

2.1 Introduction:

Review of related literature is the summary of the previous research which provides evidence of familiarity to the researcher with what is already known. Review of related literature is systematic identification, location, analysis and report of documents containing information related to research topic. Theoretical and research based reviews provide the researcher valuable guidance and suggestions to carry out the research. It also serves as a solid foundation for the study. A review of related literature is a most essential aspect in research. It helps the researcher in understanding and defining the problem accurately and systematically. Valuable information obtained in the process helps in planning of the study. Review of related literature is one of the significant aspects of research. It enables the researcher to get acquainted with the work done in the concerned areas. It helps to explore the needs of research in unknown and unexplored areas. It develops insights into the methodological aspects of the research.

2.2 Objectives of Reviewing Related Studies

The followings are the objectives of the review of related literature.

- To understand various aspect and scope of the research thoroughly
- To study the researches which have been done before the current research
- To decide proper hypothesis, objectives, methodology of research
- To have a proof on the part of the investigator show that the investigator knows what type of study is done in the same field
- To have a proper guideline to implement the practical work
- To have appropriate guidance to complete the present research
- To provide vast outlook regarding to the subject
- To avoid repetition of research done
- To find out novelty of present research

2.3 Importance of the Related Literature

The review of the related literature is an important requirement of actual planning on the bases of which the execution of any research work can be done. The review of related literature becomes a friend, philosopher and guide for the researchers.

The research for a reference material is a time consuming but very fruitful phase of any research. The researcher feels ease and clear in taking decision for the present study from the past research. It helps the researcher to avoid useless repetition in their research work. The researcher will get an idea about what sources are available in the field of study, which are most essential for the study, where and how to use them. In short, it enables the researcher to get insight into the problem on hand. The study of related literature also gives an idea about the different approaches, methods, tools and equipment, Identification of problem, selection of samples, statistical techniques, evaluation and measurement of the research work already done and major findings of the previous research work. Thus, the review of related literature provides some insight regarding some points and limitations of the previous studies, broaden the horizon of knowledge.

In other words, review of related literature work as a lighthouse for the researcher.

In the present study the researcher has reviewed various books, dissertation, articles, journals, theses, and web sites as a reference material which are as follow.

2.4 Research Studies Conducted on Environmental Awareness

2.4.1 Panth, M. K., Verma, P. and Gupta, M. (2015) conducted study on **The Role of Attitude in Environmental Awareness of Under Graduate Students.**

The objectives of this study were to find how attitude play a role to make Environmental Awareness with gender and to find that environmental attitude at higher education level has converged on females that are more sensitive toward environmental issues.

The researcher's present study is an exploratory research. It is regarded exploratory as it attempts to examine the level attitude and environmental awareness among boys and girls. The survey research method used in this study. Survey research study on Attitude and Environmental Awareness by studying sample chosen from college's boys and girls.

Major findings of this study were:

- 1) There will be significant differences in between boys and girls Attitude, there will be significant differences in between boys and girls social change.
- 2) There is no significant differences in between boys and girls social Distance.
- 3) There is no significant difference in between boys and girls Liberalism.
- 4) There will be significant differences in between boys and girls Nationalism.
- 5) There are no significant differences in between boys and girls untouchability.

2.4.2 Rahi, A.Singh (2015) conducted a study on **Construction of An Environmental Awareness Scale For Prospective Teachers**

The objectives of this study were to study Qualitative analysis of environmental awareness and interests of prospective teachers, to study Quantitative analysis of levels of environmental awareness and environment related behaviour of prospective teachers and to develop understanding for the environmental problems and critical thinking and problem-solving skills. Data was collected through demographic profile.

Major findings of this research were:

- 1) A person who is environmentally literate can help in this process such as one who is environmentally honest and whose fundamental knowledge about environment is clear, has scientific style of thinking, pedagogically strong and good at implementing knowledge.
- 2) It is very hard to determine the characteristics of the ecologically conscious person and the ecological responding behaviour.
- 3) It is even harder when it is expected to draw implications for the general people.

