Castes/Scheduled Tribes and non Scheduled Castes/Scheduled Tribes student teachers with regard to self-concept, attitude, adjustment and achievement (ii) to study the difference between Scheduled Castes/Scheduled Tribes and non-Scheduled Castes/Scheduled Tribes male and female student-teachers with regard to various areas of self-concept, attitude, adjustment and achievement. (Hi) to study the difference between Scheduled Castes/Scheduled Tribes and non-
Scheduled Castes/Scheduled Tribes student-teachers of two age-groups, i.e. 25 years and below and above 25 years, (iv) to study the relationship of self-concept, attitude and adjustment with the achievement of Scheduled Castes/Scheduled Tribes and non Scheduled Castes/Scheduled Tribes male and female student-teachers, and (v) to study the predictive efficiency of self-concept, attitude and adjustment with regard to the achievement of Scheduled Castes/Scheduled Tribes and non Scheduled Castes/Scheduled Tribes student teachers.

Methodology: A sample of 324 Scheduled Castes/Scheduled Tribes and non-Scheduled Castes/Scheduled Tribes student-teachers from various teacher training colleges in Madhya Pradesh was selected for the study. The two groups of Scheduled Castes/Scheduled Tribes and non-Scheduled Castes/Scheduled Tribes student-teachers were further classified according to sex and age. M.R. Rastogi's Self teachers to a significant level. (9) Achievement of all student-teachers could be predicted through their home adjustment worthiness and educational adjustment. [MSG 11651]. Agarwal Agarwal Agarwal

Problem: The study attempts to measure certain psychological traits of school children in Arunachal Pradesh, viz. their ability to adjust to the school situation, their attitude towards various things and concepts, their interest in different activities and the level of aspiration at which the children set their goals for future achievement.

Objectives: (i) To compare tribal students with non-tribals belonging to Classes IX to XII on five variables, viz. adjustment, attitude towards school, educational interest, vocational interest and level of aspirations, (ii) to explore the causes of high and low scores in various tools by different groups of students included in the sample on various measures, and (iii) to study the relationship among the five variables.

Methodology: The study was limited to 150 tribal and 150 non-tribal students studying in Classes IX to XII of secondary and higher secondary schools in Lohit District in Arunachal Pradesh. The sample included both boys and girls. The data was collected with the help of the Adjustment Inventory by H.M. Singh, 'Rao's School Attitude Inventory, Educational Interest Record by V.P. Bansal and D.N. Srivastava and Level of Aspiration by Singh and Tiwari. Standard deviation, 't' test, product-moment coefficient of correlations and rank order representation were used for interpretation of data.

Major Findings: (1) There existed no difference in adjustment between tribals and non-tribals. (2) Non-tribals showed a more favourable attitude towards school than the tribals. (3) Inter-tribe
difference in attitude towards school was found to be insignificant. (4) Non-tribals showed greater educational interest in science, English and medical science than only one tribe, viz. the Kamare; while tribal students showed greater interest in agriculture, humanities and arts. (5) Sex difference was found to be significant in all the areas of vocational interest: tribal boys and non-tribal girls showed greater vocational interest. (6) The tribals and non-tribals differed in tennis of their levels of aspiration. Non-tribals showed higher level of aspiration. (7) Adjustment and attitude towards school were found to be associated positively and significantly both in the case of tribal as well as non-tribal students (8) Level of aspiration was not found to be related to attitude towards school, adjustment and educational interest either for tribal or non-tribal students. [PPG 0167].

**Dadu, Pratibhu. 1992.** “A study of personality, values and religious attitudes of urban and rural males and females in the purview of socio-economic status.” Ph.D., Psy. Agra Univ.

**Problem:** It attempts to study the urban and rural male and female college-going students with regard to their personality, values and religious attitudes.

**Objectives:** (i) To determine the impact of SES, location and sex upon personality traits, values and religious attitudes, and (ii) to determine interaction among SES, location and sex during their operational impact upon certain traits of personality, values and religious attitudes.
Methodology: In the study, 300 male and female college-going students in the age range of 18 to 25 years served as the sample; they were selected by the multi-stage stratified random sampling technique. The tools used included, the SES Scale of B.B.Chatterjee, S.S.Singh and R.P.Singh, Cattells 16 PF Scale (the Hindi version of Kapoor), the Value Test of Chaudhary and Ojha, and R.P. Singh's tool to measure Religious Attitudes. The statistical measures used included mean, SD, and 't' test.

Major Findings: (1) Between rural male and female students the difference was statistically significant for Q1, A, and Q4 and in theoretical aesthetic and religious values no difference was found in religious attitudes but the means of female students were slightly higher than the corresponding means of male students. (2) Rural male and urban male students did not differ in their personality traits and values; these groups differed significantly in religious information, orthodoxy and hostility.


Problem: It is an attempt to study the self concept of student-teachers and their attitude towards the teaching profession.

Objectives: (i) To measure the attitude of student-teachers towards the teaching profession, and assess their self-concept. (ii) to find out the relationship between the self-concept of student-teachers and their
attitude towards teaching and (iii) to find out the relationship, between self-concept of student-teachers and their attitude towards teaching.

Methodology: The sample of the study constituted 723 student-teachers from nine selected colleges of education in Tamil Nadu. The Tamil version of the Teacher Attitude Inventory (TAI) by Ahluwalia and the Self-concept Scale by Mukta Rani Rastogi were used. The statistical techniques used included 't' test and Pearson's product-moment correlation.

Major Findings: (1) Both male and female student-teachers had a favourable attitude towards the teaching profession. (2) Both male and female student-teachers had a positive self concept, and it was related to their attitude towards the teaching profession. [MKU 1088].


Objectives: (i) To know the attitude of the community with regard to resources lying with Government and Private Primary schools, (ii) to find out ability of teachers and self-motivation position of teachers, (iii) to know the attitude towards home-work and teaching methodology, (iv) to know the attitude of children towards moral education, (v) to know the attitude towards teacher-student relations, (vi) to know the attitude towards parent-teacher relations, and (vii) to find out children's attitude towards TLM.
Scope and geographical coverage: Buhana block in Jhunjhunu district (Rajasthan).

Methodology: Random sampling method was used for selection of Govt. as well as Private Primary schools in Buhana block of Jhunjhunu district. 50 guardians of the students have been selected randomly from 10 Govt. Primary schools and the same number from 10 Private primary schools also. A self-prepared measurement tool was used for the study to know the attitude of the community. Standard deviation, correlation and t-test have been used to analyse the data. Classification of the structured answers under the seven goals of the study was done. The collected information was classified and tabulated.

Major Findings: (1) Parents were impressed with the attractive primary school building but 56% parents were not satisfied with buildings. In their view, there was no correlation between school building and quality education. (2) Most of the parents appreciated the ability and capability of private schools. (3) 65% parents showed the opinion that Govt. teachers were not careful towards their task. (4) 73% parents felt that teachers pay maximum attention on home-work of the students in private schools. (5) Most of the parents agreed with the following activities preferred in the classrooms of private schools - (a) Homework giving and checking of exercise book is perfect. (b) Teaching methods are better. (c) Better attitude and behaviour of teachers. (d) Teaching methods of teachers develop grasping power and learning.
Scope and geographical coverage: Buhana block in Jhunjhunu district (Rajasthan).

Methodology: Random sampling method was used for selection of Govt. as well as Private Primary schools in Buhana block of Jhunjhunu district. 50 guardians of the students have been selected randomly from 10 Govt. Primary schools and the same number from 10 Private primary schools also. A self - prepared measurement tool was used for the study to know the attitude of the community. Standard deviation, correlation and t-test have been used to analyse the data. Classification of the structured answers under the seven goals of the study was done. The collected information was classified and tabulated.

Major Findings: (1) Parents were impressed with the attractive primary school building but 56% parents were not satisfied with
capacity among students. (e) They develop habit of cleanliness among students. (6) The parents have negative thinking regarding the above 5 points towards Govt. schools. (7) The guardians felt the education in private schools is more child-centered than in Govt. schools.

