CHAPTER III

SURVEY OF THE RELATED LITERATURE

In any research study the exploration of the previous studies conducted in the field is very essential to pave a path for further studies. The investigator explored previous literature relevant to the present study and could collect the following research studies conducted in India and in foreign countries, which bear direct and indirect relevance to the present study.

3.1 STUDIES CONDUCTED ABROAD

In 1933 appeared the first study-habits inventory by Wrenn. His selection of items was based upon the responses of the high achieving and the low achieving pupils who were matched with regard to their intelligence and major field of study. Correlation between Wrenn's revised study-habits inventory and scholastic achievement was reported to be quite significant (r = 0.42).

Michael and Reeder (1952), constructed a study-habits inventory for college students and college preparatory high school students. It was found that the scores in the study-habits inventory correlated significantly (r = .549 to .307 respectively) with the weighted grade averages. The validity of the inventory was tested on a new sample. Again, it was
observed that study-habits scores possessed significant validity. They found very low correlation (about 0 to .101) between study-habits and intelligence.

Remmers, Horton and Daniel (1955), used the vocabulary score as a measure of verbal ability, and therefore, as an index of the kind of intelligence required for success in school. They found positive relationship between this ability and the frequency of using recommended study procedure.

Diener (1960), in an attempt to observe the similarities and differences between over-achieving and under-achieving students, observed that the two groups differed significantly in respect of their study-habits. The over-achieving males had better study-habits.

Spielberger and Weitz (1964), underscored the importance of pre-examination behaviour in their programme to prevent underachievement by anxious college freshmen, rather than relating anxiety histories as they expected. They found the anxious students most concerned about the handling of immediate stresses through the development of better habits and tactics for figuring out what instructors expected. The students evidently thought effective study-habits would reduce their test anxiety.
Bochtler (1971), conducted a study to assess the social class, reading habits and interests, and reading achievement of the elementary school children. The reading habits and interests of small town residents were assessed through the use of a questionnaire. In order to gain a clear picture of these habits and interests, the results were analysed in a number of different ways such as by sex, grade, age level and social class.

Since all but three of the town's elementary school children attended St. Peter's Lutheran School, the reading achievement testing was conducted in the parochial school. The test results were analysed by grade, age level, social class and sex. In general there tended to be only a very slight relationship between social class, reading habits, interests and achievement.

Wittmaier (1972) administered Alpert Haber Anxiety Test (AAT) to 300 Introductory Psychology Students at the university of Rochester. From the pool 52 Ss were selected, 13 in each of four groups: (i) high AAT +, high AAT -; (ii) high AAT + and low AAT -; (iii) high AAT -, Low AAT +; and (iv) low AAT -, Low AAT +. The high low selections of each scale were defined by the top and bottom qualities of the distribution. Subjects were picked at random disregarding sex, as there was not a sufficient number of each sex for a reasonable sample. The Ss completed the 1956 version of the Brown-Holtzman Survey of Study-Habits and Attitudes (SSHA).
along with the composite scores, a delay avoidance (DA) score was compiled by scoring those items which appeared on the scale in the 1968 revision of the SSHA. As the data were basically correlational, no statement can be made concerning possible cause and effect relationships between test anxiety and study-habits. However, the data clearly indicate that anxious students (High AAT- scores) are likely to have less effective study-habits and are more likely to delay academic tasks than those showing low debilitating anxiety. The AAT+ scores is related much less clearly to study-habits although the results are in direction of a more effective outcome in the high AAT+, low AAT- group. The conceptual status of the high AAT+, high AAT- group is not classified by these results, but the endorsement of items reflecting poor study-habits is in accord with the suggestion that the endorsement of contradictory items is related to confusion concerning one's ability to handle academic tasks. The test anxious (AAT-) students' poor performance is partially attributable to ineffective or inappropriate pre-examination behaviour.

Jackson and Van (1974), gave exercise throughout the session to 30 undergraduates enrolled in an 8-session study skill programme and asked to evaluate their own performance on these tasks and reward themselves with money. 15 Ss were required to teach the control of each session to a friend and then to self assess and monetarily self-reinforce their teaching competence. The remaining 15 Ss constituted a non-teaching control. Analysis
of variance of scores on the Brown-Holtzman Survey of Study-Habits and Attitudes and a specially developed Study Skill Inventory showed that all Ss reported significantly better study habits following the programme, with a significant Teaching Programme interaction indicating greater gains for the teaching Ss. Ss in both groups showed a significant reduction in Suinn Test Anxiety Behaviour Scale's scores.

