



## Environment Awareness, Knowledge and Practices can sustain it: A Teacher Perspective

### KEYWORDS

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**ABSTRACT** *In recent years, 'environment' has become a very important issue because of emergence of many environmental problems all over the world. Air and water pollution, global warming, greenhouse effects, ozone toxicology, population growth, environmental disasters, energy shortage, etc. are some significant examples of major environmental problems. Environmental problems have also become the most important social problems of the day and now it has been established that environmental problems are only beginning and in coming years their severity will increase manifolds. The significance and urgency of environmental problems have started giving serious thoughts to various issues and to tackle and arrest further deteriorating situation by all possible means. In India's context, the problem of environmental degradation is quite grim that warrants quick action. Thus environmental education is pathway to sustainable development. The role of teacher is of great importance in the field of environmental issues. In a country like ours where teacher has the freedom, a lot is expected in all issues including environment also. The teacher can act as an educator to the people and students on environmental issues, education system is a medium of great educative values and is influencing human life in various ways and this can create high degree of awareness among people. The focus of study is to what extends the teachers with Environment Awareness, Knowledge and Practices can sustain it.*

### Introduction

Today man is living in the world of social, economic, political and value crises. In recent decades the environmental crisis has become another important factor, which has made every one in the world to think its gravity. This is due to increasing population, urbanization, shrinking of agriculture land, desertification, technological development and vanishing of forests. All these lead to heavy localized air and water pollution coupled with the hole in the ozone layer. To combat environmental degradation many initiatives have been taken up at International, National, State and Institutional level in the education system as directed by Supreme Court is the most appropriate strategy to create awareness, attitude, understanding and action towards environmental protection. The effectiveness of environmental education depends on the availability of environmentally trained teachers.

Sustainable means that something is viable and can be continued in the long term in ways that do not harm people but benefit them equally. Sustainable environment is about ensuring a better quality of life for everyone now and for generations to come. It enables people to develop and improve the quality of life without demanding the planet for the future. It encourages the conservation and preservation of natural resources and environment. The students will be the decision-makers of the future, in both their personal and professional lives. They need to learn to live in the way that increase quality of life for themselves and others without eroding the earth's resources at a rate quicker than they can regenerate. Teachers can help students to understand, skills and values to contribute in a positive way, which enhances self esteem and motivation. To educate students for sustainable development is undertaken as an important and must be taught.

### Review of literature

Ehrampoush M H, Moghadam B M (2005), "Survey of Knowledge, Attitude and Practice of Yazd University of Medical Sciences Students about Solid Wastes Disposal and Recycling" in this study the knowledge, attitude and practice of Yazd University of Medical Sciences students in respect of disposal of solid wastes and the important factors were studied. It is concluded that all students must take part in formal and informal education classes to promote their knowledge in this regard.

Sengupta M, Das J, Maji P K (2010), "Environmental Awareness and Environment Related Behaviour of Twelfth Grade Students in

Kolkata: Effects of Stream and Gender" try to understand the effect of Stream (Arts, Science and Commerce) on environment and Gender behaviour.

Sivamoorthy M, Nalini R, Kumar C S (2013), in study "Environmental Awareness and Practices among College Students" discusses environmental practices among college students with regard to the usage of plastic and its disposal, alternative for plastic, toilet usage, its use in the cultivation of saplings, rainwater harvesting and also their participation in environment related programmes. The target was college students because environmental education is part of their curriculum; they can implement what they learnt. It reveals that the level of awareness is high among the respondents irrespective of gender difference but in practice level there is difference between genders i.e. males practicing more than females. This study also provides some recommendations to safeguard the environment in India. Weerasiri S, Zhengang Z (2012), "Attitudes and Awareness towards Environmental Management and its Impact on Environmental Management Practices (EMPs) of SMEs in Sri Lanka" try to investigate whether there is an association amongst SMEs' attitudes, awareness on environmental issues and their environmental management practices. A questionnaire-based survey was chosen to obtain the information on attitudes, awareness and environmental management practices of SMEs. The questionnaire was developed to find out SMEs' current environmental management practices as well as their attitudes and awareness on environmental issues. The associations amongst attitudes, awareness and environmental practices for waste, energy, and the environment were investigated by calculating correlation coefficient. These analyses revealed that there is no significant association between attitudes and awareness or attitudes and environmental management practices. Attitudes appear to be remaining positive even where awareness is limited. Managers/owners who expressed rather more positive attitudes appear no more likely introduce environmental management practices for their organizations than managers/owners with less or negative attitude.

