ENVIRONMENTAL ATTITUDE AND ECO - LITERACY AMONG UNDER GRADUATE STUDENTS.

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ABSTRACT

The research study was undertaken to investigate the Environmental attitude and Eco-literacy among UG students. Sample of 60 UG students from Mysuru city was selected by adopting stratified random sampling technique based on independent variables namely gender and stream. Environmental attitude and Eco-literacy of UG students was measured with the help of Taj Environmental Attitude scale (TEAS) and Eco-literacy test constructed by the investigator. Specific objectives formulated were: 1. To find whether there is significant difference in Environmental attitude of UG students from Arts and Science stream 2. To find whether there is significant difference in Eco- literacy of UG students from Arts and Science stream. 3. To find whether there is significant difference in Environmental attitude of male and female UG student. 4. To find whether there is significant difference in Eco- literacy of male and female UG students. 5. To find whether there is significant relationship between Environmental attitude and Eco-Literacy of UG students. Descriptive survey method was adopted for the study. The data obtained from the survey was analyzed using t-test and Pearson Product moment correlation. Findings of the study were: 1.There is no significant difference in Environmental attitude of male and female UG students. 2. There is no significant difference in Eco- literacy of male and female UG students. 3. There is a significant difference in Environmental attitude of UG students from Arts and Science stream. The mean score of UG students from Arts and Science stream indicates that, the Science students have a more favorable Environmental attitude than their counter parts from the arts stream 4. There is a significant difference in Eco- literacy of UG students from Arts and Science stream. The mean score of UG students from Arts and Science stream indicates that, the Science students have significantly higher with respect to Eco- literacy 5. There is a significant relationship between Environmental attitude and Eco- literacy levels than Arts UG students.

Key words: Environmental attitude, Eco-literacy, Gender, Stream, Students.

INTRODUCTION

Increasing population, urbanization and poverty have generated pressure on the natural resources and lead to a degradation of the environment. Humans continue to engage environmental unfriendly behaviors at the individual, corporate, governmental, and societal levels (Ugulu and Erkol 2013). These behaviors contributed, and continue to contribute to the creation and exacerbation of several environmental problems that might pose serious threats to the well-being of humans and all living species (Gore 1993). It is clear that individuals with negative attitudes towards the environment will be inconsiderate towards environmental problems and will continue to pose problems to the environment (Uzun and Saglam 2006). For this reason, environmental education is crucial to prepare environmentally literate students who, as future citizens, would play an active role in protecting the environment through making informed decisions and taking environmental friendly actions (UNESCO–UNEP

1991). According to UNESCO (1978), environmental education targets social groups and individuals and concentrate on awareness, knowledge, attitude, skills and participation geared towards environmental conservation. It aims at creating sensitivity to the total environment and its allied problems. The objective on knowledge is about gaining a variety of experiences and acquiring a basic understanding of the environment and its associated problems. Environmental education is a long-term process of developing the skills and behavior necessary to understand and accept the relationships between people, culture and the natural environment. In addition, environmental education is a sequential process that attempts to increase understanding of the environment and promote pro-environmental values. Its ultimate aim is to motivate citizens to act individually and collectively in an environmentally conscious manner that balances the social, economic, and ecological needs of today without compromising those of the future (Hungerford et al. 1980; Yorek et al. 2010). It is a means to prepare society for practical decision making and to develop environmental friendly attitude. Citizens who are eco-literate and those who possess the right attitude to environmental conservation and preservation of its pollution are the core of the environmental protection movement.

DEFINITIONS OF ENVIRONMENTAL ATTITUDE

Environmental attitudes are important because they determine behavior that either increases or decreases environmental quality. Traditionally, attitudes have cognitive, affective, and conative elements, but environmental attitudes might be better described as having preservation and utilization dimensions.

Environmental attitude has been defined as, "The collection of beliefs, affect, and behavioral intentions a person holds regarding environmentally related activities or issues" (Schultz et al., 2004). Although, this three-component model remains the traditional view of attitude structure, new theoretical approaches prefer to conceptualize attitudes as evaluative tendencies that can both be inferred from and have an influence on beliefs, affect, and behaviour (Milfont & Duckitt, 2010).

According to Rosya, Lim and Fadhilah (2011), "Student's attitude towards the environment is conceptualized based on their verbal and actual commitment, motivation and effect concerning the nature and environmental issues."

According to Taciano "Environmental attitudes have been defined as a psychological tendency expressed by evaluating the natural environment with some degree of favor or disfavor."

Pro-environmental attitudes rise and fall with current events and vary with age, gender, socioeconomic status, nation, urban-rural residence, religion, politics, values, personality, experience, education, and environmental knowledge.

DEFINITIONS OF ECO-LITERACY

The term, 'Eco literacy' was coined by American educator David W. Orr and physicist Fritj of Capra in 1990

Eco-literacy of an individual is his ability to understand the natural systems that make life on earth possible. To be eco-literate means understanding the principles of organization of ecological communities (i.e. ecosystems) and using those principles for creating sustainable human communities.

According to Roth (1992) "Ecological literacy, or eco-literacy, refers to the capacity of an individual to perceive, interpret and alter the relative health of the natural environment."

