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A Study of Environmental Awareness and Environmental Attitude of Pupil Teachers

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Abstract

The Ecological Footprint is the only metric that measures how much nature we have and how much nature we use. The Footprint Data Foundation, in collaboration with York University, Toronto, results for 2022 show that human demand exceeded the planet's regeneration by at least 71% (York University et al. 2023). This indicates that the current global level of consumption is not sustainable. While the Ecological Footprint of an average Indian citizen is low compared to that in many other countries, India's total demand on bio capacity is exceeded only by that of the United States and China. Indian industries will play a key role in determining both India's future wellbeing and that of the rest of the world. Ecosystems feed our souls as well, providing places for religious expression, aesthetic enjoyment, and recreation. Every year, millions of people make pilgrimages to outdoor holy places, vacation in scenic regions, or simply pause in a park or their gardens to reflect or relax. As the manifestation of nature, ecosystems are the psychological and spiritual backdrop of our lives. In every respect, human development and human security are closely linked to the productivity of ecosystems. Our future rests squarely on their continued viability. Sustainable development has become a demand of every world citizen to save our planet. Thus, Education for Sustainable Development has become today's demand. Moreover, in present scenario we need to explore determinants of environmental-friendly behavior for this goal.

Keywords: *Ecological Footprint; Sustainable development; Ecosystems*; *environmental awareness and environmental attitude*

Introduction

All environmental problems are rooted in human behavior. Several environmental evils and harms create a hazard to ecological sustainability, along with worldwide global warming, urban and more in metropolitan areas. The environmentally friendly behavior can be individual or collective but affects earth's environment as a whole. This behavior is governed by any field of environmental knowledge and may be judged by its impact on the environment, and later may be classified into environment friendly behavior or environment unfriendly behavior. Environment friendly

Behavior is influenced by the internal factors (intellectual and physical aspects of an individual) and external factors (surroundings of an individual). Some factors have macro effects, while other factors have micro effects.

Awareness of the environment is possible through cognitive domain by books or other literature, even our community also imparts its knowledge from time to time but its incorporation in our behavior, which enhances our attitudes later on, does not happen with everyone.

Thus, it has been decided to study the awareness & attitude of pupil teachers, who are the nation builders in their forthcoming days. Education Commission, 1964-66 has highlighted, "Destiny of India is being shaped into their classrooms". This statement is still relevant as it was in the past. Today's pupil teachers will be future nation builders, who may spark the proper light among their students. The objective of this study is to study the environmental awareness and environmental attitude of pupil teachers.

Method

Descriptive survey method has been used for the collection of data along with Purposive Sampling Method, Teacher Education Institutions has been chosen and Stratified Random Method 400 selected pupil teachers. Two tools have been self-constructed, which are (i) Environmental Awareness (ii) Environmental Attitude**.** The brief description of constructing each tool is as follows.

Environmental Awareness Scale (EAS)

An Environment awareness scale was prepared to assess environmental awareness of participants. The first draft was shared with experts. The items which had equal or above 0.50 and 0.30 difficulty and discrimination value respectively were retained. The content and face validity were found to be good based on experts' opinion. The reliability of this tool has been established by administering it on a group of 50 students of teacher education institutions, which was selected by probability sampling technique. The final form of the EAS was administered to the sample of 50 students and again administrated to the same sample after 15 days to obtain another set of scores on the same group. The reliability coefficient (rtt) was estimated between two sets of scores and estimated

coefficient rtt =.76 which is the satisfactory value for the entitle scale, thus the investigator found high index of reliability through test-retest method. The scale contains multiple choice and true / false type items. A score of one is assigned for correct response and zero for the incorrect answer. Thus, the range of score is 0 to 30 for the test.

Table 1

Profile of Environmental Awareness Scale (EAS)

Name of Test	**Environmental Awareness Scale (EAS)**
No. of items	30
Method of item refinement	Discrimination and Difficulty level
Group/individual	Both
Structure	multiple choice and true/false type scale
Nature	Verbal
Reliability Coefficient of Test	0.76 (test-retest)
Validity of Test	Content and face validity

Environmental Attitude Scale

An Environment attitude scale was prepared to assess the environmental attitude of the participants. The items having insignificant discrimination value at minimum 0.05 level of confidence were eliminated. The final version had 35 items. The reliability of the tool has been established by administering it on a group of 50 B.Ed. students of teacher education institutions, which was selected by probability sampling technique. The final form of the environmental attitude scale was administered to the sample of 50 students and again administrated to the same sample after 15 days to obtain another set on the same group. Thus, reliability coefficient (rtt) was estimated between two sets of scores and estimated coefficient rtt =.80 which is the satisfactory value for the scale. The investigator found a high index of reliability through test-retest method. The Cronbach alpha value 0.81, showed high reliability. The expert's opinion was obtained to establish the validity of the

scale; items of the highest agreement were selected. Thus, the content and face validity were established. The scores for items were allotted as 5, 4, 3, 2 and 1 for responses strongly agree, agree, uncertain, disagree and strongly disagree respectively. The range of total scores of items varied from 35-175.

Table 2

Profile of Environmental Attitude Scale (EAS)

Name of Test	**Environmental Attitude Scale**
No. of items	35
Method of item refinement	Discrimination index (t-value)
Group/individual	Both
Structure	Five point rating scale (1 to 5)
Nature	Verbal
Reliability Coefficient of Test	0.81 (Crownbach alpha reliability) and 0.80 (Test-retest reliability)
Validity Coefficient of Test	Content and face validity

The data was analyzed using descriptive and inferential statistics using SPSS software. The questions and responses were coded and entered in the computer using Microsoft Excel Software. Required analysis was done with the aid of Statistical Package for Social Sciences 16.0 Version.

