

**A COMPARATIVE STUDY OF ENVIRONMENTAL
ATTITUDE AND AWARENESS AMONG THE SENIOR
SECONDARY BOYS AND GIRLS STUDENTS OF ALIGARH
DISTRICT, U.P IN RELATION TO THEIR STREAM**

MD ROFIKUL ISLAM*

ABSTRACT

In the era of science and technology environmental education gain utmost importance because it is the human needs and greed which leading the environment becomes uninhabitable for living being. It is very necessary to make the people aware about the causes and effect of environmental degradation on living being. The present investigation has been carried out to compare the environmental attitude and awareness among the girls and boys senior secondary students of Aligarh district (U.P) in relation to their stream of education. The investigator used descriptive survey method and Environmental Awareness Ability Measurement (EAAM) scale as tool and systematic random sampling technique applied for data collection. The investigator found difference among girls and boys student about environmental attitude and awareness but did not find any valid reason for such difference. The researcher also found difference among the science and arts students. Though the result showed that all the student have knowledge about environment but intra-stream difference is also there. The science stream girls were very much concerned and aware, and have protective attitude towards environment.

Key Words: Environmental Attitude and Awareness, Senior Secondary, Stream.

* RESEARCH SCHOLAR, DEPTT.OF EDUCATION, ALIGARH MUSLIM UNIVERSITY,
ALIGARH (U.P)

Introduction “We won't have a society if we destroy the environment.” ---- Margaret Mead.

Man has always been an inseparable part of the environment since his very existence on earth. However lavish consumption of precious environmental resources by man, either for greed of the developed countries or for need of the poor people of the developing or under-developed countries, caused a large scale quality degradation of the environment. The increasing population, industrialisation and urbanization have fuel to the fire by creating tremendous pressure on natural resources. This has resulted in many environmental crises like pollution, climate change, global warming, acid rain, bio-degradation etc. Environment has become the concern of all; the academicians, intellectuals, scientists, policy makers and government across the continents. Widespread and systematic concern for environmental issues has grown the world over particularly after the 1960s. The UN World Conference on the Environment in Stockholm in 1972, the Earth Summit held in Rio de Janeiro in 1992, the Global Forum, 1992 and the activities organised by the International N.G.O Forum show that environment is on the agenda of the international community.

Man-Environmental Relationship

“Of all things in the world, people are the most precious”- a phrase first used by Chinese Delegation at the 1972 Stockholm Conference on human environment. Man is the supreme creation of nature. However, the truth is that he is the part of nature and not its master. Till recent past man was a slave of environment. The child may have all kinds of abilities but they cannot be developed fully without a proper environment. Environment starts influencing the child from the stage of embryo. This influence has been called ‘Social Heredity’.

The environment which sustains life is in peril at present. Human actions are responsible for this. Rapid industrialisation, further advancement in science and technology and the abuse of this advancement in an arbitrary way and the fast growth of urbanisation have posed danger to man. Man's life, in terms of quality and sustainability, is dependent on the interrelationships among the natural environment, social environment and technological environment and the latter two being manmade. Generally, people are indifferent to their environment. Newton's third law states, “every action has an equal and opposite reaction”. This equally applies to man's

relationship with nature as it relates to application of force on inanimate objects. While man sought domination over nature in five thousand years of recorded history, he has begun to realise that his welfare and his very existence are deeply intertwined with the natural cycles and systems.

Environment and Education

Education has always been a process by which people fitted to line successfully in their environment. The present history of human beings has been marked by technological and social changes that simultaneously invited the exploitation of natural resources to suit human ambition and to improve the quality of living. At the same time one must know that what today's world craves for is an environment worth living. To make the environment worth living a drastic change in our habits, outlooks, attitudes and values are essential. Only education, undoubtedly, has the power to achieve this goal and history stands witness to it. As a result of this, in 1972 Stockholm Conference on human environment resulted in establishment of UNEP, which together with UNESCO launched the International Environment Education Program. Environmental awareness and attitude can be provide in school through environmental education. Therefore awareness about environment is must for all. The Supreme Court of India made it mandatory for all educational institutions to teach environmental education as a compulsory subject from class one to twelve.

Environmental Education

Environmental Education is designed to open our eyes to the havoc we have brought on ourselves. Environmental Education should enable people learn how hazardous environmental pollution, population explosion and resource depletion could be the best place to start such learning in school.

