CHAPTER – 2

REVIEW OF RELATED LITERATURE

All progress, which is traceable today, is the result of centuries of efforts undertaken by man, in close succession. Whenever man is confronted with some problem, he seeks guidance from the experiences of others. In fact, there is nothing new except in context of old. It is only with reference to the old that a new thing is learnt.

Any worthwhile research study in any field of knowledge requires an adequate familiarity with the work which has already been done in the same area. Mouly (1964) states, “Survey of related literature avoids the risk of duplication, provides theories, ideas, explanations or hypotheses valuable in formulating the problem and contributes to the general scholarship of the investigator”. A summary of the writings of recognized authorities and previous research provides evidence that the researcher is familiar with what is already known and what is still unknown and untested.

Survey of related literature is an important pre-requisite to actual planning and execution of any research project. Survey of related literature besides forming one of the early chapters in research report for orienting the researchers, serves some other purposes, Good, Barr and Scates (1941) analysed these purpose as given under:

1. To show whether the available evidence material solves the problem adequately without further investigation.
2. To provide ideas, theories, explanations or hypotheses valuable in formulating the present study.
3. To suggest the research methods appropriate to the problem.
4. To locate comparative data useful in the interpretation of results.
5. To contribute to the general scholarship of the investigator.
STUDIES RELATED TO CREATIVITY

Kershner and Ledger (1985) conducted a study entitled, ‘Effect of Sex, Intelligence and Style of Thinking on Creativity’. A sample of 15 boys and 15 girls from a gifted program (IQs of 130 or more on the Otis LENNON test of mental abilities) and 30 age & sex matched average children (IQs between 95 and 110) was taken. The data was compared on Torrence Tests of creative thinking and left hemisphere, right hemisphere and integrated thinking styles. Results showed that sex, IQ level and thinking style each had an effect on different dimensions of students’ creativity. Girls, irrespective of their IQ level and thinking style, scored higher than boys consistently across the seven creativity subscales, reaching significance in verbal and figural fluency.

Shukla and Sharma (1986) studied differences in scientific creativity in male and female students. A sample of 117 male and 113 female students was taken from the middle schools of Raipur and Rajnandgaon districts in India. The test of scientific creativity developed by Shukla (1980), which measures fluency, flexibility, originality and global scientific creativity, was administered. Results indicated that males and females did not differ significantly in any of the measures of scientific creativity. The mean score of boys on all measures of scientific creativity as well as on global scientific creativity were consistent, but insignificant, higher than those of girls.

Ai(1999) examined the relationship between creativity and academic achievement. Participations were students from 68 schools. Three creativity tests were used viz. the Torrance Test of Creative Thinking, the Abedi-Schumacher Creativity test and the villa and Auzmendi Creativity test. Academic achievement of the students was measured by self reported achievement in six subject areas: Spanish, Basque, English, Natural Science, Mathematics and Social Science. Results demonstrated that, when operationalised by their grades, creativity was related to academic achievement for both boys and girls.
Nori(2002) studied the sex difference and the type of relationship between creativity and academic achievement among high school students in Shiraz city. 306 high school students (150 boys and 156 girls) comprised the sample. To measure the rate of creativity, Abedi questionnaire was used and CGPA for academic achievement. The analysis revealed that there was no significant relationship between creativity and academic achievement, but the result was different for two sexes.

Jinzheng and Wenzhong (2004) explored the development of children’s creativity by using creativity test. The sample consisted of 310 students aged from 9 to 16 years. The study showed that creativity increases with age, but the development of its three dimensions – fluency, flexibility and originality – is unbalanced. As compared with other age cohorts, the fluency and flexibility dimensions of creativity develop faster during the age of 9 to 11 years. Family environment has not only a direct influence but also an indirect influence on children’s creativity. The indirect influence takes place through creative attitude.

Charyton (2007) investigated the similarities and differences in general, artistic and scientific creativity between engineering versus music students representing scientific and artistic domains. A sample of 100 music and 105 engineering students from a large North-eastern university was taken. The instruments used were Creative Personality Scale, Purdue Creativity Test, Creativity Temperament Scale, Cognitive Risk Tolerance Scale. Results indicated that musicians scored higher in general and artistic creativity, with no significant differences in scientific creativity. Participants had higher levels of creativity, compared with normative data from previous studies. Gender, age and specialization with in major yielded no significant differences.

Palaniappan (2007) investigated the relationship between creativity and academic achievement to understand the nature of these relationships in the intelligence continuum among 497 from four groups of Malaysian students. Intelligence was measured using Cattle’s Culture Fair Intelligence Tests and Creativity was measured using Torrance Tests of Creative Thinking. Four groups were formed based on creativity and intelligence scores, namely, High IQ – High Creative, High IQ – Low
Creative, Low IQ – High Creative and Low IQ – Low Creative. The mean academic achievement scores of these four groups were compared. One way ANOVA indicated that there were significant differences in the mean academic achievement scores among the four groups. It was concluded that creativity may help to compensate the lack of intelligence in enhancing academic achievement. The findings have important implications in infusing creative thinking and enhancing academic achievement among students of varying levels of intelligence.

Pareek (2008) conducted a study entitled “A study of creativity of students studying in Bodh Shikha Samiti and Government Schools”. A sample of 150 boys and 150 girls from government schools and 150 boys and 150 girls from Bodh Shiksha Samiti was taken. The objectives of the study were to study the creativity of students of Bodh Shiksha Samiti and government schools and to examine the difference in the creativity in both types of school students. It was found that there was a significant difference in creativity among students studying in Bodh Shiksha Samiti and government schools. Also, there was a significant difference in the fluency, flexibility and originality among students studying in Bodh Shiksha Samiti and government schools. It was also found that students of Bodh Shiksha Samiti were more creative than students of government schools. No significant difference was found in the creativity of boys and girls. A positive correlation was found in the creativity and educational achievement.