Miller and Sloane (1974), attempted to condition 5 male undergraduates' answers to a questionnaire about study related behaviours using verbal social reinforcement. The extent to which this training affected rate of studying was also examined. For 5 Ss, significant changes in study comments resulted. The conditioned verbal response biases, however, had no effect on rate of actual studying. Findings emphasize the need for measuring the extent to which new behaviours are used, rather than only verbal reports of their use.

Prociuk and Breen (1974), examined the relationship between locus of control and two academic related variables i.e., study-habits and attitudes and college academic performance. 89 college students were administered (a) the Survey of Study-Habits and Attitudes; and (b) Levenson's Internal, Powerful others, and chance Scales, and the latter providing separate measures of 2 external control dimensions. Results indicate that internal control was related positively to effective study-habits and attitudes and to college academic success, while the opposite was true for powerful others and
chance control. Significant differences were found between powerful others and chance control as related to study-habits and attitudes and to college grade point averages.

Wakefield, Alston, Yom and Doughtie (1974), administered the Survey of Study-Habits and Attitudes (SSHA) and the vocational Preference Inventory (VPI) to 100 undergraduates. The scales of the two instruments were compared using canonical analysis. The analysis revealed a relationship between a component of the SSHA and a component of VPI which accounted for 31% of the variance of the 2 instruments. The related components indicate that a dimension running from academic orientation to a non-academic orientation was measured by certain scales of each instrument.

Weinstein and Cripple (1974), administered the Study-Habits Inventory to 108 freshmen and 78 sophomore medical students. Study skills were more highly related to achievement (grade point averages) than to aptitude (Medical College Admission Test) scores; this relationship was stronger for freshmen than for sophomores. Results of a factor analysis of predictors of academic failure were also presented.

Leonard (1975), conducted a study to document the reading habits of intermediate grade children across a three-year period and to discover the relationship between these reading habits and scores on 'A Look at Literature', an instrument developed by the National Council of Teachers of English to assess sensitivity of literature. There was wide variation
among individuals on each reading habit. Most of the books read by these youngesters were self-selected. When they used the suggestions of others, friends' and teachers' recommendations were accepted more often than the suggestions of librarians, parents and siblings.

Each school year the district administered the Iowa Test of basic skills and the investigator found that 'A Look at the Literature' had little relation to reading habits. The only habit to which this instrument was somewhat sensitive, was the habit of reading books by known authors. This study discovered, therefore, a behavioural characteristic of literature appreciation - the habit of seeking out books of familiar authors.

Mitchell, Hall and Piatkowska (1975), assigned 94 male bright college failing under-achievers, high on test and academic anxiety and low on study habits and skills. Competence, randomly to groups of 6 and given structural therapy for the targets of academic and vocational goal setting, course commitment, stressors in study conditions, and academic application. 84 of the Ss were then assigned to 4 experimental conditions and given treatment involving disensitization, relaxation training and re-educative training singly, and in serial fashion for various combinations of test and academic anxiety and study-habits and skills. The remaining 10 Ss were assigned to a control group. The 94 Ss who received the initial structured therapy were also compared with a no treatment control group of 25 male underachievers. 93% of the Ss given treatment for all these
targets changed from failing, succeeding in course examinations post-treatment and 93% were still succeeding 2 years later at follow up.

Schmeck, Ribich and Ramaniah (1975), tested J.B. Rotter's (1966) hypothesis that internals would show more achievement striving behaviours than externals using a direct measure of such behaviour. Rotter's Internal-External (I-E) scale and the Survey of Study-Habits and Attitudes (SSHA) were administered to 123 male and 130 female undergraduates. Significant sex differences were found on the SSHA scale but not on the I-E scale. Results indicate significant differences between internals and externals with each sex in terms of the average SSHA profiles and the individual SSHA scales. Using H.L. Mirels' I-E subscales similar results were obtained with personal control but not the practical control scale. Results support the multidimensional interpretation of I-E scale.

