



RELATIONSHIP BETWEEN BIODIVERSITY AWARENESS AND ENVIRONMENTAL CONSERVATION COMMITMENT AMONG SECONDARY SCHOOL STUDENTS

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ABSTRACT

The present article examines the Relationship between Biodiversity Awareness and Environment Conservation Commitment among Seocndary School Students of Kozhikode District of Kerala state. The survey mmehtod was used for the study.The study was conducted on a representative sample of 500 Secondary School Students. Stratified random sampling technique was used to collect the data from he Secondary school Students. Preliminary analysis, Test of significance of difference between mean scores and Karl Pearson's Product Moment Coefficient of Correlation(r) was used for statistical analysis of data. The tools used for the persent study are Biodiversity Awareness Test and Environmental Conservation Commitment Scale. The study will help to find out the Biodiversity Awareness and Environmental Conservation Commitment among secondary school students of Kozhikode district. The study reveals that there exists significant relation between Biodiversity Awareness and Environmental Conservation Commitment. The correlation obtained for the total samples and relevant subsamples revealed that there exists Moderate positive correlation between Biodiversity Awareness and Environmental Conservation Commitment among Secondary School Students. The study

recommends that 'Environmental day' should be celebrated all over the India for strengthening awareness program among school children. It is also recommended that Teacher Training Institutes should include Environmental issues in their curriculum to inculcate the Biodiversity Awareness and Environmental Conservation Commitment among Secondary School Students of Kerala State.

Key word: *Biodiversity Awareness, Environmental Conservation Commitment, Secondary School Students:*

Introduction:

Biological diversity or Biodiversity refers to the variability among the living organism from all sources including terrestrial, marine and other aquatic ecosystems and ecological complexes of which they are the part, and this includes the diversity within the species of the ecosystems, biodiversity of an ecosystem or of a geographical area includes various kinds of trees, plants, animals, birds, insects and even micro - organisms. The main purpose of the study is to know the Biodiversity Awareness and Environmental Conservation Commitment among Secondary School Students of Kozhikode District in Kerala

Biodiversity of plants and animals have extremely ecological as well as economical value. We are losing both the beauty and richness of our natural environment as well as destabilizing the very ecological process on which we depend. There can be no life on earth without biodiversity. The preservation and conservation of biodiversity are hence extremely necessary and important to keep this renewable resource alive and flourishing for serving humanity for generation to come. Biodiversity is the spectacular variety of life on earth and the essential inter dependence of all living things it refers to astonishing variation in size, structure, physiology and behavior of over 3million species of organisms and their living environment.

. In this way, biodiversity represents the very foundation of human existence. Developing an awareness of Biodiversity becomes the need of the hour to initiate actions for the Well-known fact preservation and conservation of biological wealth. It is our moral duty to look after our planet and pass it on to our future generation in a good health. Our ethics recalls us that we should not deprive our future generation from economic and aesthetic benefits that can be derived from biodiversity.. Raising awareness of the social and environmental value of biodiversity, providing education on the concept of biodiversity and promoting the ability to act may lead to active and responsible citizenship. Ruthless exploitation of nature by man to meet his ever-increasing needs and greed has brought about the ecological balance of our planet on the brink of collapse.

Environmental education must be such that the student must themselves bring about a positive change and improve their own surroundings and communities by taking responsibility and become pro-active "Community_minded Citizens

A healthy planet and a healthy community go hand in hand. As an individual we can protect our environment to a large extent. Our purpose is to improve the health and wellbeing of families everywhere. To fulfill this goal, we must protect the environment in which we work and live. To conserve the natural resources pupil must keeping mind the principle thinks globally but act locally. To conserve the earth's vitality and diversity, pupils need to be aware that the choices they make and the actions they take individually and collectively have repercussion for both present and future of our planet. The best way to spread Awareness about Biodiversity is through education. So, it is necessary to provide the education through the environment to safe guard the environment for today and tomorrow.

The study actually highlights the need of promoting student's Biodiversity Awareness and Environmental Conservation Commitment of their locality, which certainly will equip the children to handle environmental problems with deeper understanding.

Need and Significance of the Study

The Planet Earth is bestowed with an amazing range of plant animal life resulting into an incredible biodiversity on the planet. However, the fast growth, increasing urbanization, industrialization and modernization has affected the natural cycle. The manifestation of the current biodiversity crisis includes the disappearance of many populations of the survival species, depletion of genetic diversity of crop plant, domesticated animals and their innumerable wild relatives and fragmentation, degradation of several unique habitats and ecosystem. We all want to protect our planet. It is not only government jobs to protect environment, we as an individual have some responsibility towards our environment. Government can't alone save our environment. Government is planning there 50 % of part in protecting environment then as an individual we should play ours 50 % contribution.

We all want to protect our planet. The continuous and close contact with nature enables the students to discriminate and differentiate the uniqueness of diversity present with in the living resources. The study actually highlights the need of promoting student's Biodiversity awareness and Environmental conservation

commitment of their locality, which certainly will equip the children to handle environmental problems with deeper understanding. The Indian Constitution endorses the concept of sustainability in its concern for the preservation of wildlife and forest. The Constitution enjoins the state and the citizen to protect the biodiversity.

