CHAPTER-II
REVIEW OF RELATED LITERATURE

2.1 INTRODUCTION

This chapter deals with the review of related literature. It is an attempt to discover relevant material published in the problem area under study. This covers conceptual literature and the empirical research studies done previously in the problem area. The conceptual literature is useful in delimiting the problem area as well as useful for understanding the background of the problem.

Review of relevant literature helps the researcher to acquaint himself with the current knowledge in the field or area on which he is going to conduct his research.

The following are the advantages of review of related literature for the researches.

- The review of related literature enables the researcher to define the limits of his field; it helps in defining and delimiting the problem.

- The review enables the researcher to state the objectives clearly and concisely.

- By reviewing the literature, the researcher can avoid unfruitful and inapplicable problem areas.

- By reviewing the literature, the researcher can know about the tools, techniques, and research methodology and various statistical methods to be employed.

- By reviewing the literature, the researcher will know about the recommendations of previous researches for further research which acts as foundation upon which a constructive work can be done.

Keeping the above points in view the researcher has made an attempt to review the related literature of the problem in a systematic way

The research studies are categorized under the following headings.

1. Studies related to Environmental Awareness
2. Studies related to Academic Achievement
2.2 REVIEWS RELATED TO ENVIRONMENTAL AWARENESS

**Euler Aline (1989)** conducted a comparative study of the effectiveness of a formal versus non-formal environmental education programme for male and female 6th grade students with respect to environmental knowledge and attitude.

The study revealed that the experimental group showed significant gains over the control group with respect to knowledge and environmental attitude. The experimental group with formal environmental education had significant higher scores on the environmental knowledge and attitude over experimental group with informal environmental education.

**Shahanawaj, N (1990)** conducted a study on environmental awareness and environmental attitude of secondary and higher secondary school teachers and students in Rajasthan. The study revealed that

- 95% teachers and 94% students possessed positive environmental attitudes.
- The environmentally trained teachers and untrained teachers did not differ in their environmental attitudes and awareness.
- Teachers had more awareness of the environment than students.
- Girls possessed significantly more awareness of the environment than boys.

**Sundarajan, S** and **Rajasekhar, S (1993)** made a study on location and environmental awareness and it was found that the environmental awareness of higher secondary students in Tamil Nadu has not been influenced by their location.

**Fong Ting – Ya (1994)** conducted a study on environmental awareness of elementary school students and their parents in Taiwan. This study reveals that parent’s educational level made significant difference on students and parent’s environmental awareness and environmental action.

In general higher the education levels, the more concern they have. This findings suggests that education is the means to solve many environmental problems. Hence, parental educational level is considered as one of the variables in the present study too.
Gopala Chandra Padhan (1994) conducted a study on environmental awareness among teacher trainees. The findings revealed that there is variation in environmental awareness between the urban and rural teacher trainees, where the former group was significantly higher than letter. The mastery degree holders exhibited higher environmental awareness compared to the bachelor’s degree holders indicating the fact that higher educational qualification more the awareness relating to environment and its problems. Furthermore the subject background the trainees has its effect on the knowledge and understanding of facts and concepts relating to different aspects of environmental problems.

Patel, D and Nanobhai (1995) conducted a study on investigation into the environmental awareness of science students and effect of environmental study multimedia package on environmental awareness.

The major findings are

- The students with high I.Q. have increase environmental awareness.
- Girl students are more sensitive about the environmental awareness than the boy students.
- The environmental awareness multimedia package was more effective than the traditional lecture method.

Patel, D.G and Patel, N.A (1995) conducted a study on environmental awareness and its enhancement in the secondary school teachers and found that;

- There was a significant effect of environmental awareness programmes as a whole treatment on environmental awareness of the teachers of experimental group.
- There was no significant difference in the mean score of teachers with high and low experience on the environmental awareness.
- There was no significant interaction between independent factors of environmental awareness programmes and experience upon environmental awareness of teachers.
**Pradhan (1995)** conducted a study on environmental awareness among the teacher trainees he found that

- There was a significant difference in the environmental awareness of the Urban and Rural teacher trainees.
- The urban teacher trainees showed high level of environmental awareness.

**Rou Sabhlok (1995)** conducted a study on awareness and attitude of teachers and students of high school towards environmental education in Jabalpur district, He revealed that

- Boys and girls, rural and urban students differ significantly in their awareness towards environmental problems, boys and urban students exhibited better awareness than girls and rural students.
- The students and teachers differ significantly in their environmental knowledge teachers had better environmental knowledge than students.
- The urban teachers and the rural teachers differ significantly on their awareness of environmental problems, urban teachers had better awareness of environmental problems than rural teachers.
- The rural teachers and the tribal teachers did not differ significantly on their environmental awareness, while the urban teachers and tribal teachers differ significantly in their environmental awareness, urban teachers had better environmental awareness than tribal teachers.
- The students studying in government schools and private schools also differed significantly in their environmental awareness, in favor of the private schools.
- The teachers and parents differed significantly on their environmental awareness teachers exhibited better environmental awareness than parents.

