Chapter II
Review of Related Studies
CHAPTER - II

REVIEW OF RELATED STUDIES

2.1 RELATED LITERATURE

Research is an important aspect for progress in every sphere of life. The review of related studies helps us to know what others have tried to find out and what problems remain to be solved. It helps the researchers to eliminate the duplication of what has already been done and it provides useful hypotheses and important suggestions for further investigations. The study of related literature in research is of immense importance because it stimulates and encourages the investigator to develop into various aspect of the problem. It also helps in paving the way for under no gap standing the potentialities of the problem in hand.

According to Best (1977), “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 have been promising and disappointing and what problems remain to be solved.

2.2 STATE OF RESEARCHES IN RELATION TO THE VARIABLES OF THE STUDY

A description of the related literature with regard to the independent variables of Self-Concept, Cognitive Styles and Personality Types and their relation with the dependent variable of Academic Achievement of students has been given.

2.2.1 Self-Concept and Academic Achievement

Success in academic fields reflects differently on students of different abilities. The slow learners and less intelligent may be more anxious and fearful about their failure and being held a grade behind. Thus success in school may have a pervasive effect on the students’ personality. As a student
improves his achievement, he develops his powers and his Self-Concept increases.

The Self-Concept refers to the individual’s perception of himself. In general, researches in the area of Self-Concept have concerned themselves with the two measures- both considered as measures of Self-acceptance. One measure is simply the favourableness of self-perception i.e. positive and negative Self-Concept. The other measure of self-acceptance is the discrepancy between the perceived self and ideal self.

McCandless (1961) predicted, “poor self-concept, implied as they often did, a lack of confidence in facing and mastering the environment, might accompany deficiency in one of the most vital of the child’s area of accomplishment, his performance in School”. The assumption was that of the student with the adequate self-concept, felt that he could succeed, would put forth the necessary academic effort, whereas the student with inadequate self-concept, felt that he could not succeed, would not put forth the necessary academic effort to achieve in school and college.

A reasonably good number of studies have been conducted in the last two decades to establish the relationship between self-acceptance and academic achievement.

Sharma (1971), in a review of relevant studies concluded that (i) one group of studies reports a positive linear relationship between Self-Concept and Academic Achievement, Walsh (1956), Coopersmith (1959), Fink (1962), Payne (1962), Edwards (1966), Irwin (1967), Kerensky (1967), Quimby (1967) and Mehta (1968) (ii) There are some studies, which report no relationship between Self-Concept and Academic Achievement viz. studies of Turner and Vanderlippee (1958), Perkins (1958), Mitchell (1959), McIntosh (1967) and Schaar (1967).

However, there are two studies by Deo and Sharma (1970 a, 1970 b), which reported Curvilinear relationship between the self-acceptance and school achievement of adolescents.
Shaw and Alves (1963) found that bright under-achievers had negative self-concept. Vasantha (1972) investigated the relationship between self-concept and achievement for 686 undergraduate students. He found that backward community subjects had low self-concept scores along with low achievement. In his study, self-concept proved to be a facilitating factor in achievement. Emmannel (1972) and Norma (1972) too reported a positive correlation between self-concept and academic achievement.

Bemoud and Cartron (1975), when divided 80 male and female students of two grades of upper elementary school into group of ten in terms of sex, age and academic success found that good students irrespective of age saw themselves more positively than did poor students. Female subjects tended to report a higher ideal self than male subjects and poor students reported a slightly higher ideal self-discrepancy than good students.

Roberts (1975), found the significant relationship between self-concept, S.E.S. and level of academic achievement. The statistical procedure used to analyse the data were correlation and chi-square test for significance. The .05 level of significance was selected for the study. The results of the analysis indicated non-significant relationship among self-concept, S.E.S. and level of academic achievement. However, through elaboration analysis, significant relationship were found among the subgroups.

Nortar (1975) studied as to how the difference between real and ideal self-congruence relates to the academic performance of high school students. He found that high self-congruence students scored higher on standard achievement tests rather than on grade point average as compared to those students in the medium and low self-congruence group.

Mintz (1975) shows that the nature of the relationship between self-concept and achievement is dependent on the measures of Self-Concept. Total Self-concept is generally a poor predictor of Achievement.