Chengula A, Lucas B K, Mzula A, (2015), "Assessing the Awareness, Knowledge, Attitude and Practice of the Community towards Solid Waste Disposal and Identifying the Threats and Extent of Bacteria in the Solid Waste Disposal Sites in Morogoro Municipality in Tanzania" tries to investigate the solid waste disposal practices and their health hazard implications to the community in Morogoro municipality. The study was conducted by considering several solid waste disposal

sites based on three methods; observation, questionnaire survey and microbiological analysis. Based on observation method, several solid waste practices were detected including collection of wastes using trucks, wheel barrow, carriers made from elephant grasses and cement bags. Questionnaire survey pinpointed several diseases caused by solid wastes such as malaria, diarrhea, dysentery, cholera, typhoid and worm diseases from the respondents. From microbiological analysis, several pathogenic bacteria were identified from the solid disposal sites. Solid waste generated by the daily activities of the people needs to be properly managed in such a way that it minimizes the risk to the environment and human health. Inadequate collection and disposal of solid waste is a major factor in the spread of disease and environmental degradation.

**Objectives** The prime aim of the present study is to know Environmental Related Awareness, Knowledge and Practices Among Teachers. However, in order to pursue this broad objective, some affiliated objectives have been identified which are given as follows:

1. To study the meaning of environment.
2. To know the positive view of teachers on the importance of environment education.
3. To know awareness, knowledge and practices among teachers about the prevalence of environmental issues.
4. To find out the actions/ strategies required to sustain environment.

**Research Design and Source Material**

Research design and source material are the ways to systematically solve the research problem. The research design adopted for the study is of a composite nature: mixing descriptive and explorative designs. This type of design assigns equal importance to the collection of existing facts as the situation demands. The study will be based on primary data. The data will be collected through Questionnaire and various sources like- relevant books on the subject, article published in various journals, reports of various committees constituted by the appropriate bodies from time to time to make necessary modification in by laws on the environment issues. The sample size is consisting of 100 number of respondents in total i.e comprising 35 respondents from University, 30 respondents from Colleges and rest 35 respondents from Schools.

**Sampling Technique** Convenience cum purposive sampling technique will be used for selection of final respondents. To analyse data the various statistical tools such as percentage, ratio as well as ANOVA is used for study. Data is analysed with the help of SPSS

**Demographic Analysis**

**Table 1: Distribution of sample on the basis of age.**

Sex	Frequency	Percent
Male	56	56.0
Female	44	44.0

As shown in the above table out of hundred respondents 56 per cent are male and 44 per cent are female, here almost equal weight age is given to both gender for this study.

**Table 3: Distribution of sample on the basis of Occupation**

Occupation	Frequency	Percent
School teachers	35	35.0
College teachers	30	30.0
University teachers	35	35.0
Total	100	100.0

As from the above table 35 per cent are school teachers, 30 per cent are college teachers and 35 per cent are university teachers.

**Table 4: Awareness about Environment Pollution**

Statements	Frequency	Percent
Yes	88	88.0
No	12	12.0
Total	100	100.0

As shown by table 88 per cent are aware about environment pollution and 12 per cent are not aware about environment pollution.

**Table 5: Know about Environment Protection Act**

Statements	Frequency	Percent
Yes	74	74.0
No	26	26.0
Total	100	100.0

As shown in the table 74 per cent respondents have heard of environment protection act are rest 26 per cent are not know about this act.

