CHAPTER - II

REVIEW OF RELATED LITERATURE

Individual differences are noted almost in every sphere of life. This is true also in respect of the educational achievement. Students appear in the same examination, but their performances are different. Naturally, attempts have been made to find out the variables that determine the extent of educational achievement. The practical usefulness of predicting future academic achievement on the basis of information related to mental ability, personality, interest pattern, personal experiences and problems, environmental impact and socio-economic background of pupils is universally admitted. But as the factors affecting academic achievement are largely unsettled, it has been a subject of continuing interest. None of the above factors work in isolation, rather they all work together and their effective influence, which is bound to be very complex, makes investigation rather different and complex. Consequently, hundreds of studies have been made for probing into the relative effect of the above variables or factor combinations for determining educational achievement at different levels. In a study like the present one, a thorough and careful review of literature, pertaining to this area is considered to be an essential prerequisite. We shall attempt to make a brief survey of the most important and relevant studies in the following sections:

(a) Researches on achievement; a bird's eye view;
(b) Achievement and Personality;
2.1 RESEARCHES ON ACHIEVEMENT

Gowan (1958) summarise the findings from various studies made by different psychologists like Terman (1947), Bonsall and Stefire, Morgan, Cohler, and Gouth. According to the authors, the parents who are either too autocratic, too dominant, too protective or too laissez-faire arrest the child's development. The underachievers missed the most needed early experiences in realistic goal setting which naturally led to a personality with strong super ego. The gifted underachiever turns to be a 'kind of intellectual delinquent who withdraws from goals and activities and active social participation generally' (Gowan).

John Kurtz and Swenson's Study (1951) of 10,000 population as part of a longer research project showed some remarkable findings. Five types of achievers were selected on the basis of ranked Otis Intelligence Test scores and achievement scores on the Iowa Every Pupil Test of Basic Skill, work Study Skills and Unit Scales of Attainment in Reading and the Hundred-problem Arithmetic tests. The findings reveal that home conditions of high achievers appear to be favourable and pleasant whereas for underachievers the atmosphere appear to be unfavourable. High achievers generally possess a feeling of adequacy to be more alert and attentive in class whereas low achievers are less happy in school situation. They are often changeable or unstable or have an inferiority complex with emotional
conflict. High achievers appear to have more academic interest than low achievers. Comparatively high educational and vocational aims are characteristic of high achievers having good prospect of their achieving these aims by relating their school work to future goals whereas low achievers have limited educational and vocational aims.

Merril and Murphy (1959) administered EPPS to 300 students of the University of Utah and found that the over achievement group was more dominant, more deferent, less exhibitionist, less affiliative, less concerned about change and more enduring than the group achieving as expected. The ambitious, conforming, deferring, persisting student of low ability was speculated to be better academic risk. The low ability group was found to be less achievement oriented, more defering, more orderly and more exhibitionist, more affiliative, less dominant, less abasing, more changeful, more enduring and less aggressive.

Pierce (1962) obtained results that reflected typical lifestyle, exhibiting favourable personality characteristics and different degrees of independence for different grades of achievement.

Muthayya (1965) made a comprehensive study of high and low achievement. He found no differences in their intelligence yet they differed a lot in their achievement motivation.

Cuppens (1967) attempted study intelligence, motivation and
anxiety as determinants of school achievement in Secondary education. The results indicated that high achievement was the outcome of high motivation and less anxiety.

Morrison (1967) conducted a study on school boys and found that low achievers showed more hostility towards authority and were more passive, aggressive i.e. stubborn and uncooperative.

Eiseman (1968) studied the relationship between creativity and achievement. In this study it was found that neither the intelligent nor creative student fared well academically.

Harries et al (1968), in a study, "Intelligence, personality and achievement" described a longitudinal developmental study of middle class students and found that children achieving most were those with high intelligence and high level of observed emotional disturbance.

Tamagni (1969) compared 30 achieving and 30 under achieving subjects. Both groups were equated in socio-economic status, intelligence, age and grade when McClelland's achievement motivation cards were used. Results established significant difference between high and low achievers.

Buck (1969) conducted an elaborate study of over achievers, average achievers and underachievers, with regard to the type of problem areas. Discrepant academic achievers identified their problems as being educational, vocational and emotional nature. Low
achievers had greater number of concerns than those who were achieving beyond expectations. A high proportion of achievers classified their problems as usually emotional.