**Battacharya, G.C (1997)** conducted a study on environmental awareness among higher secondary students of science and non science streams, in terms of environmental orientation. Environmental attitude and environmental responsibility sample consisted with 118 male and 82 female higher secondary students. The statistical technique with mean, S.D. and t-test.
The findings of science discipline were comparatively better in terms of environmental awareness, environmental orientation and environmental responsibility as compared to non-science students. Female groups were better than their male counterparts in environmental awareness.

Rajput and Gupta (1998) conducted a study on the 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 acquired and to compare the environmental awareness of school going children. They also indented to suggest in non-formal education centre. They also indented to suggested means for developing environment-based curriculum for universalization of elementary education.

The study reveals that

- The difference between Formal Rural (FR) and Formal Urban (FU) on environmental awareness was significant and in favour of FR.

- Difference between Non Formal Rural (NFR) and FU was also significant on environment awareness and in favour of NFR.

- The difference between NFR and FR on environmental awareness was not significant.

Dhinkara, S.A (2000) conducted a study on environmental awareness, attitude and teaching practice of elementary school teachers of Mysore district. The study revealed that:

- There was significant difference between urban and rural school teachers in their environmental awareness and environmental attitude. Urban school teachers were superior than rural school teachers in their environmental awareness and environmental attitude.

- There was no significant difference between urban/rural school teachers in their teaching practices.

- There was no relationship between environmental attitude and classroom practices.
• There was no significant difference between (i) the urban and rural school teachers and (ii) Government and private school teachers in their classroom practice.

• There was no significant difference between government and private school teachers in their environmental attitude.

• There was significant difference between government and private school teachers in their environmental awareness. Private school teachers had higher environmental awareness than government school teachers.

• There was a considerable relationship between environmental awareness and environmental attitude.

Satya Premakumari (2000) conducted a study on knowledge and educational need of rural adults of Mysore district in environmental education. The findings of the study indicated that

• Elementary school teachers have the highest knowledge in many areas of environmental education where as the adult education volunteers have, in contrast lower knowledge in many areas of environmental education.

• Rural adults possess the least knowledge in the area of environmental legislation and also least knowledge on explosion of population.

• The adult education learners should give adequate emphasis on the pollution health and sanitation, energy, soil pollution forests, environmental legislation, water population, noise pollution, population explosion, food issues., etc.,

• Understanding of environment is essential to the educational development of the young adults.

• Adult learners are not aware of the local resource problems.

Tripathi, M.P (2000) conducted a study on environmental awareness of students studying central schools and other schools at 10 + level in Uttar Pradesh, revealed that,
• The difference between boys and girls students of central schools was found to be significant with respect to their environmental awareness. Boy students were found significantly higher than girl students.

• There was significant difference between environmental awareness of science and arts students of central schools. Arts students were found significantly higher than science students with respect to their environmental awareness.

• There was no significant difference in environmental awareness between the students studying in central schools and other schools having different syllabus.

**Vasantha Kumari, P** and **Surendra, G (2002)** conducted a study on attitude of adult education organizers towards environmental awareness.

Findings of the study are

• There exist no significant difference between sex.

• There exist no significant difference between age.

• Caste plays a prominent role in determining the environmental awareness among the organizers, where it shows significant at 0.01 level.

• Educational qualification and working experience are also has a prominent role in determining the environmental awareness among the adult organizers which shows 0.05 level significant difference.

**Chethana, S (2003)** conducted a study on effect of background variables on the environmental attitude of 9th standard students in Bangarpet and KGF are as found that

• There is significant relationship between socio-economic status and environmental attitude.

• There is no significant difference between the background variable such as locality, sex, type of school management each separately and environmental attitude of 9th standard students.

• Different level of socio-economic status does not account for significant difference in the environmental attitude of 9th standard students.
Oksan Bartosh (2003) conducted a study on environmental education improving student achievement. According to the results, schools that undertake systemic environmental education programs consistently have higher test scores on the state standardized tests over comparable “non EE” schools the mean percentages of the students who meet standards on WASL and ITBS tests are higher in WASL and ITBS in the schools with environmental programs. There were no EE schools that had lower percentage of students who meet or above standards in all six areas. Overall, 73 pairs out of 77 EE schools had higher scores in at least one subject. Also the research shows a pattern indicating that in schools with environmental educational programs, teachers tend to use natural areas more, have more EE professional development training, have more support from parents, community and administration, and see more value in environmental education. To conclude, the author believes that the present research shows the correlation between level of implementation of environmental education and student achievement and emphasized the necessity of more in depth studies of this issue.

Sahaya Mary, R and Paul Raj, I (2005) conducted a study on environmental awareness among high school students in Pondicherry region. The investigator selected 198 students from standard IX in both Urban and rural areas and different types of schools by random sampling out of this 79 were boys, and 119 were girls. The tool used for the study environmental awareness opinionnaire prepared by the investigator.

The findings are: There are significant differences in the environmental awareness in terms of gender, location of the school, medium of instruction of the school, type of family and size of the family, caste, religion and type of school.