Sharma (2010) studied emotional intelligence and creativity of school students in three types of schools: Gurukuls, Public Schools and Government Schools. A sample of three hundred secondary school girls (100 each from three types of schools: Gurukuls, Public Schools and Government Schools) in the age range of 14 to 16 years was taken from Rohtak city. The data was analysed using descriptive statistics (mean, standard deviation, skewness and kurtosis). It was found that public school students scored significantly high on all measures of creativity i.e. fluency, flexibility and originality than the students of Gurukuls and Government schools. It was suggested that public schools tend to provide more stimulating and promoting environment for the
cultivation and enhancement of divergent thinking capacities among their students than Gurukuls and Government Schools. Government Schools and Gurukul students did not differ significantly from each other in terms of their performance on creativity test. Both Gurukul and Government Schools did not tend to provide conducive environment for the cultivation of creative thoughts among their students.

**Nadheri and Sharit (2010)** examined the relationship between creativity and academic achievements of male and female students. The study examined two research questions.

1) What is the relationship between different aspects of creativity and academic achievement?

2) Is there any significant gender difference regarding the relationship between different aspects of creativity and academic achievements?

The sample included 105 male and 48 female students for creativity test and applied Cumulative Grade Point (CGPA) to select the participants. The results of Pearson Correlation Analysis indicated that aspects of creativity were related to academic achievement for both male and female students. There existed gender differences regarding specific aspects of creativity, in relation to academic achievement. Dissimilar aspects of creativity and academic achievement were found to be significant for males and females.

**Dhatrak and Wanjari (2011)** conducted a study entitled ‘A Co-relational Study of Scientific Attitude, Creativity and Scholastic Achievement of Secondary School Students’. The objectives of the study included: 1) To study scientific attitude of the secondary school students. 2) To study creativity of the secondary school students. A sample of 500 students studying in class IX was taken from seven districts of Vidarbha. The data was collected with the help of : 1) Creativity Test by Dr. Baquer Mehdi. 2) Scientific Attitude Scale by Dr. Avinash Grewal. 3) Cumulative Record Card. The mean, standard deviation, ‘t’-test and ‘r’-correlation were calculated. It was concluded that secondary school students possessed average level of scientific attitude and
creativity. No significant correlation was found between creativity of boys and girls. Urban students were found to be more creative than the rural students. Creativity of girls was found to be more than that of boys.

**Zare (2011)** conducted a study to explore creativity differences between art and engineering students of Shiraz University. The four components of creativity: Fluency, Originality, Flexibility and Elaboration were investigated using a multiple choice paper and pencil test which is called The Abedi-Schumacher creativity test. The subjects were 160 art and engineering under graduate students. It was hypothesized that art students are more creative than engineering students. 2 X 2 factorial design analysis and t-test results indicated significant differences among art and engineering students in terms of all four creativity factors. The results supported the research hypothesis that art students are more creative than engineering students. The results also showed that there did not exist gender differences regarding creativity between art and engineering students.

**STUDIES RELATED TO ACADEMIC INTERESTS**

**Katz (1970)** conducted a study on ‘The Measurement of Academic Interest Measures’. The sample comprised of 15,500 high school juniors grouped by sex, ability and curriculum. It was concluded that the structure of academic interests seems remarkably similar for males and females.

**Bharadwaj R.L. (1978)** studied academic and vocational interests as functions of creativity components, intelligent and socio-economic status among college going students. 240 college going students of Agra town both boys and girls of Urban areas, graduates and postgraduates of the Arts, Science and Agriculture faculties were selected through a multistage random sampling. The result showed that creativity remained a consistent promoting agent of academic and vocational interest in bright adolescents of middle socio-economics status. Its promoting role was reduced both by high and low levels of socio-economics status in bright adolescents.

**Francais (1980)** conducted a study named “Interest of Intermediate-Level Secondary School Students in Physics and Technology” and examined the interests of
intermediate-level secondary school students from the State of Hesse in the Federal Republic of Germany. The study showed that both boys and girls show greater interest in technological issues than in issues of pure physics. This distribution of interest is in contrast to the importance accorded to these subjects in school curriculum. Children from rural areas seem to have a slightly better background of experiences involving knowledge of physics and technology than children from urban areas. A correlation was found to exist between out of school activities concerned with technology and the natural sciences and academic achievement as measured by students’ physics grades. Girls display a general interest in natural phenomena which are not sufficiently covered by physics curricula.

Grewal (1984) conducted a study involving the variables of interest, intelligence, creativity and socio-economic status. It was observed that interest supports constructive activity and played a powerful role in guiding the selection and persistency of an action.

Mahale (1987) while studying the interests of the students found that adolescents showed greater interest in those school subjects which they believed that these would be of more value to them vocationally. Also, they were more interested in other areas of life than in subjects for which they see no practical values. They might also select those subjects in which they were confident to score higher grades in secondary school certificate examination.

Sharma and Verma (1991) studied educational and vocational interests of tribal high school students. The study was conducted through descriptive survey method of research. The sample of the study consisted of 300 tribal high school students and tools used were EIR and VIR by Kulshreshtha. The major findings were:

1. The tribal male and female students differed significantly with regard to their educational interests in area of agriculture, fine arts, home science, humanities, science and technology.
2. The tribal male students had top position of educational interests in the area of technology and bottom position of educational interest in the area of fine arts. On the other hand, tribal female students tend to show top position of educational interest in home science and bottom position of educational interest in the area of technology.