Wheeler, Prewett and Stillion (1975), attempted to find a practical test battery for predicting academic success. Ss were 103 high school seniors, 60 females and 43 males. The Lorge-Thorndike Intelligence Test (LTIT) was used to measure the intellectual factor; the Brown-Holtzman Survey of Study-Habits and attitudes (SSHA) and Dunhan's scale were used to measure achievement motivation. Scores on these measures were analysed using a multiple regression technique. The 4 variables of the LTIT, the SSHA, Dunhan's scale and sex yielded a multiple
correlation co-efficient of 0.64 with GPA which is similar to the correlations reported by the previous researches. The time required to administer the test battery was less than the most studies with similar intent.

Gadzella, Goldston and Zimmerman (1977), compared the perception of study-habits and course academic achievement of 80 college students who were given study technique guides; took quizzes, and participated in class discussions with those 80 students who were not exposed to these aids and activities. Ss were matched on sex, college status, race and mental ability and reading test scores. Each group responded to the Survey of Study-Habits and Attitudes 3 times during the semester. Trend analysis showed significant:

a. differences on 5-scales over trials reflecting upward shifts;

b. differences on Teacher Approval scale, with experimental group scoring higher; and

c. differences on 5-scales on interaction displaying reverse patterns of perceptions of study-habits by the two groups.

Analysis of the semester GPAs showed no significant differences between the groups.

Mussano (1977), administered the organisation survey and study technique survey to second semester freshmen living in dormitories at New York College (Pennsylvania) and these results were compared with students' overall grade point averages GPAs. The results indicated a clear positive correlation between
study organization and GPAs and a significant positive correlation between study techniques and GPAs. Questions regarding organization of study area produced a slightly higher percentage of incorrect responses as compared to those items dealing with effective use of study time. The sub-categories of the Study Techniques Survey that produced the largest percentage of incorrect responses were taking class-notes, taking tests, and reading text books. It is recommended that a study skill workshop be developed for resident freshmen. Sub-scale responses should be used in establishing goal and priorities.

Simes (1977), conducted a study to find out the effect of two methods of instruction of Biology on the study-habits and attitudes on 175 tenth grade academic biology students. An individualized and traditional method was followed. The particular individualized was a learning package approach which is included self-instructional learning units, self-pacing, optional learning activities, and an opportunity for mastery. The traditional method was characterized by group pacing, teacher directed activities, and essentially no options with respect to the learning process.

The analysis of the data was performed using analysis of variance in a factorial design. The findings did not support the major hypothesis that individualized instruction had a positive effect on the study-habits and attitudes of students compared to the traditional approach. The scores of students
were also analysed, sub-groups of high and average I.Q., high and average family status and sex. The students of average I.Q obtained significantly high scores in study-habits in traditional approach compared to the individualized approach. Students of average family status obtained significantly higher aptitude scores in the traditional approach. All other comparisons of means between the two methods of instruction in these categories were not found to be significant.

Additional data analysis of the sub-groups to determine significant differences with each method of instruction showed students of high I.Q. performed significantly higher in study-habits compared to students with average I.Q. within the individualized method of instruction. In addition, students with high family status were significantly higher in study attitudes compared to students of average family status within the individualized method of instruction. All other comparisons of means within each method of instruction were found not to be significantly different.

The evidence indicated that the success of students of high family status and high I.Q. in individualized programmes may be due, in part, to their acquisition of more positive attitudes and better study-habits, respectively. In addition, the data seemed to indicate that students high in family status and I.Q. were more able to adjust to the requirements of a new method of instruction with respect to their study-habits and attitudes.
Tollefson (1977), investigated the relationship of self-reported study behaviours, affect towards the course, test anxiety, and past achievement to final examination performance. Subjects were students in education, who enrolled in undergraduate measurement course final. The six factors examined were:

i. participation in an organized study group;
ii. preparation for class;
iii. using the teacher as a resource person;
iv. preparation for examinations;
v. reviewing material after each class; and
vi. using formative evaluation techniques.

Multiple regression analysis yielded a significant multiple (R). Past achievement explained the largest proportion of the variance in final examination scores, but study behaviour factors (iii) (using teacher as a resource person) and (vi) (using formative evaluation procedures) yielded significant partial correlations.

Gadzella (1978), investigated (a) relationship between measures of study-habits and attitudes, locus of control, achieving tendency, and semester grade point averages (SGPA), (b) difference between the sexes on the above mentioned variables, and (c) best predictors of SGPA. The subjects were 39 males and 81 females. There were number of significant relationships between these variables for the total group and each of the sexes. Some of the relationships were positive,
others were inverse. Results showed female obtaining higher scores on powerful others and chance scales of the locus of control inventory. The best predictor of SGPA was one's study-habits measure.