Samir Kumar Lanka (2005) conducted a study on the awareness of environmental education among the PG students. The study was conducted on 150 PG students of science, arts and commerce to study the awareness of environmental education with respect to their different groups (Science, arts and commerce), gender. For this study the investigator himself developed and standardized a test known as Environmental Test (EAT).
The findings of the study are:

- There exists a significant difference in environmental awareness among PG Students of Science, Arts and Commerce groups.

- There exists no significant difference in environmental awareness between two postgraduate male and female students.

**Seyed Shoebri (2005)** conducted a study on comparative study on environmental awareness and environmental attitude of teachers and students of secondary school students in India and Iran. His study revealed that:

- In both the countries, gender and academic qualification and area of specialization had influence on Environmental Attitude of teachers.

- In both the countries female teachers showed better Environmental, Attitude than male teachers and teachers with master degrees had better Environmental Attitude than other teachers with lower levels of education as well science teachers exhibited better Environmental Attitude than arts teachers.

- In both the countries, type of school management and age and lengths of experience had no influence on Environmental Attitude of teachers.

- Indian teachers had higher levels of Environmental Attitude than Iranian teachers.

- Type of school management had influence on Environmental Attitude of students. Iranian government school students showed better Environmental attitude than private school students. Whereas Indian private school students showed better Environmental Attitude than government school students.

- Gender had influence on Environmental Attitude of students, in both the countries girl students showed better Environmental Attitude than boy students.

- In both the countries students’ studying in X standard exhibited more favorable Environmental Attitude than IX standard students. Indian students showed more favorable Environmental Attitude than Indian students.
Santosh Kumar Rout and Sukirthi Agarwal (2006) conducted a study on environmental awareness and environmental attitude of students of high school level. This study was conducted to known the environmental awareness and environmental attitude of male and female students of Science and Non-science streams belonging to rural and urban background studying in Class – X of different schools of Moradabad city.

The findings of the study are:

- The students of science stream have more environmental awareness and environmental attitude than the students of non-science stream.
- The students belonging to urban background are comparatively better in terms of their environmental awareness and environmental attitude as compared to the students belonging to rural background.
- The male and female students do not differ significantly in terms of their environmental awareness and environmental attitude.

Seyed Mohammad Shobeiri and Prahallada, N.N (2006) conducted a study on environmental awareness among secondary school students in India and Iran. 991 students were selected through the stratified random sampling technique from 103 secondary schools of Mysore city (India) and Tehran city (Iran) subjects consisted of 476 boys and 515 girls. They were assessed using the Environmental Awareness Ability Measure (EAIAM).

The investigator found that

There are significant difference between Indian and Iranian students in their level of environmental awareness. Also there are significant difference between them in environmental awareness across with two groups with regard to their gender. Also type of school in a factor, which can affect students’ environmental awareness in both countries.

Umadevi, D and Adinarayana Reddy (2006) conducted a study on knowledge and educational needs in environmental aspects among rural adults.

The results revealed that the rural adults had high knowledge in all the aspects of environmental concern. The village secretaries are more interested to know about the environmental aspects when compared with others. They expressed high need levels followed by village sarpanches.
Vipinder Nagra and Jaswinder Sing Dhillon (2006) conducted study on environmental awareness among secondary school teachers sample of 1800. The result revealed that the level of environmental awareness of urban secondary school teachers was significantly higher than that of rural secondary school teachers. The male secondary school teachers and science teachers showed significant difference in environmental awareness than female secondary school teachers and social economic language counterparts.

Julie, E Schmidt (2007) conducted a study on the role of environmental awareness of college students. This study examined the ways environmental education influences the attitudes and behaviours of university students. Previous research has been able to associate strong attitudes with intentions. This research goes beyond intentions by measuring behaviours / surveys were used to verify the impact and introductory environmental course on participant’s environmental awareness. Two independent groups were divided by the characteristics of enrolment in the course. Students in the course reported greater pro-environmental attitudes and behaviours than students who were not enrolled. Results also revealed a positive correlation between attitudes and behaviours at the end of the course. These findings suggest a need for stressing the importance of environmental awareness in an educational setting in order to benefit both student knowledge and future welfare of the greater population.

Raju, G (2007) conducted a study on environmental ethics of higher secondary students of Cuddalore educational district of Tamilnadu, India and also for sub-sample Viz. gender community, type of school and location the school. The sample of the study is 560 higher secondary students. The findings of the study are:

- Environmental ethics of the higher secondary of Cuddalore educational district is high.
- Girl students have more environmental ethics than the boy students.
- The communities of students do not have any influence on their environmental ethics.
- The types of schools where they happened to study do not have any influence on their environmental ethics.
• Rural higher secondary students have more environmental ethics than the urban higher secondary students.

_Shiva Kumar, K_ and _Mangala, S Patil (2007)_ conducted a study on influence of environmental education on environmental attitude of postgraduate students. For this purpose 120 postgraduate students were selected and were administered the environment pollution attitude scale. It was found that

- Students with environmental education background had better environmental attitude.
- There is no significant difference between male and female students in their attitude towards environmental pollution and related issues.