Ricks and Mirsky (1974) studied the relationship between the attention deficits and learning problems. Under-achievers were significantly lower in contracts in WISC (Wechsler Intelligence Scale for Children) Verbal Full Scale IQs but not in performance IQ.

Yawkey and Jantz (1974) found statistically significant differences in the levels of performance on all factors. Using mean achievement scores, children with high IQ levels (101 & above) significantly differed from children with low IQ levels (100 & below) in their achievement.

After analysis of data collected from College Students of Patna, Jamuar (1966) found that academic achievement is positively related to study habits but are not dependent on scholastic aptitudes. Brown and Holtzman (1965) observed study habits to be a good predictor of academic achievement, both at school and College level.

Srivastava (1968) obtained different patterns of study habits for the over and under achievers. The under-achievers devoted less time to their studies, had faulty habits of concentration, could not properly plan their studies and required more time to develop the right mood to study than overachievers.
Mondani and Tutko (1969) demonstrated that under-achievers learnt significantly more of the incidental material. The problem of under-achievement does not appear to be the capacity to learn but a difficulty in focussing attention on the Central material.

Marentic-Pozarnik (1972) found a significant relationship between scholastic achievement and both study habits and attitudes even with intelligence kept constant.

Asbury (1974) reviewed the literature on pre-school achievement, showing a lack of clearcut comprehensive explanation of many interactive factors of both cognitive and non-cognitive nature that might bear on the achievement status of young students. Conflicting results of the study of cognitive deficits were reported.

Sontakey (1975) attempted to identify factors responsible for affecting the achievement of bright students. Fifty bright, under-achieving and achieving male students were selected and were administered problems and study habit inventories, of self-concept blank, an interview. Results showed that:

(a) Study habits of overachievers were better than those of underachievers;
(b) emotional problems and needs of underachievers were greater than those of overachievers who were more cooperative and sociable; and
overachievers had positive self-concept and were more satisfied with their progress than underachievers.

Kanoy (1980) examined a group of academically bright students for positive relationships of academic achievement with locus of control and self-concept. Twenty achievers and nine underachievers received Intellectual Achievement, Responsibility Questionnaire, and Piers-Harris Self-concept scale. Two factors ANOVA were used to examine the self-concept and locus of control scores, with sex and achievement serving as the two independent factors. Achievers had significantly higher self-concepts than the underachievers and also had the higher internal control scores than the underachievers.

Sarah S. Williams (1981) found a positive correlation between students' attitude towards teachers and their performance in science subjects and hence recommended developing skills and interests in teaching of the teachers concerned.

Getzels and Jackson (1982) found that there was no significant differences in academic achievement between two groups of students, one of high IQ and the other of high creativity. Torrance (1982) also found the same characteristic with University students as sample.

Jerome (1984) proved that underachievers are deficient in attention and concentration. His findings reveal that majority of the high achievers are experimenting, critical, liberal, free-thinking, socially precise, follow self-image, happy-go-lucky, impulsive and
lively whereas the low achievers are experimenting, critical, analytical, sober, prudent, serious and taciturn although high and low achievers differ significantly in the traits, emotional stability, boldness and self-assurance.

Hansford and Hathey (1986) noted a positive and significant correlation between self-perception and academic success.

Vollmer (1986) investigated the determinants and effects of expectancy in academic achievement. The hypothesis that expectancy determines effort expenditure in the examination situation, and thereby grades, was also supported. It is suggested that expectancy as an expression of self-confidence might be more strangely related to style of working in an examination situation than to an energy dimension like effort expenditure.

According to Glover and Bruning (1987), "Success seekers are students who have a history of successful achievement in schools. They are generally self-confident, tend to have strong achievement motivation, and an internal locus of control." Success fosters success among such students because it confirms their ideas about their abilities. Failure, for success seekers, is a signal that in the particular task in question they made a misjudgement about how much effort was required for success (Covington and Omelich, 1977, 1985). Failure is seldom taken as an indication of lack of ability; rather it is a sign that more effort is necessary (Covington and Omelich, 1979).
Wentzel et al (1990) suggest that motivationally affective and self-regulatory factors play an important role in the achievement of academic competence, both as intrapersonal process and as behavioural manifestations of student efforts to achieve.

Wentzel (1991) further comments that academic interventions designed to increase social competencies as well as academic skill may be more effective than interventions focussed exclusively on improving intellectual abilities.

Alva Sylvia (1991) examined academic invulnerability among Mexican-American Students. Results revealed that subjects with a positive view of intellectual ability and a strong sense of responsibility for their academic future were more likely to be academically successful. A supportive network of teachers and friends was linked to academic invulnerability. Students' subjective appraisals were powerful in predicting differential levels of achievement.

