CHAPTER - II

REVIEW OF RELATED LITERATURE

2.1 Introduction

In this chapter, review of the studies carried out in the field of environmental awareness are presented. The reviews have been gathered through primary sources, Database and internet.

Gay (1998) “the review of literature involves the systematic identification, location and analysis of documents containing information related to the research problem. The review tells the researcher what has been done and need to be done”.

In the words of Good, “the key to the vast store house of published literature may open doors to sources of significant problems and explanatory hypotheses and provide helpful orientation for definition of the problem, background for selection, of procedure and comparative data for interpretation of results. In order to be truly creative and original, one must read extensively and critically as a stimulus to thinking”.

2.2 Purpose and Need for the Review of Related Literature

Review of the related literature, besides being a foundation for qualitative research, permits the researcher to acquaint with current
knowledge in the field or area in which researcher would be conducting research. As such, a careful review of literature related to the problem to be investigated is an important step in educational research.

2.3 Studies Related to Environmental Awareness

Indian Studies

Rajput and Grewal (1978) conducted a study to examine the awareness on environment of children of non-formal education centres of Madhyapradesh and Maharashtra. They selected 60 children of class 4th from each centre. The study has revealed difference in the environmental awareness of the two groups of children studying in different geographical regions of the country. The difference in the awareness scores may not be necessarily due to lack of the knowledge on the part of children but may be due to varied emphasis laid on teaching at the primary level subjects, which incorporate in them.

Mattaque (1981) M.S. University conducted a study “to develop an ecology curriculum suitable and effective in developing environmental literacy among sixth, seventh and eighth grade students of Bangladesh.” The design of this research was experimental and the major findings were: (i) There was a low positive correlation between the gain in knowledge and attitude to environment; (ii) Girls seemed to possess more environmental awareness than boys. (iii) In majority of grades there was no significant difference between attitudes of boys and girls towards the
environment; (iv) Urban boys had more ecological awareness than rural boys; (v) Urban girls had significantly more ecological awareness; (vi) Rural boys had a significantly positive attitude towards environment; (vii) Urban girls possessed more favorable attitude towards environment.

Patel and Nanubhai (1985) conducted a study on “an environmental awareness of secondary students and effect of environmental study multimedia package on environmental awareness”. To study the secondary students environmental awareness with context to IQ and sex and to study the effect of the environmental study multimedia package on environmental awareness of secondary school students. For this 110 secondary school students of class IX were divided into groups namely controlled group and experimental group and the major findings were: (i) The students with high IQ have increased environmental awareness; (ii) Girls are more sensitive about the environmental awareness than the boys; (iii) For environmental awareness, multimedia package was more effective than the traditional lecture method.

Rajput et.al., (1988) conducted a study on environmental awareness among children of rural and urban schools and non-formal education centres to know the components of environment in which children from rural and urban areas were lacking and the areas in which the students from both the streams were well acquainted and to compare the environmental awareness of school going children and children
studying in non-formal education center. They also intended to suggest means for developing environment based curriculum for universalization of elementary education.

The sample of the study consisted of 115 students among whom 20 were from rural school, 35 from urban schools, and 60 from non-formal centres. An environmental awareness questionnaire was administered on the sample. The performance of students of the three groups was compared. Differences were tested for significance by t-test. First and the last ten ranking questions for each of the groups were identified and compared.

The study reveals that: (i) The difference between formal rural (FR) and formal urban (FU) on environmental awareness was significant and in favour of formal urban; (ii) Difference between non formal rural (NFR) and formal urban (FU) was also significant on environmental awareness and in favour of non formal rural (NFR); (iii) The difference between non formal rural (NFR) and formal rural (FR) on environmental awareness was not significant.

Bandara (1989) conducted a study on studied “the environmental awareness among the most vulnerable communities in developing countries”.

The ways to increase awareness of human actions to change the global environment in developing countries are presented. Especially
targeted are vulnerable groups such as the rural peasantry, the urban poor women and children in those group. Children's activities may also have detrimental consequences on the promoting environmental awareness that includes, environmental education and training, the mass media, and courses in environment in school curricula. And working through international organizations strategies to disseminate research information. Limitations of environmental awareness promotion are discussed adequate awareness and concern would help to improve the economy in developing countries.

Shahnawaj (1990) "Environmental awareness and environmental attitude of secondary and higher secondary school teachers and students", Ph.D., Edu., Univ. of Rajasthan.

This study addresses issues related to the awareness and attitudes of teachers and students towards the environment.

Objectives of the study were: (i) To determine the extent of awareness about the environment among students and teachers; (ii) to find out the attitudes of teachers and students towards the environment and (iii) to find out the differences between teachers and students and male and female groups concerning the environment.

The study was conducted mainly through a survey and the application of a tool developed by the investigator to test attitudes and awareness.
(i) It was found that 95% teachers and 94% students possessed positive environmental attitudes; (ii) Both the trained and untrained teachers did not differ in their attitudes; (iii) Teachers had more awareness of the environment than students; (iv) Trained, untrained teachers did not differ on environmental awareness; (v) Girls possessed significantly more awareness of the environment than boys.

**Naik and Joshi (1991)** have conducted a study on "school and college education in creating environmental awareness". They found that the four major but integrating components of EE, awareness, real-life situations, conservation and sustainable development, have to be matched with the needs of the primary to university stages of education. EE should start from childhood so that children develop from an early age a healthy, optimistic view of their environment, realizing that they are themselves a part of nature. The paper suggests involvement of basic ecological concepts, environmental concerns and strategies in our educational system to influence and motivate the child and the youth who are to inherit the world.

**Takala (1991)** describes "the historical and societal background of the Framework for Research on Human Dimensions of Global Environmental Change Program". Increasing global risks and the destruction of the environment have driven international organization to take initiatives for research programs that are both cross-disciplinary and cross-national. The psychological problems of the prerequisites for
sustainable development are examined (for example risk perception, environmental awareness, and human activity). Awareness includes both cognitive and affective components. Human activity should be examined at different levels, including decision making, choice behaviour, consumption patterns and the general way of life. Examples of both descriptive and analytic studies indicate individual inconsistencies of various aspects of awareness and activity and discrepancies between them.

Gakhar (1993) this study reveals the “environmental pollution awareness among urban and rural youth in relation to intelligence”.

The present study was conducted with the following objectives: (i) To prepare environmental pollution awareness scale; (ii) To compare the high intelligence and low intelligence urban and rural students on environmental pollution awareness scale; (iii) To see the effect of sex difference on the environmental pollution awareness of the urban and rural schooling youth; (iv) To compare the environmental pollution awareness of the school joining youth of urban and rural areas.

Major Findings: (i) There exists significant positive differences between the variable of high intelligence urban and low intelligence urban, and high intelligence rural and low intelligence rural groups at 0.01 levels (t-rates = 16.25 and 21.94 respectively). This shows that high intelligence youth is having high awareness of environmental pollution in both the samples. The reason for this may be due to more knowledge, high
discriminative power to identify good and bad environment and ability to understanding the importance of cleanliness of environment among high intelligence student; (ii) It also shows that urban students score better than on environmental pollution awareness as compared to rural group as t-ratio between two group is significant at 0.01 level (t = 20.81). This result can better be explained that urban students learn many books and journals, which create an insight for healthy environment and awareness for environmental protection.

Pradhan (1993) has conducted a study which reveals "the environmental awareness among secondary school teachers".

There are two views about the fact that quantitative development and qualitative development and qualitative progress of man-kind depends on the quality of the environment. Hence, it is the primary responsibility of man not only to preserve the environment but also to improve it qualitatively. But man's greed to over exploit the natural resources, and his attempt to make life more and more comfortable by the intensive application of science and technology and unprecedented rapid population growth have in their wake brought serious environmental problems.

The investigator has conducted the study on the following objectives: (i) The level of environmental awareness among the secondary level learner; (ii) Variation if any, in environmental awareness between social science, language and science learners; (iii) Variation if any
between teacher residing in rural and urban areas in environmental awareness; (iv) Variation if any, between male and female teachers in environmental awareness.

(i) The finding clearly showed that the teachers working in secondary schools had low awareness about environmental problems. Therefore, the hypothesis, that there is significant difference in environmental awareness between social science teachers was retained at 0.01 levels; (ii) It is concluded that the science teachers have higher environmental awareness than the social science and languages teachers. There exist rural-urban variation in environmental awareness and a teacher working in urban schools are more aware about environmental issues and its related problem.

Abroad Studies

Mares and Cherry (1985) conducted a study on “Environmental Awareness and Language Development Through School Exchanges”

Environmental awareness language exchange occurred between four English and four French schools. Comparative studies on shopping patterns/consumerism, leisure/recreation, and management of resources provided motivation for learning and using the second language. Advantages for this approach include new dimensions on traditional language exchanges, increased environmental awareness, and improved relationships and attitudes.

This activity book was written for the purposes of: (i) increasing students' awareness of nature and environmental issues; (ii) providing an interdisciplinary curriculum for environmental issues; (iii) encouraging students to use a variety of current nonfiction sources to research activities; and (iv) encouraging students to work together in small groups. Each of 20 units corresponds to one environmental topic. Topics include the Earth, the atmosphere, water, energy, seas and oceans, islands and coral reefs, the seashore, ponds and wetlands, rivers and lakes, rainforests, forests and woodlands, mountains, grasslands, deserts, polar regions, urban environments, food and farming, waste and recycling, endangered species and habitats, and environmental awareness. Each unit provides seven activities within the subject areas of library skills, arts and crafts, spelling and vocabulary, geography, math, music and theater arts, English composition, science, history and sociology, and topics for discussion. Suggested resources, additional reading lists, and a list of addresses to write to for further information conclude each unit.

Hausbeck et al. (1992) “evaluated environmental awareness among 3,207 eleventh graders in 30 secondary schools in New York state”. Independent variables included type of school, region of school,
and sex of students. Although students scored low on knowledge questions, they displayed higher scores on environmental awareness and concern; private school students had more environmental awareness than public school students.

Ting-Ya (1994) investigated about “environmental awareness action from elementary school students and their parents in Taiwan”. Survey research was employed with descriptive and correlation techniques in the data analysis. A questionnaire containing demographic information, environmental awareness and environmental actions was also used. The sample consisted of 521, fifth grade students and their parents who all agreed strongly that everyone should protect this planet. They also strongly indicated that passive smoking was as harmful as direct smoking of cigarettes.

The study demonstrated that 237 students from Taipei city and their parents scored higher on many environmental awareness items and also that they took more action.

This study also suggests that parents educational level made significant difference on students and parents environmental awareness and environmental action. In general, the higher the educational level, the more concern they have. This finding is supported by the previous research and suggests that education is the means to solve many environmental problems.
Pavlov and Vladimir (1995) compared “environmental awareness of German with Russian adolescents.” 610 German and 610 Russian adolescents in age groups of 12, 15, and 18 yrs, completed questionnaires assessing their emotions about environmental destruction, willingness to engage in pro-environmental behaviour, relation to nature, and evaluation of adult environmental behaviour. Results show that in both groups, anxiety, sadness and anger about environmental destruction were high but hopelessness was rejected. Willingness to engage in pro-environmental behaviour was strong. German students had stronger feelings and were more willing to engage in personal pro-environmental behaviour than were Russians. But, their level of environmental awareness decreased with age. Females of both groups had higher levels of environmental awareness than did males. Environmental feelings and behavioural tendencies were highly correlated.

Bill and Roger (1996) examined “the experiences of adolescents to see if there are gender patterns in environmental concern and awareness of adolescents”. 661 students (354 boys and 307 girls) of 10 years age completed a screening test comprising a purpose built environmental behaviour scale; a ranking of 10 issues of most concern; and a self ranking of performance in Mathematics and English. Although higher environmental consciousness is associated with higher parental education, particularly among boys, girls exhibit greater
environmental responsibility than boys from the same SES. Wilderness experience contributes to greater environmental concern, and the results suggests that it is mediated by, and is less significant than, gender and socio-economic factors. The findings suggests that if environmentally responsible behaviour is to be increased, attention should be paid to matters of gender identity and environmental attitudes as well as environmental knowledge.

Corral and Berth (1996) made a study in which 29 female and 31 male Mexican elementary school students (aged 8-10) completed questionnaires that were designed to assess the students ability to distinguish environmental facts from opinions. Three demographic variables (gender, age and grade level), 2 psychological factors (academic skills and pro-environmental competencies), and 4 teaching strategies (exposition, examples, feedback, and positive reinforcement) were tested as possible predictors of environmental critical thinking. Results of multiple regression analysis reveal that the use of teaching strategies, the possession of pro-environmental competencies, and the exhibition of academic skills were significant determinants of the ability under study. Giving examples, providing feedback and reinforcing a proper distinction between environmental facts and opinions produced higher scores on critical thinking compared with the effects of using a simple exposition of this difference.
Gambro and Harvey (1996) assessed in their study the “current environmental awareness base in a sample of American high school students”. Data were analyzed from the Longitudinal Study of American Youth (LSAY), a 4 year panel study of students, teachers and parents. The LSAY includes a national probability sample of 52 middle schools and 51 high schools. The students were selected from a national probability sample of approximately 2,900 high school students who were participating in the LSAY. The analysis revealed low levels of environmental awareness. A majority of the students were able to recognize basic facts concerning environmental problems; however, most students could not apply their knowledge to comprehend the consequences or potential solutions related to the problems. Students also demonstrated extremely little growth in environmental awareness from 10th grade to 12th grade. Educational implications and recommendations were discussed.

Bolseka and Dietmao (1996) studied “Environmental education and environmental awareness”.

A literature review of empirical study illustrates that efforts made by schools to increase awareness have met with success. Though duration and intensity are questioned.

The critical analysis of environmental education awareness in environmental psychology in the context of problems perception value orientation and information behaviour has shown that presupposition
and process of awareness involve a complex and highly differentiated research concept. Teachers should avoid the tendency to moralize rather pedaecological practice should help persons reflect on experience and social context in a chosen frame work environmental awareness cannot be reached through social and technical strategies unless the problems of contradictory social discourse addressed.

Bradley and Waliczek (1999) “assessed 475 high school students’ environmental awareness and attitudes before and after exposure to a 10 day environmental science course”. Questionnaire results indicate significant difference in students knowledge gain and attitudes after exposure. Students’ environmental awareness scores increased by 22% and their environmental attitudes became more environmentally favorable after they completed the environmental science course. A significant correlation was found between pretest awareness scores and pretest attitude scores and between posttest awareness scores and posttest attitude scores. In both cases, students with higher awareness scores had more favorable environmental attitudes.

Zarakovskii and Medvedev (2000), examined “adolescents environmental awareness”. 197, tenth and eleventh students from Tver, Russia rated local environmental conditions. Other collected data included students completion of an ecology course, overall academic progress, and interest in the future. Results show correlations concerning: (i) negative environmental ratings and active attitudes ; (ii)
breadth of environmental interest and environmental activity; (iii) better academic progress and wider environmental awareness and (iv) better academic progress and readiness to support radical environment protection measures. Environmental awareness was related to value orientations, level of general activity and an altruistic psychological motivation. Findings support an environmental awareness model consisting of the 2 components of: (i) attitudes towards nature, human interaction and subjective image of the natural anthropogenous world in the past, present and future and (ii) attitudes towards the use of nature and practical activities related to interaction with it.

**Kadjī and George (2001)** conducted a study on “Primary School Pupils’ Awareness of Environmental Issues”

With increasing environmental problems, there is a large social demand for environmental policy. Education is a powerful source to fulfill this demand and the Foundation for Environmental Education in Europe's (FEEE's) Eco School program aims to develop awareness of environmental issues and sustainability among elementary and secondary school students. The study presented in this paper investigates the effects of the Eco Schools Project in Cyprus on students' knowledge of and attitudes toward environmental problems.