_Krishna Devi, G (2008)_ conducted a study on awareness of environmental education of IX class students at secondary school level Warangal district. The findings are

- Gender significantly influences the awareness of environmental education of X class students of Warangal district.
- The type of Management is not significant influencing the awareness of environmental education in X class students of Warangal district.

_Amarjyothi, A.R (2009)_ conducted a study on environmental awareness among secondary school students. The findings are

- Telugu medium students shown more environmental awareness than English medium students.
- In Father Education students have shown more environmental awareness whose father’s education is unto 9th compared to whose father’s education is 10th and above 10th.
- In Mother Education students have shown more environmental awareness whose Mother’s education is up to 9th compared to whose Mother’s education is 10th and above 10th.
- Students studying in Government schools have shown more environmental awareness than the students studying in private schools.
• In size of the family students whose family members are 5 and above have shown more environmental awareness than the students whose family members are 4 and below.

• Annual income students have shown more environmental awareness than the students whose family income is below 50,000, compared to students whose family income 50,000 and above 50,000.

• In occupation of the father students have shown more environmental awareness whose father’s occupation is farmer compared to the students whose father’s is an employee and a business man.

• Occupation of mother students have shown more environmental whose mother is s house wife compared to employee and other occupation.

• Rural students shown more environmental awareness compared to urban students.

**Arumugarajan, R (2010)** conducted a study on environmental awareness of IX standard students in Tuticorin district. In this study aimed at finding the level of environmental awareness of class IX students. The investigator found that the students had some but equal level of awareness and warned that mankind could perish if the protection of environment does not become an integral part of all developmental programmes.

The findings of the study are

• There is no significant difference between the mean scores of environmental awareness of the boys and girls studying in standard IX in Tuticorin district.

• There is no significant difference in the mean scores of environmental awareness of students in Government schools and Private management schools.

• There is no significant difference between the mean scores of standard IX students residing in own houses and rental houses on environmental awareness. This indicate that now a days students have some awareness on environmental and they have equal environmental awareness.
Jayante Mete (2010) conducted a study on the status of environmental awareness among secondary school students residing whether at rural or urban sector. A self made situation based questionnaire was used to collect the data from 1000 secondary school students of west Bengal. The collected data has been treated with suitable statistical techniques like two way ANOVA, ‘t’ test etc., The result indicates that

- Urban boys have higher environmental awareness than of its rural counter parts.
- No significant difference upon environmental awareness was found for boys and girls students.

Madhumala Sengupta, Jayanti Das and Pintu Kumar Maji (2010) conducted a study on environmental awareness and environment related behaviour of twelfth grade students in Kolkata : effects of stream and gender. A total of 360 students under West Bengal council of higher secondary education in Kolkata were randomly chosen as sample. Two 5 point likert type questionnaires were used for this study and were standardized by the researchers. For statistical analysis ANOVA and coefficient of correlation were conducted to determine the effect of stream and gender on environmental awareness and environment related behaviour.

Maryam Larijani (2010) conducted a study on assessment of environmental awareness among higher primary school teachers. 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 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 counter parts. Age wise analysis also revealed that teachers with 31-50 years had higher levels environmental awareness and lastly teachers crossing in private schools found to have significantly higher environmental awareness than teacher working in Government Schools. Implication of environmental education was also stressed.
Sarojini, K (2010) conducted a study on level of environmental awareness among the school students. A sample of 542 students studying in IX standard in different types of schools in Chennai District and Kanchipuram Districts were identified for the present study. The sample consists of 247 boys and 295 girl’s samples were collected from Government, Government aided and corporation schools.

The findings of the study are the environmental awareness to be medium with urban students having higher level of environmental awareness than rural students, with no significant difference seen in environmental awareness when sex and medium of Instruction were considered.

Arun Kumar, J (2012) conducted a study on assessment of environmental awareness among teacher trainees in teacher training institutes in Tiruchirapalli district Tamilnadu. The investigator used normative survey method for the study. The sample consists of 300 teacher trainees from seven teacher training institutes in Tiruchirapalli district. The major finding of study reveals that teacher trainees in Tiruchirapalli district have average level of environmental awareness with regard to back ground variables such as gender, locality and teaching competence.

Kalpana Thakur (2012) conducted a study on environmental awareness among senior secondary school students of Chandigarh. The study was conducted on the sample of 200 senior secondary students from four schools of Chandigarh and data was collected through descriptive survey method. The major findings were

- Students of government and private schools exhibited comparable environmental awareness.
- Science students exhibited very high degree of environmental awareness than students opting for humanities.
- Male science students exhibited higher degree of environmental awareness than female science students but overall no significant difference was found between male and female students.