Chambers and Abrami (1991) investigated into the relationship between student team learning outcomes and achievement. Team outcome was found to be significantly related to achievement and academic perceptions, and was independent of prior achievement and individual outcome. Criterion referenced team goals and between-team cooperation are recommended for low to average to high achievement.
2.2 ACHIEVEMENT AND PERSONALITY

2.2.1 Studies Abroad:

Owens and Johnson (1949) by using the short form of MMPI (Minnesota Multiphasic Personality Inventory) found that the underachievers exhibited worry, psychic tendency and depression which was a result rather than a cause of underachievement.

Broadbent (1958), Savage (1962), Goodfellow and Callard (1962) found that the academically superior student tends to be somewhat introverted, while extraversion and poor achievement tend to go together.

Bachtold (1969) studied personality characteristics of achieving and underachieving students. Underachievers were grouped on the basis of (a) low grades, (b) low achievement test scores and (c) both low grades and test scores. Credulity, self-confidence and self-control were components in successful female achievement; emotional stability, seriousness, and sensitivity were components in successful male achievement. Underachievers differed in personality factors according to type and degree of underachievement. Underachieving female groups differed in emotional stability, cheerfulness and sensitivity.

Kraft (1969) found underachievement to be associated with negativism, inferiority feelings, high anxiety, boredom, inability to
tolerate less than perfection and overprotection.

Entwistle and Entwistle (1970) observed that stable introverts had good study habits and high achievement in academic field.

Bailey's (1971) investigational results strongly suggested that a student's academic performance is the result of his self-perception of his academic ability.

Cowell and Entwistle (1971) found that stable introverts had the best study attitudes though their examination results were not significantly better than those of extroverts. All the subscales of SSHA (Brown-Holtzman Survey of Study Habits and Attitudes) were significantly related to academic performance but they showed contrasting patterns of relationships with the personality dimensions.

Elliot (1972) found scholastic attainments to be negatively correlated with neuroticism.

Robert (1972) obtained significant gender differences on 16 PF measures. Girls tended to be more warm and outgoing, more sensitive, more conservative, more tensed, more superstitious and more insecure. Conversely, boys tended to be more alert, more tough, more trustful, more confident and more stable.

Gulo (1973) observed that subjects with a high achievement
motivation had significantly higher grades than those with a low achievement motivation. He concluded that the academic performance of students were highly influenced by the personality variables.

Marko (1973) tested boys and girls of a normal school population with Cattell's 16 PF to assess their self-confidence evaluation and analysis of the scores showed that subjects with high self-confidence appear to be emotionally stable; confident and self-secured; more group dependent, carefree, adventurous, extraverted, sociable with a tendency to leadership whereas subjects with low self confidence are, on the contrary, extremely shy, timid, considerate, aloof and not adaptable, emotionally unstable, introverted, submissive, insecure, lacking self-assurance with a tendency for neurotic reactions and a decreased ability to cope with stress situations.

In the study of Vollmer and Almas (1974) the females obtained a higher mean score on fear of failure than the males prior to or after final course examinations. There was no sex difference in length of protocol, nor was variable related to any of the motivation scores. Success in terms of examination results did not affect motivation scores, whereas failure led to higher scores on hope of success for males, but not for females.

Berhoud et al. 1975-76 found that good students, irrespective of age saw themselves more positively than did bad students. Female subjects tended to report a higher ideal self than male subjects. Differences between perceived and ideal self were negligible for good students
but larger for poor students.

Schultz and Pomerantz (1976) found that achievement activities and resultant success had a strong relation with achievement motivation. Locus of control did not distinguish high need achievers who preferred achievement activities from those who did not. Achievement needs were significantly related to achievement motivation which in turn were related to achievement behaviours.

Dean (1977) found that high self-esteem subjects showed significantly greater mastery in all learning tasks than lower self control counterparts. Analysis of organisation scores supported the use of more sophisticated learning strategies by students with higher self-perceptions.

Dumke (1977) observed that the performance of students were positively influenced by their expectations about themselves and hence suggested that teachers should be more aware of these tendencies and promote more attentive treatment to the needs of weaker students.

Koul's (1978) experimental finding showed that the high achievers in Mathematics were high on need for order, dominance, change and endurance, and low on exhibition, succourance, heterosexuality and aggression, in comparison to low achievers.

