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Study of Knowledge & Attitude of UG students towards Environmental Education in WB state of India

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ABSTRACT

A study was carried out to assess the environmental knowledge and attitude of UG-level students in West Bengal. Two hundred and twenty graduation students were randomly selected from 8 government-aided general degree colleges. The data were collected using a questionnaire survey method. The results showed that male and female students had different levels of knowledge and concern, but students studying Arts and Science had similar levels. Students from rural and urban areas had similar views on the environment. The study found a strong connection between how much students knew and how much they cared about environmental issues. Teachers thought the environmental studies curriculum was good but might need some changes. Caring for the environment is crucial for human survival, not just for animals and resources. It's about understanding how everything is connected, that resources are limited, and how our actions affect the planet's future. We must prioritize the planet's well-being over material gains and think about what's right and fair for the long term.

Keywords: Attitude, Environmental knowledge, General degree college, Gender.

1. INTRODUCTION

The environment encompasses all physical, chemical, organic, and inorganic components of the atmosphere, lithosphere, and oceans. It represents the external conditions influencing individual and population life, particularly humans, crucially determining the quality of survival. Merriam-Webster Dictionary provides two definitions: firstly, the complex mix of physical, chemical, and biotic factors (like climate, soil, and living organisms) shaping organisms and ecological communities; secondly, the aggregate of social and cultural conditions affecting individual or community life. Though different, these definitions are interconnected as they profoundly impact human existence.

Our environment is currently facing severe threats due to human activities. Awareness efforts have been made worldwide, but these actions have not been sufficient to halt the degradation of our environment. The efforts of individuals in specific areas are insufficient to reverse the damage to our planet. While it is the responsibility of every human to conserve our environment for our own benefit and that of future generations, college students have a particularly important role to play as they will soon enter the workforce. Their awareness, attitudes, and actions concerning environmental issues can have significant impacts.

In today's world, in addition to the threats of global warming and ozone depletion, humanity faces potential catastrophic events like nuclear war. Actions taken in one part of the world can adversely affect people in other regions, as exemplified by the current pandemic. Originating in Wuhan, China, it quickly spread globally, demonstrating how nature and environmental problems transcend borders. Environmental pollution similarly disregards boundaries; activities in one state can cause pollution that affects neighboring regions.

Environmental degradation is a critical issue in our daily lives, necessitating urgent action from all individuals. At the college level, where environmental education has long been a part of formal education, students are expected to possess knowledge, attitudes, and engage in environmentally responsible activities. Therefore, it is important to assess student’s current understanding of environmental issues and how environmental education influences their attitudes. This study aims to evaluate the effectiveness of environmental education within our educational system and propose measures to enhance environmental consciousness based on its findings.

Some others were conducted studied in order to evaluate environmental literacy among school, college and university students. Sharma (2021) studied “a comparative study on the environmental awareness and environmental

attitude among the undergraduate students". Bhakta & Guha (2017) investigated "knowledge and attitude of M.Ed. trainees towards environmental sustainability". Bala (2016) studied on, "Study of environment awareness in relation to attitude towards environment among secondary school students". **Bhartiya (2016)** investigated "the study of Awareness, Attitude and Knowledge about Environmental Education in High School and Higher Secondary School Students".

1.1. Objectives of the study:

[1] To investigate the Environmental knowledge of UG boys & girls students on the basis of their habitat & stream.

[2] To investigate the attitude towards Environmental education of UG boys & girls students on the basis of their habitat & stream.

[3] To correlate the relation between knowledge and attitude of UG students towards the Environmental Education.

1.2. Hypothesis of the study:

$\mathbf{H_{0.1.}}$ There is no significant difference between the UG students about Environmental knowledge on the basis of male & female.

$\mathbf{H_{0.2.}}$ There is no significant difference between the UG students about Environmental knowledge on the basis of rural & urban.

$\mathbf{H_{0.3.}}$ There is no significant difference between the UG students about Environmental knowledge on the basis of science & arts.

$\mathbf{H_{0.4.}}$ There is no significant difference between the UG students' attitude towards Environmental education on the basis of male & female.

$\mathbf{H_{0.5.}}$ There is no significant difference between the UG students' attitude towards Environmental education on the basis of rural & urban.

$\mathbf{H_{0.6.}}$ There is no significant difference between the UG students' attitude towards Environmental education on the basis of science & arts.

$\mathbf{H_{0.7.}}$ There is no significant correlation between knowledge and attitude of UG students towards Environmental education.

2. RESEARCH METHODOLOGY

2.1. Method

Descriptive survey method has been found to be the most appropriate method for the present study. The present study is quantitative in nature because data analysis and interpretation is fully depending on quantitative data.