The importance of environment has been recognized in India since long. This is also reflected in our Constitution where in it is stated that it shall be the duty of every citizen to protect and improve the natural environment, including forests, lakes, rivers, wildlife and to compassion for all living creatures. (Dhawan, S. 2008). The selfish attitude of mankind with irresponsible activities and human recklessness has disturbed the habitats and territories of various creatures. There are various species today that are on the verge of extinction. (“Biodiversity Awareness Using Mobile Application: Ikimono Mike, discloses Nowadays, loss of biodiversity and biodiversity conservation issues”. Baharum, 2017).

The study actually highlights the need of promoting student's Biodiversity Awareness and Environmental Conservation Commitment of their locality, which certainly will equip the children to handle environmental problems with deeper understanding. If there is a significant relation between Biodiversity Awareness and Environmental Conservation Commitment, we can adopt suitable measures to develop proper Biodiversity Awareness among Students at Secondary level and it also creates an Environmental Conservation Commitment for motivating actions to address the proper conservation of environment. Definitely, investigator hopes it would be an asset to the future life.

Statement of the Problem

The present study has been taken up in order to assess the Relationship between Biodiversity Awareness and Environmental Conservation Commitment and hence entitled as “**Relationship between Biodiversity Awareness and Environmental Conservation Commitment among Secondary School Students**”.

Definition of Key Terms

1. Biodiversity Awareness:

Biodiversity Awareness Means showing realization of biodiversity. It implies concern and well-informed interest in variety and variability among living organisms and the ecological complexes in which they occur. (Jones and Stokes Associates, 1987).

In the Present Study by the term “**Biodiversity Awareness**” the investigator means the awareness of the value and importance of Biodiversity. Among Secondary School Students

2. **Environmental Conservation Commitment:**

It implies responsible behavior towards life and resources in the environment. (Glossary of environment statistics, 1997)

In the Present Study by the term “**Environmental Conservation Commitment**” the investigator means the individual's pursuit to protect resources in environment.

3. **Secondary School Students:**

According to KER Rule (1959) Standards VIII, IX, and X shall be collectively known as Grade. Secondary School Providing the Three-Year Course shall be known as Highschool.

Secondary School Students are the Pupils studying at VIIIth, IXth and X th Standards. (Oxford dictionary-2011)

In the Present Study by the term “**Secondary School Students**” investigator means those Pupils / students who are studying / attending in any one of the educational Standard VIIIth, IXth and Xth of Govt. of Kerala.

Variables of the Study

In the present study the variables are:

- **Dependent Variable** is Biodiversity Awareness
- **Independent Variable** is Environmental Conservation Commitment.

Classificatory Variables

- Gender
- Locale
- Type of management

Objectives of the Study

1. To find out whether there exists any significant difference in the mean scores of Biodiversity Awareness of Secondary School Students for the sub samples based on
 - Gender
 - Locale
 - Type of management
2. To find out whether there exists any significant difference in the mean scores of Environmental Conservation Commitment of Secondary School Students for the sub samples based on
 - Gender
 - Locale
 - Type of management.
3. To find out whether there exists any relationship between Biodiversity Awareness and Environmental Conservation Commitment among Secondary School Students for the total sample and the sub samples based on
 - Gender
 - Locale
 - Type of management

Hypotheses of the Study

1. There exists significant difference in the mean scores of Biodiversity Awareness of Secondary School Students for the comparable sub samples namely
 - Gender (Boys and Girls)
 - Locale (Rural and Urban)
 - Type of management (Government and Aided)
2. There exists significant difference in the mean scores of Environmental Conservation Commitment of Secondary School Students for the comparable sub samples namely
 - Gender (Boys and Girls)
 - Locale (Rural and Urban)
 - Type of management (Government and Aided)

3. There exists significant relationship between Biodiversity Awareness and Environmental Conservation Commitment among Secondary School Students for the total sample and sub samples namely
- Gender (Boys and Girls)
 - Locale (Rural and Urban)
 - Type of management (Government and Aided)

Methodology of the Study

Survey method was used to find out the “Relationship between Biodiversity Awareness and Environmental Conservation Commitment among Secondary School Students”.of Kozhikode District in Kerala.

Sample Selected for the Study

- The present study was conducted on a representative sample of 500 Secondary School Students of Kozhikode district in Kerala State, through Stratified random sampling on the basis of
 - Gender (Boys and Girls)
 - Locale (Rural and Urban)
 - Type of management (Government and Aided)

Tools used for the Study

- **Biodiversity Awareness Test.** Developed and standardized with the help of supervising teacher (.Abdul Rasheed Poozhithara &Aswathi M, 2023).
- **Environmental Conservation Commitment Scale.** (MB Shyamala Devi & Hennath Beevi, 2021).

