



## **Attitude of College Students of Mizoram towards the Environment**

**P. C. Lalremruati\***  
**Lynda Zohmingliani†**

### **Abstract**

*The objectives of the present study were to find out the attitude of college students towards the environment, the difference in the attitude of male and female college students as well as the difference in the attitude among students from different streams i.e. science, arts and commerce streams towards the environment in the colleges of Mizoram. The sample comprised of 600 college students of Mizoram from 3 streams viz. Arts, Science and Commerce, out of which 300 were males and 300 were females. 100 male and 100 female students were selected from each of these streams. Taj Environmental Attitude Scale (TEAS) developed by Dr. Haseen Taj was used for data collection. It was found that all the college students had a positive attitude towards the environment even though the level of positivity differed. It was also found that female college students had a more positive attitude towards the environment in general. Among the different streams, male and female science students differed in their attitude towards the environment. The findings also revealed a significant difference among the three streams and this difference was found to lie among arts and commerce students in their attitude towards the environment, with commerce students having a slightly more positive attitude.*

**Keywords:** Environment, Education, Attitude, Arts, Science, Commerce, College Students.

### **Introduction**

Earth is the only planet known so far to have life in the solar system. During millions and millions of years, life evolved on this earth. Each living thing is habituated to a certain way of life either in water, on land or underneath the soil. The surrounding features have to

---

\* Research Scholar, Department of Education, Mizoram University, Aizawl, Mizoram. Email: reshika.lalremruati@gmail.com

† Associate Professor, Department of Education, Mizoram University, Aizawl, Mizoram. Email: lynda.zohmingliani@gmail.com

be amenable for a certain species to survive and thrive. This surrounding feature is called the environment. The environment is a broad concept encompassing the whole range of diverse surroundings in which we perceived, experienced and react to events and changes. It is the aggregate of all external conditions and influences that support living things. The environment includes all that surrounds us, inclusive of all that we term as 'resource'. P. Gisbert defines it as anything immediately surrounding an object and exerting great influence on it. T.D. Elliot regards it as the field of effective stimulation and interaction for any unit of living matter (Krishnamacharyulu and Reddy). It regulates the life of the organisms including human beings. Among all the living things, human beings are the ones that interact more with the environment than any other living. Thus, environment is a total of all the forces and materials that immediately surround living organisms and have a direct influence on it.

An attitude towards the environment is the behavior or concern or interest of the people towards the environment and its problems and development. Attitude of college students towards the environment is essential to solve environmental problems as they are the future of our country. There is a necessity to incorporate not only knowledge about the environment but also to acquaint and sensitize the minds of the students to the problems of the environment and concerns. It is the duty of college students to develop a positive attitude towards the environment. The knowledge of the environment creates a better attitude towards the environment where they are living. The students should develop an environment friendly attitude and practice during their lifetime. So it is essential to assess environmental attitudes among the college students.

### **Review of Related Studies**

Katoch, K.S. (2017) in his study on "Awareness and attitude of school students towards environment" revealed that:

1. There was no difference in the environmental awareness between male and female school students. Both male and female had equal awareness towards the environment.
2. There was a significant difference in attitude towards the environment of male and female school students. Female students were having better attitude towards environment than male students

Krishnakumari, S. & Ponmozhi, D. (2017) conducted a study on "Environmental attitude of school students" 200 samples were collected on random sampling technique and a normative survey method was utilized and found out that there existed no significant difference between sub samples.

Hooda, S. (2016) in his study on "A study of attitude and awareness of college students towards environmental pollution" found that:

1. Majority of the students of colleges were aware of the consequence of environmental pollution.
2. A significant difference was found between the students of private and government schools with reference to environmental awareness.

3. The private college students were significantly more positive than government college students towards environmental problems.

Kose, A.N. (2015) in his study on “Environment awareness and attitude towards environment of male and female class V students of Chandigarh, Haryana and Punjab” revealed that:

1. Students had a positive attitude towards the environment as regard to their gender and faculty types.
2. Female students were more sensitive towards than male students.