The following statistical techniques were used: Descriptive Statistics i.e. Mean, Standard Deviation & Correlation and Correlation Matrix (Pearson Product Moment Correlation) respectively.

Table 3

Summary Statistics (Mean, S.D., Median, Skewness and Kurtosis) for students in relation to their Environmental Awareness and Environmental Attitude

Statistics Summary	Environmental Awareness	Environmental Attitude
N	400	400
M	38.86	215.36
Mdn	38	222
SD	6.56	33.12
Skewness	0.40	-0.78
Kurtosis	0.546	0.212

DISCUSSION & CONCLUSION

It is evident from the above-mentioned statistical facts that scores of Environmental Awareness and Environmental Attitude under study are normally distributed in the universe under the male & female group. It was found that there is no difference in the environmental attitude and environmental awareness among the pupil teachers with respect to their gender. Mean values for male group in relation to their environmental awareness and environmental attitude, were found 19.55 and 109.55, respectively and their related values of S.D. were found 3.09 and 14.81 respectively. The value of skewness and kurtosis for the male group in relation to their scores of environmental awareness was found 0.40 and 0.192, which had shown normal distribution of the scores of environmental awareness but slightly platykurtic shape of the distribution curve may be cause of sample error. In the same manner, the value of skewness and kurtosis for the male group in relation to their scores of environmental attitudes was found -0.38 and 0.637, which has shown normalized distribution of the scores of environmental attitudes but shows negative skewness and

slightly leptokurtic shape of the distribution curve in relation to the environmental attitude.

Mean values for male and female (both) groups in relation to their environmental awareness and environmental attitude were found 19.49 & 108.61, respectively, and their related values of SD were found 3.18 and 15.72, respectively. The value of skewness and kurtosis for the male and female (both) group in relation to their scores of environmental awareness was found 0.28 and 0.469 which has shown normal distribution of the scores of environmental awareness, but slightly leptokurtic shape of the distribution curve may be cause of sample error.

In the same manner, the value of skewness and kurtosis for the male and female (both) groups in relation to their scores of environmental attitudes was found -0.41 and 0.350 which has shown normal distribution of the scores of environmental attitude but shows negative skewness of the distribution curve in relation to the environmental attitude. The value of skewness (-0.48) and kurtosis (0.389) shows normalized nature of the scores of the environmentally friendly habits of the male and female (both) pupil teachers.

EDUCATIONAL IMPLICATIONS:

The world we live in is fragmented, materialistic and degeneration one. Our struggle for existence has become so much self-centered that we find man himself as a life-threatening force on this planet. We face the threat of self-extinction by nuclear warfare, environmental pollution, corruption of the self and the society. Important ethical issues such as self-immolation, euthanasia, human organ and transplantation etc. are creating imbalances in the mutual cycle of human sustenance. Reality has become dependent on human decisions. All the ills and evils of the world can be traced back to an improper education system, which prepares an individual to contribute towards global prosperity.

There are following educational implications, which stated the comprehensive application of the results of the present study in the different dimensions of the nature and education given as under:

Nature & Society: Nature is the base of every life on earth and we humans are an integral part of this nature. Moreover, psychologically humans are a social animal. He was born in the society and died in the society. Therefore, from the perspective of future research in the field of social sciences may be burning interest areas i.e. ‘Governance and transparency’; ‘public services’; ‘social services’ & ‘cultural diversity’ etc.

Economy: Economy is the backbone of all round development of any country. In reference to sustainable development, we need to conduct several research works in these economic areas: Consumption patterns'; 'wages and benefits'; 'cost of living and inflation'; 'employment levels'; 'fiscal budgets'; 'transportation and purchasing'; and 'resource procurement'.

Well-Being: In this field research may be conducted apropos to the 'quality of life'; physical and mental health'; personal security'; working and living conditions'; 'education and training'; 'relationships'; 'spiritual fulfillment' and 'happiness' orientated by environment friendly behavior.

Ecological Literacy: In the field of education, basic literacy refers to the 3R- the ability to read, write and do arithmetic. This expertise is the fundamental conditions required for people to build productively a life for themselves and to pursue the policy indispensable to surviving in contemporary humanity.

Environmental Protection & Environment and Education: Education for Sustainable Development is utmost today's reality and demand.

Environment Friendly Culture: This environment friendly culture is the whole sum of positive green living, waste watchers, concerned consumers, sideline supporters, cautious participants, and installed starters. These are driven by the different modes of environmental protection and sustainable development.

Green Architecture: Environmentally friendly lifestyles and behaviors are the urgent call of the present devastating scenario. Green architecture refers as the use of sustainable transport, more efficient appliances within homes, sustainable home construction and green infrastructure at macro level. Building regulation- norms also require new homes to perform to higher

Environmental Standards. Sustainable Homes Glossary might be used to evaluate the environmental sustainability of a home and community.

Education and Disaster Management: Every year different kinds of natural and manufactured disasters affect the whole of humanity and natural environment.

At present, a series of earthquakes in Nepal and in India, floods in Jammu & Kashmir and lands-slide in Uttarakhand etc. are the few examples of this biggest environmental problem of calamities.

Every calamity has left behind frightened humans and animals; food and water crises; severe health problems; ruined human civilization; downfall of economy and insecurity problems. Whenever any type of disaster occurs, then we use to publicize its affecting factors and this situation illustrates our weakness in the form of the inclusive lack of disaster knowledge and awareness, required attitude, quick decision making and frail administration.

Therefore, it is another vital need of the present scenario that we should integrate education and disaster management to decrease the devastating aftereffects, to protect the environment and its units, and fortify civilization and economy. A couple of years before, UGC also recommended 'Disaster Management' as a core course for Undergraduate level at every year in all streams.

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