Statistical Techniques used for the Study

The following Statistical techniques were used for the analysis of data in the present study

- Preliminary Analysis
- Test of Significance of difference between Mean Scores
- Karl Pearson's Product Moment Coefficient of Correlation(r)

Analysis and Interpretations

The study was intended to estimate the relationship between Biodiversity Awareness and Attitude towards Environmental Protection among Secondary School Students. The statistical analysis of the data has been done to throw light on the specific objectives kept for the study.

The name of the Schools selected for the study and its Type of management are presented in **Table 1** given below.

Table 1

Table showing the distribution of schools for the study

Sl. No	Name of school	Type of school
1.	Pullurampara HSS School	Aided
2.	Koodaranji HSS School	Aided
3.	Thiruvambadi HSS School	Aided
4.	Govt.Higher secondary school Kuttikatoor	Govt
5.	Govt Higher secondary school Peringolom	Govt
6.	JDT ISLAM HSS Vellimadukunnu	Aided
7.	Govt Model Higher secondary school Kozhikode	Govt
8.	Govt Higher secondary school Campus Medical College	Govt

Break- up of final sample based on gender locale and type of management are presented in **Table 2** given below

Table 2

Table showing Break- up of final sample based on Gender Locale and Type of management

Gender	Government School pupils		Aided School pupils		Total
	Rural	Urban	Rural	Urban	
Boys	50	40	90	60	240
Girls	60	50	90	60	260
Total	200		300		500

School wise break of the final sample are presented in **Table 3** given below.

Table 3*School wise break of the final sample*

Name of school	Locale of school	Type of management	Gender of school		Total
			Boys	Girls	
Thirumbadi HSS	Rural	Aided	30	28	58
Koodarinji HSS	Rural	Aided	29	27	56
Pullurampara HSS	Rural	Aided	31	35	66
GHSS Kuttikatur	Rural	Govt.	26	26	52
GHSS Peringolam	Rural	Govt.	24	34	58
JDT ISLAM HSS	Urban	Aided	60	60	120
Govt Model HSS	Urban	Govt.	20	27	47
HSS Campus	Urban	Govt.	20	23	43
Total			240	260	500

Preliminary Analysis

As a first step of analysis, the important statistical constants such as mean, median, mode, standard deviation, skewness, and kurtosis for the dependent and independent variables namely Biodiversity Awareness and Environmental Conservation Commitment were determined for the total sample and sub samples.

The statistical constants for dependent and independent variables for the total sample are presented in the

Table 4**Table 4***Statistical Constants for the Dependent and Independent Variables for the Total Sample*

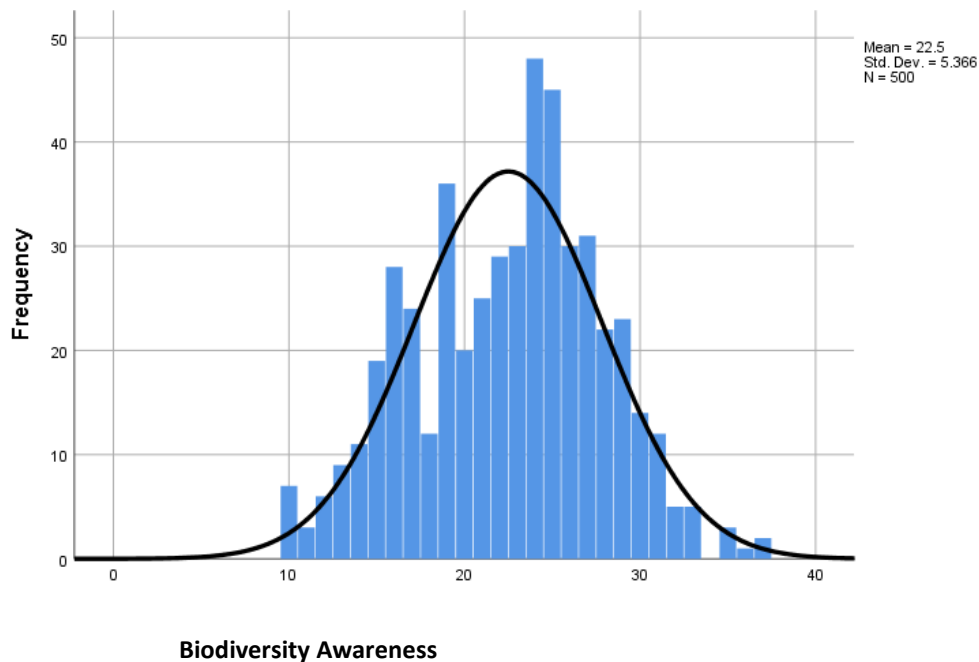
SL NO	Variables	Mean	Median	Mode	SD	Skewness	Kurtosis
1.	BiodiversityAwareness	22.50	23.00	24	5.366	-0.125	-0.439
2.	EnvironmentalConservationCommitment	90.70	90	90	12.306	-0.130	-0.390

All the statistical constants in the table have been calculated for the total sample (N= 500). From the table it can be seen that the mean, median and mode of the variable Biodiversity Awareness are approximately equally distributed. The obtained value of skewness is -0.125. So, the distribution is slightly negatively skewed. The kurtosis value obtained is -0.439 which indicates that the curve is Platykurtic