Bhattacharya, G.C. (1997) conducted a study on the “Environmental awareness among higher secondary students of science and non science stream” and found out that:

1. Students belonging to the science stream were better in terms of their environmental awareness compared to non science streams.
2. Formation of attitude towards any issue or object might not depend upon the nature of discipline and the formal instructional situation as well as of curriculum structure.
3. Female groups of higher secondary students were better than their male counterparts in environmental awareness.
4. Male and female students differed significantly in terms of environmental awareness. Female students were better than their male counterparts.

### **Rationale of the Study**

Environment is degrading at a much faster pace than our imagination. Most of this mess is caused by human activities. Human beings are facing grave environmental problems and adjustment to changes in the environment has become a huge challenge. All members of society depend on natural resources to survive. The availability of these resources has limits. It is therefore essential that college students who are supposed to be our future leaders should understand the need of the environment for their quality of life and should have the knowledge, tools and skills to live in ways that minimize the impact of their actions on the environment. It is thus essential that students should be inculcated in the effective and optimal use of our natural resources and energy to safeguard our mother nature and in conserving our resources in order to attain sustainability in all levels. There is a need for environmental awareness in every aspect of the environment and conservation of natural resources and biodiversity so as to produce socially responsible citizens of tomorrow. To protect and manage the environment it is thus important to have a sound environmental education. Today’s students will be responsible for making decisions that will shape the health of the environment. To prepare them for such responsibilities, they need a sound environmental education from which to make those decisions. Hence the present study has been undertaken.

### **Objectives of the Study**

1. To study the attitude of college students towards the environment.
2. To find the difference in the attitude of male and female students towards the environment in the colleges of Mizoram.

3. To find the difference in the attitude among students from different streams towards the environment.

### **Hypotheses**

The following hypotheses have been stated so as to realize the 2<sup>nd</sup> and 3<sup>rd</sup> objectives of the study:

1. There is no significant difference in the attitude of male and female college students towards the environment.
2. There is no significant difference in the attitude of male and female college students of arts stream towards the environment.
3. There is no significant difference in the attitude of male and female college students of commerce stream towards the environment.
4. There is no significant difference in the attitude of male and female college students of science stream towards the environment.
5. There is no significant difference in the attitude of science, arts and commerce students towards the environment in the colleges of Mizoram.
6. There is no significant difference between arts and science students in their attitude towards the environment in the colleges of Mizoram.
7. There is no significant difference between science and commerce students in their attitude towards the environment in the colleges of Mizoram.
8. There is no significant difference between commerce and arts students in their attitude towards the environment in the colleges of Mizoram.

### **Methodology**

The present study mainly focused on the attitude of college students towards the environment. Thus it is largely descriptive in nature. Therefore, a descriptive survey method was followed for the study.

### **Population and Sample**

In the present study, for the assessment of the attitude of college students towards the environment, the target population consisted of all the 4th semester college students of arts, science and commerce streams of degree colleges of Mizoram.

The sample selected consisted of 600 degree college students of Mizoram from 3 streams viz. Arts, Science and Commerce, out of which 300 were males and 300 were females. 100 male and 100 female students were selected from each of these streams for the sample. The samples were selected on the basis of stratified random sampling.

### **Tools and Techniques Used**

Taj Environmental Attitude Scale (TEAS) which was developed by Dr. Mrs. Haseen Taj, in 2001 was used for the collection of data. Following the Likert's method of summated rating procedure Taj Environmental Attitude Scale was developed with 61 items consisting of six areas which aimed to identify the attitudes of people towards various aspects of the environment.

Each item alternative was assigned a weightage ranging from 4 (strongly agree) to 1 (strongly disagree) for favorable items and the scoring is reversed from 1 (strongly agree) to 4 (strongly disagree) in the case of unfavorable items. The attitude score of an individual was the sum total of item scores on all the six areas. The range of scores was from 61 to 244. For each statement, there were no right or wrong answers. What was required was each individual's feeling or opinion about the statement. The reliability of the scale was estimated by two methods (a) split half (odd-even and 1<sup>st</sup> half-2<sup>nd</sup> half) and (b) test retest reliability coefficient with a time gap of one month on a sample of 150.