**Korhonen and Kaisa (2004)** examined “the Environmental Awareness of Children and Adolescents in the Ranomafana Region, Madagascar”.

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This paper examines children's and adolescents' environmental awareness in rural Madagascar. Two types of school survey among 8- to 21-year-old students and pupils in 18 schools were used for data collection. The objective of this comparative study was to examine the environmental awareness and knowledge of children and adolescents living under different ecological conditions. The role of education in forming environmental awareness is also considered. This research was carried out in villages nearby Ranomafana National Park located in forested areas as well as in more environmentally degraded villages, further from the park. The results of the study show that children in rural areas of Madagascar are measurably aware of environmental issues and can relate them to human activities. The effect of education on environmental concern is significant, but when the effects of degradation can be felt and seen in daily life there is an increase in this awareness. Children's environmental concern and demand for action was stronger in deforested areas.

Wang and Yuanmei (2004) studied "An Analysis of Environmental Awareness and Environmental Education for Primary School and High School Students in Kunming"

This article analyzes the status and characteristics of environmental awareness and discusses issues related to environmental education in primary school and high school students of Kunming, based on sampling data. This article presents a survey conducted by the
authors, which is aimed to better promote environmental education for primary school and high school students. The survey was conducted in the form of a questionnaire. Judging from the results of the survey and analysis, primary school and high school students have a relatively good awareness of participation in environmental affairs.

Jianguo and Mao (2004) conducted a study on “Teaching Environmental Awareness in Mathematics”

This article is all about the integration of environmental education to the middle school mathematics in China. To raise environmental awareness and improve environmental quality, environmental education is a must. Environment-related materials can be found in middle school algebra and geometry textbooks. In order to provide environmental education in middle school mathematics, teacher quality must be improved and environmental awareness must be enhanced. Here, the author presents some examples of teaching environmental education in mathematics class: (i) Plants Trees to Keep the Environment Clean; (ii) Conserve Resources and Develop "Clean Energy"; (iii) Utilize Land Resources Wisely; (iv) Construct Water Conservation Projects to Save Water; and (v) Control Population Growth by Family Planning.

Wallace (2006) conducted a study on “The Effect of National Park Visitation on Environmental Awareness”

The Environmental Protection Agency (EPA) currently emphasizes formal environmental education (that is in a classroom setting), but
informal environmental education (for example visiting a National Park) may also be an effective method of environmental education. This study explores the influence of visiting National Parks, National Recreation Areas, and National Monuments during different school grades on environmental attitude (for example supporting, conservation) and behavior (for example recycling), collectively termed "awareness." Telephone surveys of 106 randomly chosen Californian residents measured visitation history to aforementioned National Park Service (NPS) units, environmental awareness, and formal environmental education as a confounding factor. Those who visited NPS units scored an average of 9% higher on environmental awareness than those who had no visitation history. There was a weak correlation between environmental attitude and behavior ($r^2 0.18$). Those who visited National Park Service (NPS) units scored significantly higher on environmental attitude, but there was no significant difference on environmental behavior. These results show that while visiting National Park Service (NPS) units significantly improves environmental attitude, it does not improve behavior, and the time in one's life when one visits a unit affects neither attitude nor behavior. Therefore, there is no compelling argument for the Environment Protection Agency (EPA) to require schools to send students to National Park Service (NPS) units; however, visits should be encouraged because they might positive environmental attitude.
Bernardi and Nubia (2006) conducted a study on "Environmental Comfort in School Buildings"

This article describes the results of a study on user behavior in relation to environmental comfort conditions. A case study was conducted in school buildings in the region of the city of Campinas, Sao Paulo, Brazil. The methodology adopted was based on field observations of technical aspects of the school environment and of types of user behavior (interventions) that introduced changes in the classroom space. Questionnaires were applied to users. A follow-up study evaluated user perception of possible interventions. User knowledge on environmental comfort concepts was also assessed. The results of the case study showed few interventions by users in favor of their own comfort. Low participation results may, in part, be attributed to the context, where users, school children, are subject to discipline codes with restricted spontaneous behavior in favor of individual comfort. Environmental awareness should therefore be stimulated by teaching concepts of environmental comfort in primary and secondary schools.

Grady and Erickson (2010) studied to find whether does "Socio/Economic Status Affect Environmental Awareness in Elementary School Children Interacting With School Gardens", Environmental Studies Program Environmental Studies Undergraduate Student Honors Theses, University of Nebraska-Lincoln USA.
This is a case study involving three elementary schools in the greater Lincoln, Nebraska area. These schools were chosen to provide insight to three different economic backgrounds. Saratoga and Randolph from Lincoln Public Schools, and Norris Elementary part of Norris Public Schools 160 was the third school involved in the study. This case study focused on seeing whether socio/economic background had any effect on environmental awareness. To do so, surveys were handed out to each school to help measure environmental awareness. These surveys also helped determine where the environmental literacy standards were in the elementary schools of Lincoln, Nebraska. The hypothesis of this case study is lower socio/economic background will result in schools having lower environmental awareness.

At all three schools, there were no-till, raised bed gardens. No herbicide was used and all vegetables grown were 100% organic. Along with the garden preparation, college students also taught the elementary school children, important environmentally friendly practices.

The results of the overall surveys consisted of the following: the majority of the elementary children gained most of their environmental knowledge from school and teachers.

Whose environmental vocabulary and jargon was unfamiliar to the students surveyed. There is a growing trend of children spending more
time indoors than outdoors. The elementary children are most comfortable with the word, "Outdoors".

Individually, Saratoga saw the highest percentage of correct answers. Saratoga also had the most impoverished socio/economic background. Randolph had the second most percentage of correct answers. Randolph also was the second tier up on this reports socio/economic scale. Norris had the lowest percentage of correct answers. Norris was the highest school on this reports socio/economic scale. These results were inversely related to the hypothesis, which stated, if a school with a lower socio/economic scale would have lower environmental awareness.

Maryam and Larijani (2010) conducted a study on "Assessment of Environmental Awareness among Higher Primary School Teachers"

The present study is an attempt to study the environmental awareness of higher primary school teachers of Mysore City in India. A total of 300 teachers (136 male and 164 female) teaching in 6th and 7th standards were randomly selected for the present study. The environmental awareness test was employed to assess the level of environmental awareness (EAW) among teachers. Chi-square test and contingency table analysis were employed to find out the significance of difference between the teachers with respect to their gender, age and school type. Results revealed that on the whole, majority of the teachers
had moderate levels of environmental awareness. Female teachers had significantly higher levels of environmental awareness as compared to their male counterparts. Age-wise analysis also revealed that teachers with 31-50 years had higher levels of environmental awareness and lastly, teachers working in private schools found to have significantly higher environmental awareness than teachers working in government schools. Implications of environmental education were also stressed.

Chatzifotiou and Athanasia (2010) conducted a study on "National Policy, Local Awareness Implementing Environmental Education in the Primary Schools of Northern Greece"

In this essay the author uses a sample of Greek primary school teachers to investigate environmental education awareness in three counties of northern Greece. The author begins by outlining the status of environmental education in Greek primary schools. The author then states the study's rationale by defining the term "awareness" and moves on to discuss the methodological considerations that guided the project. This is followed by a presentation of the study's findings. Here the author shows that environmental education awareness is influenced by several philosophical notions about nature and that its implementation is mediated by both local and state factors. This then allows the author to offer recommendations for enhancing the current practices of environmental education and discuss future perspectives for it in Greece.
Coertjens and Peter (2010), conducted a study on “Do Schools Make a Difference in Their Students' Environmental Attitudes and Awareness?”

The environmental agenda is gaining momentum as an international policy issue. This is reflected in an increase in environmental education research focusing on children's awareness and attitudes toward the environment. In this study, authors focused on this issue from a school effectiveness perspective and evaluated (i) which student characteristics predict environmental attitudes and awareness; (ii) whether schools make a difference in their students' environmental attitudes and awareness and (iii) if school effects are different for students with varying levels of science ability. The cross-sectional Flemish data of the Organisation for Economic Co-operation and Development's Programme for International Student Assessment 2006 (4,999 students in 156 schools) were re-analysed using a multivariate multilevel model to address these issues. Results show that gender, immigrant status, socioeconomic status and educational track are important in explaining students' environmental attitudes and awareness. Furthermore, the results show that schools do matter; schools in which science is taught in a more hands-on manner are associated with higher student environmental awareness whilst environmental learning activities are associated with more pro-environmental attitudes amongst students. After controlling for
student characteristics, these school effects do not differ between more science-literate children and their less or average science-literate peers.

Quentin and Duroy (2011) conducted a study on "The Determinants of Environmental Awareness and Behavior Economics".

This paper investigates the determinants of environmental values across countries. Its purpose is to put the role of economic affluence into perspective by challenging the conventional wisdom that states that the level of economic affluence influences the level of environmental concern expressed by the population. While this paper does not question the fact that large scale environmental defensive activities are likely to be influenced by the level of income in a country, it is hypothesized that environmental awareness and individual involvement in environmental protection need not be a function of the level of economic affluence. To test this hypothesis, three variables are created Positive Environmental Attitudes, Willingness to Pay to Protect the Environment, and Human-Environment Relationship using data from the World Values Survey (1995-1997). The variables are regressed against a set of economic, demographic, political, and psychological and educational variables. The results show that economic affluence has, at best, a marginally direct influence on environmental awareness and no direct impact on environmental behavior. The paper demonstrates that the degree of urbanization, the level of subjective well-being and the level of income equality have direct effects on awareness, while education,
population pressure and happiness are significantly correlated with environmental behavior.

2.4 Studies Related to Personality Factors

Indian Studies

Saran (1975) studied “the teacher’s attitude towards teaching profession and certain personality variables as related to their level of education and amount of experience”.

The sample consisted of 1000 teachers from four western districts of U. P. Of these, 510 were male teachers and 490 were female teachers. The tools used were Chatterjee’s Non-Language Preference Record, Vyktitva Parakh Prashnavali and Edward personal Preference Schedule. The major findings were: (i) The attitude of teachers towards the teaching profession was positive; (ii) Interest was positively related with attitude towards the teaching profession. The teachers who had a positive attitude showed more interest in literary and mechanical fields, while teachers with negative attitude showed more interest in the field of agriculture and sports; (iii) Adjustment and attitudes were not directly related to each other; (iv) The needs of achievement, abasement, endurance, and autonomy had hardly any influence on the formation of attitude towards teaching profession; (v) Attitude towards teaching profession was not positively related to experience in the teaching profession as well as age; (vi) Level of education was positively related to
degree of attitude towards the teaching profession; (vii) Level of education had no relationship with home adjustment and social adjustment. It was negative related with health adjustment, emotional adjustment and college adjustment were positively related with level of education; (viii) Teaching experience and adjustment were not significantly related; (ix) Needs of achievement and abasement were closely related to the level of education; and (x) The amount of experience and need of achievement were positively related to each other. Need of abasement was positively related to the amount of experience. The needs of autonomy and endurance showed no relationship with amount of experience.

Nangia (1980) studied “the personality characteristics and self-esteem of Indian sportsmen”. The objectives of the study were: (i) to identify the personality factors associated with high and low performing sportsmen and sportswomen in the two popular games of badminton and table tennis; (ii) to identify the need pattern of the extremely high performers and that of the low performers with reference to sex and game and (iii) to find out the difference in the self-esteem of the low performers, both male and female, in table tennis and in badminton.

The findings were: (i) The high performers were more intelligent, emotionally stable, dominant, surgent, suspicious, shrewd, self-sufficient and tense; had higher self-concept and control and were more reserved, shy, tough-minded, practical and placid; (ii) The high performers had a higher need for achievement, aggression, dominance, recognition and
sex, and a lower need for abasement, play and affiliation; (iii) The self-esteem of the high performers was higher than that of the low performers; (iv) The personality factors of the sportsmen were different from those of the sportswomen; the sportsmen were more tender-minded, anxious, introvert and subdued; (v) The sportsmen had a higher need for recognition, aggression and sex; (vi) The self-esteem of the sportsmen was not higher than that of the sportswomen; (vii) The table tennis players were more affected by feelings and were trusting, tense, introvert, adjusted tender minded and emotional than the badminton players; (viii) The table tennis players were higher in need abasement, recognition, affiliation and play; (ix) The self-esteem of the table tennis players was not higher than that of the badminton players.

Reports (1981) conducted a study "Teacher Training in Environmental Education". UNESCO, 7, place de Fontenoy, 75700 Paris, France. Reports - Descriptive; Collected Works - Serials

Provided are recommendations and reports related to teacher training in environmental education (EE). Recommendations from the Intergovernment Conference on Environmental Education (Tbilisi, 1977) are highlighted, indicating that environmental training of qualified educational personnel be a priority activity. Activities of the Unesco- UNEP International Environmental Education Programme are also highlighted. The Programme's approach has been the prior orientation of key personnel toward developing EE strategies at the national level,
particularly pre- and in-service teacher training. Individual reports on the status of teacher training in EE in four regions of Unesco membership are also included (Africa, Arab States, Europe-North America, and Latin America and the Caribbean). Topics in the African report, focusing on various aspects of EE teacher education, are based on results of a questionnaire. The Arab States report focuses on several areas related to pre-/in-service EE teacher training. The Europe-North America report addresses pre-service EE (cognitive, affective, skill-process domain activities, EE methodologies, site utilization, and national/regional cooperation in EE) and in-service EE (cognitive, affective, skill/process domains, methodology, teacher education program implementation, and national/regional cooperation). Brief highlights of individual country activities are provided in the Latin America/Caribbean report. Highlights of the European Subregional EE Seminar are also provided.

Sathiyagirirajan (1985) focused on “competency, personality, motivation and professional perception of college teachers”.

The objective of the study were : to find out the extent of relationship between competency of college teachers and their personality, motivation and profession perception. The sample consisted of 300 college teachers. The tools used were : (i) teacher competency rating scale; (ii) self-actualization person inventory; (iii) Cattell’s 16PF questionnaire; (iv) Tuckman’s teacher feedback form; (v) Patted’s teaching
profession perception scale. The correlation, ‘t’ test, regression analysis were used to analyze data. The major variables were: teacher competency, some selected variables.

The major findings of the study were: (i) teacher competency was related to intelligence, emotional stability, conscientiousness, tender mindedness, trusted nature, placid nature, self-sufficiency and related factors of Cattell’s 16PF questionnaire; (ii) it was significantly related to creativity, dynamism, organized demeanor and warmth and acceptance, self-actualization and profession perception of teachers; (iii) the more competent teachers significantly differed from the less competent teachers in all the above variables; (iv) those variables that correlated significantly with teacher competence, inter-correlated with one another significantly.

Pandey (1993) studied “the personality traits and self-esteem”. The present study concentrates on the impact of personality traits on self-esteem of respondents. The objective of the was to investigate the impact of personality traits on self-esteem of respondents.

The major finding of the study were: The two extreme groups scoring high and low stens were found to differ significantly on all factors except on ‘M’ factor.

Verma (1997) focused on “the relationship between family climate and creative personality of adolescents.”
The objectives of the study were: (i) to find out the significant relationship between family climate and creative personality of adolescents and (ii) to find out the significant differences in creative personality of adolescents coming from good (high), average and poor (low) family climates. The sample consisted of 200 adolescent girls of Grades XI and XII, drawn through random cluster sampling technique from two randomly selected senior secondary institutions of Shimla (H.P.). The girls belonged to arts stream only. The tools used were: (i) family climate scale (FCS) by Beena Shah and (ii) Hindi version of “What kind of person are you?” of Torrance and Khatena, prepared by Dadrun Nisha and Kiran Gupta. The mean, SD, 't' test and coefficient of correlation were used to analyze data.

The major findings of the study were: (i) creative personality was found to be significantly positively related to family climate; (ii) the significant differences were observed in creative personality of adolescents belonging to high family climate, average family climate and low family climate.