2.2. Population of the study

The population for the present study comprised all the general degree college students of Nadia and Purba Medinipur district.

2.3. Sample of the study

In this study, 220 UG students from 8 general degree college of Nadia and Purba Medinipur districts under Kalyani University and Vidyasagar University have been selected as the sample of the study.

2.4. Sampling techniques

At the first stage, 8general degree college of Nadia & Purba Medinipur district ware selected by the use of Simple Random Sampling technique. At the second stage of sampling, 220 UG college students are taken by the use of Convenient Sampling Technique, where 116 female students and 104 male students.

2.5. Tools used for data collection

The tools used for data collection are as follows:

2.5.1. Knowledge & Attitude Scale towards Environmental Education:

Reliability of the Scale: Reliability of the scales was established by test- retest method. The reliability co-efficient of the knowledge scale was 0.82 including internal reliability for attitude scale. The reliability co-efficient of the attitude scale was 0.90 including internal reliability for knowledge scale.

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Validity of the Scale: Validity of the knowledge scale was established through content validity. Validity of the attitude scale was established through contrast validity. The draft questionnaire was given to the expert for selecting the items from the draft tools. After 4 weeks the draft questionnaire were again given to same expert for selecting the items. Information which was collected from the experts in second time was remaining almost same compared to that found in the first time and no significant differences had found.

2.6. Statistical techniques used:

Analysis of data was done by using the following statistical techniques:

1. Descriptive statistics: Mean, and Standard Deviation.
2. Inferential statistics: t-test, and Product Moment Correlation.

3. DATA ANALYSIS AND INTERPRETATION

Table-3.1: Frequency and Percentage Distribution of UG Students on Environmental Knowledge

RANGE	TOTAL STUDENTS		GRADE
	f	%	
+2.01& above	3	1.36%	A
+1.01 to +2.00	27	12.27%	B
+0 to +1.00	92	41.82%	C
+0 to -1.00	70	31.82%	D
-1.01 to -2.00	20	9.09%	E
-2.01 & below	8	3.64%	F

Table-3.2: Frequency & Percentage Distribution of Male & Female Students on Environmental Knowledge

RANGE	Boys		Girls		GRADE
	f	%	f	%	
+2.01& above	2	1.92%T	1	0.86%	A
+1.01 to +2.00	7	6.73%	11	9.48%	B
+0 to +1.00	49	47.12%	41	35.34 %	C
+0 to -1.00	34	32.69%	44	37.93 %	D
-1.01 to -2.00	9	8.65%	15	12.93 %	E
-2.01 & below	3	2.88%	4	3.45%	F

Table-3.3: Frequency & Percentage Distribution of Rural & Urban Students 0n Environmental Knowledge

RANGE	Rural		Urban		GRADE
	f	%	f	%	
+2.01& above	1	0.84%	2	1.98%	A
+1.01 to +2.00	16	13.45%	11	10.89%	B
+0 to +1.00	49	41.18%	43	42.57%	C
+0 to -1.00	29	24.37%	31	30.69%	D
-1.01 to -2.00	21	17.65%	11	10.89%	E
-2.01 & below	3	2.52%	3	2.97%	F

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Table-3.4: Frequency And Percentage Distribution Of Science & Arts Students On Environmental Knowledge

RANGE	Arts		Science		GRADE
	f	%	f	%	
+2.01& above	1	0.84%	2	1.98%	A
+1.01 to +2.00	16	13.45%	11	10.89%	B
+0 to +1.00	49	41.18%	43	42.57%	C
+0 to -1.00	29	24.37%	31	30.69%	D
-1.01 to -2.00	21	17.65%	11	10.89%	E
-2.01 & below	3	2.52%	3	2.97%	F

Table-3.5: Frequency and Percentage Distribution Of Ug Students On Environmental Attitude

RANGE	TOTAL STUDENTS		GRADE
	f	%	
+2.01& above	7	3.18%	A
+1.01 to +2.00	33	15%	B
+0 to +1.00	62	28.18%	C
+0 to -1.00	75	34.09%	D
-1.01 to -2.00	41	18.64%	E
-2.01 & below	2	0.91%	F

Table-3.6.: Frequency And Percentage Distribution Of Ug Boys And Girls Students On Environmental Attitude

RANGE	Boys		Girls		GRADE
	f	%	f	%	
+2.01& above	1	0.96%	1	0.86%	A
+1.01 to +2.00	12	11.54%	18	15.51%	B
+0 to +1.00	49	47.12%	43	37.06%	C
+0 to -1.00	20	19.23%	37	31.89%	D
-1.01 to -2.00	21	20.19%	15	12.93%	E
-2.01 & below	1	0.96%	2	1.72%	F