Mwaniki (1976) investigated the relationship between self-concept measures and academic achievement with Kenyan Primary School, pupils
from rural and urban communities. The analysis of variance showed significant differences in means on mental ability (a sub area of self-concept measures) and between rural and urban subjects. This study suggests that the home background as well as schools of the subjects, has a substantial influence on scholastic achievement. Almost all studies reviewed above show low positive but significant correlations between different measures of self-acceptance or self-esteem with academic achievement. Most of these studies have taken self-concept measures which are global in nature. Very few studies have taken specific self-concept measures.

Iskowich (1977) found that high self-concept children solved more puzzles. Results of Adrian’s (1978) study showed that there is positive relationship between reading contact, Science and Mathematics achievement, general self-concept of ability and self-concept of ability in Mathematics, English and Science.

Rogers, Smith and Coleman (1978) found that self-concept measures were differently related to achievement in different school courses.

Bagsby (1979), McClary (1979) and Jordan (1979) too reported an association between self-concept and academic achievement.

Gose-et-al (1980) studied 49 females and 47 males of sixth grade and discovered that achievement was positively or negatively correlated to academic self-concept but not to other aspects of the self-concept. Mayer (1981) indicated that casual relationship between self-concept and academic achievement is most consistent in nature. The findings of the study of Litwack (1980) revealed a correlation of .270 between the students’ achievement score and their self-concept. Savicky (1980) found a significant positive correlation between the two variables.

Bulbul (1981) and Hahn (1981) found positive intercorrelations between self-esteem and academic performance. It was evident from the study of Zervos (1981) that association among self-concept measures and science achievement was positive. Kachooyeanos (1982) found a significant
relation between grade point average and self esteem, Smith (1983) studied UK undergraduate students. His study indicated that self-concept accounted for 36% of the variability in grade point average.

However, there are some studies, which report no correlation between the variables of self-concept and school achievement. These studies reveal that low self-concept children can achieve as much as those with high self-concept.

Mitchell (1959) reported that a group of self-rejecting women did as well as self-accepting women.

Peters (1968) reported that self-concept as measured by ‘Tennessee Self-Concept Scale’ was not significantly related to over and under achievement. Study of Frederic (1969) could not determine, whether higher self-concept resulted in higher achievement or not. Dwyer (1969) found as a result of his study, that correlation coefficient between final self-concept and academic-achievement indicated that in no group, was the relationship high enough, to be significant at any level. The correlation, he obtained, was inconsistent. Morakinyo (1970) expressed his view that enhancement in self-concept by itself was not a sufficient condition for improvement in academic performance. Meighan (1970) conducted a study on the visually handicapped adolescents and found that no significant relationship existed between self-concept and academic achievement.

Gillman (1970) also could not find any significant correlation between the two measures, though his study did show a tendency towards a positive correlation. Moore (1972) concluded as a result of his study that self-concept, though important was not a sufficient factor to determine achievement in mathematics. Velma (1971) could not find any significant difference between the self-concept of high and low readers.

Richard (1973) using the Pearson-product-moment correlation coefficient formula found that no significant relationship existed between self-esteem and achievement. Byron (1976), after studying sixth grade male
students reported, that no significant relationship existed between these two variables. Fredman (1976) reported that neither global, nor school self-concept had any significant relationship with achievement. Edward (1976) found as a result of his study that magnitude of correlation between self-concept and academic achievement was too low to be significant. Saio (1977) and Gold (1978) reported that self-concept did not affect achievement.

Cotton (1980) conducted an exploratory field based study and found that for the total group of adult students, there was no significant relationship between the variables of self-esteem and academic achievement. However, for one sub-group there was positive and significant relationship.

Analysis of variance of Morford’s (1980) study showed no significant difference between self-concepts of high and low achieving gifted students. Taylor (1980) found a zero-order correlation coefficient of reading achievement test with academic self-concept.

Watkins (1981) found that physical self-concept was not correlated to academic performance. Haynes (1981) also could not find any significant correlation between the two measures. Baughman (1982) reported that self-concept did not successfully predict success in learning of communication skill. Smith (1982) conducted a study on 95 freshman black students. The cross tabulation analysis of students’ self-concept scores with their achievement test scores and their grade point average did not yield high ‘r’.