Seni, Gadzella and Zimmerman (1978), compared perceptions of study-habits for 124 internally oriented undergraduates (as measured by their scores on Rotter's Internal-External locus of control), who were exposed to attend study techniques and those who were not. The survey of Study-Habits and Attitudes (SSHA) was administered 3 times during a semester to detect possible variations between the groups and changes in their study-habit skills. Trend analytical results for (SSHA scales) show no significant difference between groups, significant difference among trials on 5 scales and interaction on 5 scales. Illustrated post t-test for the interaction reveals patterns reflecting upward shifts for Ss exposed to effective study-habits and downward shifts for Ss who were not exposed to them.

Schroeder (1978), conducted a study on children's Work-Habits and Reading Performance. Two types of problems are found in reading performance of children with poor work habits; a child may have mastered skills but performed inadequately in task due to poor work habits, and a child may never have mastered skills because of such habits. Work habit behaviour is the student's tendency to apply himself or herself to learning tasks by displaying inadequate self-direction in individual or
group learning activities. Problems may occur in one of three stages of task performance; getting started, keeping going and getting finished. Work habit problem increases on students' advance in grades. To build a structure for development of good work habits, teachers must do the following; help the students understand what abilities will be gained as a result of the task and how the ability to do what is expected will be demonstrated; make consequences of good and poor performance clear at the oneself and stick to them; plan the alternate methods of instructions if performance is inadequate; and help the child to organize for the task. Specific techniques are available for teachers to use with students at each of the three problem stages.

Griffin (1979), investigated the correlation between specific personality and biological variables and the grade point average (GPA) of 211 first quarter community college and technical institute. Students using the Adult Nowicki Strickland Internal -External Scale to determine Locus of Control, the Post High School Self-Concept of Academic Ability Scale, and the Survey of Study-Habits and Attitude Scale. Locus of control, self-concept of academic ability and study-habits and attitudes were found to be significantly correlated with GPA, as were age, sex, race and marital status. Delay avoidance in undertaking academic pursuits made the greatest contribution to the explanation of variance in GPA in the multiple regression equation used, followed by self-concept of academic ability, age,
sex, race, locus of control, work methods, study-habits and acceptance of educational goals. Study orientation, teacher acceptance, marital status, and study attitudes did not contribute to the multiple regression equation. In the paradigm of interaction factors believed to facilitate academic achievement, biographical variables accounted for 8% of the variance in GPA and personality variables for another 19%, the remainder was attributed to intelligence and other assumed factors.

Keetz (1979), randomly selected 182 students (91 men and 91 women) from 1066 entering freshmen at West Chester State College to whom she had administered the study-habits checklist (Preston & Botel (1957, 1967 b) in September 1973 and whose admissions' folders contained information about the education and occupation of each parent as well as the birth order and the number of siblings. Social position has been determined by Hollingshead's Two Factor Index of Social Position.

The co-efficient of correlation found between social position and selected family correlates are not of sufficient magnitude to be of any value in predicting study-habits. The means of the females' social position index scores and study-habits scores are significantly higher than the means of the males' scores on both of these measures.

Results of stepwise regression analysis showed that social position and selected family correlates failed to add significantly to the predictive value of the checklist scores.
Lynn (1979), conducted a study to identify factors related to the development of reading habits of twelve sixth grade students. The focus of the study was on four major areas—factors in the school environment, factors in the home environment, personal characteristics of the students and non-related factors as they relate to the development of children's reading habits. The study was conducted in a small, Mid Western City located near a metropolitan area. The twelve subjects for study were selected from 146 sixth grade students through initial screening procedures. These procedures included completion by the students of the Estes Attitude Scale, the Fiddler Reading Aptitude Test, an Interest Inventory, a log of out of school activities, and peer ratings of a reading habits through a sociogram. From the analysis of initial information and with attention given to gender and socio-economic level, the six students with the most positive reading habits and attitudes and the six students with the most negative reading habits and attitudes were selected as subjects for the study.

The results of the study revealed significant differences between the positive and negative reading habit groups in each of the four major areas investigated. The students in positive and negative reading habit groups differed significantly in terms of self-confidence, influence of peer, reading habits, parental reading habits, availability of material, in the home reading ability, reading strategies, reading interests, parental involvement and peer independence,
reading models outside home, amount of the reading done to the child as a pre-schooler, and the television viewing were not significant in differentiating the students in the positive and negative reading habit groups. The teacher's knowledge of their students' reading habits and attitudes were conveyed in the interviews, but this knowledge was not reflected in the ranking task.