### Analysis of Findings and Observation

Objectives 1: To study the attitude of college students towards the environment.

Table 1: Classification of Students on their Attitude towards the Environment

Respondents	Low positive attitude	Moderate positive attitude	High positive attitude
All samples (N=600)	101 (16.83%)	395 (65.83%)	104 (17.33%)

As seen in table-1, 65.83% of college students had a moderate positive attitude towards the environment. 16.83% of college students had a low positive attitude towards the environment while the other 17.33% of college students had a high positive attitude towards the environment.

Discussion: The findings of the present study corroborated the findings of Hooda who had a similar finding in a previous research. It could be deduced from these two findings as well as other research findings that college students have a fairly positive attitude towards the environment.

Objectives 2: To find the difference in the attitude of male and female students towards the environment in the colleges of Mizoram.

Table 2: Difference in the Attitude of Male and Female College Students towards the Environment

Gender	Number	Mean	SD	MD	t-value	Sig. level	
Male	300	174.9	3.04	0.26	8.84	0.05	0.01
Female	300	177.2	3.5			Significant	Significant

Table 2 showed that the 't' value for the significance of difference between the attitude of male and female college students towards the environment was 8.84. Since the calculated 't' value was greater than the critical 't' value at 0.05 and 0.01 levels of

significance, it could be concluded that there was a significant difference between the attitude of male and female college students towards the environment. Therefore, the null hypothesis that assumed that there was no significant difference in the attitude of male and female college students towards the environment was rejected since there existed a significant difference at 0.05 and 0.01 levels of significance. A comparison of their mean score showed that this difference was in favor of female college students as their mean score was higher than the mean score of male college students. The result indicated that female college students had a more favorable attitude towards the environment when compared with male college students.

*The difference in the attitude of college students towards the environment was also compared between male and female students of different streams as follows:*

Table 3: Difference in the Attitude of Male and Female Students of Arts Stream towards the Environment

Stream	Gender	Number	Mean	SD	MD	t-value	Sig. level	
Arts	Male	100	174.22	10.69	0.56	0.38	0.05	0.01
	Female	100	174.78	9.97			NS	NS

As per table-3 the 't' value for the significance of difference in the attitude of male and female arts students towards the environment was 0.38. Since the calculated 't' value was less than the critical 't' value at 0.05 and 0.01 levels of significance, it could be concluded that there was no significant difference in the attitude of male and female students of arts stream with regards to their attitude towards the environment. Therefore, the null hypothesis which assumed that there was no significant difference in the attitude of male and female students of arts stream towards the environment was accepted. A comparison of their mean score showed that although there was no significant difference between male and female arts students with regards to their attitude towards the environment female students had a slightly higher mean score in their attitude towards the environment than male students of arts stream.

Table 4: Difference in the Attitude of Male and Female Students of Commerce Stream towards the Environment

Stream	Gender	Number	Mean	SD	MD	t-value	Sig. level	
Commerce	Male	100	176.56	11.56	1.75	1.13	0.05	0.01
	Female	100	178.31	10.13			NS	NS

As seen in table 4, the 't' value for the significance of difference in the attitude of male and female commerce students towards the environment is 1.13. Since the calculated t value is less than the critical 't' value at 0.05 and 0.01 levels of significance, it could be

concluded that there was no significant difference in the attitude of male and female students of commerce stream with regards to their attitude towards the environment. Therefore, the null hypothesis which assumed there was no significant difference in the attitude of male and female students of commerce stream towards the environment is accepted. A comparison of their mean score showed that although there was no significant difference between male and female commerce students with regards to their attitude towards the environment, female students had a slightly higher mean score in their attitude towards the environment than male students of commerce stream.