Madumere Akuego Jane (2012) conducted a study on assessing the level of environmental awareness of non-science students of colleges of education in rivers state. Environmental awareness is the first step towards the achievement of
environmental literacy. The pivot of any educational system is the teacher. Teachers are the most crucial factors in any educational system and one of the goals of the teacher education is to provide teachers with the intellectual and professional background adequate for their assignments to changing situation. These teachers are products of teacher education institutions. The non science students outnumber the science students in college of education and they graduate to take up teaching opportunities and from greater part of the teaching work force or the primary and junior secondary schools. These non science students at graduation teach the primary science subjects therefore there is a need to know their environmental content readiness to handle primary science subject. Three research questions were postulated and analysed using percentages. The implication of the finding was that non science student’s environmental awareness is low. It was recommended among others that a planned environmental education curriculum must be made compulsory as general studies in colleges of educations.

**Mudita, K Bhatnagar (2012)** conducted a study on environmental awareness among secondary school students in relation to their gender and locality. Education develops man’s thinking in reasoning, problem solving, intelligence, aptitude, positive skills and attitude. The educated man not only understands the problem related to an individual but to the whole community or the whole nation. Education determined the level of prosperity, welfare and security of the people. Education builds up the personality of the child and prepares him for being in the complex world. A good citizen is one who takes care of his environment which affects his health. If a person lives in a clean environment he can progress in every field of life with fresh mind. Education plays an important role in solving environmental problems in a systematic way.

**Preeti Saxena and Pallavi Srivastava (2012)** conducted a study on environmental awareness of senior secondary students in relation to Eco friendly behavior. The present study shows the level of environmental awareness in relation to eco-friendly behaviour through the sample drawn randomly from two CBSE affiliated schools of Bhopal. The sample consisted of 150 students. Survey method was used for the study and questionnaire was used to assess the environmental awareness and eco-friendly behaviour by taking into consideration natural resources like, air, soil, water and their sustainable use. The data was statistically analysed using Karl Pearson’s coefficient of correlation (r).
Findings indicate that respondents had only a limited understanding of environmental issues which positively impact eco-friendly behaviour. We often talk about clean and green environment but little do we think of using eco-friendly products. Most environmental education to date has focused on green topics i.e. tree planting and nature conservation. Include critical thinking and social transformation. These elements have often been lacking from environmental education.

**Indumathi, T Bharambe (2013)** conducted a study on environmental awareness among secondary school students.

She found that

- There is no environmental awareness among secondary school students.
- There is no significant gender difference in environmental awareness.
- There is a significant difference between environmental awareness among students in relation to qualification of their parents. The environmental awareness among students having highly qualified parents is more than the lower qualified parents.
- The environmental awareness is more among the students above parents are farmer than the students whose parents are teachers and labour.

**Shiv Kant and Yogesh Sharma (2013)** the present study was designed to investigate the environmental awareness of secondary school students in relation to their intelligence. Sample of the study consisted of 100 secondary school students from different schools of Faridabad district. Students were divided into two groups of high and low intelligence and then their respective environmental awareness was measured. The result of the analysis shows that there exists significant difference between Environmental awareness of students belonging to rural and urban background, moreover the significant positive relationship between intelligence and environmental awareness was found.

**Vipinder Nagra and Sandeep Singh (2013)** conducted a study on environmental education awareness among senior secondary school teachers. The present study identifies the environmental education awareness of senior secondary
school teachers in relation to type of school, gender and subject streams. Environmental awareness test was used for collecting data from a random sample of 200 senior secondary school teachers. Statistical techniques such as mean, standard deviation and t test were applied for analysis of data.

The results revealed average level of environmental education awareness in these teachers. No significant difference was observed in environmental education awareness in relation to type of school, gender and subject streams.

2.3 REVIEWS RELATED TO ACADEMIC ACHIEVEMENT

Dhalikia, J.V (1980) conducted a study on effects of observers and feedback upon changing the classroom performance of public teachers. He found that no significant difference in the achievement of male and female teacher trainees.

Aruna, N.S (1981) conducted a study on the factors influencing the achievement of standard VII students belonging to scheduled castes and scheduled tribes whose medium of instruction is Kannada. She found that boys had better achievement than girls.

Asudullakhan et al., (1982) conducted a study on scholastic achievement as a function of aspiration, religion and socio-economic status. The findings are

- Sex of pre university students (XII class) was found to be not effective in bringing about any variation in the scholastic achievement.

- Religion of pre university students (XII class) was found to be not effective in bringing about any variation in the high school students academic achievement belonging to different religions (viz) Hindu, Muslim and Christian.

Gupta, P.L (1983) conducted a study on personality characteristics of ninth grade over and under achieving boys and girls at different levels of achievement motivation. He found that

- Girls on the whole, had better achievement motivation, than boys and had higher academic achievement than boys.
Jagannadhan, K (1983) conducted a study on the effects of certain socio-psychological factors on academic achievement of children studying in class V to VII. The findings are

- Sex does not have any significant influence on the academic achievement of V, VI and VII class pupils
- Type of the school and academic achievement - it was found that pupils of V, VI and VII classes in Govt. schools achieved the highest mean (58.50) academic achievement followed by Panchayat Raj (40.81), private (45.99) and municipal (44.02) schools. The F test (17.17) revealed that the means differed significantly at 0.01 level.
- Pupils of Urban areas had better achievement than rural pupils.
- Forward caste pupils of V, VI and VII classes is significantly better than that of backward caste pupils.