Singer (1979), opined that study guide helps both new and old college students, if college is for him, if he is ready for college and which skills he needs to be mastered in order to be a successful college student. The guide offers step-by-step approach for developing study-habits which include the student's knowledge of (i) the classroom; (ii) note taking; (iii) the text book; (iv) effective listening; (v) studying and study schedules; (vi) tests, and (vii) counsellors.

Annis and Annis (1980), administered the Study Technique Questionnaire to 914 students in grades 6-8, in grades 10-12 and in undergraduate school. The students were asked to describe in detail, their preferred study technique for a fairly long reading assignment. The responses were reliably grouped into one of nine categories; reading only; read and underline; read and take notes; read, underline and take notes; read and underline or take notes; read and underline and read and form mental notes. Reading only was most popular technique for 60% of the 6-8 grade students, 47% of the 10-12 grades and 13% of the undergraduate students.
Reading and underline was first choice of 39% of the college students. The popularity of underline and of note taking (combined with reading) greatly increased with increasing student age. The variety of techniques described also increased for older age groups. The variety may be explained by the increased level of student participation which demanded by more complex reading material, or by the fact that individual aptitudes, characteristics, and habits are more fairly established in older students.

Cummings (1982), conducted a study on 242 students (107 adult and 135 traditional students) enrolled in randomly selected first year, non remedial English courses in the University College and the Division of Continuing Education during the 1981 summer session. The study sample was representative racially of the predominantly black student body of the University of the District of Columbia.

He found the five status characteristics (sex, marital status, work status, college status and student status) did not account for a significant proportion of the variance in the study-habits and study attitudes scores of adult and traditional students. Significant differences were found in both the study habits scores and study attitudes scores of adult and traditional students, with traditional students being significantly higher in both areas, indicating better study-habits and attitudes.

Cavanaugh (1982), conducted the survey on 509 students in grade nine through twelve and found that female scored high
than males on the SSHA when the means of both groups were compared. Student grade level comparisons indicated that, regardless of grade placement, study-habits and attitudes toward school were similar.

Analysis of student scores by class rank and grade point average indicated that students in the upper quarter of the class and students with grade point averages between 3.51 and 4.00, scored highest on the SSHA.

Seventeen extra class activities were compared on a participant non-participant basis. Students involved in community service, interscholastic athletics, publications and students government scored significantly higher than students not participating in these activities. The remaining activities displayed no differences in mean SSHA scores between participants and non-participants.

Students planning to attend a college/university scored higher on the SSHA than students with other plans. Students with no plans following high school and those students planning to get jobs immediately following graduation, scored lowest on the SSHA.

Koivo (1982), conducted a study on 200 students. The stratified random sample procedure was used to obtain 25 students from each of the upper and lower academic achievement levels in each of the grades nine through 12. Selected sample completed Brown Holtzman's Survey of Study-Habits and Attitudes (SSHA).
The most important single fact in this study in determining students' perception of the measured variables was the academic achievement level of the students. The higher the academic achievement level, the more positive study-habits and attitudes possessed by the group. The consistent variation from this trend was among the 10th grade males in the higher achievement level. The ninth graders started with similar perception but the groups, higher and lower academic achievement levels of males and females varied in the other three grades. After the negativism of the 10th grade, the students, particularly males of higher academic achievement level, indicated more positive attitudes in the 11th and 12th grades. Among the grades, 10th graders tended to have the lowest scores in all the measured variables. The females tended to have more positive overall scores when compared to the males. If the subjects are divided further into higher and lower academic achievement level males and higher and lower academic achievement females, the high group males were consistently more positive than the females in the 11th and 12th grade in Delay avoidance (DA), Work Methods (WM), Teacher Approval (TA), Education Acceptance (EA), Study-Habits (SH), Study Attitudes (SA) and Study Orientation (SO), to sex, academic achievement level and secondary school grade level.

Marston (1982), conducted a study on 129 students in eight schools in an urban system. Participating schools were selected to represent the range of population values. Student participation was voluntary, with parental consent. He found that:
Females reported significantly more time reading books than did males. Overall, reading achievement and SES were less powerful than had been anticipated, and where significant, for females only.

