ABSTRACT

“There is a paramount need to create a consciousness of the environment. It must permeate all ages and all sections of society, beginning with the child. Environmental consciousness should involve teaching in school and colleges. This aspect will be integrated in the entire educational process”.

National Policy of Education 1986

Education brings awareness and is essential for action. In this direction Environmental Education provides an understanding of the multi-dimensional problems of depleting resources and ever-increasing populations. Environmental Education is a way of creating knowledge, understanding, attitudes, skills, abilities and awareness towards the environment and its protection.

The basic purpose of Environmental Education is to provide individual and social groups sufficient scope so that they can acquire awareness and knowledge, develop attitudes, skills and abilities and participate in solving real life environmental problems. The perspective should be integrated-approach and should be holistic in nature. Purpose of Environmental Education is therefore not to introduce a new subject as such, but to evolve a new approach to education to integrate the concept of preserving environment with the existing content of a subject discipline. Therefore, it is assumed that Environmental Education is an approach, which is expected to provide the necessary methodology to integrate the consciousness about the environment (both in applied and basic/theoretical aspects) with education, engineering, socio-economics, ethics, law and other applied disciplines, so that the knowledge will be holistic.

Though these days a section of intelligentsia is becoming conscious, about depleting resources, deteriorating standards of life due to ever increasing serious problems of pollution, poverty, population and illiteracy, however, still a large section of our society has a very low awareness and sense of civic
responsibility and growing tendency of indifference and negligence, which is in one way the other prevents them from thinking positively well in advance. The need of creating mass awareness about the environmental problems is felt by all including those concerned with education that environmental problems is felt by all including those concerned with education that is teachers and intellectuals.

The teacher has to play an important role in National development and social change. The teacher is the mediator of disseminating knowledge and awareness about the environment and is one of the important factors, which is bound to affect this programme. The teacher can provide a vital link in the delivery of Environmental knowledge, its associated problems and their solutions. The effectiveness of Environmental Education relies heavily on the knowledge, skills and attitude of the teacher. It is therefore essential, that the teacher should himself be fully aware of the environmental problems and day to day activities related to the environment. The teacher has to internalize a change in his/her role from one of “giver of Knowledge” to one of “facilitator in the learning process”.

In this study, the Secondary School teachers have been chosen, because Secondary level is a crucial stage when students are found more active, inquisitive and enthusiastic. Environmental Awareness among Secondary School teachers was selected because that provides the basis for developing a positive attitude towards the appreciation of different environment problems and inspires one for actively participating in the programs for conserving nature and preventing further deterioration. Awareness is the spring board to conservation.

Also the study was carried out on the Secondary School teachers, because most of the pressing need of Environmental Education was found at the Secondary level of education.

The investigator exhausted all his efforts to go through literature, informations, and findings which have been earlier done by the scholars in this particular field. The researcher through the present research has tried his best to
contribute some new findings, informations and knowledge on the basis of the earlier informations, work available, to contribute something new to this vast ocean of knowledge.

The review of related literature has shown that government, policy makers, educationists all have come on one platform to propagate Environmental Awareness and Environmental Education among Secondary School teachers.

The investigator therefore, made a humble attempt to make a review of the studies done in the field of Environmental Education. The researcher reviewed the following studies during his present research work. These studies were:

1. Studies based on the Environmental Awareness.
2. Studies based on the attitude of the teachers towards the Environmental values.
4. Studies based on the curriculum of Environmental Education.
5. Studies based on Sustainable development and its related problems.

The present study states as “A study of Environmental Awareness among Secondary School teachers in relation to their Gender, Subject-Area and Types of School with special reference to their Socio-economic Status”.

Objectives of the Study:
The entire research process is guided by objectives, which have been explicitly and precisely spelled out by the investigator in advance.

The present study has the following major objectives given below:-

1. To develop a tool in the form of “Environmental Awareness Questionnaire” for measuring and studying Environmental Awareness
among Secondary School teachers teaching in various schools of Aligarh.

2. To study Environmental Awareness among Secondary School teachers.

3. To establish a relationship if any between Environmental Awareness of Secondary School teachers and Gender.

4. To establish a relationship between Environmental Awareness of Secondary School teachers and the Subject which the teachers are teaching.