3. The tribal male and female students showed significant difference in their mean scores of vocational interest pertaining to constructive, artistic, agriculture, persuasive, social and household areas.

Singh (1993) studied academic and vocational preferences of Creative high school Tribal Pupils. The main objectives of the study were: 1) To identify the high creative and low creative high school tribal pupils in Kohimer and Mokokchung districts of Nagaland by developing a battery of verbal and non verbal tests of creative thinking. 2) To find out the academic and vocational preferences of high creative and low creative Ao and Angami pupils by developing and using academic and vocational prestige scale. The population of the study consisted of all the Ao and Angami pupils studying in class IX in the state of Nagaland. No significant difference was found between Ao and Angami in their levels of creativity. However significant difference were found between creative groups such as Angami high creative being found superior to Ao high creatives; Ao low creative being found superior to Angami low creative in their level of creative thinking. Level of creative thinking of private school pupils being found higher (.01 level) than the government school pupils, sex and location were found not affecting much to the creative thinking pupils.

Kubilius and Yasumoto (1994) examined the factors influencing students in choosing their academic courses. The factors included gender, race, ability, previous educational experience, interests and parental attitudes. A sample of 394 students ageing 13 to 14 students who were participating in a summer residential programme was taken. Scholastic attitude test was taken. Results showed that there was a gender difference favouring males for selection of mathematics and science courses over verbal
ones. Females were less likely to choose maths or science and more likely to choose verbal classes as compared to males.

Mattoo (1994) studied academic and vocational interests, Adjustment problems and Scholastic achievement of high and low creative students. The objectives of the study were: 1) To identify high and low creative students. 2) To compare high and low creative students on their academic and vocational interests. 3) To find out the sex variation on academic and vocational interests, adjustment problem and scholastic achievements in case of high creative students. One thousand students (boys and girls) studying in 10th grade were drawn randomly from high and higher secondary schools of Anantnag district of Kashmir. Major findings were: 1) High and Low creative students differed significantly in the academic interest area-fine arts, literary, scientific, technical and house hold; the mean differences favouring the high creative group. On the other hand, low creative students in comparison to high creative students were found to possess significant differences in the interest areas of medicine, agriculture, crafts and sports, the mean difference favouring the low creative group. 2) High creative boys and girls were found to be significantly different in 5 interest area-fine arts, medical, outdoor, agriculture and sports and in the remaining two high creative girls were favoured.

Scarr and Thompson (1994) pointed out that children’s academic interests can be predicted by their family background. It may be anticipated that parents’ psychological supporting children’s education expectancy would be more influential among all other sources of support.

Young et. al (1994) conducted a study to examine the academic interests of students from both rural and urban high schools in western Australia. The researchers surveyed and interviewed twenty western Australian high schools. The students were asked about their subject choices. It was found that academic interests were different for rural and urban students. The study revealed significant differences in academic interest between rural and urban students. However, in many ways, these students had very similar reasons for choosing different subjects.
Bansal (1995) surveyed 528 class XI students of arts and science streams from different colleges of Moradabad District. The purpose of study was to identify high creative and low creative students from the sample with the creativity test and also to find out whether high creative and low creative students differ significantly on the basis of their academic interests. It was found that

(1) There was a great deal in common between the vocational interests of high creative and low creative students.

(2) The high creative males tended to give preference to social, scientific and executive jobs, while the high creative females preferred social, scientific household and executive jobs. Thus, the social scientific and executive vocations were common in both the sexes of high creative group.

(3) There was no significant difference regarding the adjustment faced by the high creative and low creative students under the faculty of arts and science.

(4) Females either of the high creative or of the low creative group showed their keen interest in jobs pertaining to household, scientific and social works.

(5) There was no significant difference in the academic achievement of the high creative students and low creative students on the basis of sex.

Pradhan, Nityananda and Shreelekha, Dei (1995) studied vocational interest of higher secondary girl students in relation to their stream of study.

The sample for the study consisted of 150 girls (75 arts, 54 science, 21 commerce) studying in higher secondary classes of 3 colleges situated in Urban Puri. Sodhi and Bhatnagar interest inventory (SBII, 1985) was administered to them individually. The major findings of the study were:

1. There was significant difference among high secondary students studying in arts, science and commerce streams with regard to their interest in literary, scientific, social service, artistic, constructive and home management activities.
2. There was no significant difference among higher secondary girl students studying in arts, science and commerce stream with regard to their interest in outdoor, mechanical, persuasive, clerical, administrative and teaching activities.

Wu (1998) examined the relationships among students’ intelligence and their career interests. The study also analyzed the academic performance and academic interest of senior-high students who were talented in science and math subjects. In this research study, student’s academic performance and academic interests were included as correlating variables. The sample consisted of 170 talented students and 170 regular students. Instruments of collecting data included the Career Interest Inventory, The Career Development Inventory and Academic Performance & Interest Scale. It was found that the two groups significantly differed in four selected variables i.e. the talented group showing a higher level of career maturity in particular; and that there were significant relationships between career variables and academic attributes.

Chan et. al (2000) conducted a survey on secondary school students in Vancouver city on their interests and perceived abilities in a range of subjects and the factors influencing their career choices. The survey was conducted on 200 secondary school students and 300 undergraduate students. The survey showed that females have a substantially lower interest and perceived ability than males in three subjects, namely computer science, engineering and physics. It was also reported that females spend less time on computer activities at school and at home, and gave lower estimates of their computer skills. The survey also revealed that both male and female students have little knowledge of the skills and personality characteristics needed for success in information technology careers.