For both sexes, the most powerful predictors consistently came from the use of time measures. There was significant positive correlation between hours spent in reading and the composite of hours spent on other activities. The most significant predictors of reading were the hours spent on daily responsibilities. Students reading more than predicted tended to be females, of higher reading achievement and of higher SES than the men.

3.2 STUDIES CONDUCTED IN INDIA

Krishnan (1956), studied the study-habits of college students with a study-habits inventory. His results showed that the senior B.A. students had better study-habits than junior B.A. students. Individuals varied in respect of study-habits and study-habits among students were far from being satisfactory.

Vedavalli (1956), administered a 39-item inventory to a sample of 212 students (130 men and 82 women) from all colleges at Tirupati. In addition to analysing the distribution of scores, Vedavalli also examined the influences of such factors as sex, birth order, father's educational level, students' educational level and area (rural and urban) from which the students came. The investigator found two statistically
significant differences:

a. male students had better study-habits than female students and;

b. the first born students showed better study habits than those students who were born later to their parents.

Jamuar (1958), in an earlier investigation, tried to survey the study-habits of college students with the help of a preliminary study-habits inventory and observed (r) of 0.51 between study-habits and achievement. In a subsequent study, he found no relationship between study-habits and intelligence.

Krishnan (1960), administered a study-habits inventory on cyclothymes and schizothymes to a group of 161 college students of Mysore, with an idea of finding out the relationship between study-habits and a few personality factors. The results have indicated that a few factors of personality namely A (emotional state, social type), B (adjusted schizoid vs. maladjusted schizoid type), and factor S (not named, though indicating sociability) have significant positive correlation with study-habits.

Daftuar (1967), administered the Hindi version of Jamuar's Study-Habits Inventory, consisting of 24 items, to 150 students (100 men and 50 women) of Patna University, in order to determine if there was a relationship between study-habits and such factors as age, sex, grade differences and income background as measured by monthly family income. Two factors sex and
economic background, were found to be positively and significantly correlated with study-habits, when discussing his findings he noted.

Thus the present findings add another testimony to the fact that study-habit is a matter of early formation and that it is not made or remade by later grades or age differences. The present findings support the view of course indirectly, that SH (study-habits) is related to such dimensions of personality adjustment as home, health, social, emotional and even sex.

Sinha (1970), conducted a study on 375 students of the Allahabad University, to find out the difference in the study-habits of High achievers and Low achievers in terms of regularity, time and place of study, home work, main sources of study, environment of study, amount of concentration, impediments to study and sessional regularity. He found that:

i. The groups did not differ very much with regard to time when they generally studied. As far the place of study, high achievers worked alone in a room.

ii. As for the general environment of study, more of the low achievers preferred solitude, figures being 58.94% as against 47.02% for the high achievers. About one-third in both the groups said that they could study in any type of environment, and about 15% even under very noisy conditions.
There was not much difference between the groups as to the sources of study. There was a strong tendency for most students to depend upon class notes and notes prepared from books.

About 17% of the highs and 22% of the lows complained that they were easily distracted from their studies. The two groups did not differ on this score.

The most commonly mentioned hurdle to studies was "mental worries or physical ailments". Next in frequency was distraction by friends. Domestic responsibilities acted as impediments in about 10% of the cases.

No difference between the groups existed with regard to the completion of their homework. Difference between the highs and lows seemed to emerge on the scores of regularity in daily work. On the whole, the high achievers were more systematic and regular. Significant difference also emerged in respect of the commencement of regular study. On the whole, greater proportion of low achievers began studying systematically for the examination quite late in the academic year. On the other hand about 45% of highs as against 26% of the lows commenced regular study from the beginning of the session itself.

Jamuar (1974), conducted a study for his Ph.D on the Intermediate Arts and Science Students of Patna University. The first administration of the study-habits inventory and that of intelligence tests was done while students were in first year.
class. The rest of the tests were administered when they were in the second year class. The size of the sample, in the beginning was 250, but as the number of tests increased the size of the sample gradually decreased, yet the minimum number of cases for a particular variable was 100. He himself constructed the study-habits inventory and drew following conclusions:

i. study-habit is related to scholastic achievement;

ii. study-habit affects scholastic achievement independently of intelligence;

iii. study-habit is related to the general personality adjustment and home, social and emotional adjustment;

iv. study-habit is related to such background factors as (a) position in the family; (b) father's occupation; (c) hobbies; (d) future educational, and (e) vocational plans of the students;

v. study-habit is inversely related to (a) age, (b) membership of organizations outside college; and sharing household duties;

vi. students with poor study-habits have some "halo effect" about themselves. Students with positive study-habits are more discrete in ascribing themselves the desirable as well as the undesirable traits as compared to students with poor study-habits;
vii. study-habit is related to some environmental factors as well. It has positive relationship with lighting and negative relationship with noise and ventilation, but they are less important than the personality factors;
viii. scholastic achievement is related to intelligence, general personality adjustment, home, social and emotional adjustments;
ix. introversion also influenced scholastic achievement independently of intelligence and study-habit.