2.4.3 Tiwari, S. (2014) conducted study on **A Comparative Study of Environmental Awareness and Scientific Attitude of Under Graduate Students.**

The objectives of this study were to compare the scientific attitude of male and female students under graduate students, to find out the differences scientific Attitude of Arts and Science under graduate students and to examine the relationship between environmental Awareness and scientific Attitude.

The Researcher used a Simple Random technique for selection of sample from the population. The random sample will be consisted of science art and commerce students of graduate level college of Lucknow city. The sample of the present study will be consisted of 500 students from Science, Art and Commerce students of graduate level.

The Major findings of the research were:

- 1) The result clearly indicates that a strong relationship between the environmental awareness and scientific attitude.
- 2) Female students have higher scientific attitude compared to male under graduate students.
- 3) It shows the science students are higher than the Arts students it indicate that scientific attitude was found better science students.

2.4.4 Ghosh, K. (2014) conducted **Environmental Awareness among Secondary School Students of Golaghat District in the State of Assam and their Attitude towards Environmental Education.**

The Objectives of this study were to study the environmental awareness and attitude towards Environmental Education of Secondary School students of Golaghat district in the state of Assam, to study the environmental awareness and attitude towards Environmental Education of rural and urban Secondary School students of Golaghat district in the state of Assam, to find the relationship between environmental awareness and attitude among the Secondary School students of Golaghat district in the state of Assam, to find the relationship between environmental awareness and socio-economic status, environmental awareness and academic achievement among the Secondary School students of Golaghat district in the state of Assam and to find the relationship between environmental attitude and socio-economic status, environmental attitude and academic achievement among the Secondary School students of Golaghat district in the state of Assam. The researcher used Descriptive Survey Method used for data collection.

Major findings of this research were:

- 1) There is no significant difference in environmental awareness among the Secondary School rural and urban students of Golaghat district in the state of Assam and there is significant difference in environmental attitude among the

Secondary School rural and urban students of Golaghat district in the state of Assam.

2.4.5 Sindhu, P. and Singh, S. (2014) conducted a study on **A Study of Awareness towards Environmental Education among the students at secondary level in Gurgaon District**

The objectives of the study were to study the difference in awareness towards Environmental Education between Rural boys and rural girls at secondary level, to study the difference in awareness towards Environmental Education between urban boys and urban girls at secondary level, to study the difference in awareness towards Environmental Education between Rural boys and urban girls at secondary level, to study the difference in awareness towards Environmental Education between Rural girls and urban girls at secondary level and to study the difference in awareness towards Environmental Education between Rural and urban students at secondary level. The investigator used normative survey method to collect data for the present study.

The major findings of the research were:

- 1) While making the comparison between rural boys and girls of secondary level regarding awareness towards environmental education, it was found that there exists no significant difference between girls and boys student of secondary level.
- 2) While making the comparison between urban boys and girls of secondary level regarding awareness towards environmental education, it was found that there exists no significant difference between boys and girls student of secondary level regarding awareness towards environmental education.
- 3) While making the comparison between rural boys and urban boys of secondary schools regarding awareness towards environmental education, it was found that there exists no significant difference between rural boys and urban boy's student regarding awareness towards environmental education.

2.4.6 Sharma, S. (2014) conducted a study on **A Study of Environmental Awareness of Student Teachers and Teachers in Relation of Their Emotional Intelligence**

The objectives of the study were to study and compare the environmental awareness of male and female student teachers and male and female teachers, to study the

environmental awareness of male and female teachers, to study and compare the emotional intelligence of male and female student teachers, and male and female teachers and to study the relationship between the environmental awareness and emotional intelligence of male and female student teachers and male and female teachers. The investigator selected a sample of 200 student teachers out of which 100 male and 100 female student teachers have been taken & also a sample of 100 teachers' out of which 50 male and 50 female teachers have been taken from self-financed B.Ed. colleges of Ghaziabad District. According to the need and conditions of the problem—"Stratified Random Sampling Technique" is used by the investigator. An authenticity of the study depends upon the selection of appropriate tools with the help of which data is collected.