Kruger (1978) noted that students who got better grades were
more involved in choosing their own sections though the desirability of the section had no interactive effect.

Rodriguez (1978) attempted to predict achievement in Mathematics based on selected aptitude and interest tests. Results indicated that not only is aptitude important in mathematical achievement, but interest also contributes to limited, although important, effects on performance.

Bergum and Bergum's (1979) experimental results indicated a significant difference in the predicted direction for number of reversals. The architecture students perceived themselves as more creative, original and visually oriented than the Business Administration students.

Bar-tal's and Others' (1980) experimental results revealed that, in general, internals tended to attain greater academic achievement, expressed less anxiety, and had higher levels of aspiration. The relationship between academic achievement, level of aspiration, and the perception of locus of control was accentuated among subjects of Asian and African origin to a greater extent than among subjects of European, American or Israeli origin.

Maqsud (1980) found significant correlations (0.38 to 0.52) between academic achievement and extraversion of subjects in modern institutions and significant negative correlations (-0.39 to -0.51) for those in traditional and old institutions signifying thereby the
impact of modern facilities on individual and group performance.

Gjesme (1983) noted that academic achievement was highly influenced by both cognitive (i.e. ability and future time orientation) and motivational factors (i.e. achievement motives). Since it was the worry component that normally reduced quality of performance, one way to reduce worries at school or college, he suggested, for low achieving, future-oriented students was to reduce the importance of institutional activities.

Vollmer (1986) investigated the determinants and effects of expectancy in the academic achievement situation. The hypothesis that expectancy determines effort expenditure in the examination situation and thereby grades was also supported. It was suggested that expectancy as an expression of self-confidence might be more strongly related to style of working and resultant achievement.

Lourdes Diaz Soto (1989) studied differences in academic performance due to differences in home environments and motivational orientation of a group of Puerto Rican children. The relative weights of the variables and their ability to predict achievement were examined via a post-hoc multiple regression analysis. Gender differences were also noted. Family environment and guardian involvement accounted for a significant amount of variance with regard to achievement. Home environment differed for higher and lower achievers with parental aspirations higher for high achievers. Motivational orientation differed with high achievers adopting a more
intrinsic orientation and low achievers adopting a more extrinsic orientation.

Heaven Patrick C (1990) examined the relative importance of a range of personality and attitudinal variables as predictors of achievement in two studies of 189 adolescents (mean age 16.6 years) and 144 adolescents (median age 16 years) respectively. In both studies achievement motivation was found to be significantly related to scores on the Eysenck Personality Questionaire Lie Scale. Partial Correlations in Study - I, showed extraversion to be a significant correlate for both sexes, in addition to other attitudinal variables for females. Findings were partially replicated in Study - 2, while a significant negative correlation between impulsiveness and achievement motivation was also noted.

Wolfe and Grosch (1990) examined personality correlates of confidence in one's decisions and suggested that illusory confidence is associated with personality traits that load saliently on factors labelled affective and cognitive.

2.2.2 Studies in India:

In a study of differential personality traits in academically superior, average and below average (low achiever) students S.P. Suri (1973) noted a good deal of difference among three groups of achievers. The superior students (high achievers) were found to be
more intelligent, emotionally stable, assertive, venturesome, tough-minded, placid, controlled and relaxed while the other two groups were less intelligent, affected by feeling, obedient, expedient, shy, tender-minded, apprehensive, indisciplined, self-conflicted and tense. He also noted some degree of differences in sex characteristics. The superior girls in comparison to superior boys were less tender minded. Average boys were emotionally more stable and conscientious as compared to average girls and below average boys were found to be more obedient, conscientious and tender minded compared to below average girls.

R. Jaygopal (1974) studied the personality profile of high and under achievers of a group of school students in Madras City and found that there was no significant correlation between scholastic achievement and personality with regard to eleven out of fourteen personality factors of Cattell (factors B, C, D, F, G, H, J, O, Q2, Q3, Q4) when high achievers were concerned. But with regard to the factors A, E and I, the correlations were highly significant. In the case of under achievers, twelve factors (A, B, C, D, E, F, G, I, O, Q2, Q3, Q4) were not significantly correlated with performance. The underachievers' profile revealed that they were characterised by spontaneity, vigour, spirit to associate with the group uninhibited and zestful in nature. The high achievers were reserved, humble and tough minded.