Implications and action points: (1) To impress the parents, it is essential to beautify the school building. (2) Govt. teachers should be more active, responsible for duties, disciplined, honest towards teaching and punctual. (3) There is a need for frequent supervisions to sensitize teachers towards teaching and home work/class work. (4) Parents feel that use of teaching methods, learners' evaluation and maintenance of work books are performed the headmaster in private schools but not always in Govt. schools. (7) All the headmasters of private schools had been supervising home work completion and its proper checking in the class. (8) Headmasters in private schools said that the teachers deputed for work other than teaching, affects the teaching pertly; while 70% of the headmasters of Govt. schools were not in favour of assigning any non-teaching work to the teachers. (9) 82% of the headmasters of private schools were sensitive towards co-curricular activities, while in Govt. Schools all the headmasters took interest in such activities due to training programme. In both the types of school all the headmasters were active towards Bal Sabha. (10) Better coordination was there in between parents and the headmasters in private schools. 75% of the headmasters of private schools felt that there should be direct contact
between parents & teachers. (11) Parents took more interest in private schools due to facilities provided by these schools like regular teaching, teaching in "English, school being in neighborhood, sufficient number of teachers, attractive co-educational activities and regular contact with parents etc. these had positive impact on parents. (12) 63% teachers of private schools felt that the disciplinary action should be taken by the headmasters against students if the students, disobey orders, while 59% teachers of Govt. schools had been contacting the parents. (13) 88% teachers of private schools were accepting and obeying the instructions given by the headmaster. (14) More than 85% teachers of both the schools were using TLM and were organising co-educational activities. (15) The parents' meetings were organized in Govt. and private school. Some parents did not attend the meeting in Govt. schools while all the parents were attending the meeting in private schools. (16) All the teachers of Govt. Schools; felt that they were deputed in other activities for addition to teaching while only 69% of the; E teachers of private schools felt so. {RJ/04}.


Objectives: (i) To know the attitude of the community with regard to resources lying with government and private primary schools, (ii) to find out ability of teachers and self-motivation position of teachers, (iii) to
know the attitude of children towards moral education (v) to know the attitude towards teacher – student relations, (vi) to know the attitude towards parent-teacher relations, and (vii) to find out children's attitude towards TLM.

Scope and geographical coverage: Buhana block in Jhunjhunu district (Rajasthan).

Methodology: Random sampling method was used for selection of government as well as private primary schools in Buhana block of Jhunjhunu district. 50 guardians of the students have been selected randomly from 10 government primary schools and the same number from 10 private primary schools also. A self-prepared measurement tool used for the study to know the attitude of the community. Standard deviation, correlation and t-test have been used to analyze the data. Classification of the structured answers under the seven goals of the study was done. The collected information was classified and tabulated.

Major findings: (1) Parents were impressed with the attractive primary school building but 56 percent parents were not satisfied with buildings. In their view, there was no correlation between school building and quality education. (2) Most of the parents appreciated the ability and capability of private schools. (3) 65 percent parents opined that government teachers were not careful towards their task. (4) 73 percent parents felt that teachers pay maximum attention on home-work of the students in private schools. (5) Most of the parents agreed with the
following activities preferred in the classrooms of private schools. - (a) Homework giving and checking of exercise book is perfect. (b) Teaching methods are better. (c) Better attitude and behavior of teachers. (d) Teaching methods of teachers develop grasping power and learning capacity among students. (e) They develop habit of cleanliness among students. (6) The parents have negative thinking regarding the above 5 points towards government schools. (7) The guardians felt that the education in private schools is more children – centered than in government schools.

*Implications and action points:* (1) To impress the parents, it is essential to beautify the school building. (2) Government teachers should be more active, responsible for duties, disciplined, honest towards teaching and punctual. (3) There is a need for frequent supervisions to sensitize teachers towards teaching and home work/class work. (4) Parents feel that use of teaching methods, learners' evaluation and maintenance of work books are performed better in private schools. (5) It is suggested for government schools that they maintain daily diary of students and convey to parents the progress of the students.

*Debas (1979)* studied the children perception of teachers’ attitude towards them and its relationship with self-perception, home environment and school achievements.
The sample consisted of all male students of Class IX studying in government boys' higher secondary schools of Delhi in north district, having Hindi as medium of instruction and belonging to different cultural backgrounds. The tools used were: Advanced Progressive Matrices for measuring intelligence, a Cultural Status Scale was developed by the investigator for measuring home environment or cultural status of students and Pupil's Characteristics Rating Scale. The major findings of the study were: (i) Children's perception of teachers' attitude towards them was significantly related with pupils' self-perception, teachers' perception of pupils' characteristics and school achievement (in physical sciences), whereas, it was not significantly related with the cultural status of students; (ii) Teachers' attitude towards children coming from advantaged homes was more favourable than towards children coming from disadvantaged homes; and (iii) School achievement (in physical sciences) was not significantly related with the cultural status whereas, teachers' attitude (as measured in terms of their perception of pupils' characteristics) towards students was likely to affect their school achievement (in physical sciences).

Mann(1980) made a study on some correlates of success in teaching of secondary school teachers.

The study was conducted on 1,800 male and female teachers working in high/higher secondary schools of Punjab. To collect data two sets of tools were used. The first set of tools consisted of the 16PF Test,
Teacher Attitude Inventory (TAI) along with academic achievement scores of teachers the achievement scores of teachers in professional courses and teaching experience of teachers in number of years of service. The second set of tools consisted of a scale to measure teaching success. The scale had different items on different aspects like professional skills, personal qualities and social skills. The scale was rated by heads of schools, colleagues and students. Among other things, the study revealed that: (i) The personality factors A, B, C, G, H, N, and Q3 had significant positive relationship to teaching success and factors F, I, 0 and Q4 had negative relationship; (ii) The personality factor of successful and unsuccessful teacher differ with respect to eleven factors. The successful teachers were significantly more expressive, ready to cooperate, attentive to people, generous in personal relations, bright and alert, fast in learning, efficient in abstract thinking, emotionally mature, realistic about life, effective in adjustment, dependable, conscientious, persevering, responsible and dominated by sense of duty, socially aware, spontaneous and abundant in emotional responses, practically independent, polished, experienced and analytical and less tense than unsuccessful teachers; (iii) The relationship between attitude of teachers towards the teaching profession, classroom teaching, child-centered practices, educational process and success in teaching was significant; (iv) The successful teachers had more healthy attitude towards the teaching profession and allied aspects than the unsuccessful teachers;
(v) Both academic achievement had positive relationship with teaching success; (vi) Teaching experience was not related to success in teaching; (vii) There was significant difference in personality characteristics, attitude towards the teaching profession and allied aspects, academic achievement and achievement in professional courses of successful and unsuccessful teachers; and (viii) Personality characteristics, attitude towards the teaching profession and allied aspects, academic achievement and achievement in professional courses were determinants of success in teaching.


All the ninety teacher-trainees enrolled in the L.T. course (general) of the Government Central Pedagogical Institute, Allahabad, during the 1980-81 sessions, constituted the sample. The Ahluwalia Teacher Attitude Inventory was employed for finding the attitude of the teacher towards teaching and their academic achievement was taken from their entrance records in the L.T. course. Product moment correlation was computed between the academic achievement score and the score for the attitude towards teaching.

The findings of the study, among other things, showed no relationship between academic achievement and attitude towards teaching among the teacher-trainees.
Ramachandran (1991) studied an enquiry into the attitude of student teachers towards teaching. The sample of the study was 100 teacher-trainees from Lakshmi College of Education, Gandhigram, and 100 candidates from the Institute of Correspondence Education, University of Madras, at the Gandhigram centre. A scale for Ascertaining the Attitude towards Teaching was constructed and used. Among other things, the study revealed that: (i) Regular college teacher-trainees had a more favourable attitude towards teaching than the correspondence course teacher-trainees; (ii) Female teacher-trainees had a more favourable attitude towards teaching than male teacher trainees; (iii) The sons and daughters of teachers had a highly favourable attitude towards teaching; (iv) PG teacher-trainees had a more favourable attitude towards teaching than undergraduate teacher-trainees; and (v) The nature of the course did not influence the attitude of teacher trainees towards teaching.

