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Environmental Attitude of Secondary School Students in Aizawl City

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ABSTRACT

This study investigates the environmental attitudes of secondary school students in Aizawl City, Mizoram, against the backdrop of growing ecological challenges and the rising importance of environmental education. A descriptive survey was conducted among 443 students from Classes IX and X, selected using proportionate random sampling from government, private, and deficit schools. The Environmental Attitude Scale (EAS-TH) by Taj (2016) was used to assess students' attitudes across six dimensions: health and hygiene, wildlife, forests, polluters, population explosion, and general environmental concern. Data analysis using mean, standard deviation, percentage, and t-tests revealed that students held moderately positive environmental attitudes overall. Female students and those from private schools exhibited more favorable attitudes, with slight variations also noted between Class IX and X. The findings emphasize the need for inclusive and context-specific environmental education that strengthens awareness and promotes responsible environmental behavior among adolescents.

Keywords: Environmental Attitude, Secondary School Students, Gender, School Management, Class.

1. INTRODUCTION

In recent decades, environmental degradation has become a global concern, with serious implications for ecosystems, public health, and long-term sustainability. Issues such as climate change, pollution, biodiversity loss, and unsustainable resource exploitation have reached critical levels (Ministry of Law and Justice, 1986). As human activities increasingly disrupt natural systems, it is essential to foster awareness, responsibility, and behavioural change across all sectors of society. Education, particularly at the school level, is seen as a key instrument in cultivating values and attitudes that support environmental conservation (UNESCO, 1978).

Environmental education serves as a tool for equipping individuals with the knowledge, skills, and motivation to address environmental challenges. It enables learners to develop critical thinking, problem-solving abilities, and responsible decision-making skills grounded in objective, scientific understanding (EPA, 1992; Fang et al., 2023). One of the crucial components of environmental education is attitude, which encompasses a person's beliefs, emotions, and behavioural intentions toward environmental issues (Cherry, 2024; Milfont & Duckitt, 2010). Positive environmental attitudes have been found to influence environmentally responsible behaviour, making them a critical area of focus in educational research (Schultz et al., 2004; Ajzen & Fishbein, 2005).

Schools play a vital role in shaping students' environmental attitudes, particularly during adolescence when values and worldviews are still being formed (Birdsall, 2010). Secondary school students are at a

stage where they can grasp complex issues and translate understanding into action. In Aizawl City, the capital of Mizoram, rapid urbanization has led to several environmental challenges such as waste accumulation, air pollution, and declining green cover. Despite curricular efforts to promote environmental awareness, little is known about how students in this context perceive and respond to environmental issues.

2. RATIONALE OF THE STUDY

Despite the increasing global emphasis on environmental education, a consistent gap persists between awareness and environmentally responsible behaviour (Chu & Karr, 2017). While students may demonstrate basic knowledge about environmental issues, this knowledge does not always translate into pro-environmental attitudes or actions. This disconnection highlights the importance of understanding the underlying attitudes that influence behaviour, especially among adolescents who are in a formative stage of value development (Palmer, 1998).

Studies have shown that factors such as gender, type of school management, academic level, and parental education significantly influence environmental attitudes (Tindall et al., 2003; Uitto et al., 2011; Manoli et al., 2007; Hammami et al., 2017). For instance, girls are often found to exhibit stronger pro-environmental attitudes than boys, while private school students may be more environmentally conscious than their peers in government institutions. However, most of these findings are context-specific and cannot be generalized without region-specific data. In Aizawl City—Mizoram's capital facing urban issues such as pollution, deforestation, and waste mismanagement—there is limited empirical research exploring how such factors influence the environmental attitudes of students.

The present study seeks to addresses this gap by examining the environmental attitudes of secondary school students in Aizawl City. By analysing their perspectives across variables like gender, school type, class level, and parental educational background, the study aims to generate insights that can help shape effective environmental education strategies. Understanding students' attitudes will assist educators and policymakers in designing localized, evidence-based programs to cultivate a more environmentally responsible generation

3. REVIEW OF RELATED LITERATURE

Hausbeck et al. (1992) studied Grade 11 students in New York and found that while students had relatively low environmental knowledge, they exhibited high levels of environmental concern and awareness. Notably, female students showed higher levels of concern than males, indicating the relevance of gender in shaping environmental attitudes, regardless of knowledge level.