Table-3.7.: ***Frequency And Percentage Distribution Of Ug Rural And Urban Students On Environmental Attitude***

RANGE	Rural		Urban		GRADE
	f	%	f	%	
+2.01& above	0	0%	2	1.98%	A
+1.01 to +2.00	15	12.61%	15	14.85%	B
+0 to +1.00	54	45.38%	32	31.68%	C
+0 to -1.00	33	27.73%	36	35.64%	D
-1.01 to -2.00	11	9.24%	16	15.84%	E
-2.01 & below	6	5.04%	0	0 %	F

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Table-3.8: ***Frequency And Percentage Distribution Of Science And Arts Students On Environmental Attitude***

RANGE	Rural		Urban		GRADE
	f	%	f	%	
+2.01& above	1	0.84%	2	1.98%	A
+1.01 to +2.00	16	13.45%	11	10.89%	B
+0 to +1.00	49	41.18%	43	42.57%	C
+0 to -1.00	29	24.37%	31	30.69%	D
-1.01 to -2.00	21	17.65%	11	10.89%	E
-2.01 & below	3	2.52%	3	2.97%	F

Table-3.9.:'T'-*Test Between The Female And Male Student's (Ug) About Environmental Knowledge:*

	G	N	M	S.D	Obtain 't'-value	Table value	Remark
E.K.	F	104	13.42	2.67	3.2349	1.97	Significant at 0.05 level
	M	116	12.19	2.94			

E.K.=Environmental Knowledge, G= Gender, F= Female, M= Male, N= No. of students, M=Mean, S.D=Standard Deviation

It is clear from the above calculation that the't'-value is 3.2349 which is greater than the table value 1.97. So, it is significant at 0.05 level means the researcher's null hypothesis is rejected. Finally, it is interpreted that the mean environmental knowledge of UG students is significantly different.

TABLE-3.10.:'T'-TEST BETWEEN THE RURAL AND URBAN STUDENT'S (UG) ABOUT ENVIRONMENTAL KNOWLEDGE:

	L	N	M	S.D	Obtain 't'-value	Table value	Remark
EK	R	119	12.79	2.75	0.1024	1.97	Not significant at 0.05 level
	U	101	12.75	3.04			

EK=Environmental Knowledge, L=Locality, R= Rural, U= Urban, N= No. of students, M=Mean, S.D=Standard Deviation

It is clear from the above calculation that the't'-value is 0.1024 which is less than the table value 1.97. So, it is not significant at 0.05 level means the researcher's null hypothesis is not rejected. Finally, it is interpreted that the mean environmental knowledge of UG students is insignificantly different.

TABLE-3.11.:'T'-TEST BETWEEN THE SCIENCE AND ARTS STUDENT'S (UG) ABOUT ENVIRONMENTAL KNOWLEDGE:

	S	N	M	S.D	Obtain 't'-value	Table value	Remark
E.K.	A	119	12.79	2.75	0.1024	1.97	Not significant at 0.05 level
	S	101	12.75	3.04			

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E.K.=Environmental Knowledge, S=Stream, A=Arts, S= Science, N= No. of students, M=Mean, S.D=Standard Deviation

It is clear from the above calculation that the‘t’-value is 0.1024 which is less than the table value 1.97. So, it is not significant at 0.05 level means the researcher’s null hypothesis is not rejected. Finally, it is interpreted that the mean environmental knowledge of UG students is insignificantly different.

TABLE-3.12.:‘T’-TEST BETWEEN THE FEMALE AND MALE STUDENT’S (UG) ATTITUDE TOWARDS ENVIRONMENTAL EDUCATION:

	G	N	M	S.D	Obtain ‘t’-value	Table value	Remark
E.A.	F	104	106.94	5.56	3.2160	1.97	Significant at 0.05 level
	M	116	104.28	6.59			

E.A. = Environmental Attitude, G= Gender, F= Female, M= Male, N= No. of students, M=Mean, S.D=Standard Deviation

It is clear from the above calculation that the‘t’-value is 3.2160 which is greater than the table value 1.97. So, it is not significant at 0.05 level means the researcher’s null hypothesis is rejected. Finally, it is interpreted that the mean environmental attitude of UG students is significantly different.

TABLE-3.13.:‘T’-TEST BETWEEN THE RURAL AND URBAN STUDENT’S (UG) ATTITUDE TOWARDS ENVIRONMENTAL EDUCATION:

	L	N	M	S.D	Obtain ‘t’-value	Table value	Remark
E.A.	R	119	105.95	6.18	1.0637	1.97	Not significant at 0.05 level
	U	101	105.05	6.34			

E.A. = Environmental Attitude, L=Locality, R= Rural, U= Urban, N= No. of students, M=Mean, S.D=Standard Deviation

It is clear from the above calculation that the‘t’-value is 1.0637 which is less than the table value 1.97. So, it is not significant at 0.05 level means the researcher’s null hypothesis is not rejected. Finally, it is interpreted that the mean environmental attitude of UG students is insignificantly different.

