

“A Study On The Environmental Awareness Of Secondary Grade Students”

Dr. Muttu. Vemula¹, Dr. Bhukya Devendar²

¹Assistant Professor Department of Education Mizoram University (A Central University)
Aizawl-796004, India

²Assistant Professor© Department of Education Kakatiya University

Abstract

Today man is living in a world of crises. The social, economic, political and value crises are some of the threats which the humanity faces and these threats are quite alarming. Added to this, in the recent decades, the environmental crises become another important factor which has made everyone in the world think of its gravity. Though the environmental dimension has its own history, it has gained prominence in the recent past due to several reasons such as urbanization, industrialization, automation and population explosion, along with pollution, acid rains, gas leaks, nuclear disasters which have made man a helpless victim. The present study observed that There is no significant difference between boys and girls with regard environmental awareness. Majority of the secondary school students have good level of environmental awareness. Private school students had better environmental awareness than the students of Government school's and 9th class students have more environmental awareness level than 8th class student.

Keywords: Environmental Awareness, Secondary Schools, environmental crises

Introduction: Meaning of the Environment.

The dictionary meaning of the word “Environment” is a surrounding external condition influencing development or growth of people, animals’ plants, living or working conditions etc., environment refers to the sum total of conditions which surround man at a given point in space and time. In the beginning the environment of early men consisted of only physical aspects of the planet earth (land, air and water) and biological communities but with the march of time and advancement of society man extended his environment through his social, economic and political functions.

Characteristics of Environment

1. The sum total of the stimulation that one receives from the nature since one’s birth until his death.

2. It is everything which affects the individual excluding genes.
3. All the external forces which affect the growth, development of living organism.
4. It consists of physical, intellectual, social, moral, cultural, emotional, economic and political forces which affect the life and nature of behavior.
5. It refers to sum total conditions which surround man at given point in space and time.
6. It includes physical (land, air and water) and Biological (Plants, animals including man and his several functions, organizations and institutions) components.
7. It involves, physical, chemical, biological, social, economic, political and cultural processes.

In this background several international organizations including some non-Governmental organizations have started working on the sustainability of environmental and ecological balance. In this direction a large number of workshops, seminars and meetings have been conducted. Among these intellectual experiences we may cite a few like the workshop held in Belgrade on environmental education in 1975, the first inter-governmental conference on environmental education held in Tbilisi, former USSR 1977, Tbilisi plus the conferences (1987) held in Moscow and more particularly the Earth Summit which took place in Rio de Janeiro in 1992 which was attended by about 120 heads of state and government together with delegates from over 170 countries. Several important documents were signed at the summit, responding to the beginning of a long process of interpreting, responding to and implementing recommendations and agreements designed to change the future of this planet. The center piece of the Rio agreement is known as Agenda 21, a major action programme setting.

Global Environmental Issues

- Green House Effect
- Depletion of Ozone Layer
- Acid Rain
- Thermal Pollution
- Pollution due to Oil Slicks
- Nuclear War – Fare
- Population Explosion
- Over Exploitation of Natural Resource
- Environmental pollution
- Air pollution
- Water pollution
- Soil pollution

- Noise pollution
- Deforestation

Environmental Concerns

One cannot deny the importance of environment in the present state of polluted atmosphere. Purity of environment depends upon pure air, pure water, pure light, clear sky and pure land. We should understand the importance of vegetation in Indian culture and revealing the secrets and eternity of nature. Vegetation is not only the gift of nature but it also unites us to the Almighty. Hills, covered with plants and trees, valley and dales, carpeted with flowers, green pastures and green gardens give us eternal delight and a felling of elevating our souls. The relation between vegetation and mankind is very old is everlasting.

In the ancient times the sages lived for studies, meditation and penance. Mankind development and advanced its process of learning and knowledge in forests that promoted feelings of kinship with plants and trees. The ancient sages worshipped nature and vegetation, which commanded a high place in their daily worship and religious performance. Trees are not merely a source of fuel. They also inspire, motivate, and serve us in our social, religious, domestic and ecological needs. Trees influence our therapeutic psyche, our temperament, habits, moods etc., Trees strike an equilibrium in the five basic elements. They are not mere show – pieces, they are, in fact, our life. Imagine what would have been the fate and condition of humanity had there been no tree. Trees, flowers, vegetables, herbs, fruits are some of the bounties of nature. Trees are not only worshiped by people but they are helping the man to maintain eco-balance, purifying the environment by taking in carbon dioxide and releasing out oxygen. Thus, tree worship apart from its spiritual value, has a tremendous role in keeping the environment good and healthy all around the man.

Ancient Indians listed five important environmental concerns: space (akasha), air (vayu), energy (agni), water (jal) and land (bhoomi). They were to be treated with respect and they even attained the status of Deva or Godhood. Many temples were consecrated to the manifestation of the Pancha Bhootha or five spirits, as they were known. Today, at least four of these five concerns are threatened and are threatening the existence of people on this planet. Air, energy, water and land are polluted, over exploited and misused.

Environmental Education in School Education

The movement of basic Education launched by Mahatma Gandhi in 1937 was perhaps the first serious attempt at relating education in school to local environmental needs. The essential elements of Basic Education were (a) productive activity in education, (b) correlation of curriculum with the productive activity and the physical and social environment, and (c) intimate contact between the school and the local community.

The education system in India had incorporated some aspects in Environmental Education in School curricula as 1930. The roots of the present status of Environmental

Education in formal education can be traced back to the Report of the Education commission (1964-66) (Kothari commission). This Report also incorporated the best that basic education had to offer so as to relate it to the life, needs and aspirations of the nation. For the primary stage, the Report recommended that “the aim of teaching science in the primary school should be to develop proper understanding of the main facts, concepts, principles and processes in the physical and biological environment”.

This recommendation could be implemented only in 1977 when the curriculum for the 10+2+3 pattern of education was evolved at the national level by NCERT, and presented in the document ‘The curriculum for the Ten years School: A Framework’ (1975). The National Policy on Education (NPE, 1988) and subsequent curriculum frameworks brought out by NCERT in 1988 and 2000 reiterated the importance of Environmental Education in school education. Thus, Environmental Education has been one of the priority areas of concern in all curriculum development programmes. The syllabi and instructional material for science and the social science, and, to some extent, those for languages and mathematics, included enough content related to the environment essential for the fulfillment of the desired objectives.