Table 5: Difference in the Attitude of Male and Female Students of Science Stream towards the Environment

Stream	Gender	No.	Mean	SD	MD	t-value	Sig. level	
Science	Male	100	173.89	17.73	4.29	2.50	0.05	0.01
	Female	100	178.18	11.49			Significant	NS

An analysis of table-5 revealed that the ‘t’ value for the significance of difference in the attitude of male and female science students towards the environment was 2.50. Since the calculated t value was greater than the critical t value at 0.05 level of significance, it could be concluded that there was a significant difference in the attitude of male and female students of science stream with regards to their attitude towards the environment. Therefore, the null hypothesis which assumed there was no significant difference in the attitude of male and female students of science stream towards the environment was rejected. A comparison of their mean score showed that this difference was in favor of female college students of science stream as their mean score was higher than the mean score of male college students of science stream. The result indicated that female students of science stream had a more favorable attitude towards the environment when compared with male students of science stream.

Discussion: The present study found that female students had a more positive attitude towards the environment. It was only among commerce students that no significant differences were found between the two genders. In an earlier study done by Krishnakumari and Ponmozhi, it was found that there was no significant difference among male and female college students but another study performed by Kose also found that female students were more sensitive towards the environment when compared with male college students. Therefore, depending on the area, male and female students may also differ in their outlook towards the environment.

Objectives 3: To find the difference in the attitude among students from different streams towards the environment.



Table 6: Difference in the Attitude of Students from Science, Arts and Commerce Streams towards the Environment in the Colleges of Mizoram

Source of variation	SS	Df	MS	f calculated	f critical	Significance
Between groups	862.03	2	431.015	3.438862	3.010815	Significant
Within groups	74825.91	597	125.3365			
Total	75687.94	599				

As found in table-6, the calculated 'f' value was greater than the critical 'f' value, the hypothesis stating that 'there is no significant difference in the attitude of science, arts and commerce students towards the environment in the colleges of Mizoram' had to be rejected and it could be concluded that there was a significant difference between the three streams of study i.e., science, arts and commerce.

*The above interpretation was based on calculations of analysis of variance among the three streams (ANOVA). Since there was no evidence of the reason for the variance among these three streams, a t-test was employed between two streams each so as to calculate the variance between the different streams. Accordingly, separate null hypotheses 7,8 and 9 were also framed between the streams and findings as shown in tables 7, 8 and 9 as follows:*

Table 7: Difference in the Attitude of Students from Arts and Science Streams towards the Environment

Stream	Number	Mean	SD	MD	t-value	Sig. level	
Arts	200	174.5	10.32	1.53	1.35	0.05	0.01
Science	200	176.03	12.29			NS	NS

Table - 7 indicated that the 't' value for the significance of difference in the attitude of arts and science students towards the environment was 1.35. Since the calculated 't' value was less than the critical 't' value at 0.05 and 0.01 levels of significance, it could be concluded that there was no significant difference in the attitude of students from arts and science stream with regards to their attitude towards the environment. Therefore, the null hypothesis that assumed that there was no significant difference in the attitude of arts and science students towards the environment was accepted. However, a comparison of their mean score showed that although there was no significant difference between arts and science students in their attitude towards the environment science students had a higher mean score in



their attitude towards the environment than arts students. This particular fact was highlighted because it showed that science students, who had always been considered to have a positive attitude towards the environment due to the content of their syllabus, showed a rather unexpected result.

Table 8: Difference in the Attitude of Students from Science and Commerce Streams towards the Environment

Stream	Number	Mean	SD	MD	t-value	Sig. level	
Science	200	176.03	12.29	1.4	1.20	0.05	0.01
Commerce	200	177.43	10.88			NS	NS

Table 8 showed that the ‘t’ value for the significance of difference in the attitude of science and commerce students towards the environment was 1.20. Since the calculated ‘t’ value was less than the critical ‘t’ value at 0.05 and 0.01 levels of significance, it could be concluded that there was no significant difference in the attitude of students from science and commerce streams with regards to their attitude towards the environment. Therefore, the null that assumed there was no significant difference in the attitude of science and commerce students towards the environment was accepted. However, a comparison of their mean score showed that although there was no significant difference between science and commerce students in their attitude towards the environment, students from commerce stream had a higher mean score in their attitude towards the environment than students from science stream.