Justification of the Problem

One in every seven persons on this planet lives in India. With 16% of the world's population and only 2.4% of its land area, there is a heavy pressure on the natural resources including land. Apart from them, human activities towards environment may lead to unexpected gigantic

hazards for all the creature in the coming few years. Day by day human being is consuming natural resources in an unsustainable way. The main reason behind this is the non-cooperative thinking with nature. Awareness and involvement of the civil society is a precondition of checking environmental degradation. So for that we should create environmental awareness and attitude among people for the sake of our green planet and it is only through education we can make aware people about environmental degradation, and for bringing out environmental awareness in the society we have to start from the school which is the miniature of the large society. Research in environmental education may help in formulating strategies that would suit the need of different students at different levels. So they would develop into environmentally oriented individuals.

Statement of the Problem

“A comparative study of environmental attitude and awareness among the senior secondary Boys and Girls students of Aligarh district, U.P. in relation to their stream”

Operational Definition of the Key Terms

Environment

Jose de Castro opines, “Environment as a system of mutual relations between living creatures and their environment.”

Environmental Awareness

According to Belgrade Charter-“Environmental awareness means the act of having or showing realisation, perception or knowledge about the environment and its related problems. It is a total behaviour pattern and sensitivity to the environment in its totality and problems related to the environment”.

Objectives of the Study

- I. To find out the difference of environmental awareness and attitude among the Boys and Girls students of Aligarh district.

- II. To find out the difference of environmental attitude and awareness among Science and Arts students of Aligarh.
- III. To compare the environmental attitude and awareness of Science and Arts Boys students.
- IV. To examine the difference of environmental attitude and awareness of Science and Arts Girls students.
- V. To investigate the difference of environmental attitude and awareness of Science Boys and Girls students of Aligarh district.
- VI. To compare the environmental attitude and awareness of Arts Boys and Girls students of Aligarh.

Hypotheses of the Study

H0-1: There is no significant difference of Environmental Awareness between Boys and Girls students in Aligarh.

H0-2: There exist no significant difference of Environmental Awareness between Science and Arts students in Aligarh.

H0-3: There is no significant difference of Environmental Awareness between Science and Arts Boys students.

H0-4: There exist no significant difference of Environmental Awareness between Science and Arts Girls students.

H0-5: There is no significant difference of Environmental Awareness between Science Boys and Girls students.

H0-6: There exist no significant difference of Environmental Awareness between Arts Boys and Girls students.

Significance of the Study

The present investigation was carried out with the purpose of comparing environmental awareness among Boys and Girls students at Senior Secondary school in Aligarh in relation to

their stream of education. The issue of Environmental Education has been discussed at several nations and international seminars, workshops, conferences. The Stockholm conference (1972) stressed specifically on the need for promoting awareness of environmental issue. In recent years we have been observing an unprecedented awareness of environmental problems among conscious public. Stockholm Conference produced an action plan for human environment and resulted in the establishment of UNEP which together with UNESCO launched the International Environmental Educational Programme. Although, India is not fully implemented these programmes in its schools due to the lack of awareness and resources but attempt is going on. A reference to the past researches have been conducted in this field and needs further studies for protecting and improving environment in all the country including India.

This was the fact that inspired the investigator to conduct a study in this field. As a humble beginning, the investigator tried to study the extent of environmental awareness among science and arts students at senior secondary level in Aligarh.

Delimitations of the Study

The sample was selected from the Senior Secondary Schools (Boys and Girls) of AMU. The study has been conducted on senior secondary students only. Out of many personal variables, only the gender, science and arts streams, and Senior Secondary Schools have been taken into account.

Review of the Related Literature

Selvam, V. and Abdul Nazar, N. (2011), studied “An analysis of environmental awareness and responsibilities among university students.” And found that majority of the students and not all the students are having environmental awareness and responsibilities

Prashant Kumar Astalin (2011), studied “A study of environmental awareness among higher secondary students and some educational factors affecting it” and found that Students of 11th and 12th standard were identical as for as their environmental awareness was concerned.

P.K. Sahoo (2000) conducted a study on measuring the effects of different components of environment awareness and to establish a relationship between scientific attitude and environmental awareness of +2 students of Rajasthan.

Dr.Shivakumar, G.S (2000), studied “Environmental concern among the secondary school students.” It was found that Gender and locality have interaction effect on environmental awareness. The types of secondary schools also play an important role on environmental awareness.

M. Prateek and A.K. Sidana (1998) investigate interest towards Environmental Education among Senior Secondary students. The findings showed significant difference between urban and rural students.

G.C Bhattacharya (1997), in his study found that there was no significant difference between students in their environmental awareness and attitude, but students differ in their environmental orientation and responsibility

Methodology

For the present study, the investigator used descriptive survey method.

Research Tool

The investigator used ‘Environmental Awareness Ability Measure’ (EAAM) Scale, (2009) purports to measure the extent and degree of awareness of people about environmental pollution and its protection.