Major findings of the study were:

- 1) No significant difference was observed between male and female student teachers regarding environmental awareness.
- 2) Similarly no significant difference was observed between male and female teachers regarding environmental awareness.
- 3) No significant difference was observed between male and female student teachers regarding emotional intelligence.
- 4) Similarly no significant difference was observed between male and female teachers regarding emotional intelligence.

2.4.7 Sivamoorthy, M. (2013) conducted a study on **Environmental Awareness and Practices among College Students.**

The Objectives of this study were to measure the environmental awareness level among the college students, to study the general environmental practices among the college students and to suggest actions towards creating environmental awareness and environment friendly practice among the college students. In this research for the purpose of collecting primary data, the researcher adopted Standardized scale on Environmental Awareness Ability Measure (EAAMJPK English to Tamil) and self-prepared questionnaire on environmental practices were used for collecting primary data. In this research work multi stage sampling method was followed for selecting the respondents from study area. In the 1st stage list of affiliated colleges of Dindigul district functioning under Madurai Kamaraj University (A State University of Tamil

Nadu), Madurai was collected. In the 2nd stage, from the listed colleges, only the colleges started during the academic year of 2007 - 2008 was selected. On that basis five colleges were selected. In the 3rd stage systematic random sampling (hard numbers has been taken) was used to select 3 colleges out of 5 colleges.

Major findings of the research were:

- 1) Gender does not influence environmental awareness which means the result indicates that irrespective of gender college students are aware of environmental issues.
- 2) There is no significant correlation exists between environmental awareness and environmental practice that is to say college students are aware of the environmental issues but when they are going to practice it they fail.

2.4.8 Sharma, N.K. (2013) conducted **A Study on Environmental Awareness of College Students In Relation To Sex, Rural- Urban Background and Academic Streams Wise.**

The objectives of this study was in order to protect and conserve the environment, enabling people to lead quality life due emphasis has to be given to environmental education in both formal and non-formal System of Education Sundaravalli (2012).

The researcher used convenient random sampling technique, and Environmental Ability Measure developed for data collection.

Major findings of this research were:

- 1) There is no significance difference in environmental awareness ability of male and female students and it is interpreted that male and female students possess equal level of environmental awareness ability.
- 2) There is Significant Difference in Environmental Awareness Ability of Rural And urban Students

2.4.9 Saxena, P. and Srivastava, P. (2012) conducted study on **Environmental Awareness of Senior Secondary Students in relation to their Eco-Friendly Behaviour**

The Objectives of this Study were to find the relationship between environmental knowledge and eco-friendly behaviour of senior secondary students, to find the percentage distribution of scores of environmental awareness and eco-friendly

behaviour of senior secondary students and to study the superstition controlled eco-friendly behaviour among boys and girls of senior secondary students. The researcher used random sampling technique, and descriptive survey method. The sample consisted of 150 eleventh grade students, which includes 75 boys and 75 girls of these two randomly selected schools.

Major findings of this research were:

- 1) The value of correlation between the environmental awareness and eco-friendly behaviour has come out to be 0.47. the value of 'r' signify the relation between the two variables is positive and moderate. Thus we conclude that if environmental awareness among the students rise it will lead to the further rise in eco-friendly behaviour and students have more environmental awareness but they fail to implement the same, equally in their behaviour. This may be because of the family and school rituals and practices which as a result, fail to give desired environment in which a child can follow eco-friendly.

2.4.10 Abbas, M.Y. and Singh, R. (2012) conducted study on **A Survey of Environmental Awareness, Attitude, and Participation amongst University Students: A Case Study.**

The objectives of this study were to find out the level of environmental awareness among students of the university under study, to examine students' attitudes and sense of responsibility towards the environment and environmental problems, to investigate students' participation and level of engagement in environmental activities and protection and to prosper recommendations on the bases of the results obtained from the study. The researcher used questionnaire survey method and random sampling technique used for the data collection. The study employed descriptive statistics in the presentation and interpretation of data using Statistical Package for Social Sciences (SPSS) software.