Ali (2007) conducted a study on “The Effect of Turkish Geography Teacher’s Personality on their Teaching Experiences”.

It is aimed in this study to determine to what extent the geography teachers at high schools reflect their personality on their teaching experiences. It has been observed by researchers that teachers with different personalities affect their students in different ways. The
personal characteristics of a teacher play a significant role in determining the limits of his studies and affect his teaching experiences. Those who remain indifferent to activities and undetermined in planning have a negative effect on both classroom relations and each student's character development. Survey model was used in the study. The paper was formed through a questionnaire on 198 teachers, and showed that teachers reflected their personalities on their teaching experiences as their ages and seniority increased. The personal assets the teachers found in themselves were self-confidence, discipline, tidiness, justice and job-satisfaction.

**Abroad Studies**

Ione and McHale (1990) conducted a study on “Personality factors: Changes in traits of special education teachers after teaching mildly handicapped students for three years or more”

The purpose of the study was to determine whether there were any significant ($p < 0.01$) changes in personality factors after teaching mildly handicapped students for three years or longer, as measured by the Sixteen Personality Factor Questionnaire (16 PF) (Cattell, 1970). Students from Kearney State College (Nebraska) during the school years of 1972-1981, who received their baccalaureate degree with an endorsement in special education, comprised the subjects for the study. A total of 119 subjects (105 females, 14 males) participated in the study. The personality factors of the following sub-groups were analyzed: (i)
comprehensive majors; (ii) second endorsement graduates; (iii) females; (iv) males; (v) unmarried students; (vi) married students (vii) subjects with less than 10 graduate hours in special education and (viii) subjects with more than 10 graduate hours in special education. The specific data analysis procedure involved a related measure, matched-pair t test. Findings of the study were: (i) There were no significant (p $<$.01) changes in personality factors of the total group; (ii) There were no significant changes in personality factors of the sub-group of comprehensive majors; (iii) There was a significant change in personality factors of subjects with a second endorsement in special education. The subjects scored significantly higher on personality factor F.; (iv) Female subjects scored significantly higher on the personality factor Q1; (v) There were no significant changes in personality factors among male subjects; (vi) There was a significant change in personality factor Q4 among unmarried subjects; (vii) There was a significant change in personality factor Q3 among married subjects; (viii) There were no significant changes in personality factors in the group of subjects who had completed less than ten graduate hours since graduation or in the group of subjects who had completed more than ten graduate hours in special education.

Sparks and Rozanne (1992) conducted a study on “Characteristics of Master Teachers: Personality Factors, Self-Concept, Locus of Control, and Pupil Control Ideology”
A study of differences among 29 secondary school teachers rated by 501 secondary school students, other teachers, and administrators as master teachers or rated as not-so-masterful found no significant differences in teacher locus of control, pupil control ideology, and self-concept but did find differences in personality factors.

**Furnham et al (2002)** in two studies investigated “the relationships between personality traits and aspects of job satisfaction”. They found that in both the studies personality accounted for a small percentage of the total variance both in importance ratings and in levels of job satisfaction. They concluded that personality does not have a strong or consistent influence either on what individuals perceive as important in their work environment or on their levels of job satisfaction.

**Lounsbury et al (2003)** research revealed “three personality traits consistently related to career satisfaction:” emotional resilience, optimism, and work drive in initial and holdout samples as well occupational groups. Personality traits correlated with career satisfaction included the Big Five traits of conscientiousness, extraversion, and openness and other, narrower traits, such as assertiveness, customer service orientation, and human managerial relations orientation. A study by Juristo (2009) analysed the relationships between personality, team processes, task characteristics, product quality and satisfaction in software development teams. They found that the teams with the highest job satisfaction were precisely the ones whose members scored highest
for the personality factors agreeableness and conscientiousness. Lounsbury et al (2003) examined personality traits in relation to job satisfaction and career satisfaction for 1059 information technology (IT) professionals. As hypothesized, eight traits were significantly related to both job and career satisfaction: Assertiveness, Emotional Resilience, Extraversion, Openness, Teamwork Disposition, Customer Service Orientation, Optimism, and Work Drive. Career satisfaction correlations were of generally higher magnitude than corresponding job satisfaction correlations.

**Sarah and Hampson (2006)**, conducted a study on “A First Large Cohort Study of Personality Trait Stability Over the 40 Years Between Elementary School and Midlife”

This report provides some initial findings from an investigation of the relations between childhood Big Five personality traits assessed by elementary school teachers and similar traits assessed 40 years later by self-reports at midlife (N=799). Short-term (1–3 years) test-retest reliabilities were lower (.22–.53) in childhood when personality was developing than they were in adulthood (.70 –.79) when personality stability should be at its peak. Stability coefficients across the 40-year interval between the childhood assessment and the 2 measures of adulthood personality were higher for Extraversion (for example .29) and Conscientiousness (for example .25) than for Openness (for example .16), Agreeableness (for example .08), and Neuroticism (for example .00).
Construct continuity between childhood and adulthood was evaluated by canonical analysis and by structural equation modeling and indicated continuity at both a broad, two-dimensional level and at the level of the Big Five. The findings are discussed in relation to A. Caspi, Roberts, and Shiner's (2005) principles of rank-order personality stability.

Zhang (2007), conducted a study on “Do personality traits make a difference in teaching styles among Chinese high school teachers?”

This research pioneered the investigation of the predictive power of personality traits for teachers’ teaching styles. Participants were 157 teachers from two senior-high schools in the People’s Republic of China. Results indicated that teachers’ personality traits as measured by Costa and McCrae (1992) NEO Five-Factor Inventory significantly contributed to teachers’ teaching styles as assessed by the Thinking Styles in Teaching Inventory (Grigorenko and Sternberg, 1993) over and above their gender, educational level, and perceptions of the quality of the students they were teaching. Practical implications of this finding are proposed for school teachers and administrators.

Jheng (2008), conducted a study on “A Study of the Relationship Among Principals’ personality traits and School Innovative Management in Elementary Schools in Pingtung County”

The purpose of this study aimed to explore the relationship among the principal’s personality traits and school innovative management in elementary schools. The four research purposes in this study were
presented as follows: (i) to investigate the current situation of principal's personality traits, and school innovative management; (ii) to analyze how teachers from diverse backgrounds perceive the principal's personality traits and school innovative management; (iii) to analyze the relationship among the principal's personality traits and school innovative management; (iv) to probe into the predictive function of the principal's personality traits have in various aspects of the school innovative management, and (v) to apply the research results into future studies.

The major instrument, "The Description Questionnaire of the Relationship among Principal's Personality Traits and School Innovative Management" was designed to collect the data. 390 samples were selected by employing the cluster sampling. Descriptive and inferential statistics, including t-test, one-way ANOVA, canonical correlation and stepwise multiple regression analyses were applied to analyze the data.

(a) There were significant differences between the background variables such as gender, position of service, scale of school, and school's location on the principal's personality traits. Among them, male, division director, and teachers of the school fewer than 12 classes had awareness of higher levels.

(b) There's no significant difference between the background variables such as years of service, age, educational background, position of service, school's history, and school's location on the school innovative management. (c) There were significant differences between the
background variables such as gender and scale of school on the school innovative management. (d). The relationship among the four principal's personality traits: "agreeableness", "conscientiousness", "extraversion", "openness to experience" and all factors of school innovative management is positive and above average, whereas the relationship between neuroticism and all factors of school innovative management is negative and below average. (g). The principal's personality traits could predict the school innovative management. Above all, "openness to experience" is the highest predictive factor. Based on above findings, some suggestions are proposed to the educational administration, principals, and future researchers.

Juan et al. (2009) conducted a study on "The Relationship Between Aggression and the Big Five Personality Factors in Predicting Academic Success Journal of Human Behavior in the Social Environment, School of Social Work"

The focus of this study was to determine whether aggression adds incremental validity above and beyond the Big Five personality factors in predicting grades. An archival data analysis was used in this study. The data consisted of a sample of eighth grade students. The students completed the Personal Style Inventory Adolescent (PSI-A), which is a 120-item survey instrument designed to measure the Big Five personality factors and aggression. Results indicated that aggression does add incremental validity above and beyond the Big Five. The results also
indicated that the Big Five were significantly correlated with academic performance. When aggression was added into the statistical model, conscientiousness, openness and aggression were significantly correlated with grades.

Tun (2009) conducted a study on "The relationship of personality factors to teacher longevity of mathematics and science teachers.

The problem of teacher shortage in the United States has been studied extensively. Struggling schools and school districts have resorted to filling positions with unqualified teachers, substitutes, and recruiting teachers from foreign nations. Despite recommendations made by the research, each year schools confront the same problem of teachers leaving the classroom. The need to hire and retain good mathematics and science teachers in our nation's secondary schools is high. It is posed that if the personality factors of mathematics and science teachers in Nevada could be determined in teachers who remain in education, then recommendations could be made in conjunction with the existing data for how to better retain those teachers longer.

The purpose of this study was to determine if there were any correlations between personality factors, as measured by the Cattell 16PF, with longevity of stay in mathematics and science teachers in Nevada. Seventy-nine subjects took part in the study. They came from six school districts in Nevada: four rural and two urban. Subjects volunteered based upon proctor requests from each participating school
district. The Cattell 16PF Questionnaire and demographic form were administered to each participant along with an incentive for completing the forms. Data were collected between October, 2007 - October, 2008. T-tests were used to compare rural and urban school district teachers, a one-way ANOVA was used to compare rural, urban, and nationally normed teacher means, and a Pearson Product-Moment Correlation Coefficient (r) was used to determine if significant correlations existed between each personality factor and longevity of stay. Results of the study showed Nevada mathematics and science teachers had low mean scores for personality factor A (Warmth) and personality factor I (Sensitivity). They had means near the middle for all other personality factors. The study also found two personality factors that correlated significantly with longevity of stay: low with personality factor A (Warmth) (r = - .223, p < .05) and high for personality factor Q4 (Tension) (r = .291, p < .01). Based on the results of the study, it is recommended that mathematics and science teachers receive training to become more aware of struggling students so that they can be more sensitive to their learning needs.

Maite and Bernarás (2009) conducted a study on “Self-concept, Self-esteem, Personality Traits and Psychopathological Symptoms in Adolescents with and without Visual Impairment.”

The purpose of this study was to analyze self-concept, self-esteem, and other personality traits and psychopathological symptoms in
subjects with and without visual impairment. The sample was made up of 90 participants aged 12 to 17: 61 with no impairment and 29 with visual impairment. The ANOVA showed that there were no significant differences in self-concept and self-esteem in the samples, but the visually impaired adolescents scored significantly higher in various psychopathological symptoms as well as in their capacity for kind behavior. The ANOVA revealed no gender differences in any variables in adolescents without visual impairment. However, women with visual impairment scored lower in self-esteem and higher in various psychopathological symptoms. Pearson coefficients revealed negative relations between self-concept/self-esteem and all the psychopathological symptoms, and neuroticism, as well as a positive relation with extraversion. Low psychoticism, high extraversion, and low hostility were identified as predictors of high self-concept.

**Olga (2010)** conducted a study on “Personality Development and Problem Behavior in Russian Children and Adolescents”

The aim of this study was to explore child and adolescent personality in the Russian culture, addressing gender and age differences, and to examine personality and family effects on children's Internalizing and Externalizing problems. Parents of 1,640 Russian children aged 3-18 years completed the Inventory of Child Individual Differences measuring personality, the Strengths and Difficulties Questionnaire measuring problem behavior, and reported about family
background. Girls scored higher than boys on the Conscientiousness domain and on the Intelligent and Considerate scales, but lower on Activity. In younger children, Extraversion was higher; in older children, Agreeableness, Conscientiousness and Shyness were higher; Distractibility was highest in early adolescence. The gender and age differences were small. Personality explained about 30% of variance in children's Internalizing problems, and 50% in Externalizing problems; family factors contributed less than 4%. Internalizing Problems were linked to higher Neuroticism and lower Extraversion; Externalizing Problems were linked to higher Extraversion, lower Conscientiousness and Agreeableness. For both types of problems, harsh parenting was a risk factor, while SES and family cohesion were associated with lower problem levels. Models linking personality with children's problem behavior were similar in preschool, middle childhood, early and late adolescence.

Humbyrd (2010) conducted a study on, "The relationship of personality traits to satisfaction with the team: A study of interdisciplinary teacher teams in Rhode Island middle schools".

A shift toward shared practice in schools has emerged and teachers are moving from isolation to collaboration (Hindin et al 2007). One of the structures that supports collaboration is the collaborative team. Teams have great potential, however, their failure can impact the organization's progress and the team members' satisfaction in working
with the team. There is increasing evidence that personality may be related to the quality of social interactions occurring in teams (Waldman et al., 2004). This study examined the relationship between the Big Five personality traits (that is Extraversion, Conscientiousness, Agreeableness, Emotional Stability, and Openness to Experience) and Satisfaction with the Team. A mixed methods sequential approach utilized a survey methodology followed by open-ended interviews. A questionnaire was administered to a purposive sample of N = 244 full-time educators from N = 49 interdisciplinary teams at N = 7 middle schools in Rhode Island. It assessed the Big Five personality traits, demographic variables, general job satisfaction, and team member satisfaction. These quantitative data were analyzed using descriptive and correlational statistics as well as multiple regression. The open-ended interviews were conducted with n = 14 teachers. A synthesis of coded themes was used to investigate team members' perceptions about team members' personalities and interactions. The quantitative findings indicate, no significant relationship between the BFI traits and Satisfaction with the Team. However, the relationships varied across team tenure groups. Team-level analyses indicate a significant negative correlation between Satisfaction with the Team and maximum (highest member score) Extraversion (r = -.44, r² = .19, p = .002; medium effect size) and maximum Agreeableness (r = -.31, r² = .10, p = .031; medium effect size). The qualitative data revealed that team climate, team member
personality, and team personality configuration are factors related to Satisfaction with the Team. This study extended the research on teams by investigating longer-lived work teams in real life educational settings. Recommendations for administrators and interdisciplinary team teachers regarding professional development and team selection are provided as well as recommendations for future research.

Patricia (2011) studied “Impact of Teacher Personality Styles on Academic Excellence of Secondary Students.”

The focus of this study was to determine if there was a significant relationship among tenth and eleventh graders’ (secondary students) Texas Assessment of Knowledge and Skills (TAKS) scores due to teacher personality styles. The study used the Big Five Inventory (BFI), to assess teachers’ criterion referenced test. The study used two years’ worth of TAKS test scores for secondary students in grades ten and eleven. Secondary students’ TAKS scores were compared to the teachers’ BFI surveys to determine if there was a significant relationship to tenth and eleventh graders’ TAKS scores due to the teacher’s personality style. Results indicate that there is a significant difference among the academic excellence of secondary students based on teacher personality style.

Zupan (2011) conducted a study on “Factors of social adjustment to school: child's personality, family and pre-school. Early Child Development and Care”. 

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The role of child’s characteristics (gender, cognitive ability, mother-perceived personality traits), family environment (maternal education, self-reported parenting practices) and pre-school experience (at least three years vs. no experience) in social adjustment to school, reflected through teacher reports on social competence and internalising and externalising behaviours, was investigated with six-year-olds ($N = 366$). Three blocks of factors, that is child, family and pre-school, explained up to 19% of variance in social adjustment with child's characteristics accounting for the major part. Family variables contributed significant, though small, portions of variance to social competence and internalising behaviour over and above the child factors. Pre-school experience was additionally predictive of lower incidence of internalising behaviour and more frequent externalising behaviour.