2.3) Research Studies on Teachers' Teaching Effectiveness

Indian Studies:

Anand (1961) in his study suggested that the teachers of Mathematics and English were ranked higher than the teachers of Drawing. Pupils' ranks also agreed more for qualities like expression, sympathy, loveliness, beauty, etc. In the case of principal's ratings also the analysis of variance was worked out which suggested significant difference between principal's rating and qualities.
Deva (1966), studied the effectiveness of the teachers of B.T. level with some psychological factors. In his study collected the data from 546 student teachers preparing for the B.T. Examination of Agra University and concluded that intelligence, as a predictor, was of negligible importance. Kindness, effective questioning and fluent expression were the most important characteristics of efficient teacher. Good scholarship had been found to be another important characteristic of teaching efficiency, followed closely by good use of material aid.

Kulandaiveh: and Rao (1968) Studied the effectiveness of teachers with different qualities. He analysed the qualities of a good teacher. A checklist was developed for data collection. The sample comprised 1227 boys and 1435 girls from 6th to 11th standards of 11 schools of different types.

The major findings revealed that a good teacher as viewed by the students was one who: teaches well inspires good qualities re-teaches a lesson when not understood treats the students alike reprimands students for their follies and tries to reform students of problematic type.

Debnath (1971) studied the determinants of teaching efficiency. A questionnaire and an evaluation sheet for observations of the lesson were developed in order to study the effectiveness of the lesson. Two hundred and twenty-six headmasters selected by stratified random sampling and staff members of twenty-two training colleges of West Bengal served as
the sample of the survey. The major findings were: The important correlates of teaching efficiency, as found in the study, were knowledge of the subject matter, sincerity in teaching, mastery of the method of teaching, academic qualifications, mode of exposition, sympathetic attitude towards students, discipline, student's participation, proper use of instructional aids in teaching and the art of questioning.

**Chhaya (1974)** investigated certain psychological characteristics of effective teachers and compared them with those of ineffective teachers. The teachers were categorized as effective or ineffective based on the High School (D.P. Board; Allahabad) examination results for three years, 1968-70. Principals' ratings and students' ratings were used. The two groups 80 effective and 100 ineffective teachers were compared in personality adjustment, attitude towards teaching, interest in teaching, emotional stability, extraversion-introversions and authoritarian. The major findings were: (i) Effective teachers had significantly better personality adjustment and more favourable attitude towards teaching than the ineffective teachers; (ii) Effective teachers did not show significantly more interest in teaching than ineffective teachers; (iii) Effective teachers were significantly more emotionally stable than ineffective teachers; (iv) Effective teachers were not more extraverted than ineffective teachers; and (v) Ineffective teachers were more authoritarian than effective teachers.

**Kamala Arora (1976)** studied characteristic differences between
effective and ineffective teachers. The major findings were: (i) Effective teachers were mostly satisfied with their job, whereas, ineffective teachers are dissatisfied or indifferent; (ii) Effective teachers derive satisfaction in job, in company of students and teaching in general, whereas, ineffective teachers do so mainly from the financial angle; (iii) Effective teachers have significantly more favourable attitude than ineffective teachers towards teaching profession, teaching personnel, friendly relations between teachers and pupils, democratic discipline and mild reformative punishment, modern teaching techniques, judicious homework and adequate teaching aids; and (iv) Effective teachers feel that enhancement of teacher's prestige depends on teacher's own competence and behaviour and feel teacher education necessary and beneficial.

Grewal (1976) studied the intellectual and personality correlates of teacher effectiveness and found that: (i) The measure of intelligence and "Lecture, direction and authority" categories in the classroom behaviour; (ii) The effective teachers involved more indirect influence, student initiation, teacher response ratio and pupil steady state ratio, whereas, ineffective teachers involved more direct teacher talk, silence or confusion, steady state ratio and non-stimulating situation in classroom behaviour; (iii) In the effective teacher's teaching, student response and initiations were followed by teachers' praise and accepting feelings,
whereas, ineffective teachers' teaching student response and initiation were followed by direction and authority; and (iv) The effective teachers personality traits clustered in specific constellations with some measures of teacher effectiveness; and (ii) The predictors correlate significantly with the criterion measures of teacher effectiveness and the main predictors of teacher effectiveness were home, health, social, emotional and total adjustment, dominance, verbal and non-verbal intelligence.

**Gupta (1976)** attempted to predict teacher effectiveness. Teacher effectiveness was measured by a Teachers' Rating Scale, a Pupils' Rating Scale, a Teacher Attitude Inventory and a Teaching Aptitude Test. The teacher's personality was measured by Cattell 16 PFQ (Hindi Version). The major findings were: (i) the High effective teachers differed significantly from the general population with respect to A+, B+, C+, F+, Q3+, L-, C-, Q1-; (ii) the low effective teachers differed significantly from the general population with respect to B-, Q3-; and (iii) in comparison to average effective teachers 'High' effective teachers were more intelligent (B+), emotionally stable (C+), assertive (E+), conscientious (G+) adventurous (H+), tender minded (I+), and had high self-concept control (Q3+) and they were also less suspicious (L-), less experimenting and radical (Q1-) and less self-sufficient (Q2-) and less tense and frustrated (Q4-).
Tripathi (1978) this study tried to find out the relationship between teacher attitudes and organizational climate. The sample of the study constituted 840 teachers, ten each from all the eighty four intermediate colleges in Varanasi district. He concluded that on professional attitudes, the mean differences between teachers of rural and urban colleges, government and private colleges and girls and boys colleges were not significant.

Ramoji Rao (1978) in his study of organizational behaviour in schools concluded that: (i) Mean achievement index of a school possessing closed climate was close to overall average schools possessing open climate; (ii) The difference between achievement indices of open and controlled climate was found to most detrimental; The job (iii) satisfaction of teachers in closed climate was low whereas, it was high in open climate; and (iv) Organisational climate had marked consequences on the behaviour of the members of the organization and consequently on the achievement of the organization.

Chandra and Singh (1980) studied the emotive aspects of work perceived by effective and ineffective teachers and found that, the values of social service, intellectual challenge and independence appealed to effective teachers and the emotive factors for ineffective teachers was economic return.
Mutha (1980) made an attitudinal and personality study of effective teachers. The study attempted to identify in factors attitudinal motivation and personality which differentiated effective teachers from ineffective ones. The sample comprised of 300 secondary school teachers—180 male and 120 female randomly drawn from the secondary schools of Jodhpur. Teacher effectiveness scale was developed and standardized to form criterion groups. The criterion groups consisted of seventy-five effective ones. Job Satisfaction Questionnaire for secondary level teachers was also developed and standardized to study the attitude of teachers towards job and job-related conditions. Besides this, personal factors like sex, age, professional training, income level, nature of residence, marital status and size of family and nature of schooling were studied. Personality variables like intelligence, anxiety teaching aptitude, marital adjustment, extroversion neuroticism, job satisfaction, values, ascendance-submission and self-concept were also studied. The tools employed were Raven's Progressive Matrices, Sinha's Self-Analysis Form, Eysenck-Maudsley Personality Inventory, Srivastava's Teaching Aptitude Test, Bhatnagar's Value Scale, Singh's Marital Adjustment Inventory, Sharma's Self-Concept Inventory, and Allport's Ascendance-Submission Scale. Percentage, chi-square, t-test, factor analysis and multiple correlations were employed to analyse the data.

The major findings of the study were: (i) Sex, professional training, nature of schooling and income level were significantly associated with
the teacher's effectiveness; (ii) The effective teachers had significantly higher scores on intelligence than the ineffective; (iii) The effective teachers had higher scores on anxiety than the ineffective; (iv) The effective teachers had significantly higher scores on teaching aptitude than the ineffective; (v) The effective teachers had significantly higher scores on neuroticism than the ineffective; (vi) The effective teachers had significantly higher scores on theoretical value than the ineffective; (vii) The ineffective teachers had significantly higher scores on political value than the effective; (viii) The effective teachers had significantly higher scores on job satisfaction than the ineffective; (ix) The set of personality variables-ascendance-submission, anxiety, marital adjustment, extroversion, neuroticism, job satisfaction and teaching attitude-significantly predicted the teacher's effectiveness; and (x) Personality variables ascendance-submission, anxiety, marital adjustment, extroversion, neuroticism, job satisfaction, teaching aptitude, real-self-ideal self discrepancy, religious value, social value, theoretical value, aesthetic value, economic value, political value and intelligence significantly predicted the teacher's effectiveness irrespective of sex or subject of teachers; (ii) Students' rating and self-rating of teaching effectiveness were positively and significantly related but the self-rating was significantly higher than the students' rating; (iii) The factors of teaching effectiveness identified were: subject mastery and intellectual kindling, responsiveness, integrity and communicating ability, commitment to
teaching, impartiality, motivating, concern for the student's progress and informal academic help; (iv) The lowest performance of teachers, on an average, was with respect to encouragement discussion in the class and the best was with respect to punctuality; and (v) The teachers in the Madras University area in general, had a favourable attitude towards students' evaluation of teaching.