Gopalacharyulu, R.V.V (1984) conducted a study to find out the relationship between certain psycho-sociological factors and achievement of student-teachers in teacher training institutes of Andhra Pradesh. He found that no difference in the achievement levels between male and female teacher trainees.

Sarma, M.K (1984) conducted a study on academic achievement of schools student’s vis-à-vis. Their parent’s education. He showed that

- Mother’s education is highly associated with the academic achievement of their sons and daughters.
- Father’s and mother’s education is highly associated with the scholastic achievement.

Singh (1984) conducted a study on a survey of the study habits of high, middle and low achievers adolescents in relation to their sex, intelligence and socio-economic status. He found that the study habits of boys and girls differed significantly at different levels of academic achievement.
Jagannadhan, K (1986) conducted a study on socio-economic status and academic achievement. The findings are

- Mother’s education is not associated with the achievement of the pupils where as father’s education has impact on the scholastic achievement.
- Father’s occupation much impact on achievement of students.
- Father’s income had much impact on the academic performance.

Quraishizm and Bhat, V.D (1986) conducted a study on academic achievement in relation to socio economic status, age and sex. He found sex has significant effect on academic achievement.

Rama Swamy, R (1990) conducted a study on study habits and academic achievement. He found no significant difference between boys and girls of high and low achievers.

Vijay Kumar Sethi (1990) conducted a study on personality patterns of high achieving and low achieving students in professional courses revealed that

- The parents of high achieving students of all the four professional groups i.e., Engineering, law medicine and teaching are better qualified than those of low achieving students.
- Father’s education has got much impact on the academic achievement of their sons and daughter studying in professional course or engineering, law, medicine and teaching.

Rajendra Nath Panda (1991) conducted a study on academic achievement and selected Demographic Factors – A Study on Urban – Rural High School Adolescents. He found that

- 9th and 10th class boys of rural areas and urban girls were better in academic achievement than their counter parts.
- 9th and 10th class pupils coming from small families were better in their academic achievement when compared to that coming from big families.
• 9th and 10th class pupils with college educated mother’s are having better academic performance than illiterate or elementary class educated mother’s.

• 9th and 10th class pupils with skilled professional parents were found to be better in their academic achievement when compared with their counterparts.

Kumar Swamy, T (1992) conducted a study on certain factors related to achievement of adult learners he found that caste of the adult learners did not have any influence on their academic achievement.

Vijaya Lakshmi, O and Hemalatha Natesan (1992) conducted a study on factors influencing academic achievement. She found that XI class girls (N=50) have better mean academic achievement than boys (N=50) which is significant at 0.01 level.

Rama Rao, G and Sinha, R.K (1993) conducted a study on female’s education and achievement in higher education. He reported that the performance of girls in examinations at all levels of higher education was much better than that of boys.

Vendal, N (1994) conducted a study on academic achievement and semantic relationships. The result show significant interaction between urban and rural background and level of academic achievement is also found with regard to mastery of each one of the sematic concepts.

Rawat and Leela (1995) conducted a study on the effect of parental absence on adjustment, study habits and academic development of students of high school classes. Should that there was no significant difference between the study habits of boys and girls and their academic achievement.

Dubey, S.N and Mishra, A.K (1997) conducted a study on determinants of academic success among rural girls. Reported that the school environment was significant predictor of academic achievement among upper caste, backward caste, scheduled caste and Muslim girls.
Ayishabi, T.C and Moly Kuruvalla (1998) conducted a study on achievement motivation of secondary school children of working and non working mother’s of Kerala, found that there is no significant difference between mean scores of achievement motivation of pupils of IX standard of working and non working mother’s for the total sample (N=871).

Jayachandrarama Naidu, K (1998) conducted a study on a comparative study of academic achievement of formal and non-formal education, he observed that

- The influence of caste is not significant on the academic achievement of learner (N=300) of formal education where as caste has significant influence on the academic achievement of learners on the non formal education and total sample of (N=600)

- Family size has no significant influence on the academic achievement of learner from formal education centers, whereas family size has significant influence on the academic achievement of total sample formal and non formal education learners.

- The influence of father’s occupation is not significant on the academic achievement of learners from formal education (N=300). Whereas father’s occupation has significant influence on the academic achievement of learners from non formal education (N=300) and total sample (N=600).

Narayana Koteswara, M and Rama Chandra Reddy, B (1998) conducted a study on reading achievement in relation to demographic variables. He revealed that high school girls (N=648) are better than boys (N=648) in reading achievement. There is the influence of locality on reading achievement of high school pupils. Pupils in residential schools performed better than the pupils in rural and urban. Among the three groups, pupils from rural areas were the lowest in their achievement.