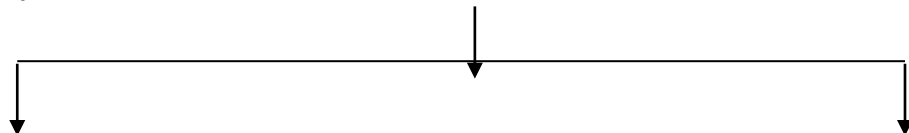
Relationship of Environment with the Study of the subjects

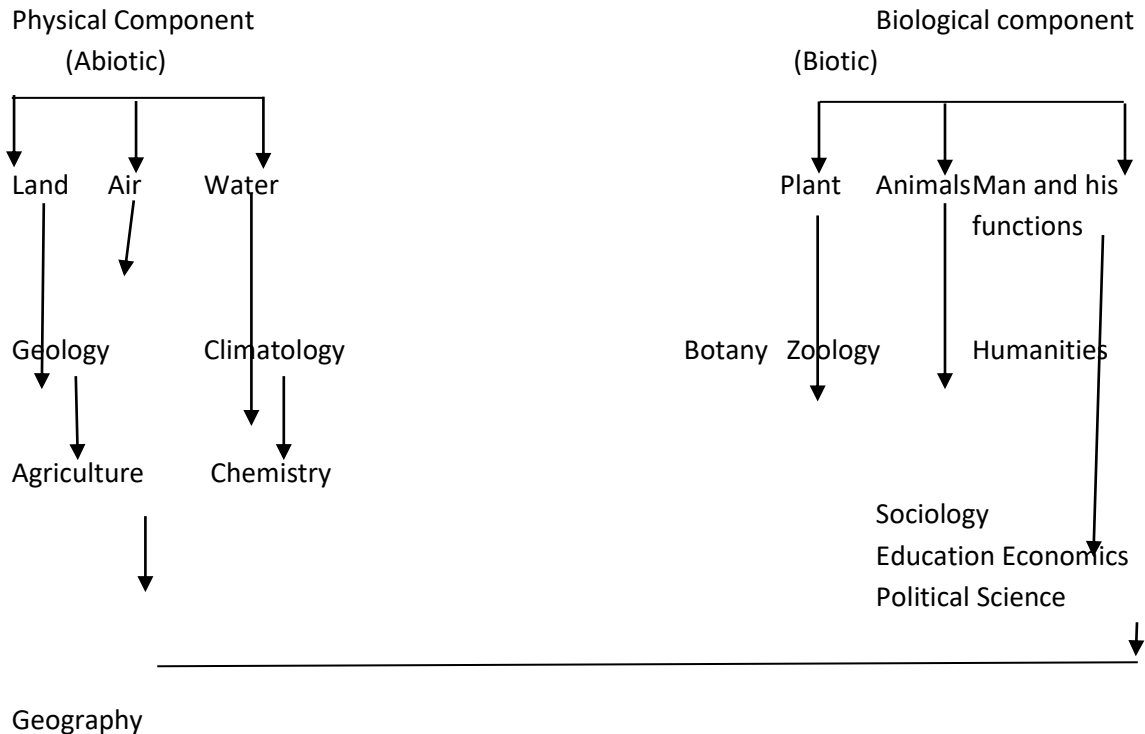
The components of the environment are broadly classified into two major categories.

1. Physical components or abiotic components and
2. Biological components or biotic component

The environment is composed of biotic (biological) and abiotic (physical) component. This can be shown with the help of chart

Environment





Geography

Environmental Protection Act

India was the first country to impose a constitutional obligation on the state and citizens to protect and improve the environment as one of the primary duties. Article-48A of the India Constitution provides

“The state shall endeavor to protect and improve the environment and to safeguard forest and wildlife of the country”.

Article-51 A provides

“It shall be the duty of every citizen of India to protect and improve the natural environmental including forests, lakes, rivers and wildlife and to have compassion for living creatures”.

Thus the Constitution of India has provisions to make environmental legislations. The central, state and the current lists subjects on which Parliament and State Legislatures are empowered to legislate spam noise control, land improvement, irrigation, town planning, slum clearance, house schemes, pest control, smoke, water pollution, forests, wildlife, recreation etc. consequently, laws have been enacted on some of the subjects

- The Factories Act, 1947.
- The insecticides Act, 1968.
- The water (Prevention and control of Pollution) Act, 1974.

- The Air (Prevention and control of Pollution) Act, 1981.
- The forest (Conservation) Act, 1980.
- The wildlife (Protection) Act, 1972 and
- The environment (Protection), 1986

Background of the Study

The uncontrolled activities of human beings are damaging the healthy environment more and more. In the Indian context, the following are the environment problems where priority action is needed.

- a. Population stabilization
- b. Integrated land use planning
- c. Healthy cropland and grassland
- d. Woodland and re-vegetation of Marginal lands
- e. Conservation of biological diversity
- f. Control of water and air pollution
- g. Development of non-pollution renewable energy system
- h. Recycling of wastes and residues
- i. Human settlement
- j. Environment education and awareness updating environmental laws
- k. New dimensions of natural security

These are the issues that are posing threat to our environment as a whole and to sustainability in particular. Now the understanding of the ecology and environmental awareness is essential for the wise management of the planets. As good citizens, we can play a vital role in creating a better environment for the future. It could be a small step like planting trees in more areas or keeping our vehicle exhaust smoke to the minimize or a major step like regulating the dumping of hazardous chemicals and industrial wastes. Come let's our bit to create a clean environment that is the best thing we can leave behind for our future generation.

“Oh earth, my mother, Air, my father, oh fire,

My friends

Water my kinsman, space, my brother,

Here do I bow before you with folded hands!

With your aid I have done good deals and found

Clear knowledge.

And, glorious, with all delusion past, I merge in highest good head”

- **Vairagyahstakam**

Need of the study

Health, clean and pure environment is a precious gift of nature to the humanity. The environment, which is made up of the layer of air above the surface of the earth and water and soil on the surface of the earth, is habitat of man as it is for all other living things. Like every living thing, man has to depend for his life on the environment. He receives his basic necessities of like water, air, food, and shelter from it. With the development of science and technology and the growth of population and industrialization brought in the tremendous changes in the natural environment thereby posting danger to the physical, mental and social health of man.

In the present scenario, the teacher has to play a vital role to educate the students on the awareness of environmental aspects like components of pollution, population issues, environmental sanitation, food issues, and environmental legislation. Unless the student possesses the awareness on the environmental; aspects, the students cannot acquire the knowledge of the environment. Therefore, there is a dire to study the level of awareness on the environmental aspects among the secondary school students.

Objectives of the Study

1. To study the environmental awareness of secondary grade students with respect to their management of the school.
2. To study the environmental awareness of secondary grade students with respect to class of students.
3. To study the environmental awareness of secondary grade students with respect to gender.

Hypotheses of the study

1. There is no significant different between students of private schools and government schools on the environment awareness.