Koller and Baumert (2001) investigated the relationship between academic interests and academic achievements in mathematics by taking a sample of 602 students (59.5 % female) from selected schools at three points of time – end of Grade 7, end of Grade 10 and middle of Grade 12. The study showed sex differences in favour of boys in mathematics achievement for those who opted for advanced mathematics course. Further, analyses by means of structural equation modeling showed that interest has no
significant effect on learning from Grade 7 to Grade 10, but it affects course selection – i.e. highly interested students were more likely to choose an advanced course. Furthermore, interest at the end of Grade 10, has a direct and an indirect effect on achievement in secondary school. In addition, results suggest that at least from Grade 7 to Grade 10, achievement affected interest i.e. high achievers expressed more interest than low achievers. The findings underline the importance of interest for academic choices and for self-regulated learning when the instructional setting is less structured.

Young (2003) assessed the college students in terms of their academic interests. The sample included 144 education majors and 151 business majors from an arts college. Students were asked about their general interest in their major and also their interest for learning education and business vocabulary words. All measures demonstrated a converging evidence that students have interest in their own major and that they were interested in learning their own majors’ vocabulary.

Rao (2004) examined educational interests of secondary school students to identify their academic interests which play a deciding role in selecting the right course of their interest. A sample of 200 boys and girls from government and private schools in rural and urban areas was taken. The study revealed that the rural and urban students possessed average interest in different courses. Further, when equal opportunities are provided to both boys and girls, then they may come forward in excelling in their interested academic areas.

Trumper (2006) conducted a study entitled “Factors Affecting Junior High School Students’ Interest in Biology” to examine the students’ interest in biology at the end of their compulsory schooling in Israel, and its relation to their views on science classes, attitudes to science and technology. The results reported that their overall interest in biology was relatively positive but not high. Girls showed greater interest in biology than boys. Students’ interest in biology correlated closely with their negative opinions of science classes.

Zmudka (2006) examined the association between creativity style and choice of musical career among university students. The sample included 74 students enrolled in
one of four majors in music; music education, music therapy, instrumental performance
and jazz performance which assesses by: “View: An Assessment of problem solving
style” which included 34 items defining problem-solving style across three dimensions
including Orientation of Change (OC), Manner of Processing (MP), and Ways of
Deciding (WD) scales. Demographic information concerning subjects declared major,
Preferred musical career and level of education were also provided. The results showed
the significant differences between the four groups on the OC and WD dimensions
when using preferred musical career as the category variable. Also, research results
found no differences when major was used as the category variable. More analysis
suggest problem solving style is likely to be associated with problem types which found
in specific musical activities and therefore a musician’s preferred career in music.

Dotter et. al (2009) conducted a study on the development and correlates of
academic interests from childhood through adolescence. The study focused on (i)
development of academic interests from middle childhood through late adolescence (ii)
the degree to which junior and high school transitions, parents’ educational
expectations, interests and education were related to changes in academic interests (iii)
the longitudinal links between students’ academic interests and school grades. The
study revealed overall decline in interests of students over time, with boys showing
more rapid decline than girls. The study also showed that parents’ educational
expectations were positively related to students’ interests and thereby students’ interests
declined less when parents have more education. Decline in students’ academic interests
were linked to declines in school grades.

Subramaniam (2009) conducted a study to highlight the power of interest on
student engagement and learning in education. It was found that the situational interest
plays a key role of motivator in student engagement and learning. Interest has been
conceptualized as individual interest and situational interest. The former is a
psychological predisposition to re-engage in particular tasks or content over time. The
latter refers to the affectively action triggered by specific or appealing stimuli in the
environment. The study concluded that situational interest is a construct that should not
be underestimated. Its potential for student engagement and learning in physical education has been well documented. If teachers are willing to give up the notion that students either have or do not have interest, and recognize that they could potentially contribute to the development of students’ interest via the creation of a situationally interesting learning environment, then we would see more motivated students willing to be actively engaged in learning.

Oriahi et. al (2010) examined the choice of science and technology subjects among secondary school students. The study employed the ex-post facto design. 250 secondary school students randomly drawn from 10 secondary schools were used as sample for the study. Researchers’ self developed valuation questionnaire (SVQ) on subject preference by students and choice of course of study in the higher institution of learning duly vetted by specialists in educational measurement and evaluation, guidance and counseling and science education were used to obtain information from the respondents. Descriptive statistics were used in presenting the data while the hypotheses were tested using the chi-square. Statistical decisions were made at 0.05 level of significance. Results of data analysis showed that 1. more girls than boys prefer to study science education course, 2. more boys than girls prefer to study technology courses in higher institutions of learning.

Sara (2010) investigated the effects of learning styles on career preferences of senior secondary school students in Jigawa State, Nigeria. A total of six hundred students (360 males and 240 females) were randomly selected from ten senior secondary schools across the state for the study. To gather data for research, Kazembe Sorting Test and Vocational Interest Inventory were used. Chi-square analysis was used to find the effect of independent variable (learning style) and dependent variable (career preference). It was found that there is significant sex difference in career preference. Female students tend to incline to artistic related careers. Male students select scientific related careers.
STUDIES RELATED TO STUDY HABITS

Esther (1945) in her study “An Analysis of Study Habits of High School Students” analysed the study habits of Catholic high school students. It was reported that there existed a statistically significant difference between the study habits of the most successful and least successful students.

Valdina (1953) conducted a study entitled “understanding Your Child’s Habits” to analyze the study habits of secondary school students. It was reported that the study habits were important correlates of emotional aspects of students. The emotional feelings also had important impact on study habits; thereby these might prevent students from studying.