Sinha and Sharma (1975) observed higher self-concept and academic motivation scores for high achievers and admitted their important roles in scholastic performance.
R.P.Gupta (1975) examined second order personality factors and their relationship with age, sex and creativity of young adults and found that age affected significantly the second order factors of university students. Sex, independent of age and creativity, affected personality; and as correlates of adjustment, no relationship existed between sex and creativity. Subduedness during middle and late adolescence was not at all affected by creativity or its components.

Nisha, Singh and Gupta (1976) found that fluency, original power and ingenious solutions to problems were significantly related to the creative personality. However, the relationship between creative abilities and creative personality was not as high for females as it was for males.

Agarwal (1977) administered a group of mental ability tests among over- and under-achieving urban and rural male students and found a significant difference between them on eight personality factors whereas urban and rural subjects differed significantly on three factors.

Bhatani's (1977) experimental findings indicated that attitude change was possible in the case of subjects with inconsistent and complex cognitive systems. Girls were found to be more responsive to persuasion than boys.

Kanekar (1977) tested the hypothesis that there should be a
positive correlation between anxiety and academic performance of more intelligent students (progressive performance) and negative correlation for less intelligent ones (regressive achievers). He found product moment coefficient of correlation to be -0.03 between intelligence and anxiety, 0.23 between intelligence and academic performance, and -0.16 between anxiety and academic performance. The correlations between anxiety and academic performance were -0.03 for high intelligent and -0.39 for low intelligent group indicating a significant difference between the two group of achievers.

Bhusan and Agarwal (1978) administered Cattell's 16-PF questionnaire to high achieving and low achieving Indian table tennis and badminton players who represented India at International events. High achievers scored significantly higher than low achievers on dominance and urgency among primary factors. On the second order factors, outstanding players were significantly more extraverted than low achievers and there was no significant difference in intelligence, ego-strength, self-sufficiency, tenseness or anxiety. Outstanding sportswomen compared to sportsmen, scored significantly higher on the primary factors of dominance, suspiciousness and tenseness and lower on outgoingness, emotional stability and tendermindedness. On the second order factors, the sports women were significantly more anxious, alert poised and independent. Perhaps this is due to the fact that outstanding women players are more dominant and independent than outstanding men players because they have to break through stronger barriers of custom and tradition to complete in a male dominated world.
Jindal and Panda's (1982) experimental results indicated that regressive achievers had a high level of anxiety; low achievers, irrespective of sex, were more anxious than high achievers. Girls in general, irrespective of achievement level or trend, possessed more anxiety than boys.

Singh B.K. (1984) studied the patterns of personality variables of rural and urban college students of Agra Region and found a significant difference in the level of anxiety between the two groups of students. The rural students were found to have a higher level of anxiety and frustration than urban students although the rural students were significantly more adjusted in all the four major areas of home adjustment, social adjustment, school/college adjustment as well as health and emotional adjustment.

Ahluwalia and Kalia (1987) found that high achievers have less adjustment problems on health and emotional and school adjustment area in comparison to low achievers.

Dr. Hemlata Natesan and K Renuka Devi (1987) very interestingly showed that introversion-extroversion characteristic of personality is not a variable capable of affecting achievement.

Achamamba B (1990) examined the relationship between achievement values, manifest anxieties as related to time orientation. Achievement value was found to be related to temporary integration. Anxiety was
associated and related with time zones and high achievement values were associated with internal orientation in the subjects.

2.3 ACHIEVEMENT AND INTEREST

2.3.1 Studies Abroad:

Studies by Edwards and Wilson, Frandson and Thorndike have shown that students do relatively better in subjects in which they are more interested. On the other hand studies by Strong (1966), Darley (1955) and Super (1960) have led to the conclusion that interest has very low relationship with achievement in school and college.

Randahl (1991) made a typological analysis of the relations between measured vocational interests and abilities using scores on the strong vocational interest Blank and Strong' Campbell Interest Inventory. Data were obtained from the records of 846 vocational assessment clinic clients who were tested between 1978 and 1985 and found that interest types had generally higher abilities.

Sansone, Carol and Morgan (1992) focussed their research on intrinsic motivation and suggested that there might be multiple goals relevant to interest in a task and these goals include achieving a particular level of competence. The potential flexibility in exploring different routes to interest for maintaining performance or achievement accelerates ability and efforts of the individual
students.

Edward L Deci (1993) has recently studied the role of interest in learning and development particularly the relation of interest to intrinsic and extrinsic motivation in the context of activities and achievement and has found a significant role of interest.


Prenzel Manfred (1993) has also focussed on ways in which the study of selective persistence of interests extends our present understanding of the development of interest and its role in learning subjects for academic achievement in schools and colleges.