2. There is no significant different between 8th class students and 9th class students on the environmental awareness.
3. There is no significant different between boys and girls on environmental awareness.
4. There is no the environmental different between private school's' boys and government on the environmental awareness.
5. There is no significant different between 8th class boys and 9th class boys on the environment awareness.
6. There is no significant different between boys of private school's and government school 8th class boys.
7. There is no significant difference between private school 8th class girls and government school's 8th class girls on the environmental awareness.
8. There is no significant difference between 8th class girls and 9th class girls on the environmental awareness.
9. There is no significant different between private school 9th class boys and government school's 9th class boys on the environmental awareness.
10. There is no significant difference between private school's 9th class girls and government school's 9th class girls on the environmental awareness.
11. There is no significant difference between government school's 9th class girls and 9th class girls.
12. There is no significant difference between private school's 9th class boys and government school's 9th class boys on the environmental awareness.

Limitations of the study

1. The scope of the present is limited only to six (6) areas i.e., (1) general environmental awareness, (2) components of environment, (3) reasons for pollution, (4) consequences of pollution, (5) current trends in protection of environmental pollution.
2. The study is limited to secondary grade students in Warangal district.
3. The sample is limited to government and private schools only.

REVIEW OF RELATED LITERATURE

David G. Victor (2007) – Climate change is one of the most complex issues facing policy, takes a fresh look at these issues and persuasively marshals arguments for three distinct approaches to combat the cause global warming will require societies to incur costs now, while uncertain benefits accrue in the distant future. These conditions make it hard to create successful policy, yet the longer policy shifts are put off, the more greenhouse gases accumulated in the atmosphere.

Uma Devi, D & Adinarayana Reddy, P (2006)- The investigators studies knowledge and educational needs in environmental aspects among rural adults. The study area is Andhra Pradesh and is divided into three geographical areas Viz., Rayalaseema, Telangana and coastal Andhra. For the purpose of the study, the Chittoor district of the Andhra Pradesh is taken as local of the study.

Deb, S.K & Bhattacharya, N (2006)- Environmental education enhances public awareness and knowledge of environmental issues and challenges to civilization. Teachers are the back bone of a society. They play a crucial role in highlighting crucial environmental issues and implementing practical solutions to current local environmental problems in order to reduce the global environmental impact. The paper discusses the basic features and different issues of environmental education. It also suggests the steps to meet environmental challenges by framing proper policy in our educational system.

Santhosh Kumar Rout & Sukriti Agarwal (2006) – The study was conducted to know the environmental awareness and environmental attitude of the male and female students of science and non-science streams belonging to rural and urban backgrounds studying in class X of different schools of Moradabad city. Normative survey research is used in this study. It was carried out on a sample of 96 students selected through the proportionate stratified random sampling.

Sandhya Gihar and Maanoj Kumar Saxena & B.R.Kukreti (2006) – The investigation was undertaken to study the developing environment friend's behavior among students role of video intervention. The study was conducted in the Barilly district of UP state. All students of secondary school's were considered as population of the present investigation. The present study researchers used multi stage stratified random sampling technique has been used.

Sheva Mary, R Paul Raj, I (2005) – The study investigates the environmental awareness among the high school students in Pondicherry region. The investigators selected 198 students from standard is, in both urban and rural areas and different types of school's by random sampling out of this, 79 were boys and 119 girls. The tool used for the study is environmental awareness opinionative prepared by the investigators satisfied used for the study were t-test and ANOVA. The results indicate that the environmental awareness among high school students is above average.

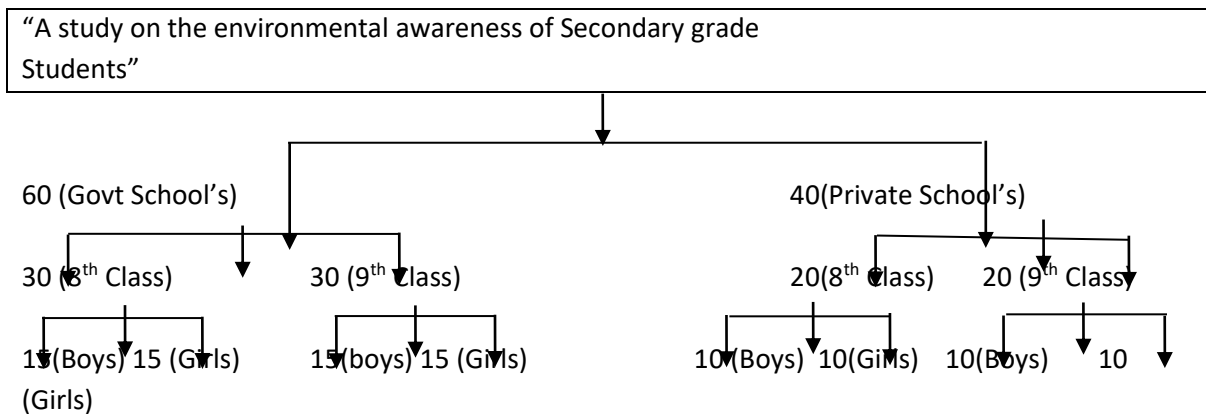
Driver and Johnson (1984)- Driver and Johnson studies the long terms benefits of the youth conservation programme, which combines outdoor work opportunities and environmental education for youths. In the study, the youths indicated that they had become more environmentally aware as results of the youths indicated that they had become more environmentally aware as a result of the youth conservation corps programme.

Rajput, J.S Saxena, A.B and Jadnao, V.G (1980) – have undertaken “A study on environmental approach of teaching at primary level in Madhya Pradesh state”. The study was conducted in three district phases. The sample consisted of 200 children from III and IV classes. In the first phase, the Madhya Pradesh state curriculum for classes III and IV was redesigned to build scope for environmental awareness test.

METHODOLOGY

Design of the Study

The Design of the study is presented in the figure



Diagrammatic Representation of the Research Design

The above figure represents the Environmental awareness among the Secondary grade students of Warangal. It also represents the relationship between the dependent variable Environmental awareness and independent variable like management of school, study of class and Gender.

Methodology

The investigator has selected survey method for the present study. The survey method was adopted since it was found suitable for collecting data regarding the existing status with regard to the environmental awareness of secondary grade students.

Research Tools used

In order to study the awareness levels of secondary school students on environmental concerns, a comprehensive questionnaire was constructed and developed after reviewing the literature and taking into consideration of the suggestions of the experts in the field. This tool consists of one part of test besides the Performa for personal bio-data of the respondents.

Consists of list of 20 multiple choice questions. Against each question from choices are given.

Procedure of the data collection

The study was conducted in the survey technique. The present researcher collected the required data from secondary school students of Warangal district.

The pupils were given a copy of the questionnaire. After explaining the purpose of the study, they were asked to select the appropriate answer for each multiple-choice question.

While answering the questions in the given questionnaire, the respondents do not face any problem. Totally 100 questionnaire copies were distributing among the respondents. The same questionnaire copies were processed.