Major findings of this study were:

- 1) Environmental knowledge alone may not be the only stimulating factor to instigate active participation in environmental protection and activities and students have acquired a set of positive attitudes on environment and environmental problems since the larger proportion of their concerns are with the

categories of worried, very worried, and sometimes worried, with very least from never worried.

2.4.11 Sundaravalli, T. (2012) conducted study on **Student Teachers' Awareness on Environmental Pollution**

The objectives of this study were to find out the level of Environmental Pollution Awareness among the Student Teachers, to find out the significant difference in the Level of Environmental Pollution Awareness among the Student Teachers in terms of the following attributive variables: a) Age, b) Degree, c) Subject of study, d) Area of Residence and e) Reading practice. The researcher used Random sampling technique and the size of the sample is 128 student teachers from Four colleges of Education in Madurai district with due representation given to the attributive variables.

Major findings of this research were:

- 1) The respondents those who are above 25 years old have higher level of Environmental Pollution Awareness than the respondents below 25 years old.
- 2) The respondents those who possess P.G Degrees have higher level of Environmental Pollution Awareness than those who possess U.G Degrees.
- 3) The respondents those who study Science subjects have higher level of Environmental Pollution Awareness than those who study Art subjects.
- 4) The respondents those who reside at urban area have higher level of Environmental Pollution Awareness than those who reside at rural area.
- 5) The respondents those who have Reading practice daily have higher level of Environmental Pollution Awareness than those who read rarely.

2.4.12 Arunkumar, J. (2012) conducted study on **A study on assessment of Environmental Awareness among Teacher Trainees in teacher Training Institutes.**

The Objectives of this study were to find the level of environmental awareness of teacher trainees in teacher training institutes in Trichy and its dimensions is average, to find the level of participation in extension activities of teacher trainees in teacher training institutes in Trichy is average, to find the level of environmental awareness of teacher trainees in teacher training institutes in Trichy with regard to their gender is average and to find the significance of difference in environmental awareness of teacher trainees in teacher training institutes in Trichy with regard to their gender. The

researcher used simple random technique has been used for the selection of the sample, and the statistical techniques like percentage analysis, differential analysis and correlational analysis were used to analyse the data.

Major findings of this research were:

- 1) The level of environmental awareness of teacher trainees in teacher training institutes in Trichy and its dimensions is average.
- 2) The level of participation in extension activities of teacher trainees in teacher training institutes in Trichy is average.
- 3) The level of environmental awareness of teacher trainees in teacher training institutes in Trichy with regard to their gender is average.
- 4) There is no significant difference in environmental awareness of teacher trainees in teacher training institutes in Trichy with regard to their gender. As the calculated t value is less than the table value (1.96) at 5% level of significance at 298 degrees of freedom for all the dimensions and the total environmental awareness of teacher trainee, the stated null hypothesis is accepted.

2.4.13 Poonam. (2012) conducted study on **A Comparative Study of Environmental Awareness among Government and Private Secondary School Students.**

The Objectives of this Study were to compare the environmental awareness between Govt. and Private Secondary School Students along with the following dimensions.

1. Environmental Education
2. Environmental pollution
3. Air pollution
4. Soil pollution
5. Noise pollution
6. Water pollution
7. Industrial pollution

The researcher used random sampling technique, and 125 students from govt. & 125 students from private schools were randomly selected from 10 Govt. and 13 Private schools of Gurdaspur District of Punjab.

Major finding of this research were:

- 1) There exists a significant difference between government and private secondary school students on environmental awareness and its components.