2.3.2 Studies in India:

Pandey (1970) studied vocational interests of high achievers and low achievers and found that interests were influenced by age, intelligence and academic performance leading to success in life.

Rajpeyi (1970) in a study of socio-economic status of 234 students (78 each of populars, neglectees and rejectees) found significant difference of intelligence and interest pattern among them. Populars had significantly higher socio-economic status than the other two groups.
Bhan (1972) tried to verify change in interest among post-graduate students and those who already had completed studies. He saw interest as a function of mental health and interest in outdoor and physical activities, literary activities, welfare and humanitarian activities deteriorated due to insecurity of mental health. Interest fields without any deterioration were scientific interest, gregarious interest and domestic interest.

Chatterjee et al (1974) found that the interests of the two groups (high achievers and low achievers) widely differed on the 10 CNPR (Chatterjee's Non-Language Preference Record) scales and the interaction between interest and achievement was significant.

J. Pal (1976) made a study to find out any correlation between achievement, interest and adjustment among student leaders in Orissa. An interest inventory covering educational, cultural, moral, social, vocational, economic, scientific, athletic, religious and political interest of the college students was constructed using Lee-Thorpe Logical Keying Technique. Personality correlates of interest patterns were analysed by classifying the students into different categories. The findings were that the differences in the interest patterns of students for different fields of interest were not significant. The students who were well adjusted had greater social interest but the sociability scale did not indicate the dominance of any interest. The differences in the personality make-up of student leaders and non-leaders were significant.
K.N.Lalithamma (1978) studied the relationship of intelligence and interest to achievement in Mathematics. The study was based on a sample of 732 pupils who were studying in secondary schools in Trivandrum and used Raven's Progressive Matrices Test to determine the level of intelligence of pupils and Kuder Preference Record to study their interest in Mathematics. The results of the study corroborates the findings of Edwards and Wilson, Frandson and Thorndike regarding the influence and impact of interest on academic achievement. The results point strongly towards the necessity of developing interests in learning the subject at appropriate point on the basis of the findings of the study that pupils' interest in Mathematics do influence their achievement in the subject.

J.D.Bhal (1981) after a survey of reading interest of the pupils of Bhavnagar City noted a significant positive correlation between academic achievement scores and reading interest scores.

Senapati and Kapat (1981) found that intelligence and interest in science were strongly related to each other and science achievement. They concluded that mental abilities and interest should be stressed in vocational and educational counselling.

J.N.Sharma (1982) studied variation in interests as detected by personality factors, anxiety and sex. Personality factors affected interest of adolescents. Anxiety affected interests independent of sex. For all interest categories, personality characteristics sexwise,
were discussed.

R.R. Joshi (1983) assigned interest a very affective role to performance of higher secondary students in relation to their parents' education, socio-economic status, location and personality traits. High achievers in examination were more interested in administrative, computational, scientific and literacy topics than low achievers. There was a good deal of difference in interest areas of high and low achievers with regard to parents' education and socio-economic status.

R. Kulshrestha (1983) found that interests play an important role in the growth of self-concept among adolescents and variations of interest occurrence have definite impact on achievement through growth of self-concept.

S. Kumar (1985) observed that high achievers were highly interested in scientific, medical and technical areas and less interested in fine arts, outdoor and sports areas whereas average students were more interested in literary areas. The high achieving girls were highly interested in medical and scientific areas and were least interested in crafts. Gifted boys had greater total adjustment than gifted girls but there was no difference in their home and social adjustment. The average boys had better total adjustment than the average girls.
2.4 COMMENTS

In the light of the foregoing review of literature it can be concluded that academic achievement is a complex phenomenon depending on a number of variables contributing, at different degrees towards success or failure of individuals. Though there is no definite functional relationship in mathematical precision and exactness, the main contributing factors have been identified. It is a chain process each affecting variable interacting with the other, giving rise to a situation which may lead to a chronic behaviour pattern, including specific personality and interest characteristics.

Although the studies reviewed above reveal that the affective variables in terms of academic self-concept, attitude towards achievement, motivation to achieve when considered from the point of view of their alterability demand a more in-depth study, there has been little research on process intervention after trend analysis towards achieving a target or goal. In the present structure of highly competitive society one really needs to study what makes a student stagnate or regress after a certain degree of achievement.

The present study is an attempt to throw some light on two important determinants of achievement, namely, personality and interest in the way of inductive reasoning.