Vedavalli (1953) examined the study habits of college students at Trupatti. A sample of male and female college students was analyzed for their study habits. It was found that male college students had better study habits than female college students. It was also found that the rural college students had slightly better study habits than urban college students.

Vedavalli (1956) examined the study habits of 130 boys and 83 girls studying in intermediate and degree classes. The answers were quantified by allotting 4, 3, 2, 1. Negative statements were quantified in the reverse order. The analysis showed that no student may be classified as very good in his study habits. Men students showed better study habits than women students. No difference was noticed in the study habits of intermediate and degree class students.

Gupta (1957) conducted an investigation into the study habits of B.A., B.Sc. 1st year students of Agra University. The study habits of science and arts students were compared. The results showed that the students who had opted science had better study habits than those who opted arts subjects.

Seth (1961) in her study analyzed the relationship between study habits and academic achievement. An inventory in Hindi based on WRENN’s inventory of study-
habits and attitude was administered to a sample of 164 students of B.A. and B.Sc. students. The results showed a correlation of 0.27 and 0.087 between the marks obtained on study habits inventory and marks obtained in B.A. and B.Sc. final examinations which was quite low. But with regard to some of the factors of study habits, such as reading and notes taking habits, the correlation coefficient was 0.053.

Mathur (1966) conducted a survey on the study habits of 110 Merrut College post-graduate and under graduate students of arts and science faculty. The results showed no significant difference between the study habits of students of arts and science faculty. But in case of post-graduate and under-graduate students’ study habits, the difference found was significant.

Richard and Virginia (1967) showed that the degree of knowledge of good study habits predicted academic achievement better than ability measures. It was also found that that the females’ correlation (0.098) significantly differed with the males’ correlation (0.859) in their study habits and attitudes.

Samuel and Rao (1967) found that there was no difference between the study habit scores of boys and girls of pre-university classes. The study was conducted on a sample of 500 pre-university college students of Coimbatore. It was found that there was significant correlation between the study habit scores and academic achievement of students. It was concluded that the achievement had positive and significant relationship with the study habits of boys and girls. It was also observed that there was no correlation between the age and the study habit scores.

Krishnamurthy and Rao (1969) conducted a study on 300 high school students from sub-urban and urban areas of Coimbatore. It was observed that there was a significant correlation between the study habits and academic achievement of the urban students and also a highly significant correlation was found between study habits and academic achievement of the sub-urban students.

Sinha (1970) conducted a study entitled “Academic Achievement and Study Habits of Adolescents” and compared the study habits of high achievers and low
achiever students. It was found that the high achievers have good study habits than the low achievers. But the difference between the two groups i.e. high achievers and low achievers was not found to be statistically significant.

**Kulshrestha (1971)** examined the study habits of college students. A sample of 500 students of class X was taken. Educational interests were measured in seven areas - agriculture, commerce, fine arts, home science, humanities, science and technology. It was observed that the study habits of girls were better than that of boys of class X.

**Reddy (1972)** examined the study habits of high school boys and girls. No significant difference was observed between the boys and girls of high school classes in their study habits. It was also observed that there was no significant difference between rural and urban pupils in their study habits.

**Jamuar (1974)** conducted an investigation into some of the psychological factors underlying the study habits of college students, with the help of a Study Habit Inventory. The findings suggested that (I) Study habits are positively related to the academic achievement, (II) Study habits are related to the general personality adjustment; (III) Study habits have a positive relationship with background factors like position in family, father’s occupation, hobbies, future educational and vocational plans of the students and an inverse relationship with factors such as membership of organization outside college and sharing household duties; on the other hand, study habits are not related to student’s interest or participation in games and sports, interest in reading, music, membership in college societies, source of recreation, doing some jobs along with studies, failures and rewards in school, hours of study at home and liking for college, (IV) some environmental factors are related to study habits; lighting has positive relationship but noise and ventilation have negative relationship.

**Marentic-Pozaranik (1974)** conducted a study entitled “Study Habits and Attitudes towards Learning as a Factor of Scholastic Achievement” to examine the study habits and scholastic achievement of students and found a positive relationship between study habits and scholastic achievement of IX class pupils.
Girija, Bhadra and Ameerjan (1975) conducted a study on the relationship between study habits and academic achievement of first and final year students of undergraduate classes of University of Agricultural Sciences, Bangalore. The results showed that the two groups differed significantly with regard to their study skills and achievement.

Patel (1976) observed the IX class pupils of Petlad Taluka (Gujarat State). A test of comprehension reading ability was given to the sample and median score was calculated. It was found that the students scoring above the median of study habits were superior in reading comprehension as compared to students scoring below the median score of study habits.

Nirmalakanta (1979) conducted a comparative study of the study habits of high school students. It was found that there was no significant difference between the boys and girls in respect of their study habits whereas significant difference between the urban and rural boys in respect to their study habits was found. But the study showed no such difference between urban and rural girls.

Bhatnagar (1980) explored the factors which affect the involvement of students in studies. The study showed that the students from urban schools show more involvement than the students from rural schools in their studies. It was also observed that the public, private and the central schools provide more needed infrastructure and facilities than the Govt. and private aided schools.

Rajeswari (1980) analyzed the study habits of male and female intermediate students of rural and urban areas and concluded that there was no significant difference between male and female students of intermediate classes in their study habits. It was also observed that there was a significant difference between urban and rural intermediate students in their study habits.

Khouj (1982) compared student’s scores in mathematics to scores in science, then compared those scores to the results of reading tests, social science test, and religious instruction examinations. Results showed that students who scored high in
math also scored high in science. Other students correlated high scores with reading to high scores in social science. All scores increased as study habits were improved.