The shape of the distribution of the variable Biodiversity Awareness for the total sample was examined by plotting the distribution. The smoothed frequency curve of Biodiversity Awareness for total sample is shown in the **figure 1** below:

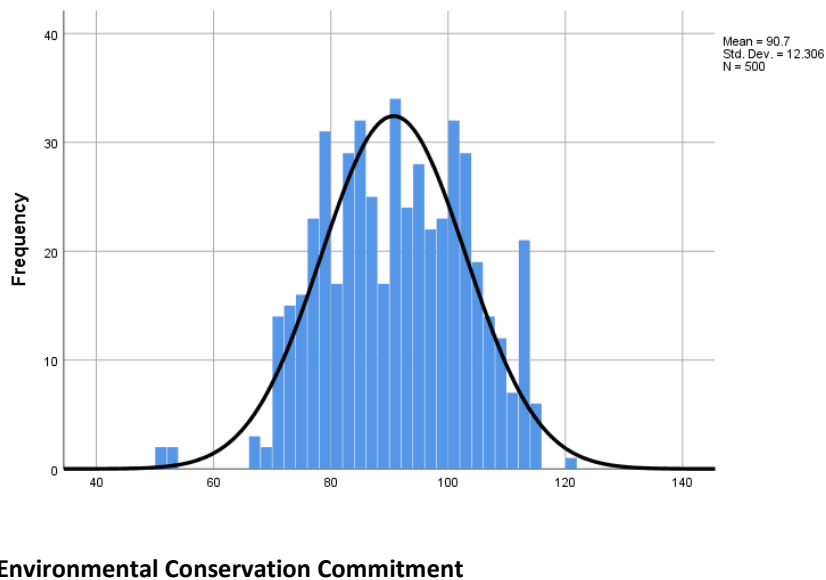
Figure 1

The smoothed frequency curve of Biodiversity Awareness of Total sample



From the table it can also be seen that there is a little variation between values of the measures of central tendency viz., mean, median, and mode of the variable Environmental Conservation Commitment. The obtained value of skewness is -0.130.

This indicates that the distribution is negatively skewed. The measure of kurtosis is -0.390, which indicates that the curve is Platykurti

Figure 2***The smoothed frequency curve of Environmental Conservation Commitment of Total sample***

The shape of the distribution of the variable Environmental Conservation Commitment for the total sample was examined by plotting the distribution. The smoothed frequency curve of Environmental Conservation Commitment for the total sample is shown in **figure 2**.

Major Statistical Analysis

This section describes the major statistical analysis done to test the hypothesis. They are the following.

- Study of group differences
- Correlational analysis

Study of Group Differences

This part of analysis was intended to find out whether there is any significant difference in the mean scores of Biodiversity Awareness and Environmental Conservation Commitment of high school students among subsamples based on Gender, Locality, and Type of management.

Comparison of Mean Scores of Biodiversity Awareness for the Samples of Boys and Girls, Rural and Urban, and Government and Aided

As part of the analysis, the difference in the mean scores of Biodiversity Awareness among subsamples based on Gender, Locale, and Type of Management was found out. For this purpose, the mean and standard deviation of Biodiversity Awareness between Boys and Girls, Rural and Urban, Government and Aided were subjected to two-tailed test of significance of difference and results were studied.

Gender Difference in Biodiversity Awareness. In order to study the gender difference in the total sample, the mean and standard deviation of the dependent variable Biodiversity Awareness of Boys and Girls were subjected to two tailed tests of significance of difference between means.

The data and results of test for the means of Biodiversity Awareness for Boys and Girls in the total sample are presented in the **Table 2**

Study of Group Differences

This part of analysis was intended to find out whether there is any significant difference in the mean scores of Biodiversity Awareness and Environmental Conservation Commitment of high school students among subsamples based on Gender, Locality, and Type of Management.

Comparison of Mean Scores of Biodiversity Awareness for the Samples of Boys and Girls, Rural and Urban, and Government and Aided

As part of the analysis, the difference in the mean scores of Biodiversity Awareness among subsamples based on Gender, Locale, and Type of Management was found out. For this purpose, the mean and standard deviation of Biodiversity Awareness between Boys and Girls, Rural and Urban, Government and Aided were subjected to two-tailed test of significance of difference and results were studied.

Gender Difference in Biodiversity Awareness.

In order to study the gender difference in the total sample, the mean and standard deviation of the dependent variable Biodiversity Awareness of Boys and Girls were subjected to two tailed tests of significance of difference between means.