**Data Analysis**

**Table 6: Awareness among Teachers**

Awareness Statements	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Mean
A2: Environment pollution is a temporary problem	0	0	16	65	19	4.03
A3: Over population is not the problem for increasing environment pollution	11	0	18	46	25	3.74
A4: The environment problem always existed and been solved, so there is no need to worry about this.	10	0	22	43	25	3.73
A5: Everybody is part of environment pollution but it varies according to individual consumption pattern	49	33	18	0	0	1.69
A6: It makes me sad to see natural environment destroyed	26	41	16	17	0	2.24
A7: Human has the right to modify the natural environment to suit their needs.	8	0	46	26	20	3.5
A8: I don't feel that human are dependent on nature to survive	15	15	8	49	13	3.3
A9: There is no need to be concerned about environment in any case, science and technology will solve the problem	0	8	36	40	16	3.64
A10: The solution of environment pollution is closely related to raising the environment pollution	28	36	17	9	10	2.37
A11: Plants and animals have as much as right as human to exist	49	51	10	0	0	1.71
A12: As population increase environment pollution also increase	41	59	0	0	0	1.59
A13: Glaciers are receding	43	57	0	0	0	1.57
A14: Ozone layer is thinning	43	57	0	0	0	1.57
A15: Forests have close relation with environment	53	47	0	0	0	1.47

A16: Use of natural gas will minimize environmental problem	24	53	23	0	0	1.99
A17: Environmental problems are related to growth issues	27	49	24	0	0	1.97
A18: Man is the greatest polluter.	46	43	11	0	0	1.65

As indicated from the above table the respondents are aware about the environment problems and majority of respondents felt that there is a pollution in our city. Even they feel that problem of pollution is not a temporary problem but it is permanent in nature. It is also found that most of respondents agree with the statement of overpopulation is also a reason behind environment disturbances and consumption pattern is also responsible for environment degradation. The high percentage of respondents felt sad for natural distortion of scarce resources because of man unending need and desire. The respondents are even concern with the issues and believe that no technology and science is going to solve the issue it is only human being who can solve the problem by controlling their lust for money and other undesired needs and wants. It is also found that glaciers and ozone layer are receding because of environment disturbances. Trees and forest are having a close relationship with environment, we can keep environment beautifully by planting more trees. Even majority of respondents felt that man is a great polluter and can destroy environment to a great extent to meet his unwanted and undesired needs and facilities.

**Table 7: Knowledge among Teachers**

Knowledge statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean
K1: Industrialized societies give most people who live in them a high standard of living.	43	37	20	0	0	1.56
K2: Do you believe environment pollution is at the dangerous level all over the world.	24	21	26	29	0	1.98
K3: Protection of the environment is more important than economic growth.	37	23	40	0	0	2.47
K4: The benefit of technology is greater than its harmful effects.	8	23	39	30	0	2.48
K5: Exhaust gases produced by automobiles causes climate change.	83	17	0	0	0	2.27
K6: Storing nuclear waste is too dangerous.	28	55	9	8	0	2.06
K7: The hole in the ozone layer will never stop growing if we continue to operate as we do now.	38	55	7	0	0	2.69
K8: There are many plants and animals species in our country that are on the verge of extinction.	21	44	7	28	0	2.42
K9: Marine pollution is natural one.	14	7	14	36	29	3.59
K10: The natural sources of energy such as sun, wind and water can never be exhausted so energy will never be scarce on earth.	7	79	14	0	0	3.93

K11: Economical use of water and energy is important for the sustainable use of natural resources.	28	21	21	30	0	3.25
K12: Excessive use of fertilizer is one of the reasons environment degradation.	22	64	7	7	0	1.99

like water, air and soil must be retained for healthy and better production of food items. As shown in table related to knowledge among teacher that a craze for advance and industrialized societies is one of the biggest cause for environment degradation. And majority of respondents believe that economic growth through industrialisation is the main factor for the destruction of clean and healthy environment. Which leads to ill health of society in the world. Nuclear/ industrial waste like air water and soil should be controlled through treatment plant so that these resources can be reused by the society. Many rare species of useful plants and animals are being destroyed by mankind. Most of the respondents felt that economical use of natural resources

**Table 8: Practices among Teachers**

Practices Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean
P1: Attending training, seminar or workshop on environment education is fruitful.	28	21	29	22	0	3.45
P2: I purchase such products they cause less pollution.	57	43	0	0	0	1.43
P3: I Convince member of my family or friends not to buy some products which are harmful to the environment.	86	14	0	0	0	1.14
P4: I don't by household products that harm the environment.	22	78	0	0	0	1.78
P5: I make every effort to buy the product made from recycled process.	65	35	0	0	0	1.35
P6: Attended a meeting or signed a letter / competition to protect environment.	71	29	0	0	0	1.29
P7: Contributed to an organization that works to protect the environment.	78	22	0	0	0	1.22
P8: Conservation of environment where we live is under the responsibility of other people of authority.	37	63	0	0	0	1.63
P9: I am opposed to program to preserve wilderness, reduce pollution and conserve resources.	77	23	0	0	0	1.23
P10: Animals could be used in scientific experiments to save life.	71	29	0	0	0	1.29