McGlynn (1983) studied 37 non-learning and 34 learning disabled students. The results were not indicative of overall differences in self-concept of learning disabled and non-learning disabled groups. Gourgey (1983) conducted a study on 92 adults; 16 male and 76 females and found that mathematical self-concept was not significant predictor of arithmetic skills.

Results of research study conducted by Ansari (1993) revealed that successful students tend to possess more stable and real self-concept. However, Self-Concept did not elicit any significant influence on perceived life satisfaction. Singh (1994) predicted that the male and female subjects
differed significantly on all the personality dimensions. Studies were also conducted by Jose and Broota (1991), Joshi (1993), Loonker and Singh (1993) on personality and self-perception.

2.2.2 Cognitive Styles and Academic Achievement

Interest in Cognitive Style developed, partly because traditionally research on ability failed to expose the processes generating individual differences.

Deguin (1972) studied the effects and interactions of matching the Cognitive Style with the instructional modes of reading and listening on the basis of post-test achievement scores, it was revealed that on the basis of instructions used in this study a valid and predictive diagnosis of cognitive style was not established.

Witkin et-al (1977) found that cognitive styles were not significantly related to overall school achievement, rather it was related to achievement in specialized areas. But Mackie (1979) concluded that field independent students had higher scores on all subjects.

Shrock (1979) studied the role of cognitive styles in problem solving performance and found that variable of field independent contributed significantly to problem solving variance.

On the basis of his findings, Letteri (1980) indicated that the cognitive profile was a basic determinant of an individual’s level of Academic Achievement and could accurately identify specific learning deficits significantly contributing to low academic achievement.

Duyne (1980) explored the relationships among field independence and field dependence, achievement, withdrawal from the course under mastery method of instruction. It was concluded that field dependence/independence towards the subject matter and mastery method of instruction were related to achievement.
Graffin (1982) conducted a study entitled ‘An investigation of the relationship between students’ Cognitive Style on the field dependence/independence dimension and their writing process’ and reported that field independent subjects obtained higher holistic scores than did field-dependent subjects.

Mrosla (1984) suggested that low achievement Mathematics students were more field dependent than high achievement Mathematics students and he also found that there was a significant interaction on the achievement variable and sex variable with respect to field dependence dimension.

Cogley (1984) studied field dependence-independence as a predictors of inferencing and problem solving abilities in college students and found cognitive styles as minimal predictors of both.

Randolph (1984) investigated the relationship among cognitive styles, achievement in Science, selected personality and the sex variables and found significant correlations among field independence and Science achievement. No significant differences were found between the performance of males and females on the Science achievement test.

Peterson (1984) Concluded that field independent students performed better in Mathematics than field-dependent students, while the field-dependent students were better at learning material.

Walker (1984) found that field independent students performed at higher level of initial learning, retention and time on task behaviour. He concluded a significant main effect for Cognitive Style for the initial learning variables.

Dugger (1985) studied the effects of two contrasting instructional approaches representing the field-dependence/independence cognitive dimension on the mathematical problem solving performance and found statistical differences in the mathematical problem solving of the two treatment groups, receiving field dependence and field independence instruction, over the control group. Therefore, the conclusions supported the
assumptions that the field dependence-independence cognitive dimension applied to teaching, improved the students’ performance in mathematical problem solving.

Fritz (1985) reported that neither locus of control nor field independence/dependence was related to academic achievement in samples of gifted students.

Atang (1985) reported as a result of his study that neither locus of control nor field-independence/dependence was related to academic achievement in samples of gifted students; there was no difference in locus of control and field-independence/dependence between male and female gifted students; and there were grade level differences in locus of control and field-independence/dependence among 4th, 6th, 8th grade gifted students.

Nelson (1986) studied the effects of field-independence/dependence cognitive styles on achievement in a telecourse and found, there was no association between field-independence/dependence and course completion.

Yore (1986) studied the effect of lesson structure and Cognitive Styles on the science achievement and found that field-independent students achieved significantly higher science score than field dependent students.