2.5 Studies Related to Self-concept

Indian Studies

Walia, (1973) studied “the gifted adolescent and their self-concepts”. The objectives of the study were: (i) to suggest an approach to identify the gifted adolescent with the help of verbal and nonverbal intelligence tests; (ii) to standardize a self-concept list for measuring perceived, ideal and real self-concepts; (iii) to compare the perceived, ideal and real self-concept of the gifted adolescents with those of the average; (iv) to compare the perceived, ideal and real self-concepts of males and females; (v) to compare the self-ideal discrepancies of the
gifted adolescent with the average adolescents and of the males with the females; and (vi) to compare the self-real discrepancies of the gifted adolescents with the average adolescents and of males with those of the females.

The findings of the study were: (i) The factor of intelligence had a significant effect on the self-perception of the individuals and on the different dimensions of self; (ii) Sex had a significant effect upon the self-ratings of the gifted and the average males and females; (iii) The interactions of intelligence and sex, intelligence and age, sex and age, brought about significant variations in the self-ratings of the subjects; (iv) Gifted males were better adjusted as compared to gifted females and they had higher ideal self as compared to the average males; (v) Gifted females had a higher ideal self than the gifted males and average females, but their level of aspiration was unrealistic and stood in their way of adjustment; (vi) The discrepancies between the perceived and ideal selves of the gifted females were higher than those of gifted males and average females; (vii) The correlations for the perceived and real self-concept ratings showed that the gifted females were not judged higher either by themselves or by others; (viii) The gifted and the average females did not differ significantly on their real self, thought the differences were in favour of the average group; and (ix) on self-real discrepancy both the groups of gifted and average females did not differ significantly from each other.
Mohan (1975) studied "the development of self-concept in relation to intelligence, learning ability, achievement and achievement motivation at adolescent level". The main objectives of study were (i) to trace the general growth of self-concept over years of adolescence, both longitudinally and cross-sectionally, separately for males, females and for combined groups of adolescents for the perceived, ideal and social aspects of the self and the discrepancies among them; (ii) to study the differential growth of self-concept of high, average and low ability groups of intelligence, learning, achievement and achievement motivation; and (iii) to establish the relationship of the variables of self-concept with the correlates of intelligence, learning (verbal and nonverbal) achievement motivation, achievement and originality.

The main findings of the study were: (i) longitudinal and cross-sectional growth analysis revealed increasing trend of female perceived self, male social self and decline of male perceived self and female social self; (ii) ideal self for both sexes indicated rapid increase; (iii) discrepancies related to perceived and social self suggested varying patterns, while those related to ideal self revealed upward rising growth throughout adolescence; (iv) in most of the differential growth curves, low and average groups indicated parallel growth, while high groups scored higher on all variables of self; (v) in both general and differential growth analysis the best period of growth was found to be between sixteen and eighteen years, marking seventeenth year as the peak point in growth of
self-concept; (vi) females showed more stability of self than males during adolescence.

Mathew (1976) studied “the classroom behaviour of teachers and its relationship with their creativity and self-concept”. The objectives of the study were: (i) to find out the nature and extent of relationship, if any, between creative teacher personality and teacher behaviour; (ii) to find out the nature and extent of relationship, if any, between creative teaching process and teacher behaviour; (iii) to find out the nature and extent of relationship, if any, between self-concept of teachers and teacher behaviour; (iv) to find out whether or not the demographic variables, namely, age, sex, marital status, residential location, and district, and qualifications of teachers influence their classroom behaviour; (v) to factor analyse the test-space due to the variables relating to creativity, self-concept and teacher behaviour of the total sample; (vi) to suggest measures for incorporating the application of the findings of study in Indian educational system.

This presage-process investigation was a descriptive correlational study. The first set of presage variables included creative teacher personality, creative teaching process and self-concept; and the second set included demographic variables such as age, sex, marital status, residential location and district. The process variables were the dimensions of teacher behaviour.
The findings of the study were: (i) there was no significant relationship between creative teacher personality and indirect/direct behaviour of teachers; (ii) there was positive correlation between creative teacher personality and ‘teacher talk’ and negative correlation between creative teacher personality and ‘vicious circle’, whereas there was no relationship between creative teacher personality and other dimensions of teacher behaviour; (iii) there was no relationship between creative teaching process and indirect/direct behaviour of teachers; (iv) there was negative relationship between creative teaching process and divergent question ratio, whereas there was no relationship between creative teaching process and the remaining dimensions of teacher behaviour considered in the study; (v) there was no relationship between self-concept of teachers and their indirect/direct behaviour; (vi) there was negative relationship between self-concept of teachers and pupil initiation ratio, and self-concept of teachers and ‘vicious circle’; (vii) there was negative relationship between chronological age of teachers and their indirect/direct behaviour; (viii) there was negative relationship between chronological age of teachers and teacher response ratio, constructive integration with reference to total interaction and constructive integration with reference to total interaction and constructive integration; (ix) there was no significant difference between male and female teachers in their indirect/direct behaviour; (x) trained graduate teachers were indirect in their classroom behaviour as compared with
trained postgraduate teachers; and (xi) the results of factor analysis revealed eleven factors out of which nine factors were named as: (i) Positive Self-Concept, (ii) Teacher Verbal Flexibility in Classroom Communication, (iii) Negative Self-Concept, (iv) Indirectness, (v) Constructive Integration–Divergent Questioning–Pupil Initiation, (vi) Positive Aesthetic Self-Concept, (vii) Positive Intelligence Self-Concept, (viii) Teacher Creativity, and (ix) Pupil Talk.

Jogawar (1976) studied “the development of self-concept in relation to some family factors at the adolescence level”. The aims of the study were to find out: (i) how the self-concept of the adolescent (age group thirteen to twenty) changed as a function of age, (ii) the relationship of these changes with some family factors; and (iii) the relationship of sex with these changes.

The findings of the study were: (i) The development curves of P. S. and S. S. stood at a higher level at the beginning and the end stage of adolescence, whereas these were at a considerably lower level at the middle of the adolescence period. (ii) The development curve of the I. S. fell steadily as the age advanced and at twenty it was statistically different from what it was at the beginning of the adolescence. (iii) Both the sexes showed just the opposite trends in their development from thirteen to twenty in case of P. S., S. S. and I. S. (iv) In case of the discrepancies the general trend was that of decline from the beginning to the end of the adolescence on development curve and in both the sexes.
(v) Under each family factor out of the four, neither lower nor the upper twenty-seven percent group on any dimension of self-concept showed systematic development when the year-to-year means were compared.
(vi) Mean of the upper group differed significantly from the mean of the lower group in case of major dimensions of the self-concept (P.S., S. S. and I. S.), meaning thereby that the favourable family conditions helped the adolescent individual to grow a better self-concept. (vii) Means of the four SES groups (lower, lower-middle, upper-middle and upper) when compared showed that the better the SES of the family the better was the self-concept the adolescent developed.

Mani and Gonsalves (1977) studied “the study of the self-concept of student-teachers in relation to their performance in practical teaching.” The major aim of the study was to identify the relationship between the students' reaching performance and the self-concept, keeping in view the background variables of previous academic achievement, age, socio-economic background and previous teaching experience.

The major findings of the study were: (i) Teachers with more teaching experience had better self-concept than teachers with less teaching experience. (ii) Teachers with better self-concept scored more on practice teaching than teachers with poor self-concept. (iii) Age had some influence on self-concept. Lower age was accompanied by better self-concept and more effective teaching. (iv) Socio-economic background
had a clear influence on self-concept and consequently on teaching effectiveness. In the case of teachers in the upper socio-economic status the correlation between self-concept and teaching practice scores was more than that in the case of middle socio-economic status group. (v) The relationship between self-concept and teaching practice scores in general was not significant.

**Sharma (1978)** studied “the comparative study of self-concept of high and low achievement and intelligence groups of students of class tenth in urban schools of Bareilly”. The main objectives of the study were: (i) To find out the relationship between any two of the four main variables, namely intelligence, socio-economic status (SES), academic achievement and self-concept, (ii) to find out the relationship of academic achievement, intelligence, SES and self-concept, respectively, with different areas of self-concept, namely, aspiration, confidence, emotionality, inferiority, physical appearance and the withdrawing tendency in various groups, (iii) to find out the inter-correlations among different variables, (iv) to examine sex differences in various groups, (v) to predict self-concept on the basis of intelligence, SES and achievement, (vi) to predict achievement on the basis of six areas of self-concept in combination with either intelligence or SES factors in the controlled high and low achieving groups, and (vii) to predict self-concept on the basis of its six areas in high and low achieving groups, sex-wise.
The findings of the study were: (i) Intelligence showed strongest relationship with achievement but the relationship between intelligence and self-concept was not significant in extreme intelligence groups. (ii) SES showed weak positive relationship with intelligence. (iii) Students having high intelligence also had high self-concept, achievement and SES and students having low intelligence had low self-concept, achievement and SES. (iv) Intelligence showed strong relationship with six areas under self-concept and achievement; intelligence made high positive and significant contribution. (v) SES did not show strong relationship with self-concept and other variables. In the low intelligence group it was negatively correlated. (iv) Achievement showed highest relationship with intelligence. (vii) Self-concept showed high positive and significant relationship with achievement and intelligence. (viii) Boys were found to be superior to girls in all areas on self-concept.

Goswami (1978) studied “the self-concept of the adolescents and its relationship with scholastic achievement and adjustment.”

The objectives of the investigation were: (i) To study the nature of the distribution of self-concept of adolescents, (ii) to study the self-concept of adolescents in relation to sex, intelligence and place of residence, (iii) to find out the relationship between self-concept and scholastic achievement, (iv) to find out the relationship between self-concept and adjustment, and (v) to construct a test of self-concept.
The findings of the investigation were: (i) The self-concept of the adolescents was a personality characteristic which was normally distributed in the population of adolescent student. (ii) There tended to be sex difference in the self-concept. It seemed that the male adolescents received more encouragement and attention in the home and society than the female, and developed brighter self-concept than the latter. (iii) The more intelligent adolescents tended to have brighter self-concept than the less intelligent ones. It meant that self-concept was not wholly a non-intellective characteristics of personality. (iv) The extent of relationship between intelligence and self-concept did not change with place of residence (rural or urban) or with sex. (v) The rural students tended to have as good self-concept as the urban ones and the rural environment was not uncongenial for the development of adequate self-concept. (vi) It was the satisfying and frustrating experiences of the adolescent in his social milieu in which he interacted with the members of the family, peers and other people that formed his self-concept. (vii) There existed positive relationship between self-concept and achievement and the adolescents with good self-concept were likely to achieve more than those with poor self-concept. (viii) Scholastic achievement highly correlated with the concept of one's mental health and of socio-economic status. (ix) There was a strong relationship between self-concept and adjustment. Good self-concept depended on good adjustment and vice versa but the adolescents who had very high concept of their socio-
economic status in the rural areas did not have good adjustment in the changing socio-political conditions.

**Dutta (1979)** studied “the effects of malnourishment on self-concept, personal-social adjustment and cognitive competence among low income group school children.” The study aimed at investigating the effects of malnourishment on self-concept, personal-social adjustment and cognitive competence of boys coming from low income families.

The findings were: (i) The parents of Brahmin children were found to be significantly taller than those of Harijan children. (ii) The Brahmin children were significantly younger than the Harijan children. (iii) The Brahmin children had significantly higher self-concept, personal-social adjustment and parental expectancy scores than the Harijan children. (iv) The Brahmin children were also found to be significantly superior to the Harijan children with regard to the performance on school achievement, Cross Modal Coding, Visual STM, Auditory STM (Serial Recall) and Word Reading Time. (v) Malnourishment adversely affected the scores on self-concept and parental expectancy. (vi) The less malnourished (tall) Harijan children were found to be better than severely malnourished (short) Harijan children, no matter whether they came from the rural or the urban background. (vii) The tall Harijan children had significantly higher scores on Auditory STM (free recall) and discrimination learning tasks. (viii) The urban Harijan children were found to be superior to the rural Harijan children in linguistic
competence as reflected by the score on Word Definition Test. (ix) The number of children in the family was fairly good predictor of performance in Cross Modal Coding and Word Definition Test of severely malnourished rural Harijan children and of Auditory Short Term Memory for severely malnourished rural Brahmin children. (x) Parental expectancy scores influenced, to a considerable extent, the competency in Word Definition (abstract) of less malnourished rural Harijan children and in Word Definition (descriptive) of severely malnourished Brahmin children.

Ramkumar (1979) studied “the subject characteristics of adolescent girls with acute self-concept.” The investigation aimed at studying the characteristics of adolescent girls with acute self-concept and comparing them with those of the normal group. The characteristics studied were the area of residence, community, the size of family, socio-economic status, the size of peer group, intelligence, personal adjustment, social adjustment, withdrawing tendency and values.

The major findings were: (i) The community of students was found to be an important contributory factor for acute self-concept. (ii) The area of residence and the size of the family did not contribute to acute self-concept. (iii) The extreme group showed lower intelligence scores than the normal group. (iv) Personal and social adjustment scores of the extreme group were significantly lower than those of the normal group. Similarly, the mean withdrawing tendency score of the extreme group
was lower than that of the normal group. (v) The extreme group had significantly higher mean scores than the normal group on four value areas — religious, political, aesthetic and theoretical. The extreme group had significantly lower scores in social values and exhibited no difference in economic values. (vi) A very high percentage of the backward community girls was found to have acute self-concept.

Sharma (1979) studied “the self-concept, level of aspiration and mental health as factors in academic achievement.”

The main objectives of the study were: (i) To find out differences in scholastic achievement between the students having a high level of self-concept, goal discrepancy and better mental health with the students having low scores on these three variables, (ii) to find out differences on various measures of self-concept between the high and the low scoring groups on goal discrepancy, mental health and academic achievement, (iii) to find out differences in the levels of aspiration between the high scoring and the low scoring groups on the measures of self-concept, mental health and academic achievement, (iv) to find out whether mental health was significantly related to self-concept, the level of aspiration and academic achievement, and (v) to find out sex differences in the levels of aspiration, self-concept and mental health at various age levels.

The main findings of the study were: (i) The level of self-concept affected academic achievement positively and significantly. (ii) The level of aspiration did not influence academic achievement. (iii) Mental health
(as measured by the adjustment inventory) did not affect scholastic achievement, but influenced certain measures of self-concept. (iv) Differences in academic achievement influenced the level of aspiration. (v) Differences in academic achievement did not influence mental health. (vi) The level of aspiration (GD scores) was significantly related to intellectual attributes and elements of self-concept. (vii) Mental health was positively and significantly related to self-concept. (viii) The level of self-concept did not influence the level of aspiration. (ix) Differences in mental health did not influence the level of aspiration. (x) Differences in self-concept affected mental health. (xi) The level of aspiration had favourable influence on mental health. (xii) There was a strong tendency in girls to set their level of aspiration below their achievement whereas boys showed an opposite trend. (xiii) Boys and girls differed significantly on their adjustment scores. Girls were significantly superior to boys at the age of 13 whereas in late adolescence from 16+ to 18+ boys showed significantly better adjustment. (xiv) There was no significant sex difference in the level of aspiration among the age group under study. (xv) Boys scored higher than girls on all the elements of self-concept at the age of 18+. (xvi) The level of aspiration was not significantly related with family income, birth order and vocational aspiration.

Uchat (1979) studied “the self-concept of pre-university students enrolled in the arts, science, and commerce faculties of Saurashtra University”.

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The main objective of the study was to determine the relationship, if any, between the nine dependent variables on the one hand and eight independent variables (faculty, college size, social class, religious affiliation, social group membership, sex, age, and birth order) on the other hand.