The data and results of test for the means of Biodiversity Awareness for Boys and Girls in the total sample are presented in the **Table.5**

Table 5***Data and Results of the Mean Scores of Biodiversity Awareness Between Girls and Boys.***

Variable Compared	Groups Compared						Critical ratio
	Boys			Girls			
	N1	M1	σ_1	N2	M2	σ_2	
BiodiversityAwareness	260	24.02	5.161	240	22.85	5.101	t = 2.64

N1 – Number of Boys

N2 – Number of Girls

M1 – Mean of Boys

M2 – Mean of Girls

 σ_1 – Standard Deviation of Boys σ_2 – Standard Deviation of Girls

The above table reveals that the critical ratio obtained for the variable Biodiversity Awareness between Boys and Girls were 2.64. The obtained critical ratio is greater than the table value 2.58 required for significance at 0.01 level. This shows that there is significant difference between the Biodiversity Awareness of Boys and Girls. In other wards there is sex difference in Biodiversity Awareness.

Locale Difference in Biodiversity Awareness.

The mean and standard deviation of Biodiversity Awareness of the Rural and Urban students of the total sample were subjected to two-tailed test of significance between means. The data and results of the test of significance are presented in the **Table.6**

Table 6***Data and Results of the Mean Scores of Biodiversity Awareness Between Rural and Urban School pupils***

Variable Compared	Groups Compared						Critical ratio
	Rural			Urban			
	N1	M1	σ_1	N2	M2	σ_2	
BiodiversityAwareness	251	21.28	6.091	249	22.1	4.520	t = -0.812

N1 – Number of Rural Sample

N2 – Number of UrbanSample

M1 – Mean of RuralSample

M2 – Mean of UrbanSample

 σ_1 – Standard Deviation of Rural Sample σ_2 – Standard Deviation of Urban Sample

The above table shows that the critical ratio obtained for the variable Biodiversity Awareness between Rural and Urban students is - 0.812 which is less than the table value 1.96 which is required for significance at 0.05 level. This shows that there is no significant difference in the Biodiversity Awareness of Rural and Urban school pupils. That means there doesn't exist locale difference in Biodiversity Awareness.

Management Difference in Biodiversity Awareness.

The test of significance for the difference between mean scores of Governments and Aided school students for Biodiversity Awareness were calculated. The data and results of the test of significance are presented in **Table 7**

Table 7

Data and Results of the Mean Scores of Biodiversity Awareness between Government and Aided School Pupils

Variable Compared	Groups Compared						Critical ratio
	Govt			Aided			
	N1	M1	σ_1	N2	M2	σ_2	
BiodiversityAwareness	200	23.18	5.078	300	21.23	5.511	t = 2.67

N1 – Number of Govt Sample

N2 – Number of Aided Sample

M1 – Mean of Govt Sample

M2 – Mean of Aided Sample

 σ_1 – Standard Deviation of Govt Sample σ_2 – Standard Deviation of Aided Sample

The above table reveals that the critical ratio obtained for the variable Biodiversity Awareness between Government and Aided school is 2.67 which is greater than the table value 2.58 required for significance at 0.01 level. This shows that there is significant difference between the Biodiversity Awareness of Government and Aided school pupils.

Comparison of Mean Scores of Environmental Conservation Commitment for the Samples of Boys and Girls, Rural and Urban, and Government and Aided

As part of the analysis, the difference in the mean scores of Environmental Conservation Commitment among sub samples based on Gender, Locale and Type of Management was found out. For this purpose, the mean and standard deviation of Environmental Conservation Commitment between Boys and Girls, Rural and Urban, Government and Aided were subjected to two-tailed test of significance and the results were studied.

Gender Difference in Environmental Conservation Commitment.

In order to study the gender difference in the total sample, the mean and standard deviation of the independent variable Environmental Conservation Commitment of Boys and Girls were subjected to two tailed tests of significance of difference between means.

The data and results of t test for the means of Environmental Conservation Commitment for Boys and Girls in the total sample are presented in **Table 8**.

Table 8

Data and Results of the Mean Scores of Environmental Conservation Commitment between Boys and Girls

Variable Compared	Groups Compared						Critical ratio
	Boys			Girls			
	N1	M1	σ_1	N2	M2	σ_2	
EnvironmentalConservationCommitment	260	92.02	12.315	240	90.28	12.162	t = 2.597
N1 – Number of Boys	N2 – Number of Girls						
M1 – Mean of Boys	M2 – Mean of Girls						
σ_1 – Standard Deviation of Boys	σ_2 – Standard Deviation of Girls						

The above table reveals that the critical ratio obtained for the variable Environmental Conservation Commitment between Boys and Girls is 2.597 which is greater than the tabulated value 2.58 which is required

for significant at 0.01 level. This shows that there is significant difference in the Environmental Conservation Commitment between Boys and Girls.

Locale Difference in Environmental Conservation Commitment.