Chan (1996) explored the environmental attitudes of secondary school students in Hong Kong and found that students held strong positive attitudes toward environmental protection, particularly regarding wildlife conservation. The study also revealed that female students were more likely to adopt environmentally responsible behaviors, reinforcing the role of gender in environmental sensitivity.

Zelezny et al. (2000) cross-cultural study involving students from 14 countries, reported that girls consistently exhibited stronger pro-environmental attitudes than boys. This gender-based difference was evident across cultural boundaries, suggesting a universal pattern in environmental concern by gender.

Tuncer et al. (2005) examined high school students in Turkey and concluded that students from private schools had more positive environmental attitudes than those in public schools. The study attributed this difference to factors such as curriculum content and school climate, highlighting the impact of institutional context.

Shobeyri et al. (2007), in a comparative study between Indian and Iranian students, found that private school students demonstrated more favourable environmental attitudes than government school students. The study also confirmed that female students consistently showed stronger environmental concern, supporting prior findings on gender influence.

Sarkar (2011) assessed the environmental attitudes of secondary school students in Bangladesh and found generally moderate levels of environmental concern. However, the most significant finding was that rural girls demonstrated the highest levels of environmental attitude, indicating a strong influence of both gender and location on environmental awareness.

Hmangaihzuali (2015) investigated the environmental ethics of secondary school students in Aizawl City and found that students displayed high levels of environmental concern, with female students scoring significantly higher than their male counterparts. Among various concerns, air pollution emerged as the most urgent issue according to student responses.

Ablak and Yeşiltaş (2020) examined Turkish secondary students and found that environmental awareness increased with class level, with older students showing more positive environmental attitudes than younger ones. The study supports the idea that academic progression contributes to greater environmental sensitivity.

Lalhmangaihzuali and Zohmingliani (2021) studied environmental awareness among college students in Mizoram. Their findings revealed that environmental awareness was high across both genders, and no significant gender difference was observed. This contrasts with secondary-level studies and may indicate convergence of attitudes at higher education levels.

4. OBJECTIVES OF THE STUDY

1. To study the environmental attitude of secondary school students in Aizawl city.
2. To compare the environmental attitude of male and female secondary school students in Aizawl city.
3. To compare the environmental attitude of secondary school students in Aizawl city with regard to types of management.
4. To examine the environmental attitude of secondary school students in Aizawl city in relation to their class.

5. HYPOTHESES OF THE STUDY

1. There is no significant difference in the environmental attitude of male and female secondary school students in Aizawl City.
2. There is no significant difference between the environmental attitude of secondary school students with regard to type of management.
   - Deficit school and Government school
   - Government school and Private school
   - Private school and Deficit school
3. There is no significant difference in the environmental attitude between Class IX and Class X secondary school students in Aizawl City.

6. RESEARCH METHODOLOGY

The study employed a descriptive survey method to examine the environmental attitudes of secondary school students in Aizawl City. This method was considered appropriate as it allows the collection of data

related to the current status of attitudes, beliefs, and characteristics of a specific population.

6.1. Population and Sample of the Study

The population of the study consisted of students enrolled in Class IX and X across government, private, and deficit secondary schools within Aizawl City, Mizoram. Using proportionate random sampling, a total of 443 students were selected as the sample.

Table 1: Sample Profile of the Study

Gender	Deficit		Government		Private		Total
	IX	X	IX	X	IX	X	
Male	16	10	29	24	69	69	217
Female	20	26	32	39	46	63	226
Total	36	36	61	63	115	132	443
	72		124		247		

6.2. Tool Used

To assess students' environmental attitudes, a standardized and validated Environmental Attitude Scale (EAS-TH) developed by Taj (2016) was used. The scale consists of 60 items covering six key dimensions: health and hygiene, wildlife, forests, polluters, population explosion, and general environmental concern.

6.3 Statistical Techniques Used

Data were analysed using mean, standard deviation, and percentage for descriptive statistics. To compare environmental attitudes across gender, school type, and class level, independent samples t-tests were applied to determine statistical significance.