Data Collection

For the present study, it was required to collect the data from the students of class XI and XII and data were collected from Senior Secondary Schools (Boys and Girls), A.M.U., Aligarh because students of these schools are come from all the sections of the society irrespective of their caste, creed, class, religion etc.

Sample Size

In the present study a total of 200 senior secondary school students (50 Science Boys, 50 Science fGirls, 50 Arts Boys and 50 Arts Girls) of Senior Secondary Schools (Boys and Girls) of AMU were selected as sample population by the investigator by using systematic random sampling technique. **Table-1: Sample distribution**

S. No.	Groups	Science	Arts	Total
1.	Girls	50	50	100
2.	Boys	50	50	100
Total		100	100	200

Source: Primary survey.

Statistical Techniques Used

The analysis of data was done by using statistical techniques i.e. Mean, Standard Deviation (SD), and t-test.

Analysis and Interpretation

Objective-wise Analysis and Interpretation

Table-2: Showing comparison of environmental awareness between Boys and Girls students.

Sources of variation	Number of Students	Mean(M)	Standard deviation S.D	SE _D	Degrees of freedom	't' value	H.0
Boys	100	41.75	4.30	0.578	198	4.065	Rejected
Girls	100	44.1	3.82				

Significance at 0.01 level
2.60

Table value-

1. Interpretation

The 't' =4.065 is found to be significant at 0.01 level of confidence which is much higher than the Table value-2.63 which confirmed that Boys and Girls students are differ in their environmental attitude and awareness. The researcher did not find any valid reason for such difference between Boys and Girls students about environmental issues.

Table-3: Showing comparison of environmental awareness between the Science and Arts stream students

Sources of variation	Number of Students	Mean(M)	Standard deviation S.D	SE _D	Degrees of freedom	't' value	H.0
Science	100	44.1	3.34	0.575	198	4.087	Rejected
Arts	100	41.75	4.65				

Significance at 0.01 level
2.60

Table value-

2. Interpretation

The 't' value 4.087 was found to be significant at 0.01 level of confidence. It shows that there is true difference about environmental awareness between the students of Science and Arts.

Table-4: Showing comparison of environmental awareness between the Science and Arts Boys students

Sources of variation	Number of Students	Mean(M)	Standard deviation S.D	SE _D	Degrees of freedom	't' value	H.0
Science Boys	50	43	3.28	0.828	98	3.019	Rejected
Arts Boys	50	40.5	4.78				

Significance at 0.01 level
2.63

Table value-

3. Interpretation

The 't' value, 3.019 was found to be significant at 0.01 level of confidence which is higher than the tabulated 't' value(2.63). The result showed that science Boys are more concerned about environmental issues than the Arts Boys students. The reason may be the influence of their subject's contents which laid emphasis on environmental issues like pollution, causes of pollution, source and use of energy, conservation of resources, biodiversity, remedial measures etc.

Table-5: Showing comparison of environmental awareness between Science and Arts Girlsstudents

Sources of variation	Number of Students	Mean(M)	Standard deviation S.D	SE _D	Degrees of freedom	't' value	H.0
Sc.Girls	50	45.2	3.058	0.737	98	2.985	Rejected
Arts Girls	50	43	4.16				

Significance at 0.01 level
value-2.63

Table

4. Interpretation

The 't' value is found 't'= 2.985 which means that there is significant difference of environmental awareness between Science and ArtsGirls students. The reason may be the influence of their subject's contents which always tried to lay much more emphasis on environmental aspects like pollution, causes of pollution, conservation of resources etc.

Table-6: Showing comparison of environmental awareness between Science Boys and Girls students.

Sources of variation	Number of Students	Mean(M)	Standard deviation S.D	SE _D	Degrees of freedom	't' value	H.0
Sc. Boys	50	43	3.28	0.64	98	3.437	Rejected
Sc. Girls	50	45.2	3.058				

Significance at 0.01 level

Table value- 2.63

5. Interpretation

The 't' value ((3.437) in the table reveals significant difference about environmental awareness between Science Boys and Girls students which is very much significant at 0.01 level of significance.

Table-7: Showing comparison of environmental awareness between Arts Boys and Girls students

Sources of variation	Number of Students	Mean(M)	Standard deviation S.D	SE _D	Degrees of freedom	't' value	H.0
Arts Boys	50	40.5	4.78	0.82	98	3.049	Rejected
Arts Girls	50	43	4.16				

Significance at 0.01 level

Table value-

2.63

6. Interpretation

The 't' value 3.049 from the above table is very much significant at 0.01 level of confidence. Hence the difference of environmental awareness between Boys and Girls students of Arts at

Aligarh is not due to the chance. The investigator did not find any valid reason for such variation.