The major findings were: (i) The students from the arts faculty had the highest self-concept, while those from the science faculty possessed the lowest self-concept and those from the faculty of commerce ranked in the middle. (ii) The college size was not related to self-concept. (iii) The students from advanced class had higher perception of themselves, themselves as student, opportunities for making friends and their community acceptance than the students belonging to backward class. However, social classes did not differ in their perception of teachers, examination system and social activities. (iv) The Hindu and Muslim students possessed almost identical self-concept. (v) On the whole, all the four social groups-Patel, Rajput, Brahmin and Harijan-had almost similar self-concept. (vi) Sex was related to self-concept; the female students possessed higher self-concept than the male students. (vii) U-type relationship was observed as regards age as an independent variable. (viii) The birth order had no relationship with self-concept. (ix) College students had the poorest perception of the examination system. (x) Social activities got lowest endorsement among the elements of social milieu. (xi) The college (teachers and the examination system) was seen
less favourably by all groups than self and social milieu. (xii) Factor analysis yielded three factors-socio-personal self, performance-oriented self and perceived educational climate.

**George and Anand (1980)** studied “the effect of microteaching on teaching self-concept and teaching competence of student-teachers.”

The major objectives of the investigation were: (i) To study the effect of microteaching on teaching self-concept of student-teachers in a control group and an experimental group separately, and (ii) to study the effect of microteaching as well as integration of skills on the teaching competence of student-teachers. Microteaching was treated as an independent variable, and teaching self-concept and teaching competence of student-teachers were treated as dependent variables.

The major findings of the investigation were: (i) There was significant difference between the pretest and the posttest mean teaching self-concept scores of the control group of student-teachers. (ii) There was significant difference between the pretest and the posttest mean teaching self-concept scores of the experimental group of student-teachers. (iii) There was significant difference between the mean gain scores in teaching competence of the control group and experimental group of student-teachers. (iv) Microteaching facilitated enhancement of the teaching self-concept of student teachers. (v) Microteaching proved effective in improving the teaching competence of student-teachers. (vi)
The microteaching treatment followed by the summated strategy of integration of teaching skills was superior to the microteaching treatment based on independent teaching skills in improving the teaching competence of student-teacher.

Tara (1980) studied “the study of self-concept, level of aspiration and interests among preadolescents of various socio-economic groups.” The investigation aimed at studying the influence of socio-economic status on three aspects of personality, namely, self-concept, the level of aspiration and interests at the preadolescent stage. Seven hypotheses had been postulated and tested, three of which were directed to studying self-concept, the level of aspiration and interests with reference to the socio-economic status while the fourth made a correlational study of the three aspects of personality. The remaining made a comparative study were self-concept, the level of aspiration and interests had been compared sex-wise and on the basis of urban/rural areas.

Findings: (i) Self-concept scores with the socio-economic status and its aspects such as the level of parental education, parental income and the level of parental profession. (ii) A significant positive relationship was noticed between parental occupation, parents’ education, monthly income of father and the level of aspiration. (iii) Socio-economic status affected the vocational interests of children. (iv) Negligible relationship existed between self-concept, the level of aspiration and interests at the preadolescent stage. (v) Boys showed a significantly superior scores in
comparison to girls on various measures of self-concept such as
behaviour, intellectual and school status and physical appearance and
attributes, with the sole exception of popularity where the two groups
were similar. (vi) On various measures of self-concept, urban and rural
children showed that the two groups were similar with the only exception
on popularity where the urban children scored significantly higher than
their rural counterparts. (vii) Boys and girls showed some difference on
their aspiration level as boys scored higher on G. D. scores than girls.
(viii) Rural and urban differences with regard to aspiration level of
children were negligible. (ix) Sex differences were found in four out of the
seven areas of interests. Boys scored significantly higher than girls in
mechanical and scientific interest areas while girls scored higher in
aesthetic and social interests. (x) There was a significant impact of the
place of living (urban/rural) on the measures of interest. The urban
children scored higher than their rural counterparts on scientific,
aesthetic and clerical interests while the rural children outscored the
urban children on the other measures of interests areas such as
mechanical, business, social and outdoor ones.

Hirunval (1980) studied “the pupils’ self-concept, academic
motivation, classroom climate and academic performance.”

The major objectives of the investigation were: (i) To measure the
levels of academic motivation, self-concept, classroom climate, and
academic performance of pupils, (ii) to find out the relationships between
academic motivation, self-concept, classroom climate and academic performance, and (iii) to study the influence of age, sex, location, management types of schools on academic motivation, self-concept, classroom climate and academic performance of pupils.

Findings: The major findings of the investigation were: (i) Academic motivation as measured by Junior Index of Motivation was positively related to self-concept and some of its components like goal-oriented activity, problem-avoidance. It was negatively related to other components of self-concept such as parental dependence, social commitment, and not related to awareness of personal block and initiative, (ii) Boys were more academically motivated than girls. Pupils in rural areas were more academically motivated than those in the urban areas. (iii) Pupils of missionary schools showed greater academic motivation than those of Central Schools and other private-aided schools. (iv) The self-concept of pupils and their classroom climate showed positive relationship. (v) Self-concept and pupils' academic performance, and pupils' academic performance and classroom climate were positively related. (vi) Pupils of twelve years of age were more academically motivated and had a better self-concept than older pupils. (vii) Boys scored better on the self-concept scale than girls. Urban pupils had better self-concept than rural pupils (viii) Classroom climate bore a positive relationship to pupils' performance. (ix) Classroom climate in urban schools was better than that in rural schools.
Rani (1980) studied "the self-concept and other non-cognitive factors affecting the academic achievement of the scheduled caste students in institutions for higher technical education."

The major findings of the study were: (i) The SC students' academic achievement was significantly lower than that of the non-SC students. Both differed significantly with regard to physical self-concept, self-esteem and self-concept. (ii) Compared to the non-SC students, the SC student had a low self-concept of academic performance, a high reflected social self-concept of academic performance of teachers. (iii) There was no difference in the self-concept and reflected self-concept of the SC students except for reflected security self-concept and self-actualization of teachers. (iv) There was no difference in the SC and the non-SC students with respect to the achievement anxiety and perception of purpose in life. (v) As a whole, significant difference existed between the SC and non-SC students with respect to the non-cognitive aspects of personality. (vi) A significant relationship existed between academic achievement and different aspects of self-concept and reflected self-concept of academic performance as also physical self-concept and reflected physical self-concept of mothers and teachers in the case of the SC student. (vii) The academic achievement of the students was positively related to reflected self-esteem of two other significant factors (teachers and peers) in the educational set-up for the SC students. (viii) No significant relationship existed between academic achievement and
achievement anxiety and perception of purpose in life for both the SC and the non-SC student. (ix) Only self-concept and reflected self-concept were related significantly to the students' academic achievement. (x) There was a positive and significant relationship between achievement anxiety and various aspects of self-concept and reflected self-concept for both the SC and the non-SC student. (xi) Students' perception of purpose in life was significantly and positively related to self-concept and reflected self-concept of academic performance for both the SC and the non-SC students. (xii) A positive and significant relationship existed between achievement anxiety and perception of purpose in life in the case of non-SC students only. (xiii) There was significant difference between the SC and the non-SC students with regard to the perception of teachers, peers, administration and facilities provided for extra-curricular activities. (xiv) The SC students' academic achievement was influenced by their perception of institutional characteristics, and the various non-cognitive aspects of personality were significantly related to the students' perception of institutional characteristics. (xv) There was no difference between the SC and the non-SC students with regard to the perception of academic programmes and personal adjustment in the institution.

**Kamalesh (1981)** studied "the comparative study of self-concept, adjustment, interests and motivation among the scheduled caste and non-scheduled caste students." The investigation was designed to make a comparative study of self-concept, adjustment, interests and
motivation among the scheduled caste and the non-scheduled caste students.

The main findings of the study were: (i) Non-scheduled caste students from the urban area belonging to higher socio-economic status had brighter self-concept than the scheduled caste students belonging to lower socio-economic status; (ii) The level of adjustment among the urban scheduled caste students belonging to lower socio-economic status was below normal; (iii) The non-scheduled caste students, both in the urban and the rural areas did not have adjustment problems; (iv) The students showed greater interest in science, medicine and technology; (v) The interests of the students were related to their socio-economic status; (vi) As regards motivation methods, the mean score of the urban non-scheduled caste students in the fields of insight, to borrow help, and patience was above the average; for other groups it was below normal; (vii) There were no significant differences as regards the development of rights, management and attitude towards the opposite sex among the scheduled caste and non-scheduled caste students.

Manav (1981) studied the study of “attitudes, self-concept and values of professional and non-professional college students and relationship of these variables with their achievement.” The objectives of the study were: (i) To compare the attitudes, values and self-concepts of the professional and non-professional college students; (ii) to compare the attitudes, values and self-concepts of the students preparing for the
engineering, medicine and teaching professions; (iii) to determine whether there were significant differences in the attitudes, self-concepts and values of professional and non-professional college students; (iv) to determine whether there were significant differences in the attitudes, self-concepts and values of the students preparing for the above three professions; (v) to ascertain the relationship of attitudes, self-concept and values with achievement of professional and non-professional college students, and (vi) to identify the factors that contributed more significantly to the academic achievement of students in a particular faculty.

The findings of the study were: (i) The professional students perceived themselves as more confident and suffering more from the feeling of emotional instability than the non-professional students; (ii) The engineering and medical students did not differ significantly on the self-concept dimensions, achievement, withdrawal, inferiority feeling and emotional instability. They differed only on the confidence dimension; (iii) The engineering students were found to be perceiving themselves as more confident and superior to the teacher training students; (iv) The medical students perceived themselves as more suffering from the feeling of emotional instability than the teacher training students, while the teacher training students perceived themselves as more suffering from the feeling of withdrawal and tendencies to escape from the situations of life than the medical
students; (v) The professional students differed significantly from the non-professional students with regard to attitudes towards teachers and society. The non-professional students had more positive attitude towards their teachers and society than the professional students; (vi) The teacher training students exhibited more positive attitude towards their teachers than the engineering students, while the engineering students exhibited more positive attitude towards family than the teacher training students; (vii) The medical students possessed more favourable responses toward family and society than the teacher training students; (viii) The professional students placed the educational value at the top, the humanistic and social values in the second and third places and the personal value at the fourth place. The non-professional students placed the humanistic value at the top, the educational and social value at the second and third places and the religious value at the fourth place; (ix) None of the self-concept variables was found to be significantly related to the students' achievement; (x) There was no relationship between students' attitudes and achievement; (xi) None of the values was found to be significantly related to the achievement of professional and non-professional students.

Saxena (1981) studied the "self-concept, study habit and school attitude as correlates of socio-economic status and cultural setting in different divisioners and failures of high school students of Kanpur District."
The findings of the study were: (i) The socio-economic status had the most significant effects on self-concept, study habit and school attitude of different divisioners as well as failures of high school; (ii) The first divisioners belonging to the rural culture had better pattern of study habits than those belonging to the urban culture, whereas the second divisioners coming from the urban culture did so in comparison with the second divisioners coming from the rural culture; (iii) Rural culture promoted better study habits and achievement level because the rural students did not involve themselves in bad practices prevalent in an urban society; (iv) Similar results had been found in the case of third divisioners and failures in which the rural culture significantly promoted better study habits than the urban culture; (v) It was interesting to note that the first order interaction between socio-economic status and cultural setting had no significant effect on self-concept, study habit and school attitude. Also the second order interaction among scholastic achievement, socio-economic status and cultural setting had no significant effect on self-concept, study habit and school attitude.

Sharma (1981) studied “the differential study of self-concepts, personality adjustment and values of teachers at various levels.” The major objective of the study was to analyse the differences with regard to self-concepts, personality adjustment and values of college, secondary school and primary school teachers, urban and rural teachers and male and female teachers.
The major findings of the study were: (i) The primary school teachers perceived themselves to be better achievers than the college teachers while the differences between the primary and the secondary school teachers were not significant; (ii) Differences on self-concept about achievement of the rural and the urban teachers were not significant; (iii) Differences on achievement concepts of the male and the female teachers were significant; (iv) Self-concepts about self-confidence in the case of college teachers were more positive than in the case of the various other groups; (v) The urban teachers had higher mean scores than their rural counterparts with regard to self-confidence; (vi) The male and the female teachers did not differ with regard to the self-confidence dimension of the self-concept; (vii) The college teachers perceived themselves to be suffering from with drawing tendencies more prominently than the secondary school teachers; (viii) The same was the case where the urban teachers were compared with the rural teachers and the female teachers with the male teachers; (ix) On feelings of inadequacy, the secondary and the primary school teachers did not differ, but the college teachers perceived themselves as having the least feeling on inadequacy of all the groups; (x) The urban teachers also, as compared to the rural teachers, seemed to have less feelings of inadequacy; (xi) Sex difference was not important on this dimension of the self-concept; (xii) On emotional stability, the female teachers perceived themselves as being more emotionally instable than the male
teachers; (xiii) Differences on occupational, health, home, emotional and social adjustments were also significant among these groups of teachers; (xiv) Similarly, value structures of various groups of teachers were also significantly different.

**Agarwal (1982),** studied the “self-disclosure and academic achievement as related to self-concept and parent child relationship among major castes with special reference to girl students.” The major objectives of the study were: (i) To study caste differences in self-disclosure; (ii) to study caste differences in self-concept; (iii) to study caste differences in academic achievement; (iv) to study caste differences in parental acceptance; (v) to study caste differences in parental rejection; (vi) to study the relationship between self-disclosure and self-concept; (vii) to study the relationship between self-disclosure and parental rejection; (viii) to study the relationship between self-disclosure and parental acceptance; (ix) to study self-disclosure and academic achievement; (x) to study the relationship between self-concept and parental acceptance; (xi) to study the relationship between self-concept and parental rejection; (xii) to study the relationship between self-concept and academic achievement, and (xiii) to study the relationship between parental acceptance and academic achievement.

The findings of the study were: (i) There were statistically significant caste differences in self-disclosure. Kshatriya, Brahmin and Vysha girls were higher in self-disclosure than the girls belonging to
scheduled castes. Kshatriya girls revealed themselves in a very different manner. Brahmin girls were lower in self-disclosure than Vysha girls; (ii) There were statistically significant caste differences in self-concept. It was interesting to note that the girls belonging to scheduled castes had lower self-concept than Kshatriya, Brahmin and Vaish girls. The self-concept of Kshatriya girls was found on the top of the hierarchy. Vaish girls had higher self-concept than Brahmin girls; (iii) There were no significant caste differences with regard to academic achievement. The girls belonging to scheduled castes were low achievers than Kshatriya, Brahmin and Vysha girls. Kshatriya girls obtained highest marks in this respect and Vysha girls were higher achievers than Brahmin girls; (iv) There were no significant caste differences with regard to both dimensions of parent-child relationship, viz., parental acceptance and parental rejection; (v) There was a positive relationship between self-disclosure and self-concept. The higher the self-disclosure, the higher the self-concept and vice versa; (vi) There was a positive relationship between self-disclosure and parental acceptance. Accepted children disclosed themselves more freely than rejected children; (vii) There was a negative relationship between self-disclosure and parental rejection. Parental rejection inhibited children to communicate with each other; (viii) There was a positive relationship between self-disclosure and academic achievement; (ix) There was a positive relationship between self-concept and parental acceptance; (x) There was a negative
relationship between self-concept and parental rejection; (xi) There was a positive relationship between self-concept and academic achievement; (xii) There was a positive relationship between academic achievement and parental acceptance and a negative relationship between academic achievement and parental rejection.

Kale (1982) studied the "development of self-concept at preadolescent level with reference to some family and school factors."

The objectives of the study were (i) to trace the general development of self-concept at the preadolescent level as a function of age and sex; (ii) to study sex differences in self-concept development, (iii) to study the relationship of internal family factors like parent-parent and parent-child relationships with self-concept at the pre-adolescent level, and (iv) to study the relationship of school factors like teacher-students and peer relations with self concept at the preadolescent level.