Eco-literacy has been defined as "the ability to use ecological understanding, thinking and habits of mind for living in, enjoying, and/or studying the environment" and as focusing on the "key ecological knowledge necessary for informed decision-making, acquired through scientific inquiry and systems thinking".

IMPORTANCE OF ECO LITERACY OR ECO LITERATES FOR SUSTAINABLE DEVELOPMENT

Eco-literacy plays a vital role in achieving sustainable development by enabling individuals to understand the interdependence between natural ecosystems, society, and economic activities. Eco-literate citizens possess knowledge, values, and skills that promote responsible decision-making, conservation of resources, and environmentally friendly lifestyles. This awareness encourages sustainable consumption, biodiversity protection, and active participation in solving environmental challenges such as climate change and pollution. Moreover, eco-literacy fosters critical thinking and community engagement, which are essential for developing sustainable policies and practices. Therefore, promoting eco-literacy through education is fundamental to building environmentally responsible societies and ensuring long-term ecological balance and sustainable development.

NEED AND IMPORTANCE OF THE STUDY

The next generation is presumably supposed to benefit from the present day natural resources (Carson, 1962). Hence the burden of ensuring that the future generation gets their share of natural resources lies with the present generation. Therefore the present young generation should be made to understand that it is their responsibility to preserve the present natural resources for the future generation. This can be achieved through developing Eco literacy and right environmental attitude at a young age.

"Environmental attitudes provide a good understanding of the set of beliefs, interests, or rules that influence environmentalism or pro environmental action" (Femandez-Manzanal et al., 2007). This presumes that if we inculcate in students, positive values and attitudes towards environmental conservation, they would take an active role in conserving the environment and its resources and hence preserve them for the future generation.

Eco- literacy proves important for several reasons; it fosters a sense of connection to the natural world, promotes sustainable development and encourages conservation of irreplaceable natural resources and vulnerable plant and animal species. Eco- literacy essentially serves as tool, helping people around the world understand the economic, aesthetic and biological importance of preserving resources and reducing or eliminating the harmful impacts of man-made alterations. Environmental awareness or education helps people understand the consequences of human activities on various lands and identifies remedial solutions.

OBJECTIVES OF THE STUDY

1. To find whether there is significant difference in Environmental attitude of male and female UG student.
2. To find whether there is significant difference in Eco- literacy of male and female UG student.
3. To find whether there is significant difference in Environmental attitude of UG students from Arts and Science stream.
4. To find whether there is significant difference in Eco- literacy of UG students from Arts and Science stream.
5. To find whether there is significant relationship between Environmental attitude and Eco- Literacy of UG students.

HYPOTHESES OF THE STUDY

1. There is no significant difference in Environmental attitude of UG students of male and female UG student.
2. There is no significant difference in Eco- literacy of UG students of male and female UG students.
3. There is no significant difference in Environmental attitude of UG students from Arts and Science stream.
4. There is no significant difference in Eco- literacy of UG students from Arts and Science stream.

5. There is no significant relationship between Environmental attitude and Eco- Literacy of UG students.

METHODOLOGY

The present study was taken up to investigate the Environmental attitude and Eco-literacy among UG students and to find whether there is any difference in these variables with respect to Gender and Stream. Descriptive Survey method was adopted for this study.

Sample of the study

The sample of the study comprised of 60 UG students from Mysuru city.The students were selected by using stratified random sampling technique.

Variables of the study

Dependent variable : Environmental attitude, Eco- literacy

Independent Variable: Gender, Stream

Tools Used for data collection

The following tools were used to collect the data:

- **Taj Environmental Attitude scale**: Taj Environmental Attitude scale was used in the study.The Taj Environmental Attitude Scale (TEAS) was developed by Dr. Haseen Taj in 2001. Following the Likert's method of summated rating procedure, TEAS was developed with 61 items consisting six areas. The six areas dealt with the scale are attitude towards (1) Health and Hygiene, (2) Wild life, (3) Forests, (4) Polluters, (5) Population Explosion, (6) Environmental Concern. Each item alternative is assigned a weight age ranging from 4 (strongly agree) to 1 (strongly disagree) for favorable items. In case of unfavorable items the scoring is reversed, i.e., from 1 (Strongly agree) to 4 (strongly disagree). The attitude score of an individual is the sum total of item scores on all the six areas. The range of scores is from 61 to 244 with the higher score indicating the more favorable attitude towards environment and vice versa. Reliability of the scale as estimated by split half is 0.82, which is highly significant.
- **Eco-Literacy Test**: Eco-Literacy test Constructed by the investigator was used to collect data on eco-literacy of UG students. This is consists of 20 multiple choice items which have four alternatives A,B,C,D. The participants have to select the most appropriate answer out of four alternatives given.

Statistical Techniques employed:

The obtained data was analyzed by using 't' test and Pearson Product moment correlation.

Collection of data

Data for the study was collected by administering the Environmental attitude scale and eco- literacy test to the selected sample by investigator. The obtained data with respect to the variables were tabulated and subjected to statistical analysis employing statistical technique.