Sheelavant and Deshpande (1981) studied the classroom verbal teacher behaviour by successful teachers of languages. The study included 250 IX class students with 12 teachers observed by 6 observer each. The other variables personality factors of the students the results showed that, the indirect teacher behaviour yielded positive and significant results than the direct teacher behaviour. Another important observations were the personality factors like extroversion and introversion were also found responsible for the academic achievement of the students. The introvert students achieved more than the extrovert students.

Another study conducted by Fransina (1981) found that, the personality factors like extroversion neuroticism and teacher teaching effectiveness are predictors of academic achievement of the students. The introvert students with effective teaching achieved more than the extrovert students. Even the extrovert students with the help of effective teaching achieved better than the other students.
Veeraraghavan and Bhattacharya (1982) studied the school achievement, student motivation and teacher effectiveness in different types of schools.

Four types of schools were taken as sample, viz., Public Schools, Missionary Schools, Government-run Urban Schools and Government-run Rural Schools. The tools used were the Achievement Motivation Scale by Rao, and the Teacher Effectiveness Scale by Arora. A rank order correlation was used to treat the data.

Khajuria (1982) studied the typical patterns of classroom verbal behaviour exhibited by successful teachers of language and science. Initially, 250 secondary school teachers teaching language and science were selected randomly, finally 72 teachers were selected. The tools used were: Marks Sheets of students, Headmasters Rating of Teachers Success and Pupil's Rating of Teacher Success. The main findings of the study were: (i) The science teachers exhibited patterns of asking questions, giving directions, soliciting initiating pupils' talk, sustained teacher initiated pupil talk, flexibility and teacher talk according to normative expectations; (ii) For the language teachers the patterns of higher proportion of student talk to teacher talk, the flexibility, content cross and total teacher were found to be of normative expectations; and (iii) Science teachers resorted more to asking questions and lecturing than the language teachers.
Among other things, the study revealed that: (i) School achievement varied significantly in terms of the four types of schools with public and missionary schools having the highest achievement and Government schools showing the lowest achievement; (ii) Students' motivation had no relationship with school achievement; and (iii) Teacher effectiveness was positively correlated with school achievement.

**Foreign Studies:**

Lamke (1951) selected poor and good teachers on the basis of composite ratings by their principals and two observers. He compared the qualities of good and poor teachers on the basis of Cattell's 16 PF test and a paired comparison scale based on Cattell's 20 Surface Traits. This analysis suggested that good teachers were gregarious, adventurous, frivolous, and more interested in opposite sex and also had above average emotional responses and strong artistic and sentimental interests. They were more talkative, cheerful, placid, frank, quick, polished and cool. Poor teachers, on the other hand, were likely to be more conscious, emotionally unstable, lacking artistic and sentimental interests. They were more talkative, cheerful, placid, frank, quick, polished and cool. Poor teachers, on the other hand, were likely to be more conscious, emotionally unstable, lacking artistic and sentimental interests.

Symodas (1954) observed that two extreme groups of teachers could be differentiated on three well defined bases, namely, (i) The
superior teachers liked children while the inferior ones disliked children; (ii) The superior teachers were personally secure and self-assured, while the inferiors suffered from inadequacy; and (iii) The superior teachers possessed good and well integrated personality organization while the inferior teachers tended to be personally disorganized.

In Schultz and Ohilson's (1955) study the best and poor student teachers were selected by the team judgment of student teachers supervisors. Both were made to respond to Strong Vocational Interest Blank. It was found that the best student teachers took interest in working with people and selecting occupations which involved teaching were indicated. Good teachers in Jane's study were superior to poor teachers in intelligence, knowledge of subject matter and professional knowledge. Good teachers were somewhat more sociable and dominant than poor teachers.

Ryans (1960) based his findings all the responses of teachers to a teacher's characteristics schedule. High teachers were found to be intelligent and social with interest in music, painting and creative literacy affairs. They were generous, emotionally stable and cheerful. On the other hand, low teachers were restricted and critical in their appraisals of other persons. They were less intelligent, emotionally less-stable and represented older age-group
Biddle and Ellena (1964) in their study included the following in teacher effectiveness as cognitive experiences (a) Teaching, (b) Socialization, (c) Ascribed position, [(i) Teacher preparation, (ii) Skill, (iii) Motives, (iv) Habits, and (v) Knowledge], (d) Teacher behaviour [(i) Trait (ii) Immediate effects (external and internal change in the behaviour of students)], (e) Long-term consequences (Adjustment of pupil and new ideas in life and education).

Hall (1964) in his study concluded that fully certified (trained) teachers were more effective when pupils, achievement scores were used as an effectiveness criterion.

Comb (1964) concluded that a good teacher was primarily a unique personality. He was first and foremost person and this fact was most important in determining the thing about him. He had a competence to be sure but not a common set of competencies like everyone else.

Arisman Febel (1966) found that student teachers in an open climate school perceived the efficiency of the student teaching situation more favourably than the student teachers in a closed climate school.

Sergent's (1967) research was also supportive of these findings. He investigated that the teachers of schools having open climate rated high on teacher satisfaction as well as school effectiveness as compared to those of schools having closed climate. He found that: (i) there was a significant rank-order correlation between school openness and teacher
agreement on the context of this openness; and (ii) There was no significant relationship between faculty size and school climate.

**Goodwin Coy Ronald (1978)** studied whether or not there was any relationship between junior high school teacher effectiveness and junior high school teacher personality factors. The major findings of this study were: (i) The junior high school students perceived the reserved teacher to be a better motivator of students than the out-going teacher; (ii) the more intelligent teacher to be fairer than the less intelligent teacher; (iii) the tough-minded teacher to be a better motivator of students than the tender-minded teacher; (iv) the tough-minded teacher to be more subject matter oriented than the tender-minded teacher; and (v) the conservative teacher to be more subject matter oriented than the experimenting teacher.

**(Doyle (1985)** found that effective teachers adjust their teaching to fit the needs of different students and the demands of different instructional goals, topics and methods.

**Rosenholtz (1986)** found that inexperienced teachers (those with less than three years of experience) are typically less effective than more senior teachers. The benefits of experience appear to level off after about five years, especially in non-collegial work setting.

A possible cause of this curvilinear trend inexperience effects is that older teachers do not always continue to grow and may grow tired in their jobs. Furthermore, the benefits of experience may interact with
educational opportunities. Veteran teachers in settings that emphasise continual learning and collaboration continue to improve their performance (Rosenholtz, 1984). Similarly, very small well prepared beginning teacher can be highly effective.

Sanders and Rivers (1996) found that students who are assigned to several ineffective teachers in a row have significantly lower achievement and gains in achievement than those who are assigned to several highly effective teachers in sequence.

Yeung, et al, (1998) conducted a study on student teachers' personal construction of teacher efficacy. This study employed the repertory grid technique to investigate how a sample of 27 student teachers in Hong Kong developed a personal sense of teaching efficacy.

The analysis indicated that third year students' perceptions were more homogeneous than were those of first year students. The results also indicated that teaching efficacy was viewed in terms of the dimension of concern for instructional participation and learning needs of students, communication and relationships with students, academic knowledge and teaching skills, lesson preparation, management of class discipline, teaching success, teaching commitment and a sense of self-confidence.

Experiences of teaching practice, electives, students, teaching practice supervisor (electives) were the major sources for the development of a sense of teaching efficacy.
Wesley (1998) in the study of high school teacher outlines 11 nontraditional expectations for new teachers. Teachers should empathize with students; create partnerships with school community members; account to others; embrace adversity; take the long view; demonstrate competency and interest in others; keep believing in students; maintain high performance goals; share reflections with colleagues; admit and rectify mistakes and wait patiently for results.