The major findings were: (i) The perceived self did not show a downward trend throughout the preadolescent period. It showed a significant upward trend at the end of this period. According to this the self-concept did not remain static and showed gradual development up to the end of the preadolescent period; (ii) Boys and girls did not differ significantly in self-concept development; (iii) Perception of family factors as well as school factors showed significant development in concept perception of parent-child relationship; (iv) Girls showed more under
standing for parent-parent relationship, teacher-student relationship and at the end of the pre-adolescent period. Parent-child relationship; (v) Parent-parent relationship was highly significantly related to self-concept; (vi) Teacher-student relationship was important in self-concept; (vii) Teacher student relationship was significantly associated with self-concept; (viii) Peer relations were important in development of self-concept; (ix) Family factors jointly were significantly associated with self-concept; (x) School factors jointly were significantly associated with self-concept.

Prasad (1982) studied “the factors that influence stability of the self-concept.”

The main aim of the study was to analyse certain important factors of stability of the self-concept.

The major findings were: (i) Anxiety, insecurity, self-role incongruence and self-satisfaction were the factors which influenced stability of the self-concept; (ii) Social change had not been identified as an independent factors of self-consistency; (iii) Older and younger generations differed significantly on anxiety, insecurity, self-role incongruence and self-satisfaction.

Sarswat (1982) studied “the self-concept in relation to adjustment, values, academic achievement, socio-economic status and sex of high school students of Delhi.”
The major findings were: (i) The boys' self-concept was positively and significantly related to social adjustment, while the girls' self-concept was positively and significantly related to home, health, social, emotional, school, as well as total adjustment; (ii) The boys' self-concept was positively and significantly related to political and religious values, while the girl's self-concept was not related to any of these values; (iii) Only intellectual self-concept was positively and significantly related to academic achievement in both the sexes; (iv) Boys and girls differed significantly on total self-concept and its physical, social and moral dimensions. Girls were found to be higher on all these dimensions.

Bharathi (1984) studied “the self-concept and achievement motivation of early adolescents.”

The objectives of the study were to study (i) the aspect of self-concept, that is real, ideal self-concept and self-ideal discrepancy; (ii) the achievement motivation and various self-concept measures in different groups, different sex groups, and different socio-economic status groups, and (iii) to observe the interaction effects of age, sex and socio-economic status and achievement motivation.

The findings of the study were (i) Older age-group subject perceived themselves as being less able less aspiring for greater ability and showed more dissatisfaction with their ability; (ii) No age differences were found in self-concept with respect to adjustment; (iii) No significant age differences were found in the personal social orientation aspect of self-
concept in the real self-concept; (iv) In the masculinity-feminity aspect of self-concept, age differences were not significant; (v) The strength of achievement motivation increased significantly from twelve years to sixteen years; (vi) At different age-levels, different self-concept measures were found to be related with academic achievement; (vii) In the ability aspect on self-concept no sex differences were observed; (viii) Girls perceived themselves better adjusted and also aspired to be better adjusted than boys; (ix) Boys perceived themselves to be more personality oriented than girls and they also aspired to be more personally oriented; (x) Boys perceived themselves to be more masculine and also would like to be more masculine as compared to girls; (xi) Girls were more dissatisfied with their perceived self than boys; (xii) No sex differences were found in achievement motivation; (xiii) The self-concept of ability was not affected by socio-economic status; (xiv) Low socio-economic status subjects perceived themselves less adjusted and felt greater dissatisfaction with themselves in this aspect; (xv) Low socio-economic status subjects wanted to be more socially oriented as compared to high and middle SES subjects; (xvi) The influence of the age variable on the masculinity-feminity aspects of self-concept was different in different SES groups; (xvii) Middle SES groups showed greater satisfaction with self in general; (xviii) Achievement motivation was found to be the highest among the high SES groups and lowest in low SES groups.
Panwar (1986) studied “the roles of academic achievement and school background in self-concept, self-disclosure and inferiority feeling among students of Kumaun hills.”

The main findings of the study were: (i) Academic achievement had significant effect of self-concept; (ii) Home background had significant effect on self-concept; (iii) School background had significant effect on self-concept; (iv) Academic achievement had no significant relationship with feeling of inferiority; (v) There was no significant effect of school background on feeling of inferiority.

Sorubarani (1991) studied “the relationship between child abuse and self-concept.” This study was undertaken to investigate the relationship between child abuse and the self-concept of school going children.

Objectives: (i) To study the forms of child abuse experienced by school going and working children; (ii) to study the relationship between the forms of child abuse and self-concept; (iii) to study the relationship between income, education of parents, and type of family and child abuse, and (iv) to study the difference in the type of punishment given to boys and girls.

Major findings: (i) Both oral and physical punishment lowered the self-concept of school-going children but did not affect the working children; (ii) Parents with school-level education had a more positive approach towards their children as far as oral and physical punishment
was concerned than the parents with higher education; (iii) A positive approach by parents towards the children improved their self-concept; (iv) Both boys and girls in the school going group experienced similar type of oral and physical abuse; (v) Child abuse by parents of working children was similar to that by parents of school going children.

**Chowhan (1992)** studied “the values, self-concept, creativity and anxiety among professional college students.”

**Objectives**: (i) To find out the values of the students of the colleges of engineering, medicine and teaching; (ii) to find out the self-concept of the students of the colleges of engineering, medicine and teaching; (iii) to find out the creativity of the students of the colleges of engineering, medicine and teaching; (iv) to find out the anxiety of the students of the colleges of engineering, medicine and teaching, and (v) to compare the values, self-concept, creativity and anxiety among students of engineering, medicine and teaching.

**Major findings**: (i) There was a little difference in the values of engineering and medical students; (ii) There was a little difference in the values of engineering and teacher-training students; (iii) There was no difference in self-concept between students of engineering colleges and medical colleges; (iv) There was no difference in creativity between students of medical colleges and engineering colleges; (v) A significant difference existed in the anxiety of engineering and medical college
students in comparison to students of teacher-training colleges; (vi) There was a difference in creativity between students of medical colleges and of teacher-training colleges.

Ganapathy S. (1992), studied “the self-concept of student-teachers and their attitude towards teaching profession.”

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

Major findings: (i) Both male and female student-teachers had a favourable attitude towards teaching profession; (ii) Both male and female student-teachers had a positive self-concept, and it was related to their attitude towards the teaching profession.

Prabhatsinh et al (1992) studied “the adjustment, aggressiveness, achievement-motivation and self-concept of physically handicapped students as compared to normal students.”

Objective: The compare physically handicapped children with normal children on adjustment, aggressiveness, achievement-motivation and self-concept.

Major findings: (i) The normal students of Standards VIII and IX were better adjusted than the physically handicapped students of
Standards VIII and IX, respectively; (ii) Among the physically handicapped students, Hindu and Muslim students were better adjusted as compared to Jain students; (iii) The physically handicapped and the normal children did not differ significantly as far as aggressiveness and achievement-motivation were concerned; (iv) Normal boys were superior to physically handicapped boys and normal girls were superior to physically handicapped girls with respect to self-concept.

Krishnan et al (1993), studied “the relationship between self-concept and academic achievement of college students.”

The major findings of the study were: (i) There was a significant relationship between self-concept and academic achievement of the college students; (ii) There was a significant difference of means between arts and science group students in the self-concept; (iii) Sex had no influence on self-concept of the individuals; (iv) Similarly, birth orders had no impact on self-concept of students; (v) Different age groups had not shown any significant mean difference on self-concept score.

Verma et al (1993) studied “the self-concept of socially stigmatized individuals.”

The major findings of the study were: (i) The stigmatized and non-stigmatized students differed significantly only in intellectual and school status, anxiety and happiness and satisfaction dimensional self-concept; (ii) It was found that students of stigmatized group showed higher self-
concept than the students of non-stigmatized group in intellectual and school dimension status; (iii) On anxiety dimension of self-concept the stigmatized group showed lower anxiety than the non stigmatized group; (iv) On happiness and satisfaction dimension of self-concept, the stigmatized group was higher than the no stigmatized group; (v) As regards the sex differences in self-concept, the male and female students differed in behaviour physical appearance and attribute dimensions on behaviour dimension and on physical appearance and attribute dimension of self-concept female students showed more positive behaviour pattern as compared to male counterparts; (vi) On other dimensions, namely intellectual and school status anxiety, popularity, happiness and satisfaction as well as global self-concept, the male and female groups did not differ significantly; (vii) As regards the interactions, it was significant only in case of intellectual and school status and popularity on intellectual and school status, the female subjects of stigmatized group had more positive self-concept than their male counterparts it was reversed in case of non-stigmatized group on popularity dimension the male subjects of stigmatized group showed more favourable self-concept than their female counterpart in non-stigmatized groups females have show more favourable self-concept than males.

Agarwal (1994) studied “the relationship between sex and general self-concept in grade IX students.”
Objective: To examine the effect of the variables of subject’s sex on general self-concept and its various dimensions as measured by the Hindi version of Fitt’s Tennessee self-concept Scale.

Major findings: (i) The mean score of girls was greater than those of boys in the case of identity, self-satisfaction, behaviour, physical, moral-ethical, personal, self-criticism, total self-concept and its instability dimension. In the remaining two cases (family and social self), the values for the two sexes were almost identical; (ii) The study found the superiority of girls over boys in their role specific self-concept.

Rangappa (1994) studied “the effect of self-concept on achievement in mathematics.”

Objective: To study the possible effect of self-concept on mathematics achievement.

Major findings: (i) There was a significant difference in achievement of the students of Class VII in mathematics belonging to high, normal and low self-concept groups; (ii) The students of Class VII belonging to high self-concept group performed better in mathematics than the students belonging to normal self-concept group; (iii) There was a high significant difference of achievement between high and low self-concept groups. Students of class VII belonging to high self-concept group performed better in mathematics than the students belonging to low self-concept group; (iv) The students of Class VII belonging to normal
self-concept group performed better in mathematics than the students belonging to low self-concept group.

**Srivastava (1994)** studied “the values in relation to personality traits and self-concept”.

**Objectives** : (i) To find out the relationship between values and personality traits, and (ii) to find out the relationship between values and self-concept.

**Major findings** : (i) It was found that theoretical value was positively correlated with enthusiastic and self-disciplined factors which was significant and was negatively associated with frustration; (ii) Economic value was positively correlated with independent personality trait and was negatively correlated with self-discipline; (iii) Social value was positively correlated with out-going and independent personality factor was significant. Political value of the students were positively correlated with socially bold and negatively correlated with frustration; (iv) Religious value showed positive relationship with demanding and individualistic personality factors; (v) Social and political values were positively correlated with all the three aspects of the self-concept whereas theoretical, economic, aesthetic and religious values did not show any significant relationship with all three aspects of the self-concept; (vi) Students ad achieved the highest score on social value and lowest score on aesthetic value. It showed that students preferred social values in comparison to other values.
Sundarafajan and Rajasekar (1994) studied “the self-concept and adjustment problems of B. Ed. teacher-trainees.”

Objectives: (i) To find out if there is any significant difference between the teacher-trainees in pairs, taking any one pair at a time, in respect of their total adjustment and also their adjustments in the five areas, namely, home, health, social, emotional and educational, and (ii) to find out the nature of relationship existing between the self-concept and the adjustment of the teacher-trainees.

Major findings: (i) The men teacher-trainees were found to be better than the women teacher-trainees in social adjustment and emotional adjustment; (ii) The women teacher-trainees were better than men teacher-trainees in health adjustment; (iii) The post-graduate teacher-trainees were seen to be better than their graduate counterparts in all areas of adjustment, except in health adjustment; (iv) The teacher-trainees of the humanities group were better in health adjustment than the teacher-trainees of the science group; (v) The science teacher-trainees had more health problems than the teacher-trainees of the humanities group, but they were better than the teacher-trainees of the humanities group in respect of the total and home adjustment; (vi) The teacher-trainees with a high level of self-concept were better than their counterparts with a low level of self-concept in all the areas of adjustment, except the home area, where there was no significant difference.
Jaowad (1996) studied "the study of self-concept, body image, adjustment and performance of hockey players."

The major findings of the study were: (i) Self-concept, body image, adjustment and performance of hockey players were found to be significantly correlated; (ii) Self-concept, body image and adjustment emerged as predictors of high performance; (iii) The players who have achieved high level of performance, scored higher on self-concept, body image and adjustment as compared to the low level performers.

Saroja (1997) studied the "self-concept and achievement-motivation of female adults towards literacy." The objectives of the study were: (i) to study the differences in the personality traits of self-concept and achievement-motivation of female adults of different age groups in different regional and socio-economic backgrounds; (ii) to study correlation of the personality factors with literacy level of the subjects and evaluate their effect on motivating female adults towards acquiring literacy, and (iii) to study interaction effects of area, socio-economic status, age and literacy level of self-concept and achievement-motivation.

The major findings of the study were: (i) Females from rural, semi-urban and urban areas did not differ in their self-concept; (ii) Low SES and high SES females differed significantly in their self-concept. (iii) Effect of age on self-concept of female adults was not significant.
(iv) Literacy was a potent factor in determining self-concept of female adults; (v) When the effect of literacy was isolated, SES did not significantly affect self-concept; (vi) Achievement-motivation (n Ach) of females residing in rural, semi-urban and urban areas was not significantly different; (vii) SES had significant effect on n Ach of female adults; (viii) Lower age females had higher n Ach than higher age females. (ix) Literate females had significantly higher n Ach than illiterate females; (x) Two-way interaction effects of literacy with age and SES were significant; (xi) Positive correlation existed between self-concept and n Ach of female adults; (xii) Ability and adjustment, the two traits of self-concept, were significant in relation to SES, age and literacy, whereas the third trait, social orientation, was more related to the area of the subjects.

Minnalkodi (1997) studied “the higher secondary school students’ achievement in zoology in relation to anxiety, achievement-motivation and self-concept.”

Objectives: (i) To find out the level of achievement in zoology in relation to anxiety, achievement-motivation and self-concept, among the whole sample, different sex, different locality, different types of schools, occupations, SES of the students; (ii) to find out whether there is a significant difference in the achievement scores, anxiety scores, achievement-motivation scores and self-concept scores of different sex, locality types of schools, different occupations and different SES; (iii) to
find out whether there is a significant relationship between anxiety scores and achievement scores of zoology as well as with different sub samples; (iv) to find out whether there is a significant relationship between achievement-motivation scores and achievement scores of zoology as well as with different sum samples; (v) to find out whether there is a significant relationship between self-concept scores and achievement scores in zoology as well as with other sub samples; (vi) to find out whether there is a significant relationship between anxiety scores and achievement scores; (vii) to find out whether there is a significant relationship between anxiety scores and self-concept scores; (viii) to find out whether there is a significant relationship between achievement-motivation scores and self-concept scores, and (ix) to find out whether there is a significant relationship between independent variables, namely anxiety, achievement-motivation and self-concept on the one hand and independent variable, namely achievement in zoology on the other.

Major findings: (i) There was a significant difference between boys and girls on achievement scores, achievement-motivation, but not on anxiety or self-concept; (ii) The rural and urban students did not differ on their achievement, but on anxiety, achievement-motivation and self-concept, they differed significantly; (iii) The government and private school students differed significantly on their achievement, anxiety, while they did not differ on achievement-motivation and self-concept scores;
(iv) As regards the educational levels of parents, children who belonged to differing educational levels differed significantly on their achievement, but not on anxiety, achievement-motivation and self-concept; (v) Differing occupational status did not affect the achievement, anxiety, achievement-motivation and self-concept of students; (vi) Differing income levels of parents did affect the achievement levels of students, and anxiety, but not achievement-motivation and self-concept; (vii) There was a significant positive relationship among achievement scores, achievement-motivation and self-concept of students.