Salim Kumar, C (1998) conducted a study on impact of select factors on academic achievement. He reported that locality has significant influence on the achievement in biology of secondary schools pupils (N=700) at 0.01 level.
Krishnamurthy, S (1999) conducted a study on achievement as related to academic achievement motivation and attitude towards study of history revealed that

- There is significant relationship between academic achievement and education of mother’s.
- Locality has caused no significant difference in respect of academic achievement in history.
- Economic condition of the family has caused no significant difference in respect of academic achievement in history of the second year higher secondary students.

Sood, S (1999) conducted a study on creativity, problem solving ability and personality characteristics as correlates of mathematical achievement of students of residential and non-residential schools. Revealed that although girls achieved somewhat higher than boys, yet insignificant differences exist in their mathematical achievement.

Jyothi Rathore (2000) conducted a study on scholastic achievement of children studying at primary level in environmental studies with special reference to MLL and development of remedial teaching strategies. The findings are

- The mean scholastic achievement of boys (N=500) of primary level in Environmental studies is significantly better at 0.01 level than the girls education centers.
- The mean scholastic achievement of children from formal primary schools in science was better than children (N=500) studying in Non formal education centers.

Nestesan, N and Susila, C (2000) conducted a study on personality factors and achievement in environmental science of V standard students reported that there is significant difference at 0.01 level in the scholastic achievement of V standard boys (N=300) and girls (N=300) in Environmental science.

Borbora and Rupa Das (2002) conducted a study on influence of parental literary on the academic achievement of children belonging to backward classes.
Reported that backward class children of literate mother’s showed better academic achievement than the children of illiterate mother’s.

Chakrabarthi and Sharmistha (2002) conducted a study on a critical study of family problems faced by the learners, socio-economic status physical facilities available in literacy centers, organizational and instructional aspect as literacy programme and their relation with literacy achievement of female learners in West Bengal”. Observed that education level of the family influenced female learners (N=320) literacy achievement attending to literacy centers.

Gnana Sundaratharasu, A and Vincent De Pauls (2002) conducted a study on effectiveness of video assisted instruction in teaching and learning social science at primary level. He found that due to video assisted instruction there is no significant difference in the mean achievement scored in social science among the pupils of Government and aided primary schools.

Govinda Reddy (2002) influence of certain psycho-sociological factors on scholastic achievement of DIET students the findings are

- Sex does not have any significant influence in the academic achievement of DIET students (N=600).
- Caste is not significant on the achievement in theory and total achievement of DIET students
- Mother’s education has significant effect on the academic achievement of DIET students both in theory and total achievement.
- Father’s education has significant influence on academic achievement of DIET students.
- Family income has significant influence on academic achievement of DIET students.

Manjula, P Rao (2002) conducted a study on teacher competencies and learner’s achievement in tribal areas of Karnataka. Revealed that the achievement of Tribal students was low except in language and mathematics, which was only on border line of average performance
Panda, B.N (2002) conducted a study on factors affecting pupil’s achievement in primary schools of Orissa. The findings are

- V class boys and girls studying rural and urban and tribal areas did not differ in their achievement in all the school subjects.
- V class rural students have shown better performance in all the school subjects, when compared to their urban and tribal classmates.
- Father’s occupation did not have any significant impact on the learning achievement of V class pupils (N=887) in rural, urban and tribal primary schools.

Anice James and Marice, P.V (2004) conducted a study on achievement in science as related to scientific aptitude and scientific attitude among XI standard students in Tamil Nadu. Found that

- Students from matriculation schools and state board school have no significant difference in their achievement scores in science.
- Students hailing from rural and urban areas have the same type of academic achievement in science.

Gakhar, S.C and Assema (2004) conducted a study on social stress, locality and gender affecting academic achievement and reasoning ability. The findings are

- No significant difference in the academic achievement of boys and girls of X class in their previous annual examination.
- Rural students significant achieved better in their annual previous examination (IX class) than the urban students.

Panchalingappa, S.R (2004) conducted a study on study habits, family climate, adjustment and academic achievement of children of Devadasis. He concludes that there is no significant difference between rural and urban high schools pupils of Devadasis in respect of their academic achievement.

Reported that the achievement level of aided schools and government higher secondary schools is greater than Panchayat union middle school and government high schools.

Mohammad Khayyer and Philip, R Delacey (2005) conducted a study on prediction of academic achievement from some demographic, family background and locus of control variables and they found that the girl’s academic achievement was higher than boy’s academic achievement.

Manchala, C (2007) conducted a study on achievement of B.Ed. students. The findings are

- Sex has significant influence on the Scholastic Achievement of B.Ed. students.
- Caste has significant influence on the Scholastic Achievement of B.Ed. students.
- Family size did not have significant influence on the Scholastic Achievement of B.Ed. students.
- Mother’s Education has significant influence on the Scholastic Achievement of B.Ed. students.
- There would be no significant influence of father’s education on the Scholastic Achievement of B.Ed. students.
- Father’s occupation has significant influence on the Scholastic Achievement of B.Ed. students.
- Mother’s occupation has significant influence on the Scholastic Achievement of B.Ed. students.
- Annual income of the family has significant influence on the Scholastic Achievement of B.Ed. students.
- Religion does not have significant influence on the Scholastic Achievement of B.Ed. students.
Krishna Reddy, D (2008) conducted a study on achievement of 10th class students in mathematics in relation to certain psycho-sociological variables. The findings are

- Academic / scholastic achievement of 10th class students has significant influence on their management.
- Locality has no significantly influence on academic achievement.
- Caste has significantly influence on academic achievement.
- Mother’s education significant influence on academic achievement.
- Father’s education significant influence on academic achievement.
- Parents occupation significant influence on academic achievement.
- Religion has significant influence on academic achievement.
- Annual income significant influence on academic achievement.