**Tiwari (1982)** examined the study habits and scholastic performance at three levels of education. The study habits of students who opted for science subjects were compared with the students who opted for other courses. It was found that the science students in every class scored higher than students in other courses. Further, girls in all cases had better study-habits than boys.

**Christian (1983)** examined the study habits of the pupils of class X. Study Habits Inventory of Patel (1976) was administered on a sample of 79 girls and 68 boys. The analysis of variance revealed that girls and boys have equally good study habits. The study suggested that study habits are one of the important factors, which are helpful to improve academic achievement in the promising field.

**Shanmugasundaram (1983)** examined the study habits of selected candidates of PMT and CET from the urban and rural areas and found that (a) High achievers had better study-habits, higher intelligence and higher achievement motivation than lower achievers. (b) Urban students were more intelligent and had better study-habits and higher achievement motivation than semi-urban and rural students.

**Chauhan (1987)** analyzed the study habits of boys and girls from scheduled caste and non-scheduled caste adolescents. The mean scores of both the groups were calculated and found that the mean scores of study habits of boys were higher than that of girls in both scheduled caste and non-scheduled caste adolescents. The study also showed that the study habits of both scheduled caste and non-scheduled caste adolescent boys and girls differed significantly.

**Premsagar (1987)** in his research study “Investigation into Study Habits of Secondary School Children” examined the study habits of boys and girls with respect to chronological age and reported that there was no significant difference between study habits of boys and girls. It was also observed that pupils of high school classes with
relevant chronological age possessed better study habits than students who were overage.

Singh (1987) conducted a study on 300 scheduled tribe students from class X of high and senior secondary schools of Kinnar, Lahaul and Spiti districts. It was concluded that boys have significantly better study habits than girls. It was also showed that sex and self concept were significantly related with study habits of students.

Kemjika (1988) found that good study habits are essential ingredients for excellent academic performance. When students excel in schools academically, parents are usually elated. The tendency most times is to attribute the reasons behind such brilliant performances to heredity, parental competence or efforts to that regard.

Sundaram (1989) examined urban and rural difference in academic achievement and other factors related to achievement such as self-concept, study habits, intelligence, adjustment problems and achievement motivation among students. The sample of the study included 490 final year degree class students from 14 colleges of Madras University. Among 490 students, 291 were from urban colleges and 199 from rural colleges. The results revealed that there was a significant difference between urban and rural students in their self-concept. The rural students have higher self-concept than urban students. But there was no significant difference between urban and rural students with respect to study habits.

Singh (1989) made an investigation into the study habits of scheduled caste adolescents in relation to their sex and achievement motivation. The study was conducted on 150 boys and 150 girls belonging to scheduled caste from 9th class in Himachal Pradesh, India. The ‘F’-value of 5.16 for the main effect of sex on the study habits was significant at .05 level of confidence. It indicated that the study habits of boys and girls differed significantly. Boys had significantly better study habits than girls.

Deb and Grewal (1990) examined the relationship between study habits and academic achievement of undergraduate home science final year students. The
technique of correlation analysis revealed that the components of study habits are positively correlated with the academic performance of students \((r=0.39)\). It was concluded that students with good study habits do better academically. Therefore, parents and teachers should help to promote good study habits in their children right from the beginning.

Ramaswamy (1990) studied the relationship between study habits and academic achievement in high and low achieving boys and girls of 11th standard in Madurai district of Tamil Nadu, India. The Study Habit Inventory of Patel (1976) was used to measure the study habits of boys and girls. Correlation analysis was used to find out the relationship between study habits and academic achievement. The results showed that there exists a significant relationship between the study habits and academic achievement variables among boys and girls.

Venkatachalapathi (1991) conducted a study entitled “A Survey of Study Habits of Second Year Degree College Students” to examine the study habits of male and female students. It was found that there was no significant difference between the study habits of male and female students of degree second year.

Bhadhri (1992) conducted a study entitled “Investigation into Study Habits of X Standard Pupils in Government High Schools in Changalpattu District”. The study showed that there was no significant difference in the study habits of boys and girls of class X in the Government High School students.

Panda (1992) investigated study habits of disadvantaged and non-disadvantaged adolescents in relation to sex and academic achievement. The sample of the study consisted of 50 disadvantaged boys and 50 non-disadvantaged girls of 9th and 10th classes in Orissa, India. The subjects were selected randomly and matched with age, sex, area of living and birth order. Patel’s (1976) Study Habit Inventory was used in the study. The data was analyzed by applying ANOVA test. The ‘F’-value for sex indicated significant difference. From the mean values, it was revealed that boys had significantly better study habits than girls.
Stella and Purushothaman (1993) examined the study habits of underachievers. The data of 90 underachievers from rural and urban schools in Tamil Nadu, India were selected by using Randomized Block Design. Patel’s (1976) Study Habit Inventory was used for the study. The ‘t’-test indicated significant difference between urban and rural students with respect to study habits. The mean value showed that urban students had better study habits than rural students. But the study showed no significant difference between boys and girls.

Manchala (1996) found that the girls had better study habits than that of boys of IX class and urban school students have better study habits than rural school students. It was also found that there was significant influence of family circumstances on the study habits of class IX students. The study showed that sociological factors certainly have an impact on the study habits of students.

Verma (1996) studied the effect of study habits on academic achievement among 500 students of X class. The sample was selected from schools in Delhi by using Random Cluster Sampling Technique. Two-way Analysis of Variance was applied to know the main and interaction effects. The ‘F’-values (13.43, 6.84 and 5.59) which were significant at .01 level of significance, revealed significant effects of study habits on performance in Hindi, English and Social Studies. The results further revealed that students possessing good study habits scored higher than the students possessing poor study habits in these courses.