5. To establish a relationship between Environmental Awareness of Secondary School teachers and the Type of School where in they work, like Government or Private School.

6. To study the influence of Socio-economic Status of Secondary School teachers on their Environmental Awareness.

**Hypotheses of the Study:**

The investigator formulated the following hypotheses for the present problem undertaken:-

1. The Male Secondary School teachers do not differ significantly on Environmental Awareness in comparison to their Female counterparts.

2. The Male Secondary School teachers of Science group do not differ significantly on Environmental Awareness in comparison to their Female counterparts.

3. The Male Secondary School teachers of Social Science group do not differ significantly on Environmental Awareness in comparison to Female Secondary School teachers of Social Science group.

5. The Female Secondary School teachers of Science group do not differ significantly on Environmental Awareness in comparison to Female Secondary School teachers of Arts group.

6. The Male Secondary School teachers of Science group do not differ significantly on Environmental Awareness in comparison to Female Secondary School teachers of Social Science group.

7. The Female Secondary School teachers of Science group do not differ significantly on Environmental Awareness in comparison to Female Secondary School teachers belonging to Social Science group.

8. The Male Secondary School teachers belonging to Arts group differ significantly on Environmental Awareness in comparison to Female Secondary School teachers of Arts group.

9. The Female Secondary School teachers of Social Science group do not differ significantly on Environmental Awareness in comparison to Female Secondary School teachers of Arts group.

10. The Male Secondary School teachers belonging to Social Science group do not differ significantly on Environmental Awareness in comparison to Male Secondary School teachers belonging to Arts group.

11. The Science group Secondary School teachers do not differ significantly on Environmental Awareness in comparison to their counterparts in Social Science group.

12. The Science group Secondary School teachers do not differ significantly on Environmental Awareness in comparison to their counterparts in Arts group.

13. The Secondary School teachers of Social Science group do not differ significantly on Environmental Awareness in comparison to their counterparts in Arts group.

15. The Male Secondary School teachers in Government schools do not differ significantly on Environmental Awareness as compared to the Female Secondary School teachers in Government Schools.


17. The Female Secondary School teachers in Government schools do not differ significantly on Environmental Awareness in comparison to Female Secondary School teachers in Private Schools.


21. The Female Secondary School teachers belonging to High Socio-economic Status differ significantly on Environmental Awareness in comparison to Female Secondary School teachers belonging to Low Socio-economic Status.


23. The Male Secondary School teachers belonging to Low Socio-economic Status do not differ significantly on Environmental Awareness in comparison to their counterparts belonging to Low Socio-economic Status.
Sample of the Study:

The present study was conducted on a sample of 250 (N = 250) Secondary School teachers of Private and Government Secondary Schools. These Secondary School teachers were selected from different disciplines of study viz; Science, Social Science and of Arts.

Tools of the Study:

For carrying out the present study the investigator found no satisfactory tool available for measuring the Environmental Awareness of Secondary School teachers. Therefore, the investigator himself developed a tool in the form of a questionnaire for measuring the Environmental Awareness of Secondary School teachers.

The tool used in this study was "Environmental Awareness Assessment Scale" (EAAS). This Scale explores the understanding of Secondary School teachers about the importance of environment in which they live and how far the efforts of Government, mass awakening programmes of NGO’s and other agencies through Mass media, electronic media and print media could achieve their goals.

For preparing the “Environmental Awareness Assessment Scale”, the researcher consulted a large number of primary and higher Secondary textbooks containing topics on various aspects of environment, prepared by the State Government and Central Government (CBSE).

Apart from this, magazines, resource books of Environmental organizations like the “The Annual Surveys” on environment and newspapers, which contained columns on articles related to environmental problems and various websites on Internet were consulted for pooling the items. Experts such as University Professors who are authorities in the field of environment were also consulted.

Thus, an “Environmental Awareness Assessment Scale”, was constructed based on the following dimensions of environment as a whole:
a) Air Pollution  
b) Water Pollution  
c) Global Action on Earth Environment.  
d) Conservation of Natural Resources.  
e) Diseases.  
f) Health and Hygiene.  
g) Sustainable Development.  
h) Environmental Laws.  
i) Noise Pollution.  
j) Deforestation.  
k) Soil Pollution.  
l) Conservation of Forest and Wild Life.