Statistical techniques used

The tool used for testing the environmental awareness among secondary level students was a questionnaire. The test consisted of 20 multiple –choice questions. Each item was given four alternatives with one correct answer placed at different positions in different question correct answer was given weight age one, and wrong answer was given zero weight age. The maximum score of the test is 20 and the minimum score is zero.

The environmental factors depend on so many factors depend on so many factors. In order to establish the relationship between different factors involved and therefore environmental awareness at statistically significant levels, the mean score, standard deviations were computed. On the basis of calculated mean scores and S.D. the 't' value were computed to bring out the significant different, if any between the environmental awareness and the variables of study.

Sample of the study

The sample of the study is selected on the basis of random sampling procedure. The environmental awareness of the sample is analyzed with respect to certain selected variables such as gender, school, and class.

The test is conducted for 8th and 9th classes taking 50 students from each class.

Table

Distribution of sample with respect to Gender wise with percentage

| Boys | Girls | Total |
|----------|----------|-----------|
| 50 (50%) | 50 (50%) | 100(100%) |

As the table indicates the sample strength of 100 is inclusive of 50 boys and 50 girls.

Table Distribution of sample with respect to Management wise with percentage

| Government | Private | Total |
|------------|----------|------------|
| 60 (60%) | 40 (40%) | 100 (100%) |

Table indicates the total strength of 100 is inclusive of 60 Government School and 40 Private schools.

Table Distribution of sample with respect to the Class wise with percentage

| 8 th Class | 9 th Class | Total |
|-----------------------|-----------------------|------------|
| 50 (50%) | 50 (50%) | 100 (100%) |

Table indicates the total strength of 100 is inclusive of 50 8th Class and 50 9th Class students rural background students.

DATA ANALYSIS AND INTERPRETATION

Hypothesis -1

There is no significant difference between Government school Students and Private Students.

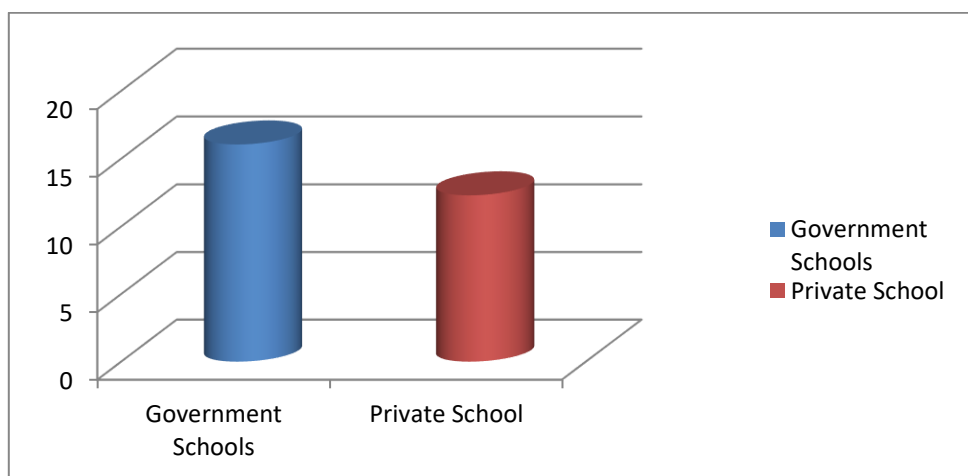
Table – 1 The difference among Government School and Private School’s Students with regard environmental awareness

| S. No | Category | No. of Students | Mean | S. D | “t” Value |
|-------|----------|-----------------|------|------|-----------|
|-------|----------|-----------------|------|------|-----------|

| | | | | | |
|---|---------------------|----|-------|------|------|
| 1 | Government School's | 60 | 16.05 | 2.9 | 5.38 |
| 2 | Private School | 40 | 12.30 | 0.33 | |

The above table 4.1.0 reveals that the "t" value is 5.38 which is greater than the table at 1.99 at 0.05 level. It is Significant at 0.05 level.

Hence the formulated null hypothesis "There is no significant difference between Government school Students and Private Students " is rejected.



Graph – 1 Mean difference between boy and girls with respect to Management

Hypothesis - 2

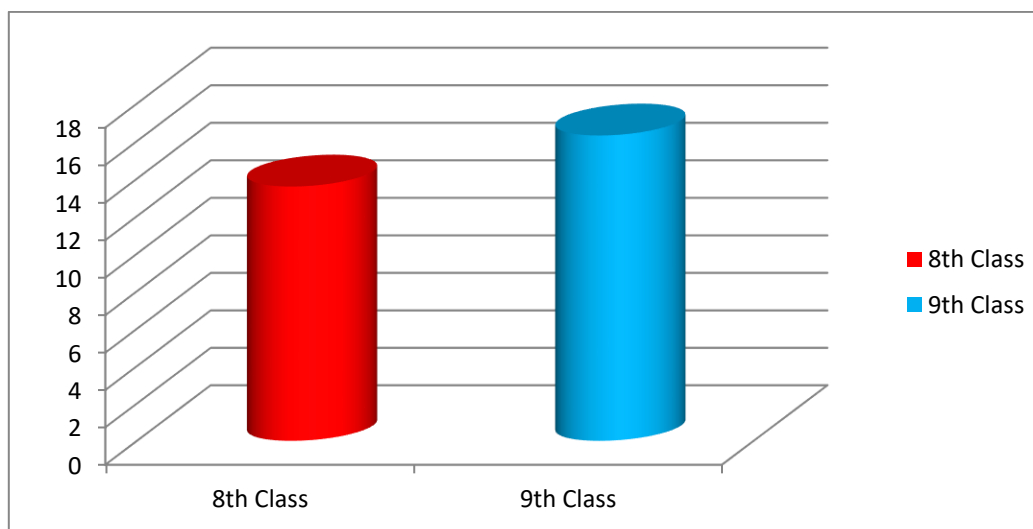
There is no significant difference between 8th Class Students and 9th Class Students.

Table 2 The difference among 8th Class Students and 9th Class Students with regard environmental awareness

| S. No | Category | No. of Students | Mean | S.D | "t" Value |
|-------|-----------------------|-----------------|-------|-----|-----------|
| 1 | 8 th Class | 50 | 13.58 | 2.9 | 4.35 |
| 2 | 9 th Class | 50 | 16.30 | 3.3 | |

The above table 2 reveals that the "t" value is 4.35, which is greater than the table at 2.01 at 0.05 level. It is Significant at 0.05 level.