Dutt (1987) concluded that intelligence of the problem solver significantly affected the problem solving ability irrespective of strategies of training. Cognitive Styles of learner were also found to be significantly contributing to the variance of problem solving ability scores, thereby showing that cognitive styles affected problem solving ability, irrespective of training strategies. The group having field independent cognitive style scored higher mean than field dependent group on problem solving ability test.

Stoeltje, Yuonne and Reppeto (1988) investigated the relationship between the field-dependent/field-independent dimension of cognitive style and reading performance. The results of this study support that cognitive style is an important factor in school learning. Specifically, the field-dependent/field-independent dimension of cognitive style appears to be
significantly related to reading performance in the lower elementary grades. Cognitive style tests could become important diagnostic tool for the classroom teachers.

Arrington (1989) studied the relationship between cognitive style and problem solving in eighth grade students. It was revealed that problem solving was positively correlated to cognitive styles and concluded that field-independent subjects were more proficient problem solvers than field-dependent subjects.

Gill (1989) concluded that the group having field independent cognitive style scored higher on originality than field dependent group on creative problem solving skill test. Levels of intelligence, personality types, cognitive styles training strategies, when paired among them, did not show any interaction, in terms of performance in creative problem solving skills in Mathematics and cerebral dominance.

Budhdev (1990) studied the effect of cognitive variables on achievement in Mathematics of secondary school students and concluded that from the beginning of formal education great emphasis was placed on academic achievement. Variables, which affected the academic achievement, could be identified as cognitive and non-cognitive. As the intelligence of students increased, the achievement in Mathematics also increased.

Rogers (1990) found that subjects, who were more field-independent, tended to demonstrate more sophisticated programming strategies than field dependent subjects.

Behal (1992) found that field-independent students attained more concepts than field-dependent students irrespective of model of teaching.

Bal (1992) found that variable of cognitive style had a non-significant effect on acquisition of higher level writing skills in English.

Sandhu (1992) found that a group having field independent cognitive style scored higher mean than field-dependent group on achievement test.
Gautam (1992) conducted an investigation on the effect of inquiry training model in relation to cognitive style and found that the interaction between teaching model and different levels of cognitive style was not significant.

Krank (1993) found no statistically significant predictive power for cognitive style on treatment condition. Pre-service teachers’ cognitive styles did not significantly contribute to enhanced critical thinking abilities. No significant differences were found for critical thinking performance between the three treatment conditions.

Ganihar (1993) in her study on a sample of 200 students of Class IX of four schools of Dharwad city found that there was significant relationship between cognitive style and academic achievement in Social Studies, Language, Mathematics, Sciences and English.

Sawhney (1993) found that field dependent/independent students did not differ significantly on the achievement of algebraic concepts.

Kumari (1994) concluded that significant positive correlation was found between the variable of cognitive style and criterion variable of acquisition of geographical concept at .01 level.

Kumar (1995) concluded that field-dependent/independent students did not differ significantly on the achievement of Economic concepts.

Gupta (1995) studied the effect of different information processing models of teaching on Class IX students in relation to cognitive style and self-concept. The result showed that cognitive style of the students had significant effect on their achievement, and field independent students had higher achievement than field dependent students.

2.2.3 Personality Types and Academic Achievement

Not many attempts have been made in assessing the relationship of Extroversion and Introversion to Academic Achievement. Most of the studies on it support the criteria that stable introverts performed better in educational
tasks. It was indicated by Himmelweit (1946). A more specific and direct evidence of the relation of introversion with achievement comes from Furneaux (1956). He found that students who did well at university level had lower score on extroversion, Broadbent (1958) confirmed that low extroversion was beneficial to academic success. Lynn and Gorden (1961) too found that those who did well at educational tasks were more introverted.

Mithavava (1962-64) studied certain personality correlates of high and low achievers at schools. His findings showed significant relationship between the two.

Some indirect evidence also supports the positive relation of introversion with achievement. McCarthy (1964) found that delinquents were educationally retarded and at the same time showed more extroverted behavior patterns.

Child (1964, 1966) detected that the promoted children were significantly more introverted than the demoted ones.

Madan (1967) demonstrated that introverts performed better on vocabulary and educational attainment in the age group of 20 to 25 years.

