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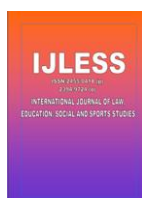
## A Study on the Ecological Behaviour of High School Students towards Sustainable Practices

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### ABSTRACT

Environmental behaviour is one of the main ways to promote sustainable practices, particularly school going learners who are the future curators of the world. High school students are at a decisive stage where they can be trained and made conscious of positive ecological attitudes and behaviours. Likewise sustainable practices are those actions as well as behaviours that meet the needs of the present without compromising the ability of future age groups to meet their own and these practices focus on environmental, social and economic sustainability in the decrease of resource consumption, minimization of waste and balance ecologically. This research looks at the ecological behaviour of high school students in Bengaluru city with special prominence on their sustainable practice. This examination utilizes Environmental Behaviour Scale standardized and developed by Dr. Haseen Taj (2000), which uses a 3-point Likert scale scoring from 1 to 3 to score the students' environmental behaviour. A sample of 105 students has been classified with the help of two broad heads; gender both boys and girls and type of schools that includes governmental, private aided as well as unaided schools present at Bengaluru City and their impacts in developing ecological behaviour have been the objective of examination here. The outputs from the study offer helpful knowledge into the behavioural patterns of high school students regarding environmental sustainability, which are pointers of areas of involvement and importance on education to bring about sustainable practice among young children. These results for integrating environmental education into schools are an attempt to promote ecological responsibility.

**Keywords:** Ecological behaviour, environment, high school, students, sustainable practices

## 1. INTRODUCTION

In the face of mounting environmental challenges, it is now a critical need to foster ecological consciousness and sustainable practices among young people, especially high school students. These students are at a formative stage of development and represent the future custodians of the planet. Their attitudes and behaviors toward environmental sustainability can significantly influence the collective efforts to address issues like resource depletion, climate change and ecological imbalance. Schools are the primary educational institutions that are crucial in molding the ecological behaviors of students.

Sustainable practices are activities that help fulfill the needs of the present without damaging the ability of future generations to meet their needs. They are based on three pillars of sustainability-environmental, social and economic sustainability-aiming at resource consumption reduction, waste minimization and balanced ecological environments. Therefore, high school students, as potential change agents, must be equipped with knowledge, skills and attitudes promoting responsible consumption, waste reduction and environmental stewardship.

This study aims to assess the ecological behaviors of high school students in Bengaluru city, specifically examining their attitudes towards sustainable practices. In this study, a standardized Environmental Behaviour Scale developed by Dr. Haseen Taj in 2000 is used to investigate how students' ecological behaviors differ based on gender and the type of school attended: government, private aided or private unaided. This research will find valuable insights in the current status of ecological behavior among high school students and provide effective approaches to integrate environmental education into the school curriculum.

## 2. LITERATURE REVIEW

Over the past decades, researchers have discussed environmental attitudes and behaviors of secondary school students both in India and worldwide and found considerable variations between and within different nations concerning student approaches to sustainability.

Sowmya and Kumar (2023) conducted a study on environmental attitudes among secondary school students in Mysore District, Karnataka. Their analysis revealed that there was no significant difference between the attitudes of boys and girls towards the environment, suggesting that both genders had similar environmental perceptions and concerns.

Manjunatha (2022) looked into the environmental behavior of the adolescent students of Bengaluru focusing on the gender and type of schools. The results showed a significant difference in the environmental behavior between boys and girls, where girls performed more eco-friendly practices compared to boys. Moreover, the study has shown an important difference in the environmental behavior of students belonging to different types of schools.

Ntanos et al. (2018) studied the environmental behavior of secondary education students in Central Greece. This study used a sample of 270 students and found that most students showed a positive attitude towards the environment, but there was a need for stronger environmental education. The study also emphasized the importance of external factors, such as family and community, in influencing students' environmental behaviors.

Behera and Samal (2015) conducted a study on pro-environmental behavior among the secondary school students of West Bengal. According to their findings, there was no significant difference in pro-environmental behavior across genders, but there was a significant difference across geographical locations and topographical zones.

Kumari (2014) compared the environmental awareness of students from government and private secondary schools. The findings revealed a significant difference between the two groups, in

that the students of government schools demonstrated higher awareness across all the dimensions of environmental education.