Sampath and Selvarajgnanaguru (1997) studied the study habits of higher secondary commerce school students. A sample of 428 higher secondary school commerce students studying in Chidambaram Taluk in Tamil Nadu was taken by using Cluster Sampling Technique. Study Habit Inventory was used as a tool of the study. The results of ‘t’-test indicated that there was no significant difference between study habits of boys and girls.

Gelat (1998) in his study entitled “Effect of Study Habit on Educational Achievement of Secondary Schools” revealed that
1) There was significant and positive effect of study habits on educational achievement of the students of secondary schools.

2) There was no significant effect of sex on educational achievement of the students of secondary schools.

3) There was no significant effect of study habits and sex on the educational achievements of the students of secondary schools.

Lockwood (1999) observed that there was a significant difference between the study time specified by the institutions and the study time students were willing to devote. Such willingness to devote time for study depends on a number of factors like student’s background, study habits, discipline, merit level, zeal for betterment, level of involvement and availability of time and so on.

Aluede and Onolemhemhen (2001) studied the effect of study habit counseling on the academic performance of secondary schools students. The 108 senior secondary school class one and two students of lumen Christ secondary school, Uromi, Edo state, Nigeria were targeted. The Multi-Stage Stratified Sampling method was used. The Study Habit Inventory (Bakare, 1974) was used to analyze the data. The main finding of the study was that counseling of students on good study habits can improve the academic performance of the students.

Verma, S (2001) found that there was no significant difference in the study habits of science and arts groups. But both these groups were found to be superior to commerce group with reference to study habits.

Riaz, Kiran and Malik (2002) conducted a survey in the University of Agriculture, Faisalabad to check the influence of study habits on the learning outcomes of students. They interviewed 150 B.Sc. and M.Sc. students. The results indicated a strong impact of study habits on the educational performance of learners. They concluded that schedule of work, writing the class room material and taking class notes appeared to be the important components of study habits. The analysis of data established that there existed a significant and positive relationship between
achievement of students and the factors like schedule of study, habit of note taking and writing in class.

**Aluja and Blanch (2004)** analyzed the relationships among Cattellian personality factors, scholastic aptitudes, study habits and academic achievement. A sample of 887 students (453 males and 434 females) from primary schools was taken. It was found that the students with higher scores on socialized personality traits showed better study habits than those students with lower scores on socialized personality traits. It was also found that females obtained higher academic achievement scores than males. It is due to the fact that females have better study habits as compared to boys.

**Nagaraju (2004)** in his study entitled “Study Habits of Secondary School Students” concluded that the study habits are an important factor in the pupils’ academic achievement and personal improvement. A sample of 372 high school students studying in X class was taken. The Stratified Random Sampling Technique was applied to choose the sample from 12 high schools representing three districts of Andhra Pradesh. Patel (1976) Study Habit Inventory was used. It was concluded that if good study habits are inculcated, nurtured and promoted at the young and impressionable age of a child, it will go a long way in removing a numbers of hurdles on the way to the development of a good and cultured citizens.

**Yahaya (2004)** investigated the relative effectiveness of group counseling, SQ3R (survey, question, read, recite, and review) and the combination of the two treatment packages in improving the study habits of secondary school students in Ilorin. A sample of 80 students was selected. Bakare’s (1974) Study Habit Inventory was used as a tool. ANOVA, ‘t’-test and Duncan Multiple Range Test Statistics were used to analyze the data. The results indicated that the three treatment packages were effective in improving students’ study habits but the combination of group counseling and SQ3R was the most effective. It was therefore recommended that professional counselors in educational institutions should use the combination of group counseling and SQ3R in improving students’ study habits.
Awujo (2006) determined the relationship between child rearing pattern and study habits of secondary schools students in selected schools in Rivers State. The results indicated that there is significant relationship between child rearing pattern and study habits.

Hubert et. al (2006) conducted a study on the study habits among senior secondary students in some selected districts in Central Region of Ghana. The sample comprised of Five hundred (500) students. The descriptive sample survey design was used. It was found that no significant differences existed between the study habits of male and female students.

Hussain (2006) examined the effect of guidance services on students’ study attitudes, study habits and academic achievement. A guidance programme was developed for secondary school students. An experiment was conducted to explore the effectiveness of guidance services in terms of improvement in students’ study attitudes, study habits and academic achievement. Ten null-hypotheses were tested to explore the effect of guidance services on students’ study habits, study attitudes and academic achievement in five subjects. All the hypotheses were tested at 0.05 level of significance. The results of the study indicated that the guidance services have significant effect on the students’ study attitude, study habits and academic achievement. Further he found that students at secondary level face many problems which hinder the development of positive study attitudes and study habits. The experiment revealed that the guidance services have significant positive effect on students’ study attitudes and study habits. Improvement in study attitudes and study habits resulted in improvement of students’ academic achievement.

Sud and Sujata (2006) conducted a study on academic performance in relation to self-handicapping, test anxiety and study habits of high school children (n=200) from Government Senior Secondary School of Himachal Pradesh. The scales used were self-handicapping questionnaire, test anxiety inventory (TAT) and Study Habits Inventory. The results revealed that boys were poorer in study habits than girls.
Nuthana (2007) analyzed the study habits of boys and girls studying in 8th, 9th and 10th classes and compared the rural and urban students on study habits and academic achievement. The sample comprised of 150 students from each school (50 each from 8th, 9th and 10th classes of four different schools) and total sample was 600 students. The result raveled that there was no association between boys and girls on study habits. Boys and girls did not differ significantly on overall study habits but they differed significantly on two dimensions i.e. on reading and notes-taking habits and preparation for examination. Further, there was a significant association between study habits and academic achievement of girls, whereas there was no significant difference between study habits and academic achievement of boys.