Sinha (1967) studied intelligence and some personality factors in relation to Academic Achievement of school students. The Academic Achievement was found to be positively and significantly related to introversion at 0.05 level.

Entwistle and Shirley (1968) reported that stable introversion was favourable for high academic achievement.

Whittaker (1969) found negative correlation of academic achievement with extroversion. Entwistle and Welsh (1969) concluded that introverted boys of high ability tended to be higher attainers than extroverted boys.

Honess and Kline (1974) found that introversion was more important for success whereas Gover (1976) could not find any relationship between the two variables.
Goh, Davids, Moorie and Charles (1978,) Upmanyu, Sushma and Deva (1980) stated that academic success and introversion were significantly positively related.

In between these two extremes, are studies, which could not establish any significant relationship between these two factors. These are findings of Ainsworth (1967) and Entwistle & Cunningham (1968).

Malhotra (1981) did not find any significant difference on extroversion/introversion of the students studying different subjects. Mohan and Sharma (1987) found non significant correlation between extroversion and academic achievement.

Mohan and Gulati (1988) observed a positive correlation between academic achievement and extroversion for arts students. Nisha (1990) found significant positive correlation between extroversion and academic achievement.

2.2.4 Self-Concept and Personality Types

Sharma (1968) conducted a study of 22 popular and 22 rejectees by giving Saxena Personality Inventory and came to the conclusion that popular students had good personality and high intelligence.

McIntire and Drummond (1976) proposed the hypothesis that a significant relationship exists between stability of self-esteem and field-dependence/independence, but the hypothesis was not confirmed.

Mackay (1980) revealed in his study that the purpose was to examine relationship among the variables of self-concept and to determine changes in the personality of fourth grade students. There was a strong significant relationship between self-concept and most happy at the end of the school year, among the targeted group of students.

Noland and Gruber (1980) found that self-esteem was positively related to the introversion vs. extroversion factor. Remirez (1980) studied
how the athletes saw themselves and what kind of relation it had with personality. The conclusions were:
- Non-athletes and body builders perceived themselves as undifferentiated.
- Power lifters and throwers perceived themselves as androgynous.
- Athletes tended to be more androgynous than non-athletes and the way they saw themselves was reflected in their personalities.

Trawick (1980) studied the effect of orientation program on academic achievement, self-concept, personality types and study skills and found that the self-concept and personality types were related.

Aggarwal (1985) conducted a study on 250 adolescents and concluded that there was a significant relationship between self-concept and personality characteristics. Bal (1986) revealed in her study that as self-concept went on increasing the number of irrational fears went on decreasing and that confidence was reflected in the personality of an individual.

Campbell (1986) and Brown, Collins & Schmidt (1988) reported that high self-esteem individuals were also more likely to rate themselves as superior to others than were low esteem individuals.

Kawash and Clewes (1986) conducted a study of inferring a child’s level of self-esteem from a knowledge of other personality factors and observed high degree of similarity between males and females in the patterning of results. Correlation and regression analysis confirmed a high degree of shared variance between the self-esteem inventory and children’s personality questionnaire and that self-esteem might be more integrated within an individual’s total personality functioning.

Lodenbaugh (1987) found that personality determined self-concept to a large extent. Rozanne (1987) pointed out that personality was useful for predicting self-concept of an individual. McDowel (1990) observed a positive relationship between several personality factors and low ego identity of those adults who feared success.
Hartsfield (1990) stated that there was a positive relation between self-concept and personality types. Luttrell (1991) found that no significant differences in self-concept levels existed among winners and losers immediately following competition.

Slee and Rigby (1993) explored the relevance of Eysenck’s factors of extroversion, psychoticism, neuroticism and psychological well-being factor of self-esteem to the tendency to bully and to be victimized. The tendency to bully was significantly associated with psychoticism, while the tendency to be victimized was significantly associated with low self-esteem.

Moore (1995) reported that no specific cognitive style could be identified for the students of health education. Pre-major in health education were relatively the least field-independent while students majoring in physical therapy, occupational therapy and dental hygiene were relatively the most field-independent.

To conclude, we can say that Self-Concept and Personality Types have close relationship. Whatever one thinks of oneself, is reflected in one’s personality.