Hence the formulated null hypothesis “There is no significant difference between 8th Class Students and 9th Class Students” is rejected



Graph – 2 Mean difference between 8th Class boys and Ninth Class boys

Hypothesis -3

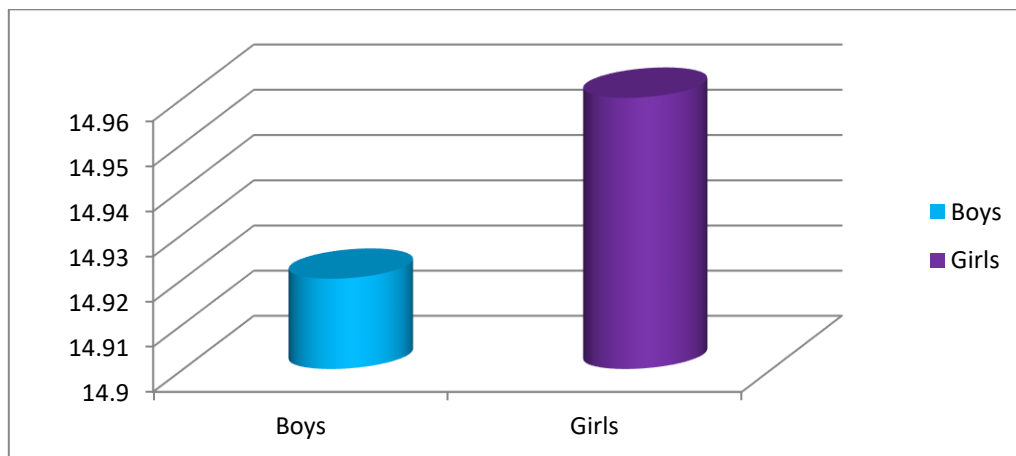
There is no significant difference between Boys and Girls on the environmental awareness.

Table 3 The difference among Boys and Girls Students with regard Environmental Awareness

| S. No | Category | No. of Students | Mean | S.D | “t” Value |
|-------|----------|-----------------|-------|------|-----------|
| 1 | Boys | 50 | 14.92 | 0.38 | 0.05 |
| 2 | Girls | 50 | 14.96 | 0.55 | |

The above table 4.3.0 reveals that the “t” value is 0.05 which is less than the table at 1.99 at 0.05 level. It is Not Significant at 0.05 level.

Hence the formulated null hypothesis “There is no significant difference between Boys and Girls on the environmental awareness” is accepted



Graph – 3 Mean difference between boys and girls of VIII and IX classes

Hypothesis - 4

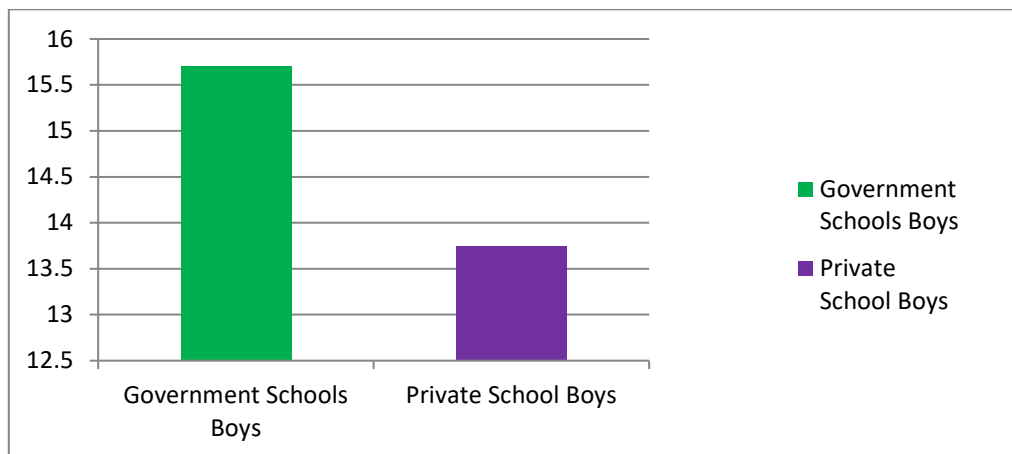
There is no significant difference between Private school Boys and Government School Boys to Environment Awareness level.

Table 4 The difference among Government School and Private School’s Students with regard Environmental Awareness

| S. No | Category | No. of Students | Mean | S.D | “t” Value |
|-------|--------------------------|-----------------|-------|------|-----------|
| 1 | Government School’s Boys | 30 | 15.7 | 0.56 | 8.86 |
| 2 | Private School Boys | 20 | 13.75 | 0.46 | |

The above table 4.4.0 reveals that the “t” value is 8.86, which is greater than the table at 2.01 at 0.05 level. It is Significant at 0.05 level.

Hence the formulated null hypothesis “There is no significant difference between Private school Boys and Government School Boys to environment awareness is rejected.



Graph – 4 Mean difference between Government school boys and Private School Boys

Hypothesis - 5

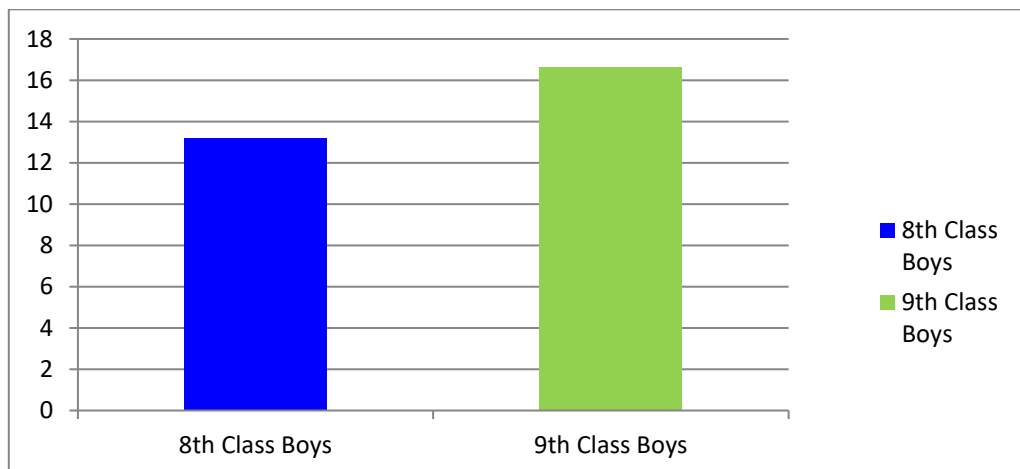
There is no significant difference between 8th Class Boys and 9th Class Boys.

Table 5 The difference among 8th Class Boys and 9th Class Boys with regard Environmental Awareness

| S. No | Category | No. of Students | Mean | S.D | “t” Value |
|-------|----------------------------|-----------------|-------|------|-----------|
| 1 | 8 th Class Boys | 25 | 13.20 | 0.25 | 5.85 |
| 2 | 9 th Class Boys | 25 | 16.64 | 2.64 | |

The above table 5 reveals that the “t” value is 5.85 which is greater than 2.01 at 0.05 level. It is Significant at 0.05 level.