The mean and standard deviation of Environmental Conservation Commitment of the Rural and Urban students of the total sample were subjected to two tailed tests of significance between means. The data for the test of significance and the critical ratio for Rural and Urban students are presented in **Table 9**

Table 9

Data and Results of the Mean Scores of Environmental Conservation Commitment between Rural and Urban school pupils

Variable Compared	Groups Compared						Critical ratio
	Rural			Urban			
	N1	M1	σ_1	N2	M2	σ_2	
EnvironmentalConservationCommitment	251	92.97	11.742	249	90.41	12.460	t = 2.42

N1 – Number of Rural Sample

N2 – Number of Urban Sample

M1 – Mean of Rural Sample

M2 – Mean of Urban Sample

σ_1 – Standard Deviation of Rural Sample

σ_2 – Standard Deviation of Urban Sample

The above table reveals that the critical ratio obtained for the variable Environmental Conservation Commitment between Rural and Urban school pupils is 2.42 which is less than the tabulated value 1.96 required for significance at 0.05 level. This shows that there is no significant difference in the Environmental Conservation Commitment of Rural and Urban school pupils. In other words, there is no locale difference in Environmental Conservation Commitment.

Management Difference in Environmental Conservation Commitment.

The test of significance for the difference between mean scores of Governments and Aided school pupils for Environmental Conservation Commitment were calculated. The data and results of the test of significance are presented in **Table 10**

Table 10

Data and Results of the Mean Scores of Environmental Conservation Commitment between Government and Aided School Pupils

Variable Compared	Groups Compared						Critical ratio
	Govt.			Aided			
	N1	M1	σ_1	N2	M2	σ_2	
EnvironmentalConservationCommitment	200	91.08	5.511	300	89.14	12.805	t = 2.67

N1 – Number of Govt Sample

N2 – Number of Aided Sample

M1 – Mean of Govt Sample

M2 – Mean of Aided Sample

σ_1 – Standard Deviation of Govt Sample

σ_2 – Standard Deviation of Aided Sample

The above table reveals that the critical ratio obtained for the variable Environmental Conservation Commitment between Government and Aided school is 2.67 which is greater than the table value 2.58, required for significant at 0.01 level. This shows that there is significant difference between the Environmental Conservation Commitment of Government and Aided school pupils. In otherwards there is management difference in Environmental Conservation Commitment.

Correlational Analysis

The extent of relationship between Biodiversity Awareness and Environmental Conservation Commitment, which is the main objective of this study, has been found out through this part of the analysis. The relationship between the variables were investigated by Pearson's Product Moment Co-efficient of Correlation, which is the ratio for expressing the extent to which changes in one variable is accompanied by the changes in the second variable.

The correlation between Biodiversity Awareness and Environmental Conservation Commitment were computed for the total sample and relevant subsamples namely Boys&Girls, Rural&Urban and Government& Aided are presented in **Table.11**

Table 11

Data and Results of Relationship between Biodiversity Awareness and Environmental Conservation Commitment

Sample	Coefficient of Correlation (r)	Type of Correlation	Significant Level
Total	0.514	Moderately Positive	0.01
Boy	0.41	Moderately Positive	0.01
Girl	0.620	Substantially Positive	0.01
Govt	0.570	Moderately Positive	0.01
Aided	0.494	Moderately Positive	0.01
Rural	0.611	Substantially Positive	0.01
Urban	0.449	Moderately Positive	0.01

Interpretation of Coefficient of Correlation

Total Sample / Whole Samples

- For the total Sample, the correlation coefficient for the between Biodiversity Awareness and Environmental Conservation Commitment is 0.514. The relationship can be interpreted as Moderate relationship.
- The obtained correlation coefficient is positive. This means that increase in one variable will result a corresponding increase in the other variable.
- Hence any increase in Environmental Conservation Commitment will result in the corresponding increase in Biodiversity Awareness and vice versa.
- Hence this relation can be interpreted as Moderately positive correlation. The correlation is significant at 0.01 level of significance.

Boys

- For Boys, the coefficient of correlation between Biodiversity Awareness and Environmental Conservation Commitment is 0.41. The relationship can be interpreted as Moderate relationship.
- The obtained correlation coefficient for this subsample is positive. This means that increase in one variable will result a corresponding increase in the other variable. Hence, any increase in Environmental Conservation Commitment will result in the corresponding increase in the Biodiversity Awareness and vice versa.
- Hence this relation can be interpreted as moderately positive correlation. The correlation is significant at 0.01 level of significance.

Girls

- For girls, the coefficient of correlation between Biodiversity Awareness and Environmental Conservation Commitment is 0.620. This value can be interpreted as substantial relationship between variables.
- The obtained correlation coefficient for girls is positive. This means that the increase in Biodiversity Awareness will result in corresponding increase in the Environmental Conservation Commitment and vice versa.
- Hence this relation can be interpreted as substantially positive correlation variables. The correlation is significant at 0.01 level of significance.

Government School Pupils

- For Government School pupils, the coefficient of correlation between Biodiversity Awareness and Environmental Conservation Commitment is 0.570. This value denotes moderate relationship between the two variables.
- The obtained correlation coefficient for Government School pupils is positive. This means that the increase in Environmental Conservation Commitment will result in corresponding increase in the Biodiversity Awareness and vice versa.
- Hence, this relation can be interpreted as moderately positive correlation. The correlation is significant at 0.01 level of significance.