TABLE-3.14.:‘T’-TEST BETWEEN THE SCIENCE AND ARTS STUDENT’S (UG) ATTITUDE TOWARDS ENVIRONMENTAL EDUCATION:

	G	N	M	S.D	Obtain ‘t’-value	Table value	Remark
E.A.	A	119	105.95	6.18	0.846	1.97	Not significant at 0.05 level
	S	101	105.05	6.34			

E.A. = Environmental Attitude, N= No. of students, M=Mean, S.D=Standard Deviation

. It is clear from the above calculation that the ‘t’-value is 0.846 which is less than the table value 1.97. So, it is not significant at 0.05 level means the researcher’s null hypothesis is not rejected. Finally, it is interpreted that the mean environmental attitude of UG students is insignificantly different.

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Table-3.15.: Pearson 'R' Between Knowledge And Attitude Of Ug Students Towards Environmental Education:

Variables	Sample Unit	N	df	Obtain 'r'	Critical 'r'	Remark
E.K. & E.A.	Overall Students	220	218	0.8248	0.174	Significant at 0.05 Level

E.K.=Environmental Knowledge, E.A. = Environmental Attitude, N= No. of Students, df= Degree of Freedom

The above table represents that there is a highly positive significant correlation between the knowledge and attitude of UG students towards Environmental education at 0.05 level of significant. So, it is implied that the null hypothesis of the present study, 'There is no significant correlation between knowledge and attitude of UG students towards Environmental education' is rejected.

4. FINDINGS

[1] The researcher find out that 73.64% of total students show average score, 13.64% of total students show above average and only 12.72% of total students show below average score in environmental knowledge.

[2] 73.28% of total female students show average score, only 10.34% of total female students show above average and 16.38% of total female students show below average score in environmental knowledge. 79.81% of total male students show average score, 8.65% of total male students show above average and 11.54% of total female students show below average score in environmental knowledge.

[3] 65.55% of total rural students show average score, only 14.29% of total rural students show above average and 20.16% of total rural students show below average score in environmental knowledge. 73.27% of total urban students show average score, 12.87% of total urban students show above average and 13.86% of total urban students show below average score in environmental knowledge.

[4] 65.55% of total arts students show average score, only 14.29% of total arts students show above average and 20.16% of total arts students show below average score in environmental knowledge. 73.27% of total science students show average score, 12.87% of total science students' show above average and 13.86% of total science students show below average score in environmental knowledge.

[5] 62.27% of total students show average score, 18.18% of total students show above average and only 19.55% of total students show below average score in environmental attitude.

[6] 68.97% of total female students show average score, only 16.38% of total female students show above average and 14.65% of total female students show below average score in environmental attitude. 66.35% of total male students show average score, 12.5% of total male students show above average and 21.15% of total female students show below average score in environmental attitude.

[7] 73.11% of total rural students show average score, only 12.61% of total rural students show above average and 14.28% of total rural students show below average score in environmental attitude. 67.33% of total urban students show average score, 16.83% of total urban students show above average and 15.84% of total urban students show below average score in environmental attitude.

[8] 73.11% of total arts students show average score, only 12.61% of total arts students show above average and 14.28% of total arts students show below average score in environmental attitude. 67.33% of total science students show average score, 16.83% of total science students' show above average and 15.84% of total science students show below average score in environmental attitude.

[9] A highly positive significant correlation is found between the knowledge and attitude of UG students towards Environmental education. There have existed a significant difference between the UG students about environmental knowledge & attitude on the basis of male and female. There has not existed any kind of significant differences between the UG students about Environmental knowledge & attitude on the basis of their habits & stream.

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5. CONCLUSION

The present study college students in Nadia and Purba Medinipur found average environmental knowledge and attitude. Male and female students differed significantly in their knowledge and attitude, but Arts and Science students showed similar levels of knowledge and attitude. There was no difference in environmental activity between the two streams. Rural and urban students showed no significant difference in environmental knowledge and attitude. A highly positive significant correlation is found between the knowledge and attitude of UG students towards Environmental education. Teachers found the EVS curriculum sufficient, but modifications may be necessary. Environmental conservation is crucial, not just for wildlife and resources, but for human survival. It's about understanding interdependence, finiteness of resources, and human actions and attitudes towards nature and the future. Morality and ethical sense are essential, prioritizing longevity and equilibrium on Earth over material gains.

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