Banerjee and Papneja (1975), investigated the relationship of study-habits (SH) of college students to their need for achievement (n-Ach.) and their need for power (NP). Groups of 44 bright and 41 non-bright 1st-year college students were formed on the basis of their high school graduation examination scores. Ss' n-Ach. and NP were assessed by the TAT, and their SH was assessed by the Survey of Study-Habits and Attitudes. The bright Ss were found to be significantly higher than non-bright in both n-Ach. and NP. The bright Ss also had significantly better SH. Intercorrelations of n-Ach; NP; and SH for the groups showed that only a negative correlation between the n-Ach, and NP of the bright Ss was significant. Results indicate that study-habits are not related to n-Ach. or NP.

Dhaliwal and Saini (1975), studied aspects of over and under-achievement, and tested the adequacy of the operations used to compute achievement indices. Results include the finding
that over and under achievement was related to the students' study-habits, motives, adjustment and feelings of security and insecurity.

Lalithama (1975), conducted a study on 732 pupils of standard IX, selected on a stratified random basis. The tools used were a standard achievement test in mathematics, a study-habits inventory, an interest inventory, socio-economic status scale and Reven's Progressive matrices.

The study revealed that (i) the average performance of pupils in mathematics was 23.14 with S.D. of 8.20 and the distribution was negatively skewed; (ii) there was significant difference in the performance of boys and girls; (iii) the urban pupils were superior to rural pupils in mathematics; (iv) intelligence and interest in mathematics were high in boys than in their counterparts; (v) the achievement in mathematics was positively related to intelligence, interest in mathematics, study-habits and socio-economic status; (vi) study lessons daily, studying mathematics by writing, repetition in learning, spaced learning, overlearning etc., influence the achievement in mathematics; (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 borns; and (ix) achievement of scheduled castes and tribes was lower than that of the total sample.
Seetha (1975), conducted a study for Ph.D on the topic entitled "An Enquiry into the Psychological and Social Factors Affecting Academic Achievement". One of the variables was study-habits. It was found that study-habits had a positive relationship with academic achievement in that high achievers possessed good study-habits while low achievers had poor study-habits.

Farogi and Tharakan (1978), administered a Study-Habits Inventory, a Locus of Control Scale and Reid-Wave Internal External Scale to 75 post-graduate students. The co-efficient of biserial correlation between internal control and good study-habits was positive and significant. A possible weakness of this study was that motivation and ability were not controlled between the internal and external groups, and further study of different abilities in the groups would be useful for interpreting the results of this study.

Tuli (1980), collected data from all types of institutions (Boys and Girls) in Hoshiarpur town, privately managed and government. From each school the population of 9th class was taken. The intelligence as a factor of achievement was controlled by taking a sample of 147 falling within the limits of $M \pm S.D \ (48.49 \pm 12.96)$ of I.Q. Results of middle standard examinations of achievement in mathematics were taken to serve as a criteria of achievement in mathematics as a result of study-habits. It is found that study-habits are not significant determinants in mathematics. Although, there is a
great variation w.r.t. prevalence of study-habits, which means that study-habits are correlates of achievement in mathematics.

Patel (1981), conducted a study on 600 pupils of standard viii of three urban and three rural schools, which were administered the General Mental Ability Test of M.T. Patel. 78 pupils of both the sexes had got upto 78.08 I.Q. The intellectually backward pupils were administered the study-habits inventory developed by B.V. Patel. The result of the terminal examination was taken into consideration and aggregate marks were converted into percentages before they were entered into data matrix. He found that:

i. Mean scores of study-habits of intellectually backward pupils from rural and urban areas do not differ significantly.

ii. Mean scores of the study-habits of boys and girls differ significantly:

a. Rural girls were significantly superior in study-habits to rural boys and urban boys at .01 level.

b. Urban girls were significantly superior in study-habits to rural boys and urban boys at .01 level.

c. Groups got achievement scores in relation to their study-habits scores.