Aided School Pupils

- The coefficient of correlation obtained for the relationship between Biodiversity Awareness and Environmental Conservation Commitment is 0.494. This value can be interpreted as Moderate relationship between the two variables.
- The obtained correlation coefficient is positive. This means that the increase in Environmental Conservation Commitment will result in corresponding increase in the Biodiversity Awareness and vice versa.
- Hence this relation can be interpreted as Moderately positive correlation. The correlation is significant at 0.01 level of significance.

Rural School Pupils

- For the Rural school pupils, the coefficient of correlation for the relationship between Biodiversity Awareness and Environmental Conservation Commitment is 0.611. The relationship can be interpreted as substantial relationship.
- The obtained correlation coefficient is positive. This means that increase in one variable will result a corresponding increase in the other variable. Hence, any increase in Environmental Conservation Commitment will result in the corresponding increase in the Biodiversity Awareness and vice versa.
- Hence this relation can be interpreted as Substantially positive correlation. The correlation is significant at 0.01 level of significance.

Urban School Pupils

- The coefficient of correlation obtained for the relationship between Biodiversity Awareness and Environmental Conservation Commitment is 0.449. This value can be interpreted as moderate relationship between the two variables.
- The obtained correlation coefficient is positive. This means that the increase in Environmental Conservation Commitment will result in corresponding increase in the Biodiversity Awareness and vice versa.
- Hence this relation can be interpreted as Moderately positive correlation. The correlation is significant at 0.01 level of significance.

Major Findings of the study

The present study has been defined with a view to correlate the relationship between Biodiversity Awareness and Environmental Conservation Commitment among Secondary School Students. The present study was conducted on a representative sample of 500 Secondary School Students. The sample was selected by stratified random sampling technique giving the representation to factors like Gender of pupils, Locale and Type of management of schools. On the basis of Analysis done, the investigator arrived at the following findings:

Comparison of Mean Scores of Biodiversity Awareness for the Samples of Boys and Girls, Rural and Urban, and Government and Aided

The test of significance of Biodiversity Awareness between mean scores revealed the following results.

- There is significant difference exists between Boys and Girls in their Biodiversity Awareness. The critical ratio obtained is 2.64 which is significant at 0.01 level. This means that there is gender difference exists in Biodiversity Awareness of secondary school students.
- No Significant difference was noticed between Rural and Urban school pupils in their Biodiversity Awareness. The critical ratio obtained is -0.812, which is not significant at 0.05 level. This means that there doesn't exist Locale difference in Biodiversity Awareness of secondary school students.
- There is significant difference exists between Government and Aided school pupils in their mean scores of Biodiversity Awareness. The critical ratio obtained is 2.67 which is greater than the table value at 0.01 level. This suggests that there is significant difference exists in the mean scores of Biodiversity Awareness between Govt and Aided school pupils.

Comparison of Mean Scores of Environmental Conservation Commitment for the Samples of Boys and Girls, Rural and Urban, and Government and Aided

The test of significance in Environmental Conservation Commitment between mean scores revealed the following results.

- There exists significant difference between Boys and Girls in their Environmental Conservation Commitment. The critical ratio obtained is 2.597 which is significant at 0.01 level. Girls have more Environmental Conservation Commitment than Boys.
- There is no significant difference between Rural and Urban school pupils in their mean scores of Environmental Conservation Commitment. The critical ratio obtained is 2.42 which is less than the tabled

value at 0.05 level. This suggests that there is no significant difference exists in the mean scores of Environmental Conservation Commitment between Rural and Urban school pupils.

- There is significant difference exists between Government and Aided school pupils in their mean scores of Environmental Conservation Commitment. The critical ratio obtained is 2.67 which is greater than table value at 0.01 level. This suggests that there is significant difference exists in the mean scores of Environmental Conservation Commitment between Government and Aided school pupils.

There exists significant difference in the mean scores of Biodiversity Awareness and Environmental Conservation Commitment of Secondary School Students for the comparable sub samples namely Boys and Girls, Government and Aided. (Except Urban and Rural).

Correlational Analysis

Relationship between Biodiversity Awareness and Environmental Conservation Commitment for the total sample and relevant subsamples were calculated. The correlation analysis revealed the following results.

For total sample, the correlation between Biodiversity Awareness and Environmental Conservation Commitment is a Moderate positive relationship. The relationship is significant at 0.01 level. ($r = 0.514$).

- It was noticed that there exists Moderate positive correlation between Biodiversity Awareness and Environmental Conservation Commitment in the case of boys. This relationship is significant at 0.01 level. ($r = 0.41$).
- The correlation obtained between Biodiversity Awareness and Environmental Conservation Commitment in the case of Girls was found to be Substantial. The relationship is significant at 0.01 level ($r = 0.620$).
- It was noticed that there exists a Moderate correlation between Biodiversity Awareness and Environmental Conservation Commitment in the case of Government school pupils. This relationship is significant at 0.01 level. ($r = 0.570$).
- It was noticed that there exists Moderate positive correlation between Biodiversity Awareness and Environmental Conservation Commitment in the case of Aided school pupils. This relationship is significant at 0.01 level. ($r = 0.494$).