Hence the formulated null hypothesis “There is no significant difference between 8th Class Boys and 9th Class Boys” is rejected.



Graph – 5 Mean difference between VIII class and IX class boys

Hypothesis -6

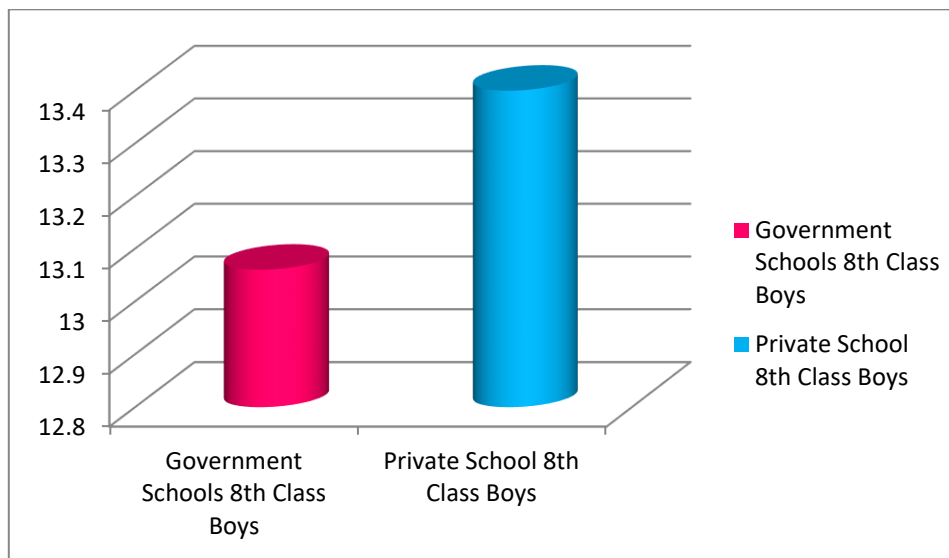
There is no significant difference between Government school 8th class boys and Private School's 8th Class boys.

Table 6 The difference among Government school 8th class boys and Private School's 8th Class boys with regard Environmental Awareness

| S. No | Category | No. of Students | Mean | S.D | "t" Value |
|-------|--|-----------------|-------|------|-----------|
| 1 | Government School's 8 th Class Boys | 10 | 13.06 | 1.48 | 0.63 |
| 2 | Private School 8 th Class Boys | 15 | 13.40 | 0.84 | |

The above table 4.6.0 reveals that the "t" value is 0.63 which is less than the 2.06 at 0.05 level. It is Not Significant at 0.05 level.

Hence the formulated null hypothesis "There is no significant difference between Government school 8th class boys and Private School's 8th Class boys" is accepted.



Graph – 6 Mean difference between Government 8th Class boys and Private 8th class boys

Hypothesis - 7

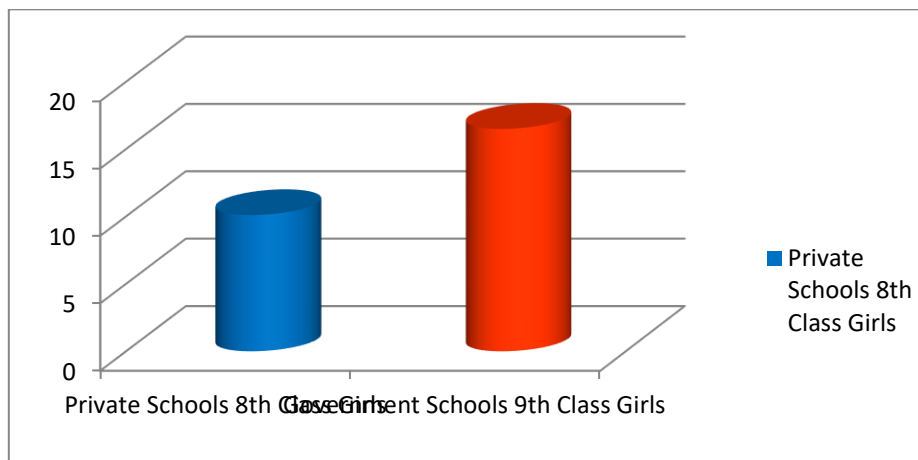
There is no significant difference between Private School 8th Class Girls and Government School 8th Class Girls.

Table 7 The difference among Private School 8th Class Girls and Government School 8th Class Girls with regard Environmental Awareness

| S. No | Category | No. of Students | Mean | S.D | “t” Value |
|-------|---|-----------------|-------|------|-----------|
| 1 | Private School’s 8 th Class Girls | 10 | 10.10 | 1.45 | 4.92 |
| 2 | Government School’s 9 th Class Girls | 15 | 16.50 | 2.90 | |

The above table 4.7.0 reveals that the “t” value is 4.92 which is greater than the table at 2.01 at 0.05 level. It is significant at 0.05 level.

Hence the formulated null hypothesis “There is no significant difference between Private School 8th Class Girls and Government School 8th Class Girls” is rejected.



Graph – 7 Mean difference between Private school 8th class girls and Government school 9th class Girls

Hypothesis - 8

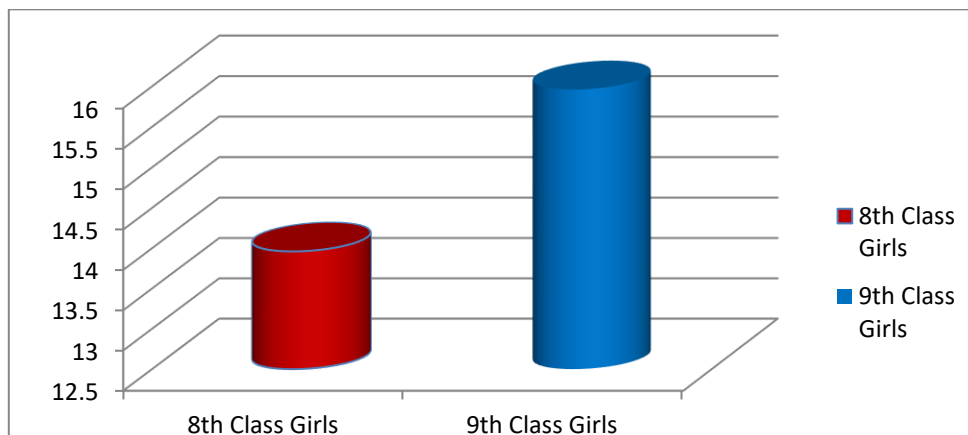
There is no significant difference between 8th Class Girls and 9th class Girls.