Findings of the Investigation

a. On comparing the environmental awareness of Boys and Girls students at senior secondary schools of Aligarh based on their gender difference, it was found that Girls students are more aware about environmental issues and problems than the Boys students on overall basis.

b. Findings related to the comparison of environmental awareness of Science and Arts students in Aligarh, It was found that Science students possess more awareness about environmental issues than the Arts students.

c. On comparing the environmental awareness of Boys students of Science and Arts streams on the total sample, it was found that the Science Boys students have more advanced level of awareness about environmental issues than the Arts Boys students. At the same time Science Boys students showed more concern towards environmental problems than the Arts Boys students.

d. The result showed that the science Girls students have more advanced level of environmental awareness than the arts Girls students. At the same time Science Girls students showed more concern towards environmental problems than the Arts Girls students.

e. Based on gender, comparing intra-stream environmental awareness of Science Boys and Girls students of Aligarh, it was found that Girls students are more aware than the Boys students though they have same subjects.

f. While comparing inter streams environmental awareness based on gender difference of Arts Boys and Girls students of Aligarh, it was found that Girls students are more aware than the Boys students though they have same subjects.

CONCLUSION

The present investigation was an attempt to see the effect of gender and streams of education on environmental awareness of pupils of senior secondary schools in Aligarh. The result showed that all the students have a positive attitude towards environmental awareness but the Science stream students exhibit somewhat higher degree of environmental awareness than the Arts stream students. Another interesting result is that Girls and Boys students differ in their awareness ability about the environment. It showed that gender difference is important in developing environmental attitude and awareness. Both Boys and Girls students were concerned about their environment but the Girls students have much more knowledge and understanding of environmental issues, problems and probable measures for the preservation and conservation of the environment. The result also showed that Science subjects have a positive effect on environmental awareness of the students. As the students of Science stream are studying environmental education as a separate subject, therefore they are more concerned about their environment in comparison to arts students who are studying environmental education as an integrated subject.

EDUCATIONAL IMPLICATIONS

Environmental education is a learning process that increases people's knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address the challenges, fosters attitudes, motivations and commitments to make informed decisions and take responsible action (UNESCO, Tbilisi Declaration, 1978). No doubt education is a strong means of foundation of behaviour. It increases knowledge, power of thinking and reasoning. It changes personality and improves quality of life of an individual. Education connects the entire world as it may solve the problems faced by human beings locally and globally i.e. environmental degradation being one of such problems. Education develops awareness in human beings towards environment. It enhances the concern of people towards their environment, their immediate surroundings as well as towards the entire world.

SUGGESTIONS

- The government, policy makers and the educationist all have come to one platform to propagate environmental education in order to increase awareness of people towards environment.
- The media has to play an important role in developing awareness among the students as it influence the life of the student greatly outside the school.
- Education, information and public awareness initiatives are essential in the support of water management and water conservation in and outside the school.
- Support the public participation in awareness-raising programmes & initiatives.
- Promote pollution awareness initiatives and voluntary accreditation schemes in the schools and in the society.
- To assist the students in the provision of bringing awareness on climate change & habitat protection.
- Educate the students to promote the use of low carbon emission technologies and the use of renewable energy fuels in all new developments and renovations.
- Educate the pupils to reduce CO₂ emissions and promote the use of renewable energy sources.
- Promote through educational programmes the concept of sustainable development among the students.
- Promote waste prevention and minimise the production of harmful waste.
- Encourage and support the recovery & reuse of waste.

REFERENCES

1. **Krishnamaracharulu, V. R. G. S.** (2005). *Environmental Education: Aims and Objectives of Environmental Education: Importance of Environmental Education*. Hyderabad: Neelkamal Publications Pvt. Ltd.
2. **Senapati, T. & Sahoo, R. K.** (2009). *Environmental Education and Pollution Control*. New Delhi: Mittal Publications.

3. **Jeronen, E., Jeronen, J. & Raustia, H.** (2008). Environmental Education in Finland – A Case Study of Environmental Education in Nature Schools. *International Journal of Environmental & Science Education*, 4 (1), 1-23.
4. **Astalin, P. K.** (2011). A Study of Environmental Awareness among Higher Secondary Students and Some Educational Factors Affecting It. *International Journal of Multidisciplinary Research*, 1, 90-101.
5. **Selvam, V. & Abdul N. N.** (2011). An Analysis of Environmental Awareness and Responsibilities among University Students. *International Journal of Current Research*, 3 (11), 202-205.
6. **Shivakumar, G. S.** (2012). Environmental Concern among the Secondary School Students. *Golden Research Thought*, 1 (10), 1-4.
7. **Singhal, A. & Verma, U.** (2012). Environmental Awareness among Higher Secondary Students of Jabalpur. *Indian Journals.com*, 5 (2), 274-279.