Girls from both the areas were found far better in study-habits than the boys of those areas.
Chauhan and Singh (1982), conducted a study on 500 children from 10 to 12 years of age in Himachal Pradesh to find out the effect of parental profession on the study-habits of children. Study-Habits Inventory developed by B.V. Patel was used. The investigators found that:

i. there is no difference in the study-habits of boys and girls.

ii. parental profession affects the study-habits of children. Children of teachers had highest scores on the study-habits, next comes the government services (civil), defence, business and agriculture respectively.

iii. children from urban areas had better study-habits than the children from rural areas.

Gangwar (1982), conducted a study on 180 students (90 rural and 90 urban) both male and female of Kanpur district who passed high school examination in first division and studying in class XI. It is a 2 x 3 factorial design and an ex post facto study. Study-Habits Inventory by B.V. Patel and Socio-Economic Scale (both rural and urban) by Dr. S.K. Saxena were used for data collection and found that cultural setting of first divisioners e.g., rural and urban has significant impact on the study-habits of first divisioners. First divisioners belonging to rural cultural setting have better study-habits in comparison to the urban first divisioners.
Rao, Parvathy and Swaminathan (1983), conducted a study on 140 children 15½ to 16½ years of age of whom 35 boys and 35 girls had full time housewives as mothers; another group of children, 35 girls and 35 boys had mothers who were full time school teachers. The relevant extraneous variables controlled were order of birth (first born), type of family (nuclear family) income (₹ 100 to 2000 per month), size of the family (4 to 6) members and age (15½ to 16½ years). The children were at plus two level of the 10 + 2 scheme of schooling; middle class schools were taken (matched for school position of the school) and the employed mothers had been employed before the children were born. Wrenn's Study-Habits Inventory (1934) was used and scored for the four sections: (a) reading and note taking; (b) habits of concentration; (c) distribution of time, and (d) general attitude of study. The data were subjected to 2 x 2 factorial analysis of variance.

It was found that adolescent boys and girls do not differ significantly in their reading and note taking techniques. Children of employed and non-employed mothers do not differ in reading and note taking techniques. Adolescent boys and girls whether born to employed or non-employed mothers show no difference in habits of concentration. Children born to employed and non-employed mothers whether boys or girls do not differ in distribution of time in habits of study. Children born to employed and non-employed mothers differ in general attitude of study. Adolescent girls of the non-working mothers
had significantly more favourable attitudes and habits of study than the other three groups indicating an interactional influence between employment, sex and study-habits.

Christian (1983), conducted a study on 147 students of standard X, which comprised 79 girls and 68 boys. Study-Habits Inventory by B.V. Patel and TAT Test (n-Ach.) adopted by Dr. Prayag Mehta were used. It was found that:

1. The boys have high n-Ach. mean scores in comparison with that of the girls. But this difference is not statistically significant.

ii. Boys and girls do not differ significantly with regard to study-habits.

iii. The pupils who are highly motivated have better study-habits than the pupils who are low motivated. Highly motivated boys have better study-habits than the low motivated boys.

iv. Highly motivated girls have better study-habits than their counterparts.

Bhatnagar and Bordia (1984), conducted a study in three colleges of Rajasthan State offering B.Sc Home Science Programme. The study included 81 students enrolled in the third year class of the three colleges. On the basis of aggregate percentage obtained in year II, they were divided into high achievers (who secured 60% and above) and medium achievers (who secured less than 59% of the marks). On the basis of the place of residence
students were divided into two categories i.e., hostellers 41% and day-scholars 59%.

They found that academic achievement has no relationship with regard to time and duration of studies, planning for study, extra reading, memorization and preparation for examination. Significant relationship was found between academic achievement and habits with regard to place of study, class missed by the students, doing reference work, preparation of notes, habits of consulting dictionary and reading other reading materials during leisure time.

No relationship was found between residence and habits with regard to hours spent on studies, length of one sitting for study, activities done during free period in college hours and activities done after each sitting, planning for study, position while studying, place of study, clarifying doubts, reading and notes taken, reading journals, news papers, magazines, memorization and revising answer books before submission. Residence was found to have significant relationship with the timings of the study, regularity in the studies, classes missed by the students, consulting the dictionary, type of novels read, language in which novels were read and the habit of the hours spent on study during examination days.