Witcher, et al., (1999) studied the characteristics of effective teachers perceptions of pre-service teachers. This study determined pre-service teachers' perceptions about the characteristics of effective teachers and investigated factors (e.g., gender, ethnicity, age, year of study, area of specialization and parental status) that may have influenced their responses. Participants were 219 students attending a large mid-southern university. The students completed a questionnaire asking them to identify, rank and define between three and SIX characteristics that they believed excellent teachers possess or demonstrate. A phenomenological analysis (i.e. method of constant comparison) of responses revealed several characteristics that many of the pre-service teachers considered to reflect effective teaching. In order of endorsement level, the following six themes emerged from these characteristics: student centeredness, enthusiasm for teaching, ethicalness, classroom and behaviour management, teaching methodology and knowledge of subject. A canonical correlation analysis

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revealed that females, college-level juniors and minority students tended to endorse teaching methodology and teaching characteristics that were classified as ethical to a greater extent than did their counterparts and to rate attributes that were associated with knowledge of subject and classroom behaviour management to a lesser degree age served as a suppressor variable.

**Partington, et. al, (1999)** conducted study on the classroom of an elementary school teacher of Aboriginal students in Western Australia demonstrates the way in which teacher intentions are hindered by the socio-political context of the school. Findings from observations of classroom events and interviews with the teacher, students, and other key participants indicated that the teacher was unable to translate good intentions into satisfactory outcomes for Aboriginal students because the teachers own value system differed markedly from those of his students; the principal constructed an environment that reflected the dominant culture and did not welcome Indigenous students and parents; the teacher was also deputy principal, and was identified with administration by the parents, resulting in parent alienation; the school the did not have the infrastructure to support teachers' efforts to provide appropriate schooling for Indigenous students; and conflict among students that arose from outside factors inhibited the teacher's efforts to provide quality schooling for the Aboriginal students.
Lin Lawrenz (1999) found that time-series design is useful for monitoring student learning and assessing teaching effectiveness reports that time-series data reveal a sharp drift of the learning curve in the treatment stage and show high correlations with established tests and discrimination between high and low achievers.

King et al., (2000) found that teachers have the most direct, sustained contact with students and considerable control over the teaching/learning climate, improving teachers' knowledge, skills, and dispositions is critical to enhancing student achievement. Professional development must also address school-wise professional community and school program coherence. Two elementary school's efforts are profiled.

Crulckshank (2000) concluded that good teaching have included ideal, analytic, effective, dutiful, competent, expert, reflective, satisfying, diversity-responsive and respected. If good teaching could be observed and measured, the results would not indicate a one-size-fits-all model, but rather demonstrate that good teaching is linked to multiple, desirable outcomes.

2.4) Research Studies on Academic Achievement

Indian Studies:

Lalithamma (1975) studied some factors affecting achievement of secondary school pupils in mathematics.
The study was conducted on 732 pupils of standard IX selected on a stratified random basis. The tools used were: Standardised.

Achievement Test in Mathematics, a Study Habit Inventory, an Interest Inventory, a Socio-economic Scale and Raven's Standard Progressive Matrices. The study revealed that (i) The average performance of pupils in mathematics was 23.14 with SD of 8.20 and the distribution was negatively skewed; (ii) There was significant difference in the performance of boys anti girls in mathematics, the difference being in favour of boys; (iii) The urban pupils were superior to rural pupils in mathematics; (iv) Intelligence and interest in mathematics were higher in boys and urban pupils than in their respective counterparts; (v) The achievement in mathematics was positively related to intelligence, interest in mathematics, study habits and socio-economic status; (vi) Studying lessons daily, studying mathematics by writing, repetition in learning, spaced learning, over learning etc., influenced the achievement in mathematics positively; (vii) Private tuition, electric light facilities, radio equipments for study, etc., influenced the achievement in mathematics; (viii) Achievement of first born was better than that of the last born; and (ix) Achievement of scheduled caste and tribe students was lower than that of the total sample.

Zacharia (1977) studied the impact of attitude and interest on achievement of secondary school pupils in social studies.
The sample consisted of 800 pupils drawn from standard X of different schools in the Alleppey revenue district of Kerala, selected on the basis of the proportionate stratified sampling technique. The tools used were: a Standardised Achievement Test in Social Studies for Standard X, Attitude Scale, Interest Inventory and Standard Progressive Matrices.

The major findings of the study were: (i) There was high positive correlation between the secondary school pupils' achievement in social studies and their attitude; (ii) The pupils' interest in social studies was closely related to their achievement in the subject at all levels; (iii) The pupils' intelligence was a major factor in influencing their achievement in social studies; (iv) The pupils' attitude and intelligence scores were more or less equally correlated with their achievement in social studies; and (v) The pupils' intelligence was not a prominent factor in influencing their attitude and interest in social studies.

Dixit and Santosh Kumar (1980) studied the effect of personality factors and self-concept on educational achievement.

The sample comprised of 500 undergraduate students of B.A. Part I of Agra City who were selected randomly. Tools used for data collection were: Cattell's 16 PF Questionnaire, Group Test of Intelligence and Self concept Test of Dixit and Srivastava.

Among other things, the study revealed that: (i) Personality factors significantly influenced the educational achievement; (ii)
Intelligence was related to educational achievement; and (iii) Self-concept was not related to educational achievement.

Sandhu (1986) tested the hypothesis that students belonging to the scheduled castes, backward classes and general category do not, differ in either intelligence or in performance in school subjects. 175, 15 year old students were administered the Culture Fair Intelligence Test Scale 2 and their school records were examined for achievement in Mathematics, Science, English, Punjabi and Hindi. Results revealed no significant differences in academic achievement.

Gawande (1988) studied the relationship between achievement motivation and scholastic achievement of higher secondary students of Class IX.

The data were collected from six junior colleges attached to schools achievement-motivation and scholastic achievement of urban students Amaravati District of Maharashtra. The tools used included Rao's Achievement Motivation Test and Scholastic Achievement Tests. Among other things, the study revealed that: (i) The correlation between was at a higher level than that of rural students; (ii) There was no significant difference in the coefficient of correlation of achievement motivation and scholastic achievement of non-backward and backward students; (iii) Boys were more achievement-motivated than girls; and (iv) The mean difference in the scores of scholastic achievement in boys and girls was not significant.
Ramaswamy (1988) studied an inquiry into the correlates of achievement. Using stratified random sampling method, 72 students of Class X from 20 schools in Madurai Revenue District were selected as the sample. Relevant data were collected from SSLC Public Examination, Personality Adjustment Inventory of Sharma, C.P., Rao's Achievement Motivation Test, Self-concept Scale of Mukta Rani, Study Habit Inventory of Patel, B.V. and Socio-economic Status Scale by Singh, R.A. and Saxena, S.K. (Tamil version). Among other things, the study revealed that: (i) Academic achievement was found positively related to personality, achievement motivation, self-concept, study habits, and socio-economic status among high and low achieving boys and girls; and (ii) Significant difference was found between high and low achievers in personality, achievement motivation, self-concept, study habits and socio-economic status.

Barnes and Nagarkar (1989) studied the effect of yoga training on academic achievement taking a sample of 40 students of class VIII, in the age range 13-14 years. Four months of yoga training was given to them. Scholastic aptitude test and non-verbal test of intelligence, pre and post training were administrated. Result revealed a definite positive effect of yoga practice on academic achievement as well as on intelligence.

The kind of home environment one has; influences the academic achievement. In this context, working and non-working mothers provide different environments influencing academic achievements differently.

Budhev (1990) compared the academic achievement of secondary
school children of working and non-working mothers. Sample included 307 boys and 343 girls of working mothers and same number of boys and girls of non-working mothers. Academic achievement scores were collected from the annual mark sheet of schools. It was found that the academic achievement of children of working mothers was greater than the children of non-working mothers.

Ngaliankim (1991) studied the selected variables associated with achievement in mathematics. From the population of all class X students studying in the central schools located in the States of Nagaland, Meghalaya and Manipur, 303 students covering 163 boys and 140 girls were selected as sample for the study. The tools used were: Achievement Test in Mathematics, Attitude Scale to measure attitude towards mathematics, Educational Aspiration Scale of Sharma and Gupta, Occupational Aspiration Scale of Grewal, Differential Aptitude Test, and Cattell's 14 High School personality Questionnaire (HS PQ). Descriptive statistical techniques together with chi-square test and contingency coefficient were used to treat the data.