7. ANALYSIS AND INTERPRETATION

7.1 Environmental Attitude of Secondary School Students in Aizawl City.

Table 2: Environmental Attitude of Secondary School Students in Aizawl City

Level	No of Students (N)	Percent (%)
Extremely High	6	1.35
High	32	7.23
Above Average	148	33.41
Average	257	58.01
Below Average	0	0
Low	0	0
Extremely Low	0	0
Total	443	100

Table 4.1 shows that out of 443 students, 58.01% demonstrated an average level, 33.41% were above average, 7.23% high, and 1.35% extremely high in environmental attitude. No students were found in the below average or lower categories.

7.2 Environmental Attitude of Male and Female Secondary School Students in Aizawl City.

Table 3: Comparison of Environmental Attitude of Male and Female Secondary School Students in Aizawl City.

Gender	No. of Students (N)	Mean	Standard Deviation	t-value	Significant Level
Male	310	166.06	14.96	2.67	0.01
Female	226	169.71	15.54		

As shown in Table 3, female students (M = 169.71) scored higher on environmental attitude than male students (M = 166.06). The calculated t-value of 2.67 is significant at the 0.01 level, indicating a statistically significant difference in environmental attitudes between male and female students. Therefore, the null hypothesis is rejected.

7.3 Environmental Attitude of Secondary School Students in Aizawl City with Regard to type of Management.

To examine whether environmental attitudes vary based on type of school management, independent samples t-tests were conducted for three pairwise comparisons: Government vs Deficit, Government vs Private, and Private vs Deficit. The results are summarized in Table 4.

Table 4: Comparison of Environmental Attitude of Secondary School Students in Aizawl City with Regard to type of Management.

Comparison Groups	N (Group 1)	Mean (G1)	SD (G1)	N (Group 2)	Mean (G2)	SD (G2)	t-value	Significant. Level
Government vs Deficit	168	165.00	14.05	175	179.00	16.60	5.87	0.01
Government vs Private	168	165.33	14.05	100	166.00	15.44	0.28	Not significant
Private vs Deficit	100	166.00	15.44	175	179.00	16.60	5.97	0.01

a) In the Government vs Deficit comparison, the mean score of deficit school students (M = 179.00) was significantly higher than that of government school students (M = 165.00). The t-value of 5.87 was significant at the 0.01 level, hence the null hypothesis is rejected.

b) In the Government vs Private comparison, the difference in mean scores was minimal (165.33 vs 166.00), and the t-value of 0.28 was not significant. Therefore, the null hypothesis is accepted.

c) In the Private vs Deficit comparison, deficit school students again had a higher mean score (179.00 vs 166.00), and the t-value of 5.97 was significant at the 0.01 level. Thus, the null hypothesis is rejected.

These results indicate that students from deficit schools exhibit significantly more positive environmental attitudes than those in government and private schools, while no significant difference was found between government and private school students.

7.4 Environmental Attitude of Class IX and Class X Secondary School Students in Aizawl City.

Table 5: Comparison Of Environmental Attitudes of Class IX and Class X Secondary School Students in Aizawl City.

Class	No. of Students (N)	Mean	Standard Deviation	t-value	Significant Level
IX	212	166.15	14.98	2.34	0.05
X	231	169.55	15.59		

As shown in Table 5, Class X students (M = 169.55) scored higher than Class IX students (M = 166.15). The t-value of 2.34 is significant at the 0.05 level, indicating that the difference is statistically significant. Therefore, the null hypothesis is rejected.

8. FINDINGS

1. The environmental attitude of secondary school students in Aizawl City was generally found to be moderately positive, with the majority of students falling within the average and above-average categories.
2. Female students were found to possess more favourable environmental attitudes compared to male students.
3. Students from deficit schools demonstrated more positive environmental attitudes than those from government and private schools, whereas no significant difference was observed between government and private school students.
4. Students of Class X exhibited significantly more favourable environmental attitudes than students of Class IX.

9. CONCLUSION

The study concluded that secondary school students in Aizawl City generally possess moderately positive environmental attitudes, reflecting a basic level of awareness and concern for environmental issues. Notable differences were observed across gender, school management type, and class level, with female students, students from deficit schools, and those in Class X exhibiting more favourable attitudes. These variations suggest that environmental attitudes are influenced by both individual and institutional factors. The findings highlight the need for context-specific and inclusive environmental education strategies that address such differences and foster stronger ecological values among students, thereby contributing to the development of environmentally responsible future citizens.

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