Subramanyam, K and Sreenivasa Rao, K (2008) conducted a study on academic achievement and emotional intelligence of secondary school children revealed that boys and girls do not differ significantly in academic achievement.

Sam Willim Bassey and Joshna (2009) conducted a study on gender difference and mathematics achievement at rural senior secondary students in cross river state Nigeria. Findings there is significant gender influence in rural students of mathematics achievement in cross river state Nigeria.

Umadevi (2009) conducted a study on relationship between emotional intelligence, achievement motivation and academic achievement. Findings are there is a positive relationship between emotional intelligence and academic achievement. Male and Female arts and science students do not differ in emotional intelligence and academic achievement.

Moula (2010) conducted a study on relationship between academic achievement motivation and home environment among standard eight pupils. Found that
• Significant relationship \((r=0.22)\) between father’s occupation and academic achievement motivation of standard eight pupils.

• Significant relationship \((r=0.26)\) between family size and academic achievement motivation of standard eighth pupils.

• There is significant between \((r=0.14)\) mother’s education and academic achievement of standard 8th pupils.

• There is significant relationship \((r=0.15)\) between father’s education and academic achievement motivation.

**Padmini (2010)** conducted a study on achievement of IX class students in biological sciences in relation to certain psycho sociological variables. The findings are

• Sex has significant influence on the achievement of IX class students in Biological sciences.

• The management of the school has significant influence on the achievement of IX class students in Biological sciences.

• Locality has significant influence on the achievement of IX class students in Biological sciences.

• Caste has significant influence on the achievement of IX class students in Biological sciences.

• Number of members in the family have significant influence on the achievement of IX class students in Biological sciences.

• Mother’s education has significant influence on the achievement of IX class students in biological sciences.

• Father’s education has significant influence on the achievement of IX class students in biological sciences.

**Sanandaj and Junani (2010)** conducted a study on the effect of family income on test anxiety and academic achievement among Iranian High School Students. Showed that family income significantly affects academic achievement.
**Hassain, D and Appa Rao, A.V (2012)** conducted a study on relationship between study habits, socio-economic status and academic achievement of class students. Findings are

- There is a no significant difference between male and female students in their Academic Achievement.
- There is no significant difference between OC and BC communities in their Academic Achievement.

**Siddi Raju (2012)** conducted a study on scholastic achievement of IX class pupils in physical sciences in relation to certain psycho sociological variables. The findings are

- Sex has significant influence at 0.01 level on the scholastic achievement of IX class students in physical science.
- Caste has significant influence at 0.01 level on the scholastic achievement of IX class students in physical science.
- Total members in the family have significant influence at 0.01 level on the scholastic achievement of IX class students in physical science.
- Father’s education has significant influence at 0.05 level on the scholastic achievement of IX class students in physical science.
- Family income significantly affected on academic achievement.
- Annual income has significant influence at 0.01 level on the scholastic achievement of IX class students in physical science.

**Randeep Pannu (2013)** academic achievement in relation to cognitive styles, location and gender of adolescent students. The findings are

- Mean scores of academic achievement of male and female adolescents’ differ significantly. The mean scores of academic achievement of female is higher than males.
- Mean scores of academic achievement of adolescents residing urban area is higher than the adolescents residing in rural area.
Santhosh Kumar Mishra and Sangeeta Jain (2013) conducted a study on impact of achievement motivation gender and locale on achievement in mathematics among secondary school students. Revealed that

- There is no significant difference in the impact of motivation on academic performance of male and female students in mathematics.
- There is no significant difference of motivation in academic performance of rural and urban students in mathematics.

2.4 APPRAISAL

The Review of the studies related to the present study indicated the following.

Many studies were conducted to examine the environmental awareness and achievement. Few studies revealed that rural students having low level of environmental awareness and achievement than urban students. A few studies indicated that girls students, showed better environmental awareness and achievement than boy students. Many studies revealed that the students studying in Government and private schools different significantly, infavour of environmental awareness and achievement.

There are only few studies about environmental awareness of secondary school students. The review of related literature has convinced the investigator that there is a need for undertaking evaluative study on Environmental awareness among secondary school students. This is the real inputs and driving force for the present researcher to undertake, the present study “An Evaluative study on Environmental Awareness among Secondary School Students”. Since environmental education is a relatively new programme in the educational system. It is the main reason that the investigator opted and carried out this kind of research work which is very useful and essential in the school level.