Among other things, the study revealed that: (i) There was significant association between (a) attitude towards mathematics, (b) educational aspiration, (c) numerical ability, (d) abstract reasoning, (e) personality factor A, and (f) personality factor G and achievement in mathematics; and (ii) None of the other variables studied showed association with achievement in mathematics.

Kundu and Basu (1991) conducted a study on 100 boys and 100
girls in the age range of 8.5 to 13.5 years. Aggressive reaction to frustration was studied using Rosenweig P-F study (Children's form) and junior Eysenck personality inventory by Eysenck (1975) adopted in India by Kundu (1976). The study indicated that academic achievement in school children is related to and can be successfully predicted from the child's mode of dealing with aggression generated by frustration. Children with high academic achievement were less aggressive than low.

Rosaly (1992) has found that the attitude of high school students towards the learning of mathematics and their achievements in mathematics are highly correlated and that urban boys and girls have a more positive attitude towards mathematics than rural boys and girls.

Mazumdar (1992) studied the relationship between attitude towards and achievement in English of Standard IX students.

The sample selected for the study was 500 students of Standard IX selected from 10 high schools of Guwahati City using stratified random sampling technique.

The tools used were: an Achievement Test in English for Class IX students and an Attitude Scale. The study revealed that: (i) There were statistically significant differences between the achievement scores as well as attitude scores of students attending government and private schools with the latter category of students showing higher scores; (ii) There were no significant differences between boys and girls in respect of their achievement and attitude scores, and (iii) The co-efficient of
correlation between achievement in English and attitude towards English for the entire sample was positive.

Bhatnagar and Sharma (1992) studied the relationship between parental education and academic achievement of a sample of 185 students studying in 9th, 10th and 11th standards. Trivedi and Udai Academic achievement was taken as the average of marks obtained by the student in his or her last examination. Results indicated that children of educated parents performed at a significantly higher academic level than others.

Gyanani (1995) examined the effects of peer tutoring on academic achievement on a sample of 415 high school students. Standardised verbal and non-verbal intelligence tests and self-made tests were used as tools. Findings revealed that peer-tutoring technique enhances the academic achievement of students.

Pathakthak and Verma (1995) studied academic achievement in relation to creativity. Sample consisted of 200 male, school students from class 10. Wallach-Kogan battery of creative instruments was used as tool. The marks obtained at school level were taken as criterion for scholastic achievement. The studies revealed that high creative were of high scholastic achievement.

VijayalakShmi (1995) studied the academic achievement of
schedule caste (SC), backward community (BC), and general candidates (GC). The sample of the study consisted of 150 students in class X. Incidental-cum-purposive technique was used to draw the sample. Marks obtained by the students in the school examination were taken as bases for the school achievement. The result showed that the general candidates, backward caste and a scheduled caste group of students differed significantly in academic achievement.

Sujii Kumar (1996) conducted a study on relationship between intelligence and achievement. The study showed that there exists a positive significant relationship between intelligence and achievement in mathematics.

Tiwari (1996) studied the degree of adjustment of high and low achieving adolescents in different areas related to home, health, school, social and emotional. Kumar’s Adjustment Inventory was administered to 50 high achievers and 50 low achievers from 10th standard. Test revealed that home, social and emotional adjustments of high achieving adolescents were better than the low-achieving adolescents.

Kochurani (1999) showed that the thinking operations in mathematics of IX standard students were positively related to their achievement in mathematics.

Sharma and Kumar (1999) studied the relationship between birth order and intelligence in Indian setting. First three born school going children randomly selected from 40 urban educated families formed the
sample. I.Q. was measured using Raven's Advanced and Coloured Progressive Matrices. Findings revealed that third born males are more intelligent than second born males and boys are more intelligent than girls.

**Jyothi and Ramakrishnaiah (2000)** conducted a study to explore the extent of relationship between scholastic achievement and academic adjustment. Data were collected from 300 intermediate students. Rao's Academic Adjustment Inventory was used as the tool. The results revealed that academic achievement was higher among those having higher academic adjustment and academic adjustment positively influenced academic achievement.

**Raj and Sreethi (2000)** studied academic achievement as related to procrastination behaviour and study habits. Sample consisted of 166 male and 134 female government and private higher secondary school students in Tamil Nadu. The inventory developed by Sananada Raj was used to measure procrastination and study habits. Results revealed that procrastination behaviour lead to improper study habits which further lead to lower academic achievement. Differences in procrastination behaviour, study habits and in turn academic achievement were observed among students of government schools and private schools.
Foreign Studies

Murnane (1985) found that it is not only the knowledge acquired with ongoing professional development (which may represent more recent advances in the knowledge base) and also the teacher's enthusiasms for learning that relates to increased students achievement.

Gaddy (1986) tested the hypothesis that, TV viewing reduces the academic achievement of high school students. The researcher concluded that a significant negative correlation exists between TV viewing and academic achievement.

Waberg et.al., (1986) collected the data from a national sample of 1955, 17 year olds to study the factors influencing academic achievement. Results suggest that academic achievement was related to ability, motivation, amount of homework, school and class environment, home environment, sex and race.

Fehrmann et al., (1987) studied the parents' role in the academic achievement of children. A longitudinal study was conducted on a sample of 28,051 high school students revealed that parental involvement had positive effects on students' academic achievement.

Effect of T.V. viewing on academic achievement is a much researched topic evoking varied findings. One such study was carried out by Potter (1987) on the relationship between exposure to various types of TV programs and measures of academic achievement. 543 students in the 8th to 12th grades responded to a questionnaire. Results revealed that
TV viewing does not adversely affect achievement until viewing exceeds about 10 hours per week.

Foon (1988) studied the employment status of mother's influence on the academic performance of adolescents. 896 male and 779 female 10th grade students completed a questionnaire designed to assess the effect of their mothers' and fathers' occupational status on their self perceptions and school achievement. Results showed that mother's employment outside the home was associated with low preference for science subjects among males, whereas, for females, mother's employment status was associated with high preference for mathematics subjects and a favourable attitude towards doing well in school. Males with mothers in low-status jobs had lower preferences for mathematic subjects than males whose mothers were in high-status jobs.

Kudrek and Sinclair (1988) reported the influence of family structure, gender and family environment upon academic performance. Subjects were 219 middle class eighth grades. It was found that students in 2-parent nuclear families had better academic performance than students from other family composition.

Simmons and Wade (1988) studied perceptions about learning and education among different nationals. A study conducted brings to light some interesting facts and contrasting attitudes of British and Japanese students towards education. A survey of Japanese and British students revealed that, Japanese students attached supreme importance
to studying, passing examinations and entering high school, whereas, many English students were more concerned with getting a job. It was also found that the Japanese emphasised ideals such as kindness and consideration for others, whereas, the English stressed characteristics like individuality and love for parents. It is concluded that the academic achievement of young people in Japan springs out of a wide spread respect for learning coupled with a belief that success or failure depends on individual effort rather than one’s place in society.

Armour Thomas et al., (1989) found that when student characteristics are held constant the relationship of teachers’ ability, motivation, amount of homework, school and class environment, home environment, sex and race.

Steinberg et al., (1989) examined the over-time relation between three aspects of authoritative parenting (acceptance, psychological autonomy and behavioral control) and school achievement in 120 families with a first born child aged 11 to 16 years to test the hypothesis that authoritative parenting facilitates school success. Results revealed that authoritative parenting facilitated adolescents' academic success. Each component of authoritativeness made an independent contribution to achievement. Students who described their parents as treating them warmly, democratically and firmly were more likely to develop positive attitudes toward their achievement and to do better in school.
Brook (1991) measured the achievement of 168 Israeli high school students. 68% of the mothers worked outside of the home, 42% of the mothers held full time jobs and 58% held part-time jobs. There were no significant differences between the achievement of pupils of working mothers and non-working mothers. A significant difference was found between the achievement of students coming from low-income families and those coming from higher income families.

Cool and Keith (1991) examined the extent of the direct and indirect influence of quality of instruction, motivation, quantity of academic course work and homework on academic achievement on a sample of 28,051 high school students. Ability, academic course work, quality of instruction had an important effect on school learning, a finding that supports their inclusion in prominent theories of school learning.

Cherian (1992) investigated the relationship between parents' education and academic achievement of 369 male and 652 female rural, South African adolescent students. Questionnaires were used to collect the information. A positively significant relationship was found between academic achievement and parental education.