2.4.14 Selvam, V. and Abdul Nazar, N. (2011) conducted study on **An analysis of Environmental Awareness and responsibilities among University Students.**

The objectives of this study were to study the demographic profile of the respondents and to analyse the environmental awareness and responsibilities with regard to pollution and environmental protection among the University students. The researchers used convenient sampling technique, and the primary sources of data which are collected through interview schedule from the students of VIT University, India.

Major findings of this research were:

- 1) There is significant relationship between degree programme of the respondents and environmental awareness and responsibilities of the University students.
- 2) There is no significant relationship between degree programme of the respondents and environmental awareness and responsibilities of the University students.

2.4.15 Astalin, P.K. (2011) conducted study on **A study of Environmental Awareness among Higher Secondary Students and some Educational Factors affecting it**

The objectives of this study were to compare 11th and 12th standard students with regards to their level of environmental awareness, to compare art and science students with regards to their level environmental awareness, to compare students belongs to CBSE and UP Board with regards to their level of environmental awareness, to compare students belongs to different level of their parent's education with regards to their level of environmental awareness and to compare male and female students with regards to their level of environmental awareness.

The researcher used descriptive survey method.

Major findings of this study were:

- 1) Students of 11th and 12th standard were identical as for as their environmental awareness was concerned because of science students had more environmental awareness in comparison to arts students.

- 2) CBSE students had more environmental awareness in comparison to UP Board students because of the rich educational climate of CBSE schools with compare to the UP board schools.
- 3) Students belonging to undergraduate, post graduate and research parent's group had more environmental awareness in comparison to high school students and also students belonging to literate parent's group had more environmental awareness in comparison to high school and intermediate students.
- 4) The male students had more environmental awareness in comparison to female students because of the male students of higher secondary students are normally so much attached with the society.

2.4.16 Astalin, P.K. (2011) conducted study on **Environmental Awareness in Relation to Awareness towards Social Duty and Some Educational Factors affecting it among Higher Secondary Students.**

The objectives of this study were to predict the environmental awareness among higher secondary students with the help of awareness of social duty, to predict the environmental awareness among higher secondary students with the help of awareness of social duty and some educational factors. The researcher used random sampling and the sample consisted of total 608 students. Survey method used for the data collection.

Major findings of this research were:

- 1) About 35.3% of the environmental awareness scores of the students may be accounted by the awareness towards social duty scores of the higher secondary students.
- 2) About of 41.0% of environmental awareness scores students may be explained by grade, course of study, type of institution, parent's education and awareness towards social duty scores of students.

2.4.17 Sengupta, M. and Das, J. (2010) conducted study on **Environmental Awareness and Environment Related Behaviour of Twelfth Grade Students in Kolkata: Effects of Stream and Gender"**

The objectives of this study were to study the level of Environmental Awareness and Environment Related Behaviour of Twelfth Grade School Students in Kolkata and to

study the level of Environmental Awareness and Environment Related Behaviour of Twelfth Grade School Students in Kolkata.

The researcher used random sampling technique and survey method used for data collection.

Major findings of this research were:

- 1) Gender is not a significant factor in this regard. But stream is observed to be significant (.05 level) source of variation in case of environment related behaviour.
- 2) The one way ANOVA revealed that the scores of the boys and girls do not differ significantly in case of environmental behaviour ($F=.006$). Hence H_02 is accepted. But H_1 is rejected as the difference between the two groups is significant in the context of environmental awareness ($F=16.88$), both H_03 and H_04 are also rejected as statistically significant difference was observed between the scores of arts and commerce students in the context of both environmental awareness ($F= 15.29$) and environment related behaviour ($F=24.69$) and the results obtained in case of science and commerce students are different.
- 3) There is no significant F values ($F= 1.95$ and $.153$) were found in relation to environmental behaviour and environmental awareness scores of the science and commerce students. So H_05 and H_06 are retained.

2.4.18 Oguz, D., Cakci, I. and Kavas, S. (2010) conducted a study on **Environmental awareness of University Students in Ankara, Turkey**

Objectives of the study were to present environmental sensitivity and awareness of university students.