Table 8 The difference among 8th Class Girls and 9th class Girls with regard environmental awareness

| S. No | Category | No. of Students | Mean | S.D | “t” Value |
|-------|-----------------------------|-----------------|-------|------|-----------|
| 1 | 8 th Class Girls | 25 | 13.96 | 3.84 | 1.78 |
| 2 | 9 th Class Girls | 25 | 15.96 | 3.91 | |

The above table 4.8.0 reveals that the “t” value is 1.78 which is less than the table at 2.06 at 0.05 level. It is Not Significant at 0.05 level.

Hence the formulated null hypothesis “There is no significant difference between 8th Class Girls and 9th class Girls” is accepted



Graph 4.8.0 Mean difference between 8th class Girls and 9th class Girls

Hypothesis - 9

There is no significant difference between Private School's 9th class boys and Government school's 9th class boys.

Table 9 The difference among Private School's 9th class boys and Government school's 9th class boys with regard environmental awareness

| S. No | Category | No. of Students | Mean | S.D | "t" Value |
|-------|--|-----------------|-------|------|-----------|
| 1 | Private school's 9 th class boys | 10 | 13.9 | 1.70 | 7.62 |
| 2 | Government school's 9 th class boys | 15 | 18.47 | 1.18 | |

The above table 4.9.0 reveals that the "t" value is 7.62 which is greater than the table at 2.06at 0.05 level. It is Significant at 0.05 level.

Hence the formulated null hypothesis "There is no significant difference between Private School's 9th class boys and Government school's 9th class boys" is rejected.



Graph -9 Mean difference between private school 9th class boys and Government school 9th class boys

Hypothesis - 10

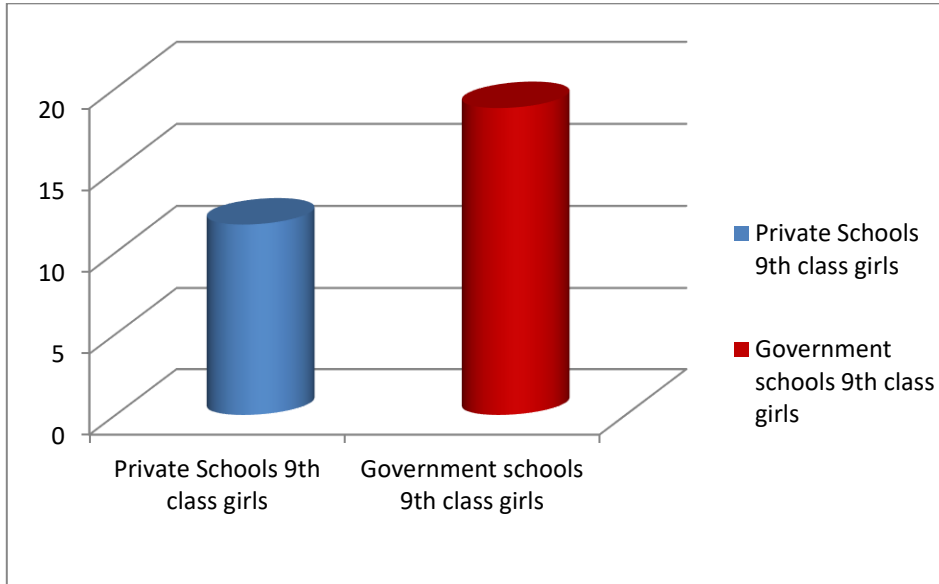
There is no significant difference between Private school's 9th class girls and Government School's 9th class girls.

Table 10 The difference among Private school's 9th class girls and Government School's 9th class girls with regard environmental awareness

| S. No | Category | No. of Students | Mean | S. D | "t" Value |
|-------|---|-----------------|------|------|-----------|
| 1 | Private School's 9 th class girls | 10 | 11.7 | 1.64 | 10.92 |
| 2 | Government school's 9 th class girls | 15 | 18.8 | 1.44 | |

The above table 4.10.0 reveals that the "t" value is 10.92 which is greater than the table at 2.06 at 0.05 level. It is Significant at 0.05 level.

Hence the formulated null hypothesis "There is no significant difference between Private school's 9th class girls and Government School's 9th class girls" is rejected.



Graph 10 Mean difference between Private School 9th class girls and Government School 9th class girls

Hypothesis - 11

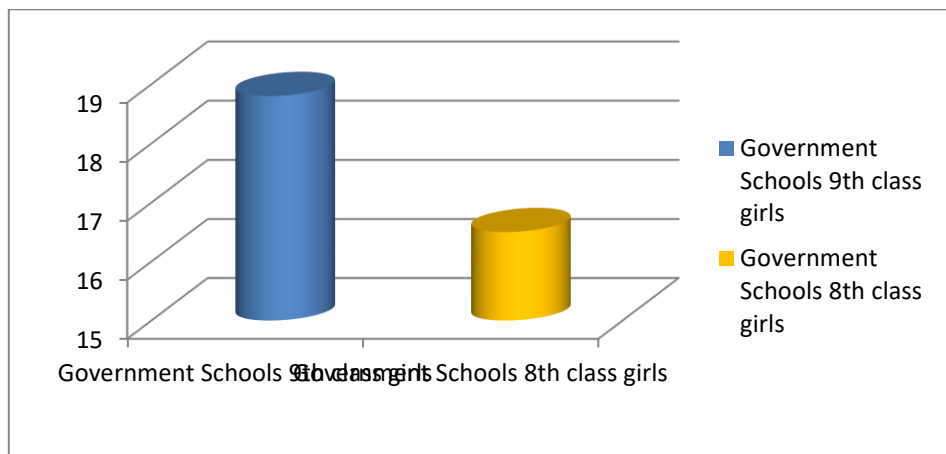
There is no significant difference between Government school 9th class girls and Government school 8th class girls.

Table 11 The difference among Government school 9th class girls and Government school 8th class girls with regard environmental awareness

| S. No | Category | No. of Students | Mean | S.D | “t” Value |
|-------|---|-----------------|-------|------|-----------|
| 1 | Government School’s 9 th class girls | 15 | 18.80 | 1.34 | 3.07 |
| 2 | Government School’s 8 th class girls | 15 | 16.50 | 3.74 | |

The above table 11 reveals that the “t” value is 3.07 which is greater than the table at 2.04 at 0.05 level. It is Significant at 0.05 level.

Hence the formulated null hypothesis “There is no significant difference between Government school 9th class girls and Government school 8th class girls” is rejected.