Keith (1993) examined the effects of parental involvement on the achievement of eighth grade students. Data from 21,814 students- and their parents participating in the National Educational Longitudinal Study, were analyzed. Results showed that parental involvement in
students' academic lives is indeed a powerful influence on eighth grade students' achievement.

**Bogenschneider and Steinberg (1994)** examined whether and under what conditions maternal employment affects school achievement among high school students. It was found that among 2,571 white adolescents living in 2-parent families who provided information on parental employment patterns, school grades, and family characteristics.

The study revealed that: (i) upper middle-class and middle-class boys, reported lower grades when their mothers worked full time; (ii) upper middle-class and middle-class girls reported no effects of their mothers' employment but did report lower high school grades when their mothers worked full time during the pre-school period; (iii) among upper middle class boys, both present employment and employment during pre-school years were associated with lower grades; and (iv) for upper middle-class boys, their grades were lower when their mothers' worked full time throughout the boys' lives than when the mothers increased their work hours over time.

**Borg (1995)** investigated the effects of age and sex on performance, on a sample of 1659 male and 1801 female students. The researcher reported that older students were more successful and percentage decreased with age. Girls outperformed boys and showed greater academic scores.
Downey (1995) study revealed that bigger is not always better. A sample of 24,599, eighth graders from the 1988 National Education Longitudinal Study were studied to find out the relationship between number of siblings and academic performance. Inverse relationship between the number of siblings and academic achievement was found.

Undheim (1995) examined sex differences and the influence of parents' education on achievement in high ability students. School I achievement data was collected from school records. Parent's education correlated with achievement in the high ability group, indicating that support and modeling influence of parental education are important for achievement.

Alishie (1996) examined the relationship between participation in extracurricular activities and the variables of schools' attendance and academic achievement. A total of 575 students from 13 high schools made up the sample for this study. Selected respondents responded to a survey instrument. The result showed a significant relationship between involvement in extra curricular activities and both school attendance and academic achievement.

Ortiz (1996) conducted a study on high school student's problems, concerns and ways of coping. A sample of 94 students from X, XI and XII grade was studied. Information was collected using an open ended questionnaire. Problems faced and the ways of coping was studied. Findings showed that major concern of this group was their academic achievement.
Beal (1998) compared the academic achievement of student athletes to non-athletes. Academic achievement was measured based on the scores obtained in the previous examinations. The study found that student athletes' academic achievement surpassed non-athletes'.

Hartley and Melinda (1998) studied the relationship between disruptive behaviour, attention and academic achievement. Academic achievement in reading and mathematics were measured with individually administered standardized achievement tests. Learning problems were measured by teacher ratings on the Learning Problems Scale. Sample consisted of 155 children referred to a psycho-educational clinic. The results revealed that disruptive behaviors are not predictors of academic achievement but overall measures of intelligence were better predictors.

Kim (1998) conducted a study to examine the way adolescents' perceptions of parental warmth, control and involvement in schooling related to their academic achievement. A sample of 245 students were administered the mother and father versions of the Child Parental Acceptance-Rejection/Control Questionnaire and the Family Information Sheet. The study found that majority of adolescent perceived their mothers and fathers as warm and highly involved in schooling. The results revealed that perceived parental behaviour had positive effects on adolescents' academic achievement.

Forbes and Baker (1991) studied the effect of classroom organisation on academic achievement. Sample consisted of 100 students, of whom the
control group was placed in traditional single grade classrooms and the experimental group was placed in multigrade classrooms for three consecutive years. Students' scores on assignments were collected. Metropolitan achievement tests, ERB comprehensive Testing program, two sub-tests in reading comprehension and mathematics were conducted to determine, if any, significant differences occurred in academic achievement between the two groups. The findings showed that there was a statistically significant difference favouring multi grade boys on mathematics achievement over single grade boys.

**Grinion (1999)** examined the relationship between family socio-economic status and academic achievement. The data were collected from high school students from four different schools. Information pertaining to students was obtained from students' personal files. The researchers concluded that there is an academic achievement gap between children from low-income homes and their more advantaged peers. A strong relationship between poverty and academic achievement was found. Further it was concluded that poverty had more deleterious effects on boys' academic achievement than on girls’ academic achievement.

**Gertz and Lee (1999)** examined the relationship between gender, race, SES and academic achievement and found out that race and gender contribute to the proportion of variance in academic achievement and SES plays the largest role general student population.
Conclusion

Review of the studies cited above leads us to the following conclusion:

An analysis of comparative studies reveals that 'good' teachers are significantly different from 'poor' teachers only in a few personality factors/dimensions or any of the correlates (like adjustment/ intelligence/attitude/interest). Further the correlates which discriminate between 'good' teachers and 'poor' teachers are different in different studies. This is due to the different criterion employed to rate teaching and the different instrument employed to assess its correlates. Further the populations studied do not resemble one another. The only factor which seems to be characteristics of 'good' teacher in most of such studies a 'emotional stability'. Some factors like knowledge of the subject matter, professional knowledge, sense of humour, higher academic qualifications, sincerity in teaching, mastery of the method of teaching which function as correlates in certain studies are considered to be components of teacher effectiveness. There is no distinct line of demarcation between teacher effectiveness and its correlates so far as certain factors are concerned. If they exchange places in different studies, then different criterion emerge and hence different findings.

Ryans (1964) gives fairly strikingly different pictures of teachers rated high and low based on the overall classroom behaviour. The criteria of this overall classroom behaviour are different from the criteria used in
Barr's (1961) studies for teacher effectiveness. Some criteria may be same while others may differ. Indian studies cited in this chapter are very encouraging in the sense that different profiles for the two contrasting groups of teachers emerge. Cattell 16 PF seems to be the most popular, personality test administered. Different studies find different factors of Cattell to be characteristics of the 'high' teachers with the exception of 'intelligence' and 'emotional stability' which have been always in favour of 'high' teachers. Attempts to predict teaching efficiency in terms of its correlates have also been encouraging. The usual correlates have been personality traits, adjustment, intelligence, attitudes and values. With regard to criteria for assessing teachers' effectiveness, different studies use different criteria (i.e., different rating scales) and different rates. Indian studies bring out different picture of the two contrasting groups of teachers in terms of the correlates of the teacher effectiveness when compared with foreign studies.

A critical appraisal of both Indian and Foreign studies revealed that there are some gaps on the relationship of personality, attitude and teaching effectiveness of teachers with students' academic achievement. teachers' teaching effectiveness on academic achievement of students.

Hence, there is a need to bring together greater number of factors influencing on academic achievement of students and to study their interactive effects. Therefore, the present study is an attempt to investigate the effect of teachers' personality, teachers' attitude and teachers' teaching effectiveness on academic achievement of students.
2.5) Studies on Interactive Effects

Another type of study conducted was on providing training to teachers in interaction analysis and determining its effect on pupil academic achievement (Pavanassam, 1977; Rajiwal, 1976; Rokha, 1976 and Shaida, 1976).

Rajiwal (1976) conducted a study on changing teacher behaviour in teaching of science and its effects on pupils. The main objectives of the study were: (i) to study the effects of change in the behavioural patterns of teachers on the development of pupils, (ii) to study the relationship between teacher influence and pupil academic achievement, classroom trust and initiative.

The study was conducted on a sample of 400 VIII standard students of Municipal schools of Surat city. Seven teachers were also selected and they were provided intensive training in interaction analysis. Totally 7 classes were selected out of which 5 classes were experimental and 2 classes made up the control group. Tools employed were Flanders interaction analysis, Pareek's pre-adolescent adjustment scale and achievement test in science (pre and post tests). The statistical techniques used were Mean, SD, Analysis of variance and t-test.

The study revealed that:

1) Training in Flanders interaction analysis modified the teachers' attitude and they showed more indirectness.
2) Mean difference between pre and post observations on the i/d index was significant in case of experimental group.

3) The training in interaction analysis and feedback given to the teachers of the experimental group affected pupil adjustment, classroom trust and initiative level positively.

4) The training in interaction analysis and the feedback given to the teachers of the experimental group affected the academic achievement of pupils in science positively and significantly.

Rokha (1976) studied the relationship between verbal teaching behavioural patterns and students' achievement in terms of instructional objectives.