The study was carried with the first and fourth year students in order to be able to compare the results. A total of 213 students were interviewed face to face, using questionnaires. The questionnaire consisted of 20 questions. The questions were either open ended or in multiple choice format. First section of the questionnaire was about personal information such as age, place of birth, and parents' educational background. Second section included questions on necessity of environmental education, basic environmental concepts, and opinions on the roles of governmental and non-governmental organizations on the environment. Final section of the questionnaire

was designed to find out the students' environmental attitudes and beliefs. The data gathered has been analysed by Chi-square test, using SPSS software, in order to find whether there is a relationship between students' awareness levels and their grades.

Major findings of the research were:

- 1) A few (17.5%) students are members of environmental NGOs even though nearly all of the students know about them and their activities.
- 2) A majority of the students think environmental education should be obligatory during all educational stages.
- 3) Knowledge, awareness and responsible behaviour are not always influential on each other. In higher education, educators have traditionally focused on the cognitive domain (Shephard, 2007); however the affective domain is usually ignored.

Therefore developing environmental attitudes and behaviours need more attention in environmental education.

2.4.19 Holt, L. (2004) conducted a study on **Awareness, knowledge, and attitude about environmental education: responses from environmental specialists, high school instructors, students, and parents**

The objectives of this study were to study the levels of awareness, knowledge, and attitude (AKA) of environmental specialists and high school instructors who teach components of environmental education (EE) in their curriculum, to find the level of AKA in high school students, and the parents of these students, enrolled in classes where EE components are incorporated in the curriculum, to study socio-economic, demographic, and personal backgrounds factors account for differences in the levels of AKA of the environmental specialists, high school instructors, high school students, and parents and to determine the self-efficacy level of AKA among the different groups studied.

The data were collected from the environmental specialists and H.S. instructors groups because both groups represented the population of environmental educators in Southwest Florida.

Major findings of this research were:

- 1) A comparison of all participating groups regarding the levels of awareness, knowledge, and attitude was conducted using a series of ANOVA. (2) The

difference in mean percentages of attitude between the parents ($M= 63.8\%$, $SD= 21.85$) and the high scores of the H.S. students ($M= 69.0\%$, $SD= 14.79$) and the environmental specialists ($M= 78.2\%$, $SD= 10.03$).

2.4.20 Tuohino, A. (2001) conducted study on **Environmental awareness and environmentally friendly behaviour - case Sulkava Rowing Event**

The objectives of this study were to find out about the environmental images of tourists (non-rowers) and participants (rowers) in this special event.

The researcher used a random sampling method was used. The data was collected during the rowing event by using a structured questionnaire. The questionnaire contained five parts to clarify different types of research problems. Environmental awareness was one of them consisting of twelve statements concerning environmental attitudes and behaviour. The number of respondents was 375 rowers and 211 non-rowers. The data was processed in statistical groupings.

Major finding of this study were:

- 1) There is a conscious or subconscious disregard for the environment. Thus, it looks like environmental ethics is partly missing.

2.5 Distinguished Features of the Present Study

From the reviews of related literature reported above, it can be concluded that all research studies have distinguished features are unique in the methodology and content. This study also has distinguished features due to the points given below.

1. The present study is different from other studies as the researcher has used Achievement Tests (Pre-test and Post-test) and Reaction Scale as a tool while in the above reviews majority of researchers used different scales such as Environmental awareness scale, Environmental attitude scale, Socio-economic status scale and Environmental Pollution Awareness Questionnaire.
2. The present study is different from other studies as the researcher has used Participatory Approach.
3. The present study is different from other studies as the researcher has used Experimental Method while in the above reviews majority of researchers used descriptive survey method and case study.
4. The present study is different from other studies as the researcher has used Two Groups Pre-test Post-test Design.

2.6 Conclusion

This chapter presents reviews of related studies. Through these studies, the researcher came to know about the research procedure, different tools, suggestions and findings of the studies on the value inculcation and professional development. The next chapter discusses the research methodology adopted for the present study.