ANALYSIS OF DATA AND RESULTS

The analysis of data interpretation and discussion of the results are presented below:

Hypothesis: 1: There is no significant difference in Environmental attitude of male and female UG students.

Table No:1 Mean difference between male and female UG students with respect to Environmental attitude.

Gender	N	Mean	Standard Deviation	Standard Error mean	t-value	df	Level of significance
Male	30	153.14	9.109	1.692	0.672	57	0.05
Female	30	151.40	10.669	1.948			

The table (1) shows that the obtained‘t’ value of 0.672 is less than the table value 2.00 at 0.05 significant level for degree of freedom 57. Hence the hypothesis is rejected and it is inferred that there is no significant difference in Environmental attitude of male and female UG students.

Hypothesis: 2: There is no significant difference in Eco- literacy of male and female UG students.

Table No: 2 Mean difference between male and female UG students with respect to Eco- literacy.

Gender	N	Mean	Standard Deviation	Standard Error mean	t-value	df	Level of significance
Male	30	9.62	3.610	0.670	0.24	55	0.05
Female	30	9.60	3.114	0.569			

The table (2) shows that the obtained‘t’ value of 0.24 is less than the table value 2.01at 0.05 significant level for degree of freedom 55. Hence the hypothesis is rejected and it is inferred that there is no significant difference in Eco- literacy of male and female UG students.

Hypothesis: 3 : There is no significant difference in Environmental attitude of UG students from Arts and Science stream.

Table No: 3 Mean difference between UG students from Arts and Science stream with respect to Environmental attitude.

Stream	N	Mean	Standard Deviation	Standard Error mean	t-value	df	Level of significance
Arts	30	146.97	7.822	1.452	4.724	57	0.05
Science	30	157.37	9.023	1.647			

The table (3) shows that the obtained ‘t’ value of 4.724 is greater than the table value 1.671 at 0.05 significant level for degree of freedom 57. Hence the hypothesis is accepted and it is inferred that there is a significant difference in Environmental attitude of UG students from Arts and Science stream.

Hypothesis: 4 : There is no significant difference in Eco- literacy of UG students from Arts and Science stream.

Table No: 4 Mean difference between UG students from Arts and Science stream with respect to Eco- literacy.

Stream	N	Mean	Standard Deviation	Standard Error mean	t-value	df	Level of significance

Arts	30	7.38	2.211	0.410	6.68	57	0.05
Science	30	11.77	2.788	0.509			

The table (4) shows that the obtained 't' value of 6.68 is greater than the table value 1.671 at 0.05 significant level for degree of freedom 57. Hence the hypothesis is accepted and it is inferred that there is a significant difference in Eco- literacy of UG students from Arts and Science stream.

Hypothesis: 5: There is no significant relationship between Environmental attitude and Eco- literacy of UG students.

Table No: 5 Pearson product moment correlations of Environmental attitude and Eco- literacy scores of UG students.

Variables	Pearson product moment correlation	Significance level two tailed	Total Sample
Environmental attitude and Eco- literacy	0.743	0.01	60

Table (5) shows that the obtained person product moment correlation value 0.743 is high. Hence the null hypothesis is rejected and it is concluded that there is a high positive relationship between Environmental attitude and Eco- literacy of UG students.

FINDINGS OF THE STUDY

- There is no significant difference in Environmental attitude of male and female UG students.
- There is no significant difference in Eco- literacy of male and female UG students.
- There is a significant difference in Environmental attitude of UG students from Arts and Science stream.
- The mean score of UG students from Arts and Science stream indicates that, the Science students posses significantly high favorable Environmental attitude than Arts students.
- There is a significant difference in Eco- literacy of UG students from Arts and Science stream.
- The mean score of UG students from Arts and Science stream indicates that, the Science students have significantly higher Eco- literacy than Arts students.
- There is a significant relationship between Environmental attitude and Eco- literacy of UG students.

EDUCATIONAL IMPLICATIONS

- Government and Educational Institutions should understand the importance of environmental issues and therefore find out the solution to improve young generation's level of environmental attitude and Eco-Literacy.
- Non-Government organizations (NGO) also should be encouraged to organize more activities that are related to the environment so that UG students can actively involve themselves in the environmental protection,
- Today, universities and colleges are capable of fostering public understanding of environmental issues. While reporting on the state of the environment, the media regularly turn to university and research institutions for input from experts. Furthermore, universities could conduct seminars for the collaboration of science and journalism departments to better communicate information to the lay public. Additionally, universities educate future elementary and secondary school teachers, as well as the college professors of tomorrow.

- Students also study topics for future careers as science and nature museum personnel. A large majority of informal science educators are employed by environmental advocacy organizations, conservation groups, and government agencies are university graduates. Universities have a great responsibility to provide future science and nature teachers and educators with an adequate science and environmental background so that they will be able to continue to advocate on behalf the environment and educate others on the importance of conservation and sustainability. College provide knowledge that will enable them to seek out accurate scientific information about the environmental crisis.
- Programs and field trips to ecologically diverse areas should be organized as part of curricular activities in under graduate courses to familiarize students to their environment.

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