The main objective of the study was to ascertain whether some selected verbal teaching behavioural patterns affected student academic achievement.

The sample of the study was 360 VIII students of Ajmeer city. Nine teachers were selected and provided training in interaction analysis and then assigned to teach three experimental groups of students. The three verbal teaching behavioural patterns were (1) providing confirmatory and corrective feedback, (2) asking cognitive memory, convergent, divergent and evaluate questions, and (3) general indirectness in teaching.

Tools used in the study were, Mehta's group intelligence test, Observational Category System (OCS) (modification of FIACS), Achievement test in General Science (Pre and post on the instructional
objectives of knowledge, understanding and application. The statistical techniques used were median test and analysis of co-variance. Major findings were:

1) Limited training as was imparted to experimental group-I (E1) did not result in significant difference when a number of verbal teaching behaviours were to be changed.

2) Significant differences were not observed in favour of additional training as was given to experimental group 2 (E2) with respect to asking cognitive memory and convergent questions and giving directions and command.

3) However significant differences were observed in experimental group 3 (E3) where the teacher used indirect influence; pupils achieved higher in terms of application ability

4) Asking more divergent and evaluative questions did not result in significant differences in achievement of pupils at understanding and application objective level.

Pavanasham’s (1977) study also examined the effect of modified teacher behaviour on classroom dynamic and pupil achievement.

The objectives of the study were:

1) to change the teacher verbal behaviour through proper training programme.
2) to study the effects of changed teacher behaviour on variables such as achievement motivation, value orientation, dependency, classroom trust, initiative, adjustment and academic achievement of pupils, and

3) to study effects of sustained changed teacher behaviour on pupil performance.

The study was conducted on 18 secondary school teaches assigned to 18 VIII standard classes. Out of them 12 teachers were assigned to experimental and the remaining control group. The 12 teachers in the experimental group were given training in interaction analysis. The pupils belonging to the above 18 VIII Std. classes served as pupil sample (N=850). Tools employed were Pareek and Rao's pre-adolescent adjustment scale, pre-adolescent classroom trust scheme, pre-adolescent dependency scale from A and B, pre-adolescent initiative questionnaire, achievement motivation inventory, value orientation inventory, achievement test in English and Flanders interaction analysis. The data was analysed using observation coding matrix and analysis of co-variance.

The study revealed that:

1) The experimental group of teachers who were provided training in interaction analysis talked less and was more responsive to pupils. They encouraged more pupil participation and more pupil initiative than teachers in the control group.
2) The teachers sustained their modified behaviour for more than 20 weeks after the training was completed.

3) The pupils taught through indirect teacher influence showed higher on classroom trust, initiative, achievement motivation and value orientation as compared to their counterparts.

4) Pupils in the experimental group achieved significantly higher than pupils in the control group.

Shaida (1976) conducted a study on teaching patterns involving questioning and feedback on pupil attainment in terms of instructional objectives like knowledge comprehension and application.

**The objectives of the study were:**

- To know the effects of four patterns of teaching viz., narrow questions with feedback P1, narrow questions with no feedback P2, broad questions with feedback P3 and broad questions with no feedback P4, upon the attainment of pupils in terms of instructional objectives like knowledge, comprehension, application.

- To study the effects of four patterns of teaching upon retention in terms of instructional objectives like knowledge, comprehension, application.

The study had a 4 x 4 Gaeco-Latin square design. The sample of the study consisted of 300 VIII standard pupils of Govt. High School, Kaithal. The sample belonged to four classes of the school which also
constituted the four groups for the treatment. The tools used were Jalota’s group test of General Mental Ability, Kuppuswami’s S.E.S. scale, Flanders interaction analysis, and achievement tests based on instructional objectives of knowledge comprehension and application. The statistical techniques used were Mean, SD, Analysis of Variance and t-test.

The main findings of the study were:

- The teaching pattern of narrow questions with feedback (P1) produced significantly higher mean for the development of knowledge and its retention than all the other patterns.
- The teaching pattern of broad questions with feedback (P3) produced significantly higher mean for application objective and its retention than other patterns.
- The teaching patterns of broad questions with feedback produced significantly higher mean than remaining other three patterns.
- The teaching patterns of narrow questions with no feedback and broad questions with no feedback did not produce significantly higher mean for total attainment in terms of institutional objectives than other two patterns.

Some of the investigators in the West have reported no relation or negative relationship with teacher indirectness and pupil attainment (Allen, 1970; Cook, 1967; Dunkin and Biddle, 1974; Flanders, 1968; Medley and Mitzel, 1959; Powell, 1968; Snider, 1968; Soar, 1968, 71; Thompson and Bowers, 1968; Torrance, 1968).
The findings of experimental studies have revealed that increased teacher indirectness was unrelated to academic achievement of average pupils (Amidon and Flanders, 1961; Carline, 1971; Cunnison, 1968; Herman, 1969; and Rain, 1969).

Rosenshine and Furst (1971) after reviewing studies in the area of teacher behaviour concluded that increased teacher indirectness is unrelated to pupil achievement, but added that criticism was found to be negatively associated with pupil achievement. Soar (1968) revealed that greater use of lecturing is associated with greater achievement of pupils with low socio-economic background.

In conclusion it can be said that the studies related to teacher behaviour and pupil achievement (process-product studies) have not yielded consistent result as the summary below reveals. Some of the researchers have shown that teacher indirect influence is positively associated with pupil achievement. Some others have revealed no relationship or negative relationship between teacher indirectness and pupil achievement. Rosenshine and Furst's (1971) review for example found that teacher indirectness is unrelated to pupil achievement.

In Indian studies it is seen that some investigators have reported positive and significant relationships between teacher indirectness pupil achievements. But in the studies of Padma (1976), Shaida (1976) and Sharma (1972), it has been found that narrow questioning was positively associated with achievement in terms of knowledge and understanding.
objectives. Narrow questioning can be taken to be factor of direct teacher influence. Further it has also been reported that the pattern of questioning, answering and feedback was found to be positively associated with application ability. This pattern which is representative of indirect influence was found to be positively associated with achievement in terms of application ability. It was also found that teachers trained in interaction analysis who used indirect influence had students who achieved higher.

**Conclusion and Formulation of the Problem for the Present Study**

The investigator after going through above type of studies concluded that, many research works has been done in the field of academic achievement and related factors. The following conclusions were drawn from the exhaustive review work.

i) The teacher effectiveness is one of the important predictor of academic achievement of the students. It also reflects the attitude and adjustment of the students. In some cases the teacher effectiveness found to be responsible for the teacher development and institutional development. Hence, proper abilities and competencies are to be developed amongst the teachers for getting effectiveness in his teaching endeavours.

ii) Another important factor considered from the review is that of attitude of the students and attitude of the teachers both are responsible for the students academic development as
well as institutional developmental. The attitude of the teachers towards the teaching, institution, students and his profession plays important role in the development of himself as well as the institution. Similarly, the attitude of the students towards the subjects like, science, mathematics, languages and social studies reflects upon the interest, adjustment and future study in the particular subject. The attitude of the students towards the teachers, institutions and allied activities of the school also becomes important to develop the individual students as well as the whole school atmosphere. Hence, developing proper attitude becomes essential part of the institutional building.

iii) The personality factors of the students as well as teachers become another important factor. The research studies mentioned above clearly indicates that the personality factors like introversion, extroversion and neuroticism play important role in the academic achievement of the students. The personality factors of the teachers also important for the development of the teachers.

iv) The academic achievement of the students depends upon many factors which are already mentioned above. Some of the other factors like, intelligence, type of the institution, essential facilities in the institutions, adjustment problems
etc., are responsible for the academic achievement.

v) It is well accepted fact that the above factors are not only effecting alone for the academic growth of the students. There are combined effects of above factors Hence, it is important to know the combined effect of some of the factors like, teacher effectiveness, students personality, students attitude towards science on students achievement. Such studies are known as interactive effect studies. In such studies the interactive effect of some of the two factors taken at a time and some of the three factors taken at a time to know the interactive effects on academic achievement of the students. This means the combined effect of teacher effectiveness and students' personality and attitude on students' achievement.

Owing to the above conclusions the investigator formulated the problem for his study as

"Interactive Effect of Teacher Effectiveness, Secondary School Students Personality and Attitude towards Science on their Academic Achievement".