Table 9: Difference in the Attitude of Students from Commerce and Arts Streams towards the Environment

Stream	Number	Mean	SD	MD	t-value	Sig. level	
Commerce	200	177.43	10.88	2.9	2.76	0.05	0.01
Arts	200	174.5	10.32	3		Significant	Significant

Table 9 revealed that the ‘t’ value for the significance of difference in the attitude of commerce and arts students towards the environment was significant. Since the calculated ‘t’ value was greater than the critical ‘t’ value at 0.05 and 0.01 levels of significance. It can be concluded that there was a significant difference between commerce and arts students with regards to their attitude towards the environment. Therefore, the null hypothesis that assumed there was no significant difference in the attitude of commerce and arts students towards the environment was rejected. A comparison of their mean score showed that this difference was in favor of commerce students as their mean score was higher than the mean score of arts students. The result signified that students of commerce stream had a more favorable attitude towards the environment when compared with students of arts stream.

Discussion: The present study had a rather different finding in terms of difference in attitude on grounds of discipline. Studies that had been done by researchers like Bhattacharya had

found that science students had a more positive attitude towards the environment. Therefore, the fact that the present research found commerce students to have a more positive attitude towards the environment showed that in a setting like Mizoram where children are very much in connection with the environment, no discipline had a more positive attitude towards the environment. It could also be attributed to the fact the students from different streams had similar exposure to the environment in their respective syllabi. Whatever the case may be, it was indeed a pleasant surprise to find that non-science students had a more positive attitude towards the environment when compared with science students.

### **Conclusion**

From the findings, we can conclude that all the college students had a positive attitude towards the environment even though the level of positivity differed. This positive attitude towards the environment also indicated that they understood the needs of the environment to a great extent. These findings were also similar to the findings of some research on environmental attitude done in other states outside Mizoram. Considering that college students of Mizoram only had theory classes on environment, it was concluded that this was quite a positive finding in itself and showed the society in a good light.

It could be concluded that female college students had a more positive attitude towards the environment in general. This finding corroborated the findings of previous research findings. Among the different streams, male and female science students differed in their attitude towards the environment. It was clear that female science students had a more positive attitude towards the environment. It could also be concluded that there was a significant difference among the three streams because there was a difference among arts and commerce students in their attitude towards the environment, with commerce students having a slightly more positive attitude.

From the present study on environmental education in colleges of Mizoram, it could be concluded that degree colleges of Mizoram are not in a very bad place where environmental awareness is concerned. In light of the fact that the world is presently fighting a battle with the covid-19 pandemic, it is a matter of absolute importance that human beings learn about their environment and the role they play in it. Not only should students be taught to have a positive attitude towards the environment, but they also need to be equipped with the right skills to combat environmental problems.

\*\*\*\*\*

### **References**

Best, J.W., & Kahn, J.V. (2000). *Research in education*. Ashoke K. Ghosh. New Delhi: Prentice Hall of India Private Limited.

Bhattacharya, G.C. (1997). Environmental awareness among higher secondary students of science and non Science students. *School Science*. 30(1), 24-32.

- Chauhan, A. S., (2004). *Environmental Studies*. New Delhi: Jain Brothers.
- Hooda, S. (2016). A study of attitude and awareness of college students towards environmental pollution. *EPRA International Journal of Economic and Business*, 4 (2).
- Katoch, K.S. (2017). Awareness and attitude of school students towards the environment. *Scholarly Research Journal for Interdisciplinary Studies*.
- Krishnakumari,S. & Ponmozhi, D.(2017).Environmental attitude of school students. *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*. 22(7), 3.
- Krishnamacharyulu, V. and G.S. Reddy. 2007. Environmental Education. Hyderabad: Neelkamal Publications Pvt. Ltd.
- Sharma, R.A. (2010). *Environmental education*. Jaidevi Nagar Meerut: Raj Printers.
- Kose, A.N. (2015). *Environment awareness and attitude towards the environment of male and female class V students of Chandigarh, Haryana and Punjab*. (Unpublished M. Ed dissertation). Punjab University.
- Zohmingliani, L (2019) *Extinction of Flora and Fauna: Deforestation and Soil Erosion*, Environmental Education. Studera Press 1586/113, FF, Tri Nagar, Delhi