P11: Being out in nature is a great source of stress reduction for me.	75	25	0	0	0	1.25
P12: Over the coming year the environment pollution will diminish.	75	25	0	0	0	1.25

As indicated by the above table the majority of respondents are having positive opinion about attending seminars and workshop to protect environment. Most of respondents buys and uses and even asked others like friends and relatives to purchased that product which brings less damage to environment. Even it is seen from table that majority of respondent liked to purchase that product which can be used and recycled. Teachers are more interested to join the organisation for protecting environment. Most of the respondents disagree that it is not the only responsibility of authority to save the environment. It is good sign that respondents are against the practices of animals used for experimentation in lab. It is found that nature is one of important source of stress reduction and believe that over the coming years the problem of environment will diminish.

**Table 9: Environment and Teachers**

Statements	Yes	No	Mean
Do you have any paper of environment in your curriculum.	61	39	1.39
Do you think it is important to include the environment curriculum?	88	12	1.12
Do you teach the specific paper related to environment	61	39	1.39
Do you organize workshops / seminars in relation to environment in your school / college / department?	88	12	1.12
Do you discuss the environment problems with students even it is not in syllabus?	61	39	1.39
Do you motivate your students other members of your institute for plantation.	88	12	1.12
Do you take part in van mohotsav?	61	39	1.39
Do you switch off the light and turn off the tap if not required, if you find it any place.	88	12	1.12
Do you think teacher can play an important role in sustaining environment?	61	39	1.39
How many trees you have planted in last two years.	88	12	1.12

As per the table mentioned above teachers are playing a vital role in maintaining the environment. Most of the teachers have paper of environment in their curriculum and attended workshops and seminars regarding maintain and managing the environment. It is also found that teachers even motivated students to sustain environment even it is not the part of their curriculum. It is seen that the teachers encouraged their students and other members of institute to take part in van mohotsav for plantation.

**Suggestions**

Environmental education in schools, colleges in universities are required to real impact on our community such as drinking water quality, indoor and outdoor air quality, habitat improvement, pesticide use and exposure as well as solid and hazardous waste management.

Building awareness is a key component to environmental education and it makes the students conscious about the physical, social and aesthetics aspects of environment.

A large number of innovative practices and lessons already exist in many Educational Institutions. But there is a need to be identified and replicated in other Educational Institutions also.

There is an urgency to review the existing curriculum in order

incorporate environmental concerns. Another method, such as folklore, folk songs, story-telling, religious institutions, or traditional venue should be involved to raise student's awareness about environment. Develop a synergy of formal education, media and NGO for promotional activities.

All the environmental actions, information and awareness-building, in order to bring about a change in the attitudes and consumption patterns among students. It aims to influence overall resource utilization of the country. Education can be directed either at the individual/household or at the community/region as a whole. Education can be formal, university-based learning and training, but can also be non-formal – on the- job training, continuing education programmes etc. It can be a continuous process, providing quick summarized information or more comprehensive information.

Here is a need to arrange mass movement vis-à-vis environmental protection should receive paramount priority. For examples, programmes can be initiated for saving trees and other forms of plants and animals life. Participation in environmental conservation and protection activities. To develop responsible behaviour skills in dealing with environmental hazards.

Teach the society for sustainable use of conservation of resources and not over exploitation of resources.

**Conclusion**

Environmental studies have become a centre stage programme of many universities in India. We are glad to see the new specializations are emerging out including degree awarding in the fields related to environmental sciences, environmental education and environmental engineering. Even thanks to the judicial activism which has forced the universities, schools and colleges to incorporate the environmental studies in education. However the scenario in our educational institutions is not as good as it is expected and it is observed that there is a great apathy in many educational organisations to these sensitive study programmes and research. The healthy practices of environment are to come with environmental education only. There are no clear mandates designed or practiced in the educational organisations for conservative use of energy, water, plants, chemicals and curb generation of wastes and wastages. The education and research on environmental issues will create “new society” which can adopt best eco-friendly and green practices. We wish to see flourishing of green chemistry, green construction or green economy for sustainability.

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