Thus, with the availability of the resources which were available at hand, the various areas of "Environmental Awareness Assessment Scale" which have been mentioned above were taken. Overall a list of 84 items was finally selected for the inclusion in the "Environmental Awareness Assessment Scale".

A Biographical Information Blank (BIB) was also prepared along with the EAAS by the investigator to gather personal information about the Secondary School teachers selected in the sample. The Biographical Information Blank includes name, Age, Sex, Religion, Academic Streams, Type of School, Grade (TGT/PGT), Subject taught and Teaching Experience (in years).

Statistical Techniques used:

The following statistical techniques have been used by the investigator for the treatment and analysis of the data.

1) The ‘t’ statistical techniques has been used to find out the significance of difference in the degree of Environmental Awareness of the selected
sample on the basis of Gender, Subject Area, Type of the School and Socio-economic Status.

2) Karl Pearson’s Product Moment Correlation Coefficient (r) has been applied so as to find out the correlation between various variables.

Conclusion:

The findings of the present investigation may be summarized according to the objectives of the present study. The summary of main points of this present study is as following:

1. A small percentage of Secondary School teachers (24.4%) show a low performance on the Environmental Awareness Scale (Table 4.1b).
2. Only 42.4% Secondary School teachers are satisfactorily aware of the environment (Table 4.1b).
3. Only 4.8% Secondary School teachers are such who are having very high awareness of the environment and its issues (Table 4.1b).
4. 16% Secondary School teachers are such who are having quite high awareness of the environment (Table 4.1b).

When the relationship between Environmental Awareness and Gender of Secondary School teachers was analyzed, following conclusions were drawn:

1. There exists a significant difference in the Environmental Awareness of Male Secondary School teachers and Female Secondary School teachers. The Male Secondary School teachers are found to be environmentally more aware than Female Secondary School teachers. Thus, Gender contributed significantly to the Environmental Awareness of Secondary School teachers. (Table 4.2a).
2. A significant difference is found to exist in the Environmental Awareness of Male Secondary School teachers of Science group in
comparison to Female Secondary School teachers of Science group. Male Secondary School teachers of Science group are more aware and conscious of the environment as compared to the Female Secondary School teachers of Science group. (Table 4.2b).

3. There exists a significant difference in the Environmental Awareness of Male Secondary School teachers of Social Science group in comparison to Female Secondary School teachers of Social Science group. Male Secondary School teachers of Social Science group are more aware of the environment than Female Secondary School teachers of Social Science group. (Table 4.2c).

4. A significant difference is found to exist in the Environmental Awareness between Male Secondary School teachers of Science group and Male Secondary School teachers of Arts group. Male Secondary School teachers of Science group are more aware of the environment in comparison to Male Secondary School teachers of Arts group. (Table 4.2d).

5. When the Environmental Awareness between Female Secondary School teachers of Science group and Female Secondary School teachers of Arts group is compared, a significant difference is found to exist. Female Secondary School teachers of Science group are more aware of the environment in comparison to Female Secondary School teachers of Arts group. Here, the Subject-Area contributed significantly to the Environmental Awareness of the Secondary School teachers. (Table 4.2e).

6. A significant difference is found to exist in the Environmental Awareness of Male Secondary School teachers of Science group and Male Secondary School teachers of Social Science group. Male
Secondary School teachers of Science group are more aware of the environment in comparison to Male Secondary School teachers of Social Science group. (Table 4.2f).

7. A significant difference is found to exist in the Environmental Awareness of Female Secondary School teachers of Science group and Female Secondary School teachers of Social Science group. Female Secondary School teachers of Science group are more aware of the environment in comparison to Female Secondary School teachers of Social Science group. (Table 4.2g).

8. No significant difference has been observed in Environmental Awareness between Male Secondary School teachers of Arts group and Female Secondary School teachers of Arts group. (Table 4.2h).

9. It can also be noted that there exists a significant difference in Environmental Awareness of Female Secondary School teachers of Social Science group and Female Secondary School teachers of Arts group. Female Secondary School teachers of Social Science group are more aware of the environment in comparison to Female Secondary School teachers of Arts group. (Table 4.2i).