- It was noticed that there exists a Substantial correlation between Biodiversity Awareness and Environmental Conservation Commitment in the case of Rural school pupils. This relationship is significant even at 0.01 level. ($r= 0.611$).
- It was noticed that there exists Moderate correlation between Biodiversity Awareness and Environmental Conservation Commitment in the case of Urban school pupils. This relationship is significant even at 0.01 level. ($r= 0.449$).

From this, it is concluded that there exists Moderate and Substantial positive correlation between Biodiversity Awareness and Environmental Conservation Commitment for total Sample and comparable sub samples and it is significant in all cases of secondary school students.

Tenability of the Hypotheses

Based on the major findings, the tenability of the hypothesis set for the present study was as follows:

- The first hypothesis states that "There exists significant difference in the mean scores of Biodiversity Awareness of Secondary School Students for the comparable subsamples namely Boys and Girls, Rural and Urban, Government and Aided."

Gender of the pupils (Boys and Girls)

From the study, it was found that there is significant difference in the mean scores of Biodiversity Awareness between Boys and Girls. So, the first part of the first hypothesis is accepted.

Locale of the school (Rural and Urban)

The study revealed that there exists no significant difference in the mean scores of Biodiversity Awareness between the Rural and Urban students, so the second part of the first hypothesis is rejected.

Management of the school (Government and Aided)

The findings revealed that there is significant difference in the mean scores of Biodiversity Awareness between Government and Aided school pupils. So that the third part of the first hypothesis is accepted.

- The second hypothesis states that "There exists significant difference in the mean scores of Environmental Conservation Commitment of Secondary School Students for the comparable subsamples namely Boys and Girls, Rural and Urban, Government and Aided".

Gender of the pupils (Boys and Girls)

The findings reveal that there exists significant difference in the mean scores of Environmental Conservation Commitment between Boys and Girls. Therefore, the first part of the second hypothesis is accepted.

The findings reveal that there exists significant difference in the mean scores of Environmental Conservation Commitment between Boys and Girls. Therefore, the first part of the second hypothesis is accepted.

Locale of the school (Rural and Urban)

There exists no significant difference in the mean scores of Environmental Conservation Commitment between Rural and Urban school students. So, the second part of the second hypothesis is rejected.

Management of the school (Government and Aided)

It was found that there is significant difference exists between Government and Aided school pupils in their Environmental Conservation Commitment. Hence, the third part of the second hypothesis is accepted.

- The third hypothesis states that "There exists significant relationship between Biodiversity Awareness and Environmental Conservation Commitment among Secondary School Students for the total sample and the subsamples namely Boys and Girls, Rural and Urban, Government and Aided".

The study reveals that there exists significant relation between Biodiversity Awareness and Environmental Conservation Commitment. The correlation obtained for the total samples and relevant subsamples revealed that there exists Moderate positive correlation between Biodiversity Awareness and Environmental Conservation Commitment among Secondary School Students in case of total samples and sub samples namely Boys, Government, Aided and Urban. But, for subsamples of Girls, Rural secondary school pupils there exist Substantial positive correlation between Biodiversity Awareness and Environmental Conservation Commitment. Hence the third hypothesis is fully accepted.

Educational Implications

The present study has certain educational implications in this direction

- First hand experiences with nature must be provided to the pupils through the programs like excursion, field trip, direct observation etc to increase their contact / experience with nature.
- Simple and Suitable projects must be conducted to the demand of the locality.
- The Government must give more stress to Environmental education programs in school Curriculam.
- Organizing awareness campaigns about environment related social issues in rural and urban areas.
- Various educational activities related to environmental education like essay writing, mime, quiz, debates, discussion etc. can be arranged in schools.
- Beyond the classroom activities the Co-curricular activities are also be well utilized for the development of proper awareness to conserve the biological diversity.
- An interdisciplinary approach should be adopted by the teachers in terms of discipline to make a holistic and balanced perspective about living world around us.
- Problem solving and action-oriented case studies on environmental issues of local significance should be taken up and instructional materials based on these are prepared.
- The students should contribute to out-of- class activities of real experiences like local visits to ponds, lakes, rivers, farms, zoos, factories, quarries and geological sites, ancient monuments, national park and natural trails in order to enhance their awareness.

The quality of life depends on the quality of natural resources. Therefore students must be well aware about the importance of biodiversity and its conservation. The environmental based project or out-of-class activities should also be given to students for real experiences to increase performance of students to strengthen the environmental education. Teachers and Organizations must focus their efforts on developing better insights and making their students feel, perceive, think and act for the environment. Therefore, it must be ensuring that learning can be best nurtured through firsthand experience and activities which foster a deep respect and care for the natural world.

It is recommended that teacher training institutes should include environmental issues in their curriculum. to train teachers in pedagogical strategies to orient them as how to teach environmental education to students for critical thinking, problem solving and action. The environmental day should be celebrated all over the India for strengthening awareness program. Environmental Commitment, which would have significant impact on intentional ecological behavior must be emphasized that may direct people towards preservation and conservation of environment.

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