Fereidouni Moghadam and Cheraghian (2009) conducted a study to identify the students’ study habits and their relationship with academic performance. A cross sectional study was conducted on 150 students of Abadan School of Nursing in 2007. Data was collected using Palsane & Sharma Study Habit Inventory questionnaire which was completed in a self-directed way at the time of holding final exams. According to the results of this study, the mean score (± SD) of the students’ study habits was 48.26 (±11.6) out of 90. 11.33 percent of the students had unsatisfactory study habits while 80.7% and 8% had relatively satisfactory and satisfactory study habits, respectively. There was a significant, week and positive relationship between the students’ study habits and their academic performance (P=0.001, r= 0.27). There wasn’t any significant relationship between study habits and semester, age and marital status. The students’ study habits were considered to be moderate; that is to say that their study method was not of good quality. Considering the importance of study habits in academic performance and achievement, they suggested, planning to improve students’ study habits and methods and interventions in this regard.

Magno (2010) in his study investigated study habits (delay avoidance, work methods, teacher approval, and education acceptance) as predictors of grades in mathematics and English in a path model. There were several assumptions in past reviews accounting on how study habits directly explain grades in the presence of other
factors but the present study isolated the effect of four study habits. There were 259 Filipino high school students who were requested to answer the Survey of Study Habits and Attitudes (SSHA) and their grades in mathematics and English for the first quarter were also asked. The four factors of study habits were first tested using a Confirmatory Factor Analysis (CFA) and the four-factor structure was proven having adequate fit ($\chi^2=47432.81$, df=8745, RMS Standardized Residual=.01, RMSEA=.01, NFI=.94, GFI=.95, PGl=.97). Path analysis was used to test the prediction of the four study habits to grade in mathematics and English and the model also had an adequate fit ($\chi^2=366.48$, IFI=.98, NFI=.98, CFI=.98, and RMSEA=.09). The path analysis revealed that work methods significantly predicted both grades in mathematics in science. Work method was the only predictor for mathematics and only teacher approval did not significantly predict grades in English.

Singh et. al (2010) In a study examined the nature, type and characteristics of study habits in high school children in relation to various orgasmic variables like gender, age, class or grade level and scholastic achievement. The sample for the study was drawn from two private English medium schools in Indore, Madhya Pradesh, India, comprising of 250 high school students including equal number of boys and girls from class/grades VIII, IX and X. A 40-item questionnaire was used to elicit study habits of the sample. The questionnaire focused on four selected indicators of study habits (study organization; study methods and strategies; motivation and feeling for study; location and time for study). Each indictor had ten items which the student respondents were instructed to answer along a 3-point scale of either ‘yes’, ‘no’ or ‘sometimes’ respectively. The results indicated an overall mean study habits score for the total sample was 42.33 (SD: 8.21). This matches closely with the gross percentage class teacher ratings on their academic performance (Mean: 56.74; SD: 15.04). The girls had better study habits than boys-which was matched with similar lower ratings given by their class teachers for boys than girls. It was also seen that study habits improve with age and class or grade levels in children. A second level analysis in relation to the four indicators revealed no statistically significant difference between students in relation to
gender, grade/class of study or age of students. The Cronbach's alpha correlations coefficients of reliability of the sub scales were found to be high and the internal consistency of the total scale was 0.68. The study highlighted the possibility of objectively measuring study habits in high school students using a self rating tool as well as using it as predictor for academic performance.

**Bajwa et. al (2011)** conducted a study to determine the difference between the study habits of students from formal and non formal systems of education in Pakistan. 500 students from the Islamia University of Bahawalpur and 500 students from the Allama Iqbal Open University were taken as sample. A 40 item questionnaire on five stages scale was administered to the students and questionnaire was divided into seven clusters ie.(Time management, class attendance and participation, general study strategies, examination preparation, goal setting and motivation, text book reading and note taking). Data was analyzed by using SPSS XII. The reliability of the questionnaire was 0.869. Students of formal system were significantly better on time management. Students of non-formal system were significantly better on class attendance, participation and general studying strategies. Students of formal system were significantly better on exam preparation and note taking. Students of non-formal system were significantly better on general setting, motivation and text book reading. Overall students of non-formal system of education were significantly better than the students of formal system.

**Parua and Archana (2011)** explored the impact of study habits of secondary school students on their academic performance. A sample of 100 students was taken through Simple Random Sampling Technique. The study showed that there was a significant and positive correlation between study habits and academic achievement of secondary school students. The researcher suggested that parents should get appropriate guidance and counseling about dealing with secondary school students to develop good study habits for the educational development of their children.
The review of related literature enabled the investigator not only in locating and defining the exact problem but also in:

1. Formulation and statement of objectives and hypotheses.

2. Deciding upon methods especially for selecting tools and techniques which were proved to be successful in the previous studies.

3. Evolving new insights and build new approaches to the problem under investigation.

4. Pointing out the inadequacies in existing studies.

It may be seen from the studies reviewed above that a lot of work has been done for each of the variables i.e. creativity, academic interests and study habits independently but only a few researchers have examined the impact of these variables on one another. The related research developed a clear insight in selecting the present problem i.e. “Study of Academic Interests and Study Habits in Relation to Creativity among Secondary School Students”. There is a need to guide the students to choose their academic field according to their creativity and to have good study habits.