10. A significant difference is found to exist in the Environmental Awareness of Male Secondary School teachers of Social Science group in comparison to Male Secondary School teachers of Arts group. Male Secondary School teachers of Social Science group are more aware of the environment in comparison to Male Secondary School teachers of Arts group. (Table 4.2j).
When the relationship between Environmental Awareness and Subject-Area of Secondary School teachers was analyzed, following conclusions were drawn:

11. It has been observed that a significant difference exists between Secondary School teachers of Science group in comparison to Secondary School teachers of Social Science group. It is therefore, concluded that Secondary School teachers of Science group are more aware of the environment as compared to Secondary School teachers of Social Science group (Table 4.3a).

12. A significant difference is found to exist in Environmental Awareness between Secondary School teachers of Science group and Secondary School teachers of Arts group. Secondary School teachers of Science group are more aware of the environment in comparison to Secondary School teachers of Arts group. (Table 4.3b).

13. It can also be noted that a significant difference exists between Secondary School teachers of Social Science group and Secondary School teachers of Arts group. Secondary School teachers of Social Science group are environmentally more aware as compared to Secondary School teachers of Arts group. (Table 4.3c).

When the relationship between Environmental Awareness and Type of School of Secondary School teachers was analyzed, following conclusions were drawn:

14. There exists a significant difference between teachers of Government Secondary School teachers in comparison to teachers in Private Secondary Schools on total sample. Secondary School teachers teaching in Government Secondary Schools are more aware of the environment
in comparison to Secondary School teachers teaching in Private Secondary Schools. (Table 4.4a).

15. There exists a significant difference between Male teachers of Government Secondary Schools in comparison to Female teachers in Government Secondary Schools. Male Secondary School teachers in Government Secondary Schools are more aware of the environment as compared to Female Secondary School teachers in Government Secondary Schools. (Table 4.4b).

16. No significant difference has been found in Environmental Awareness between Male Secondary School teachers teaching in Private Secondary Schools and Female Secondary School teachers teaching in Private Secondary Schools. Hence, it can be clearly noted that Type of School does not contribute significantly to the Environmental Awareness of the Secondary School teachers. (Table 4.4c).

17. A significant difference has been observed on Environmental Awareness of Female Secondary School teachers in Government Secondary Schools in comparison to Female Secondary School teachers in Private Secondary Schools. Female Secondary School teachers in Private Secondary Schools are having a little more Environmental Awareness in comparison to Female Secondary School teachers in Government Secondary Schools. Thus, Type of School does not significantly contribute to the Environmental Awareness of the Secondary School teachers. (Table 4.4d).

Schools are having more awareness of the environment in comparison to Male Secondary School teachers in Private Secondary Schools. (Table 4.4e).

When the relationship between Environmental Awareness and Type of School of Secondary School teachers was analyzed, following conclusions can be drawn:

19. A significant difference is observed when Secondary School teachers of High Socio-economic Status were compared with Secondary School teachers of Low Socio-economic Status (Total Sample). Secondary School teachers of High Socio-economic Status were more aware of environment in comparison to Secondary School teachers belonging to Low Socio-economic Status. (Table 4.5a).


21. No significant difference has been observed between the Females of High Socio-economic Status in comparison to Female Secondary School teachers of Low Socio-economic Status. Thus, Socio-economic Status does not make any difference in Environmental Awareness of Female Secondary School teachers belonging to High Socio-economic Status and Low Socio-economic Status. (Table 4.5c).

22. A significant difference has been observed in Environmental Awareness of Male Secondary School teachers belonging to High Socio-economic
Status in comparison to Female Secondary School teachers of High Socio-economic Status. Male Secondary School teachers belonging to High Socio-economic Status group are more aware and conscious of the environment as compared to Female Secondary School teachers of High Socio-economic Status. (Table 4.5 d).

23. The investigator observed a significant difference on the Environmental Awareness of Male Secondary School teachers belonging to Low Socio-economic Status group in comparison to Female Secondary School teachers belonging to Low Socio-economic Status. Therefore, it is concluded that Male Secondary School teachers belonging to Low Socio-economic Status group are having more awareness and consciousness of the environment in comparison to Female Secondary School teachers belonging to Low Socio-economic Status. (Table 4.5e).