**Abroad Studies**

Itskowitz and Dimitrovsky (1986) conducted a study on “The Relationship between Teachers’ Self-concept and Their Tendency to Refer Students for Psychological Help”

The present research attempted to investigate the relationship between teachers' self-concept and the number of referrals for help initiated by them. Sixty teachers were divided into three groups, according to the number of student referrals for psychological help they had made during the previous school year. They were administered the Fitts' Tennessee Self-Concept Scale and a Student Problem Questionnaire relating to their declared tendency to refer problematic children. The relationship between the number of actual referrals and self-concept measures was examined by way of discriminant function...
analysis. Differences in the patterns of self-concept of the three referral groups were found in two functions: (1) activity pattern and decisiveness; (2) feelings towards the self. The relationship between the theoretically estimated rate of referrals and self-concept measures was also examined by discriminant function analysis. The results revealed a difference in pattern of self-concept in the function of feeling of inner wholeness.

Lawrence et al. (2000) undertook the “Multiple Dimensions of University Teacher Self-Concept: Construct Validation and the Influence of Students' Evaluations of Teaching.”

Discusses teachers' self-perceptions of their teaching effectiveness in higher education. Topics include self-concept; student evaluations of teaching effectiveness (SETs); a multidimensional university teacher self-concept instrument and an evaluation of its psychometric properties; and a multitrait-multimethod analysis of relations between multiple dimensions of teacher self-concept and SET rating dimensions.


Developed an instrument to evaluate teachers' professional self-concept from a multidimensional perspective, focusing on the association between dimensions of self-concept and teacher burnout. Results for 378 secondary school teachers in the Basque Country (Spain) show that a
six-factor model fit the data well and reveal numerous positive correlations between teacher self-concept subscales and psychological symptoms.

**Burnett et al. (2003)** conducted a study on “The Impact of Teacher Feedback on Student Self-Talk and Self-Concept in Reading and Mathematics”

Investigated the relationships between teacher feedback and students' self-talk and self-concepts in mathematics and reading. Data collected from students in six rural Australian elementary schools indicated that self-talk (positive and negative) mediated between subject-specific teacher feedback (ability, effort, and negative) and academic self-concept (evaluative and descriptive). Results suggest that teachers should be strategic and balanced when providing feedback to students.

**Heikki and Tereska (2006)** undertook study on “Early Childhood Musical Experiences: Contributing to Pre-Service Elementary Teacher's Self-Concept in Music and Success in Music Education”

This article studies early childhood musical experiences of Finnish pre-service elementary teachers (N=590). The article also analyses their connections between musical self-concept at student age and musical progress in teacher education. Research material was gathered by a questionnaire, which posed retrospective questions about childhood as well as questions about musical self-concept in real time. The musical
self-concept of student teachers was analysed through factor analysis within a field of six sectors: the general concept of one's own musicality, music conducting, musical taste, playing, singing and listening to music. The highest correlations between self-concept in music and the variables of early childhood experiences were the following: the pleasure of singing, the amount of singing, inventing one’s own songs and appreciation of music in the home. The most important impulses encouraging the playing of musical instruments proved to be the amount of playing of family members, the number of musical instruments in the home and the existence of a piano or other keyboard instrument at home. As mentioned before, early childhood musical experiences were also connected with the scores given for singing and piano playing in teacher education. The research results proved the importance of early childhood musical experiences, because they even at an adult age they still significantly correlate with the individual’s musical progress and his or her self-concept in music. At the same time they are part of his or her total personality.

Onghena et al. (2010) undertook study on “Teacher Child Interactions: Relations with Children’s Self-Concept in Second Grade, Infant and Child Development”

This study examined whether teacher-child interactions characterized by teacher involvement, structure, and autonomy support at the beginning of second grade predicted children’s global, academic,
social, and behavioural self-concept at the end of second grade. The study was conducted in 30 second grade classrooms with 570 children and their teachers. Data included teacher reports of teacher-child interactions and child reports of self-concept. Results showed that, when controlling for the initial level of self-concept, children's social self-concept was predicted by teacher involvement, structure, and autonomy support. In addition, teacher autonomy support predicted high academic self-concept. Finally, these teacher-child interaction characteristics did not contribute to the behavioural and global self-concept. The results were similar for boys and girls.

2.6 Studies Related to Study Habits

Teachers in schools should become facilitators of learning: the infinite treasure within every learner should be discovered and nurtured for the purpose of improving learning effective study skills. Study skills involve reference, reading, listening, study habits and strategies. Learning improves with planning of where, when and how much to study. Good health, sufficient sleep and recreation are important for the learner.

Positive attitude, proper physical condition and balanced emotional states are important factors influencing study habits (Crow and Crow, 1956). Depending on their goals and purposes in school learning, students adopt different learning strategies. Students may also face problems in their study like:
• Lack of concentration

• Taking down notes

• Using library.

• Time management.

Academic Achievement denotes the knowledge attained or skill developed in the school subject, usually designated by test scores. Achievement is influenced by personality, motivation opportunities, education and training.

**Indian Studies**

**Rao (1986)** Undertook study on “An inquiry into the study habits of B.Ed. students”

Objectives of the Study: This study is intended to identify the study habits of B.Ed students. This type of study can yield fruitful suggestions in promoting the study skills among student teachers.

Procedure of the study: This Study Habit Inventory is administered personally to a sample of 135 B.Ed. Students of Rayapati Venkata Ranga Rao College of Education, Guntur and Siddartha College of Education, Vijayawada, which are in Nagarjuna University area. Out of these 135 scripts, only 118 are got filled properly.
The scores are converted into percentages for drawing of conclusions. The percentages are categorized as very low; 0-20, low; 21-40, average; 41-60, high; 61-80, and very high; 81-100.

Results And Discussion

1. Regarding the budgeting of time for study, average percentage (47.5%) of the sample are studying at fixed and regular hours and only a low percentage (24.6%) are studying every subject regularly. Majority (79.7%) of the students are in an understanding that some intermittent rest pauses are necessary in the long hours of work.

   The above trend indicates that there is a need for regular study among students to remember the subject matter for quite a long time.

2. A high percentage (65.3%) of the sample are having a quiet and good place for study, when the sample is in study, the attention of 54.2% is not distracted by anything.

   It seems, regarding the physical condition for study, that the students need a quiet and good place for study in order to concentrate on the study.

3. All most all of the sample (93.2%) is having real interest in the course. High (61.9%) percentage are not thinking of anything else study when they are at study table.
The success of any course depends on the students’ interest in the course, and motivation in learning. The above trend indicates that almost all the students are having real interest in the teaching profession.

4. Regarding the reading skills. High percentage (61.8%) of the sample take down notes while they read. At the same time a very high percentage (85.6%) are summarizing the material at the end of their reading. High percentage (79.6) of the students are adjusting their speed of reading to the difficulty and the importance of material.

It is very important to take down notes while either reading a book or listening to while either reading a book or listening to a lecture. Summarization of the material at the end is also very essential for easy understanding and for long time memory. And one has to adjust his speed of reading to the difficulty and importance of the material for easy understanding. The majority sample expresses the same views.

5. Regarding the skills in learning and memory the majority of the students (83.9%) take the help of either friends or teachers, when they do not understand properly. Most of the students (79.6%) are not memorizing things without understanding the concepts properly. A very high percentage (83.9%) are aware of the fact that they lose touch with the subject and it is difficult to fill the gap, if they mess a
class. A low amount of sample (29.6%) do not review frequently the material that they have learnt.

The above views are very advantageous to the students; but at the same time the students have to review the subject material regularly for a long time memory.

**Conclusion**: On the whole, the prospective teachers are aware of the right study habits. After becoming teachers, these student-teachers can help their pupils in developing the study skills for their success in education.

**Ghalsasi (1988)**, Undertook study on “A descriptive and experimental study in the field of study habits/skills of students in secondary schools”

**Problem**: The study is concerned with identifying the factors, which affect the study skills of secondary school students. A programme to develop the desired study skills was prepared and tried out.

**Objectives**: (i) To find out the trends and patterns in the existing study habits of student; (ii) to explore the relationship between study habits and socio-economic background; (iii) to prepare a programme to develop the desired study habits/skills; (iv) to find out the effect of the programme on study habits and academic performance, and (v) to ascertain the teachers views about students study habits/skills.
Methodology: A random sample of 950 students studying in Classes VIII, IX and X was chosen from Pune City. Another sample of 45 teachers teaching science in those schools was also chosen using random tables. The data were collected by administering Palsane’s Study Habits Inventory, Nafde’s Non – Verbal Test of Intelligence and a questionnaire developed by the investigator Academic achievement was taken as scores from the school records. Solomon’s Four Group Experimental Design was used for finding out the efficacy of the programme developed.

Major Findings: (i) significant differences were not noticed between the study habits scores and the achievement scores; (ii) The majority of the students had no clear idea about the purpose of studying and the objectives of schooling their response being ‘better jobs’ ‘knowledge’ social status’ etc.; (iii) Nearly 60% of the students could do silent reading but there was lip movement and murmuring during silent reading; (iv) Nearly 25% of the students could not get time for studying at home; (v) Over 70% of the students did not prepare a timetable for studies; (vi) Not more than 50% of the students got guidance from parents; (vii) The analysis of variance of study habits indicated that the treatment through the programme provided was effective in changing the study habits in the desired direction; (viii) The analysis of co-variance of academic achievement indicated that treatment through the programme was effective in improvising the achievement in the positive direction.
Singh (1990) conducted a study on “Creative thinking in relation to level of aspiration. Field dependence/independence and study habits among Scheduled Castes and Scheduled Tribes students”

Problem: This study compared the low and high creative students from Schedules Castes and Non-Scheduled Castes in terms of their level of aspiration. Field dependence/independence and study habits.

Objectives: (i) To compare high and low verbal creative among Scheduled Castes and non Scheduled Castes students in relation to their level of aspirations. Field dependence/independence and study habits; (ii) to compare high and low picture creative among Scheduled Castes and non-Scheduled Castes students in relation to the above variables, and (iii) to study the effect of locality, faculty, level of achievement and sex of students in relation to their creativity.

Methodology: One hundred and sixty five Scheduled Castes and 447 non-Scheduled Castes students from Classes XI and XII studying in 15 secondary schools in the Rohilkhand region were selected by the multi-stage random sampling technique. Verbal and non-verbal Tests of Creative Thinking by Torrance Test of Level of Aspiration by Shah and Bhargava Group Embedded Figures Test by Oltman, Raskin and Witkin and Study Habit Inventory by Raina and Kumar were used in the present study. The statistical techniques used included 't' test 'F' test, correlation matrix and analysis of variance.
**Major Findings:**

(i) There was no significant relationship between creativity and level of aspiration of Scheduled Castes as well as non Scheduled Castes students; (ii) Among Scheduled Castes students, high picture creative were more field-independent than the low picture creative; (iii) Among the non-Scheduled Castes students, high verbal creative were significantly more field-independent than their low verbal creative counterparts; (iv) The difference between the study habits of high creative and low creative Scheduled Castes students was insignificant; (v) High and low picture creative of non-Scheduled Castes group differed significantly and positively in terms of study habits; (vi) On verbal creativity, the Scheduled Castes urban and science students excelled significantly as compared to their rural group and arts group counterparts; (vii) Among non-Scheduled Castes students, the urban group and high achievers showed significantly higher verbal creativity than their rural group and low-achiever counterparts; (viii) Among Scheduled Castes students, urban students were found to be significantly better with respect to picture creativity than the rural students; (ix) Among the Non-Scheduled Castes students under the urban category, female and science groups were significantly better in picture creativity than their counterparts of rural, male and arts groups, respectively; (x) The creativity of any student did not influence his level of aspiration; (xi) In the case Scheduled Castes students, picture creativity had positively influenced the field independence, whereas in the case of
Non-Scheduled Castes students, it was verbal creativity; (xii) The creativity of Scheduled Castes students did not affect their orientation towards the syllabus whereas Non-Scheduled Castes students picture creativity was found directly proportional to the syllabus free orientation; (xiii) In the case of Scheduled Castes students. Locality and faculty of the students had affected their level of creativity; (xiv) In the case of Non-Scheduled Castes students, along with locality and faculty, the sex and the achievement level of the students had also affected their level of creativity.

**Deb et al. (1990)** Undertook study on “Relationship between study habits and academic achievement of undergraduate home science final year students”

**Problem**: This study attempts to determine the relationship between the selected study habits and academic achievement of the final year B.Sc. (Home Science) students of the Punjab Agricultural Ludhiana.

**Objective**: To find out the relationship between selected study habits and academic achievement.

**Methodology**: The present study was conducted on randomly selected 90 final years 1985-86 B.Sc, (Home Science) students of the college of Home Science. The Study Habit inventory developed by Bhilal Bhai and Patel was used as a tool to collect the data. Coefficient of correlation was used in the treatment of the data.
Major Findings: (i) Home environment of the students and planning of schedule was significantly related to their academic achievements; (ii) Suggestions and comments were related to academic achievement; (iii) The relationship between concentration for examination and academic achievement was significant; (iv) Significant relationship between study habits and academic achievement was found; (v) Students' habits and interests also influenced their academic achievement; (vi) College environment was related to study habits.

Sarojamma (1990) conducted a study on "A comparative study of reading ability and social maturity of over normal and underachievers of Standard VII"

Problem: The Study is centered around under – normal and overachievers and their reading ability and social maturity.

Objective: To measure and compare the reading ability of under., normal and over achievers and of the subgroups of these categories of students based on sex, type of schools, and social maturity.

Methodology: The study was conducted on a final sample of 1,000 Standard VII students whose medium of instruction was Kannada. This sample was drawn from the total population of 28,055 by giving proportionate representation to categories like sex, government and private schools. The final sample comprised 476 boys and 524 girls. The tools used for collection of data were the Non-verbal Group Test of
Intelligence by Premalatha, a standardized Achievement Test Battery by Auna, Silent Test Battery by Shivananada and DeveGowda, and Social Maturity Scale by Sathyanarayana and Sudha. The multiple classification analysis of variance and ‘t’ test were used for testing the hypotheses.

**Major Findings:** (i) There was significant difference in the reading ability of (a) normal and underachievers, (b) over – and normal – achievers, (c) girls and boys, (d) students having high and normal social maturity, (e) students having high and low social maturity, (e) students having high and low social maturity, and (f) students in private and government schools; (ii) The interaction effects of the variables on reading ability, hypothesised were not significant.

Roy (1990) conducted a study on “A study on verbal creativity, general anxiety and self-concept as predictors of creative reading ability of students”

**Problem:** This study attempts to enable teachers to encourage creative reading ability in students. As that alone can liberate their minds from the overwhelming influence of the printed material all around them. Convergent thinking will not help them in the matter. Instead, divergent and original thinking are needed. But there are many variables, which influence the development of creative reading ability. The researcher investigates the influence of a few of them.
Objectives: (i) To ascertain the creative reading ability of students with the help of a standardized CRA test; (ii) to appraise the extent of self- concept and general anxiety of the students with the help of two weighted scales in the two dimensions; (iii) to find out sex – wise differences, if any, in the CRA test; (iv) to determine the relationship between the creative reading ability of the students and the independent variables stated above in (iii) and (v) to develop a regression equation of the CRA of the students on the determinants identified in the study.

Methodology: Students of Class VIII of 15 schools in Calcutta and in rural areas formed the sample of the study. The tools used were Creative Reading Test (CRT) Self- Concept Questionnaire (SCQ), General Anxiety Neurosis (GAN), and Verbal Creativity (VC).

Major Findings: (i) Boys did not show better creative reading ability (CRA) than girls, while urban students showed better in CRA as compared to rural students; (ii) Boys did not show better self- concept than girls (iii) Rural students did not show better self-concept than the urban students; (iv) Boys exhibited less anxiety than girls; (v) Creative reading ability and self – concept were found to be significantly correlated; (vi) There was a positive correlation between the scores obtained by the students in the CRA test and the VC test; (vii) There was a negative correlation between GAN and VC; (viii) Creative reading ability could be predicated from SCQ, GAQ, and VCT.
Devaraja (1992) undertook study on “Impact of socio economic factors on the reading habits of students in the secondary schools of Kerala”

**Problem:** The study addresses the problem of ascertaining the impact of socio economic factors on the reading habits of students in the secondary schools of Kerala.