Graph 11 Mean difference between Government School 9th Class Girls and Government School 8th Class Girls

Hypothesis - 12

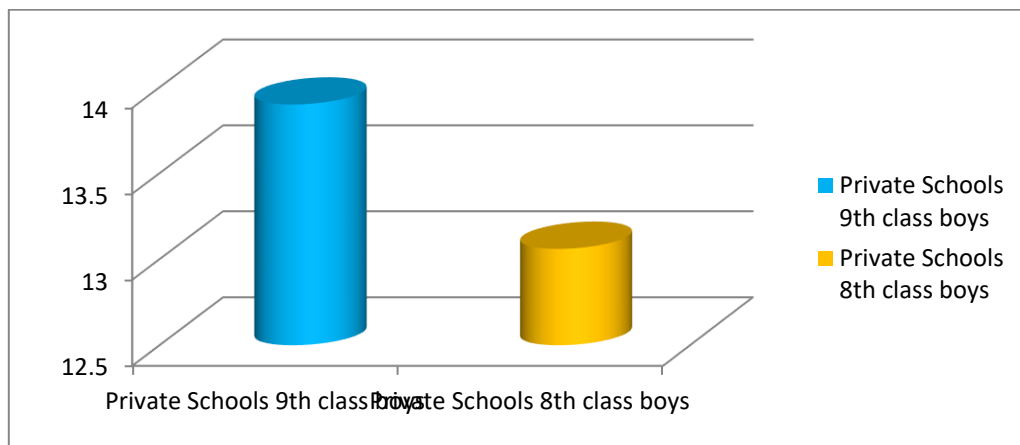
There is no significant difference between Private school 9th class boys and Government school 8th class boys.

Table 12 The difference among Private school 9th class boys and Government school 8th class boys with regard environmental awareness

| S. No | Category | No. of Students | Mean | S.D | "t" Value |
|-------|---|-----------------|-------|------|-----------|
| 1 | Private School's 9 th class boys | 10 | 13.90 | 1.70 | 1.31 |
| 2 | Private School's 8 th class boys | 15 | 13.06 | 1.41 | |

The above table 4.12.0 reveals that the "t" value is 1.31 which is less than the table at 2.07 at 0.05 level. It is Not Significant at 0.05 level.

Hence the formulated null hypothesis "There is no significant difference between Private school 9th class boys and Government school 8th class boys" is accepted.



Graph12 Mean difference between Private school 9th class Boys and Private school 8th class boys

FINDINGS

1. It is found that there is a significant difference between private schools and government school's students with regard to the environmental awareness of secondary grade students. Private school's students having better environmental awareness level.
2. It is found that there is a significant difference between students of 8th class and 9th class students with regard to the 8th class and 9th class having better environmental awareness of secondary grade students.
3. It is found that there is no significant difference between girls and boys with regard to the environmental awareness of secondary grade students.
4. It is found that there is a significant difference between government school boys and private school boys. Private school's boys having better environmental awareness of secondary grade students.
5. It is found that there is a significant difference between 8th class boys and 9th class boys.
6. It is also found that there is no significant difference between private school's 8th class boys and governments' school's 8th class boys.
7. It is found that there is a significant difference between private school's 8th class girls and government school's 8th class girls.
8. It is found that there is no significant difference between 8th class girls and 9th class girls.
9. It is found that there is a significant difference between at private school's 9th class boys and government school's 9th class boys, private school's 9th class boys having better environmental awareness of secondary grade students.
10. It is found that there is a significant difference between private school's 9th class girls and government school's 9th class girls.
11. It is found that there is a significant difference between government school's 8th class girls and 9th class girls.

12. It is found that there is a significant difference between private school's 9th class boys and government school's 8th class boys. Private school's 9th boys having better environmental awareness of secondary grade students.

Conclusion of the study

5.14.0 Educational Implications

1. As the environmental awareness is only at moderate level the action must be initiated to enrich the environmental awareness of the students.
2. Environmental education can be made local specific along with the help of local education bodies.
3. Environmental significance had to be instilled in the students of government school to enrich their environmental awareness.
4. Modules on different aspects of environment may be banned of their incorporation in the curriculum.
5. School's should arrange exhibitions, activities like tree plantation etc. and make arrangement for showing films related to environment.

BIBLIOGRAPHY

- Ajantha Chnadra & Pandey, S.N (1980) "**Industrial Pollution and Plants**", Ashish Publishing House, New Delhi.
- Aggarwal, J.C.(1996) "**Educational Research-An Introduction**" Indian Educational Review, Vol.XIV.
- Barathi, C., De Paul S.V., & Devi T.K.S., "**Study of Environmental Awareness among the Higher Education Student in the School Science**" Vol.XLII, No.1 P 46-53.
- Chandini Saxena (2006), "**Environmental Awareness in Ancient India**" University New Journal, Vol.44, No.12, March-20-26, P.79-84
- David G.Victor (2004), "**Climate Change-Debating America's Policy Options**", Council on Foreign Relation Press, New York.
- Deb, S.K & Battacharya, N (2006), "**Perspective on Environment Education-Challenge to Civilization**", Edutracks, Vol.6, No.3P.9
- Garret, H.E (1971) "**Statistics in Psychology and Education**", Akallas, Febber & Semmom Pvt Ltd. Bombay.
- John W.Best(1978), "**Reasearch in Education**" Prentice Hall of Inda Pvt Ltd., New Delhi.
- Lokesh Kaul (1984), "**Methodology of Educational Research**" Vikas Publishing House Pvt., Ltd., New Delhi.
- Raja Manicom (2001), "**Statistical Methods in Psychological and Educational Research**" Concept Publishing Co., New Delhi.
- Richard M.Stampleton,, "**Pollution A to Z**", Thomson Gale Publishers New Yard, Vol.1,P.8.
- Sadhana (2007), "**Our NGS Green Life**", AP NGC, Hyderabad

Sailaja, V.V & B huvaneshwara Lakshmi, G (2006), **“Developing Environmental Attitude with Special Reference to Use of Plastics”** University News, New Delhi, Vol.45 No.29,P 16-19.

Saraswathi Rat Kalle (2006), **“Environmental Protection Act”** A Weekly Journal Of Higher Education, University New, Vol.44, No.12, P.85.

SaravanvelP (2005), **“Research Methodology”** Kitab Mahal, New Delhi.

Sharma, R.A (1981), **“Educational Statistics”**, Loyal Bokk Depot, Meerut.

Sharma R.A (2001), **“Teacher Education-Theory Practice and Research”**, Rastogi Publications, Meerut.

Sharma, R.A (2001), **“Environmental Education”** Surya Publications, Meerut.

SmritiBosole(2006, **“Environmental Education in School’s”** A Weekly journal of Higher Education, University, News, Vol.44, No.12, P.114.

Yogamoorthi, A, **“Need for Environmentally Trained Teachers for Environmental Education”**, Journal of Education Research and Extensions, Vol.29, No.P.38-41

ARTICLES

- Antony Book- Environmental Education
Education Review.
- Rajesh Chandra- Environmental Pollution in Urban Areas,
Indian Architect.