**Objectives:** (i) To analyse the impact of socio economic factors on the reading habits of pupils; (ii) to identify pupils’ preference as regards the type of reading materials; (iii) to find out the type and sources of materials they select for their preparation for examinations; (iv) to study the impact of radio, television and computer-aided teaching on their reading habits; (v) to find out the relationship between SES background and pupils’ reading habits, the (vi) to study the variation, if any, in the nature of reading habits amongst those hailing from schools situated in the urban, semi-urban and rural areas, the degree of variance between socio-economic variables and reading materials and the influence of age and gender on reading habits, and (vii) to make suggestions for improvement in the reading habits of students studying in the secondary schools of Kerala.

**Methodology:** The sample consisted of the Class VIII, Class IX and Class X students of 32 schools in the Kotayam educational district, selected by using the stratified random sampling technique. The data
were gathered through structured questionnaire and interview. The first part of the questionnaire pertained to the socio economic background of the pupils. The second part contained items meant to ascertain reading habits. The questions were both open-ended as well as closed type. Percentages and F-ratios were used to treat the data.

**Major Findings:**

(i) Irrespective of the socioeconomic background. The majority of secondary school pupils were found to be interested in various types of books especially novels, with books on science subjects being their second choice. They showed very little interest in geography books; (ii) Readers of Malayalam language books formed the single largest group; (iii) Textbooks were reported as the main source for the preparation of examinations; (iv) Dictionaries were found as the most popular, and encyclopedias as the least popular reference materials; (v) The majority of students showed interest in reading sensational items of news in the newspapers; (vi) A vast majority of pupils listed to radio and watched TV programme, and did not feel that these would cause hindrance in their reading activities; (vii) A higher percentage of students from rural areas were found to be reading literature, especially novels, as compared to their urban counterparts; (viii) A higher percentage of male pupils were found to be reading novels than their female counterparts; (ix) More students from rural and backward communities were found to be reading storybooks of a general nature were as the urban students showed a preference for reading detective stories; ix) There was
significant difference in the choice of story – books by students from various income groups.

**Kulshrestha (1992)** Undertook study on “The effect of School environment on adjustment, study, habits and achievement of high school students”

**Problem:** The study focuses around the role of school environment on adjustment, study habits and achievement.

**Objective:** To study the effect of school environment on adjustment, study habits and achievement.

**Methodology:** The sample comprised 509 students of Class XI of different institutions of Agra City selected adopting stratified random sampling procedure. The tools used in the study included School Environment Inventory by Misra. Adjustment Inventory by Signh, and Study Habit Test by Patel, apart from considering high school marks as academic achievement indicator Mean, SD and ‘t’ test were used for data analysis.

**Major Finding:** (i) Different groups formed on the basis of cognitive encouragement, acceptance and rejection did not differ significantly in their scores on home adjustment; (ii) Regarding health adjustment, groups formed on the basis of rejection differed significantly; (iii) Low and average groups formed on the basis of acceptance and high and average group formed on the basis of creative stimulation differed significantly in
their scores of social adjustment; (iv) No difference was found in emotional and total adjustment scores of various groups formed on the basis of rejection control; (v) Regarding home environment, reading and note taking planning of subject and habit of concentration various groups formed on the basis of acceptance and rejection did not differ significantly; (vi) Groups formed on the basis of high permissiveness and control did not differ significantly in their scores of preparation for examination; (vii) Groups formed on the basis of cognitive encouragement, acceptance and rejection differed significantly in their achievement.

Nagaraju (2001) conducted a study on “Study habits of X class pupils in relation to certain factors”

Objectives: (i) Caste would not have significant influence on study habits of the pupils; (ii) To know the influence of Income of the family on study of the pupils; (iii) To know the influence of birth order of the pupils on their habits.

Sample: The present study is “Study habits of the X Class pupils in relation to certain factors” For this purpose, the study habits inventory and the Socio Economic Scale are used. These two are administered on 200 pupils of X class in 2 selected urban and 2 selected rural schools of Guntur district in Andhra Pradesh.

Findings: (i) There is no impact of the Caste on study habits of the pupils; (ii) There is no impact of the Income of the family on study habits.
of the pupils; (iii) There is no influence of Birth order on study habits of the pupils.

Nada (2001) “Study habits of socially advantaged and disadvantaged school students”.

Sample: The study involved 100 general caste students and 100 students belonging to scheduled castes and scheduled tribes. The sample was selected from four high schools of class IX of Bhubaneswar city. The students were selected by the draw of lots.

Test and procedure: Study Habits Inventory development by Anand was used. It consist of 60 statements which have four dimensions such as Self-Study, Comprehension, Seriousness and Hard work. The reliability and validity of this inventory has been established, Students may take 10 to 15 minutes to enlist their study habits on this tool. The norms of the inventory suggested that a score. Of 80 around the mean score arrived at as a whole and a score of 20 may be taken as a desirable score on each of the four study habits constituting the Inventory.

Conclusion: Since both socially - advantaged and socially disadvantaged students need help to improve their study habits. It is important that programmes for the improvement of study skills be developed by practicing teachers at school, researchers and psychologists. 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 number of hurdles on the way to the development of good and cultured citizens.

**Abroad Studies**


In previous research, the Estes-Richards Inventory of Study Habits (ERISH) has proven to be a reliable tool, with a stable factor structure when administered to large classes of engineering students. However, in the previous study (FIE 99), there was minimal variability in grades in this Introduction to Engineering class, and thus the ERISH results were not strongly related to performance. In an attempt to find a class with greater variability in performance, the author studied a first year Single Variable Calculus class. The ERISH was administered twice: once with respect to classes in general and then with special focus on the Calculus class. In this paper, the results from this new sample of students reflect on how to improve study skills and habits among first year students.

Wakefield and Doughtie (2004) undertook study on “Related factors of the Survey of Study Habits and Attitudes and the Vocational Preference Inventory”

The Survey of Study Habits and Attitudes (SSHA) and the Vocational Preference Inventory (VPI) were administered 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 the VPI which accounted for 31% of the variance of the two instruments. The related components were interpreted as indicating that a dimension running from an academic orientation to a nonacademic orientation was measured by certain scales of each instrument.

Igun (2007) conducted a study on “Study Habits of Postgraduate Students in Selected Nigerian Universities”

There are still barriers to creating a study environment that will inculcate good study habits in postgraduate students. The library is still the best place for quiet study. There should be privacy and reading materials, computers, printers, reference materials, email stations, comfortable lighting, and a quiet atmosphere. A serious postgraduate student should give priority to studying in the library.

Marcus et al. (2008) conducted a study on “Study Habits, Skills, and Attitudes: The Third Pillar Supporting Collegiate Academic Performance”

Study habit, skill, and attitude inventories and constructs were found to rival standardized tests and previous grades as predictors of academic performance, yielding substantial incremental validity in predicting academic performance. This meta-analysis ($N = 72,431$, $k = 344$) examines the construct validity and predictive validity of 10 study
skill constructs for college students. It was found that study skill inventories and constructs are largely independent of both high school grades and scores on standardized admissions tests but moderately related to various personality constructs; these results are inconsistent with previous theories. Study motivation and study skills exhibit the strongest relationships with both grade point average and grades in individual classes. Academic specific anxiety was found to be an important negative predictor of performance. In addition, significant variation in the validity of specific inventories is shown: Scores on traditional study habit and attitude inventories are the most predictive of performance, whereas scores on inventories based on the popular depth-of-processing perspective are shown to be least predictive of the examined criteria. Overall, study habit and skill measures improve prediction of academic performance more than any other noncognitive individual difference variable examined to date and should be regarded as the third pillar of academic success.

Malek et al. (2009), Study Habits and Their Relationship with Academic Performance among Students of Abadan School of Nursing.

Background and Objective: Improvement in learners' academic performance is one of the main goals of educational centers. Academic performance is affected by a lot of factors; study habit is one of them. Considering the importance of one's study habits in academic performance, this study was conducted to identify the students' study
habits and their relationship with academic performance in Abadan School of Nursing. Methods: This cross sectional study was conducted on 150 students of Abadan School of Nursing in 2007. Data was collected using Palsane and Sharma Study Habit Inventory questionnaire which was completed in a self-directed way at the time of holding final exams. Results: 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. Conclusion: Generally speaking, the students' study habits are considered to be moderate; that is to say that their study method is not of good quality. Considering the importance of study habits in academic performance and achievement, planning to improve students' study habits and methods and interventions in this regard can be effective.

Ozsoy et al (2009) conducted a study on “Metacognition, Study Habits and Attitudes”

This study is conducted to investigate the relationship between fifth grade students' metacognition levels, and their study habits and attitudes. Participants of the study consist of 221 students, 125 female
and 96 male, enrolling to six public primary schools in Turkey. The results revealed that there is a medium positive relationship between metacognitive knowledge and skills and study habits ($r = 0.351$, $p$ less than 0.05), study attitudes ($r = 0.415$, $p$ less than 0.05) and study orientation ($r = 0.434$, $p$ less than 0.05). Additionally, the results of the study showed that there is no significant relationship between metacognition and study habits and attitudes for low and medium achievers but, there is a significant relationship for high achievers.

**Aluja and Angel (2009)** conducted a study on "Socialized Personality, Scholastic Aptitudes, Study Habits, and Academic Achievement"

This study analyzed the relationships among Cattellian personality factors, scholastic aptitudes, study habits, and academic achievement. A total of 887 volunteer students from primary education (453 males and 434 females), enrolled in 29 public schools, participated in this research. It was found that the scholastic aptitudes were the most predictive variables of achievement, while the personality traits had a low direct contribution to academic achievement, although the students with higher scores on socialized personality traits showed better study habits than those students with lower scores on personality socialization traits. The relationship between personality and academic achievement seems to be mediated by study habits. Moreover, females obtained higher academic achievement scores than males. These differences could be
explained by the fact that females showed a more socialized personality pattern and better study habits.

**Gokhan et al (2009)** conducted a study on “Metacognition, study habits and attitudes”

This study is conducted to investigate the relationship between fifth grade students’ metacognition levels, and their study habits and attitudes. Participants of the study consist of 221 students, 125 female and 96 male, enrolling to six public primary schools in Turkey.

The results revealed that there is a medium positive relationship between metacognitive knowledge and skills and study habits ($r = .351, p < .05$), study attitudes ($r = .415, p < .05$) and study orientation ($r = .434, p < .05$). Additionally, the results of the study showed that there is no significant relationship between metacognition and study habits and attitudes for low and medium achievers but, there is a significant relationship for high achievers.

**Mbah (2010)** Undertook study on “The impact of ICT on students’ study habits. Case study”

This research aimed at investigating the impact of information and communication technology (ICT) on students’ study habits. The research was conducted with two main purposes; Firstly, to investigate students’ familiarity and attitude towards ICTs, and secondly, to examine the possible relationship between students’ use of ICTs and study habits.
The results revealed that students have a positive attitude towards ICTs as such use them to facilitate learning, although male students are more favourable toward ICT usage and likely to find that ICT's help them at their studies. As such students constantly change their study habits based on the type of ICT they use to ease studies.

Bolanle et al (2010), conducted a study on “Study habits among Nigerian secondary school students with brain fag syndrome”

Brain Fag Syndrome (BFS) is a psychiatric disorder associated with study affecting two to four out of every ten African students. One of the consequences of this illness is early foreclosure of education in affected students. Etiological factors such as nervous predisposition, motivation for achievement, and psycho-stimulant use have been found associated with it. However, the contributions of study habits to the pathogenesis of this study-related illness deserve more attention than has been given. This cross-sectional study was carried out to ascertain the types of study habits associated with BFS among a sample of senior secondary school students in Ile-Ife, Nigeria. Five hundred students from six schools in Ile-Ife were selected using a stratified random sampling technique. The selected students completed the Socio-demographic Data Schedule, the Brain Fag Syndrome Scale, and Bakare’s Study Habit Inventory. The prevalence of BFS was 40.2% (201). There were no significant socio-demographic variables identifying BFS students apart from those without BFS. The significant measures of study habits that predicted BFS were
homework and assignments, examinations, and written work. Those with BFS had 3.58 times the odds to perform poorly on homework and assignments, 3.27 times the odds to perform poorly on examinations, and 1.01 times the odds to perform poorly on written work compared to those without BFS. It was concluded that the results of this study suggest that homework and assignments, examinations, and written work were significant study habit variables associated with BFS.

Gujjar et al (2011) conducted a study on “A Comparative Study of the Study Habits of the Students of The Islamia University of Bahawalpur in Pakistan”

Study habits mean theme setting of subject to be learned or investigated, and the tendency of pupils or students to study when the opportunity is provided to them. Students cannot use effective study skills, until they are not having good habits. One individual learns more quickly and thoroughly than another due to good study habits.

The present study was conducted in order to determine the difference between the study habits of The Islamia University of Bahawalpur in Pakistan relating to selected variables, namely, Gender, Status, Faculty and Subject.

Five hundred students The Islamia University of Bahawalpur were taken by giving representation to the students of all departments of the Faculty of Science and Education. A forty-item questionnaire on five stages scale was administered to the students. The questionnaire was
divided into seven clusters, namely, Time management, Class attendance and participation, General study strategies, Exam preparation, Goal setting and motivation, Textbook reading and Note-taking. Data was analyzed by using SPSS XII. The reliability of the questionnaire was 0.869 (Cronbach's alpha).

Students of the faculty of education are significantly better than the students of the faculty of science on textbook reading. Female students are significantly better than their male counterparts on textbook reading. Students of earlier classes are significantly better than the students of the final year class on all parameters of the study habit scale.

On time management, students of Geography are significantly better and the students of Physics are significantly lower among the groups. On general study strategies, students of Geography are significantly better and students of Statistics are significantly lower among the departments/groups. On exam preparation, students of Psychology and Geography are significantly better and students of Physics is significantly lower among the departments. On goal setting and motivation, students of Psychology and Geography are significantly better while students of Health and Physical education and Physics are significantly lower among the groups/departments.

On textbook reading students of Fine Arts and Geography are significantly better while students of Health and Physical education,
Physics and Statistics are significantly lower among the departments. On note-taking, students of Geography and Computer Science are significantly higher and students of Chemistry are significantly lower among the departments/groups. On overall study habits scale, students of Geography are significantly better while students of Health and Physical Education; Physics and Statistics are significantly lower among the groups/departments.

Nouredine (2011) Undertook study on “Effective Physics Study Habits”

The study discussed the methods of efficient study habits and how they can be used by students to help them improve learning physics. In particular, we deal with ideas pertaining to the most effective techniques needed to help students improve their physics study skills. These ideas were developed as part of Project IMPACTSEED (IMproving Physics And Chemistry Teaching in SEcondary Education), an outreach grant funded by the Alabama Commission on Higher Education. This project is motivated by a major pressing local need: A large number of high school physics teachers teach out of field. In the presentation, focus on topics such as the skills of how to develop long term memory, how to improve concentration power, how to take class notes, how to prepare for and take exams, how to study scientific subjects such as physics. We argue that the student who conscientiously uses the methods of efficient study habits will be able to achieve higher results than the student who does
not; moreover, a student equipped with the proper study skills will spend much less time to learn a subject than a student who has no good study habits. The underlying issue here is not the quantity of time allocated to the study efforts by the student, but the efficiency and quality of actions.

2.7 Conclusion

From the above reviews it is seen that there are very few studies done in India on Environmental awareness in relation to personality factor, self concept and study habit. Hence the study the next chapter deals with design of the study.