**Research Gap and Overview of Studies:** Although there is a sufficient amount of research done on students' environmental behavior and attitudes, there are several gaps this study is looking to cover. First, though some studies looked into gender differences in relation to environmental attitudes (Sowmya & Kumar, 2023; Manjunatha, 2022), the actual behavioral practices pertaining to sustainability have not been looked into comprehensively. This study will be based on measurable behaviors in addition to attitudes such as waste management, energy conservation and sustainable consumption of high school students. While some studies have analyzed the differences in school type, for instance, government versus private, for students' environmental awareness have been conducted (Kumari, 2014; Manjunatha, 2022), there is a gap as no study has compared governmental, private aided and private unaided school types. This study will attempt to fill this gap with the analysis of how these school types influence students' ecological behavior, which can enlighten the institutional factors shaping sustainability practice. Third, it has been noted in some studies that geographical and socio-economic factors influence students' environmental behaviors (Behera & Samal, 2015). However, this is still an underexplored area, especially in the context of Bengaluru, which is unique in terms of its urban setting and socio-cultural dynamics. This study will contribute to understanding how such factors may affect students' environmental behaviors in an urban setting. The study will therefore contribute to the understanding of what impacts the environmental behavior of the students by addressing these gaps in a more nuanced way. It will, in turn, also be beneficial in formulating effective educational strategies to promote sustainability at schools.

### **3. SIGNIFICANCE OF THE STUDY**

The significance of this study lies in its potential to influence environmental education policies and practices in schools. Understanding the ecological behaviors of high school students in Bengaluru can then help educators, policymakers and environmental advocates develop targeted approaches to enhance sustainability awareness and action among young people. The inclusion of students in sustainable activities is important for building a generation which is not only aware but also actively participates in minimizing environmental issues. Furthermore, by considering the effect of gender and type of school on students' environmental behavior, this study can help understand how students' attitudes toward sustainability vary under different social and educational contexts. This can further help in tailoring education interventions and promoting more inclusive and effective environmental education. Lastly, the conclusions drawn can be helpful in filling up gaps within the current frameworks of environmental education and prompting schools to undertake a holistic approach toward the teaching of sustainability, which would in turn help the students deal with tomorrow's challenges more effectively.

### **4. STATEMENT OF THE PROBLEM**

The purpose of this investigation is to scrutinize the ecological behaviour of high school students towards sustainable practices with view to gender and type of school. The topic identified for the present investigation is: "A Study on the Ecological Behaviour of High School Students towards Sustainable Practices."

### **5. OBJECTIVES OF THE STUDY**

1. To find out the significant differences in the Ecological Behaviour of high school students with view to gender.
2. To find out the significant differences in the Ecological Behaviour of high school students with view to type of school.

## 6. HYPOTHESES OF THE STUDY

The following hypotheses guided the study:

1. There is no significant difference in the Ecological Behaviour of high school boys and girls.
2. There is no significant difference in the Ecological Behaviour of high school students studying in government and private aided schools.
3. There is no significant difference in the Ecological Behaviour of high school students studying in private aided and private unaided schools.
4. There is no significant difference in the Ecological Behaviour of high school students studying in government and private unaided schools.

## 7. METHODOLOGY

The objective of this research is to investigate the variations in the Ecological Behaviour of high school students at Bengaluru City, Karnataka in relation to gender and type of school. The present research was carried out with descriptive survey method and quantitative approach as the substantial method of the study. In a quantitative method, the researcher collect, analyze and interpret varied kinds of numerical data obtained from the subjects. A total sample of 105 high school students from the city Bengaluru was drawn through a stratified random sampling method. Data were collected on Environmental Behaviour Scale standardized and developed by Dr. Haseen Taj (2000) with a personal proforma. Data collected was analyzed on the independent 't' test at 0.05 and 0.01 confidence level, fixing the level of significance.

## 8. ANALYSIS AND INTERPRETATION OF DATA

**Table-1:** Independent 't' test results related to Ecological Behaviour of high school students with regard to gender.

Group	No.	Mean	Std. Deviation	't' Value	Sig. level
Boys	52	150.440	20.726	2.60	*
Girls	53	160.700	19.586		

\*Significant at 0.05 level (N=105; df=103, 0.05=1.98)

The above table-1 is showing the independent 't' test results related to Ecological Behaviour of high school students due to variations in gender. From the independent 't' test it was shown that, the obtained 't' value (t=2.60) related to Ecological Behaviour of high school boys and girls is higher than the tabulated value (1.98) at 0.05 level of confidence. Hence, the proposed hypothesis is negated and in lieu of that, an alternative hypothesis has been developed that is 'there is a significant difference in the Ecological Behaviour of high school boys and girls'. The mean scores of girls regarding ecological behaviour (M=160.700) are higher than the mean scores of boys (M=150.440). Thus, it can be inferred that the ecological behaviour of high school girls is more when compared with boys. The same has been graphically presented in Fig.1.

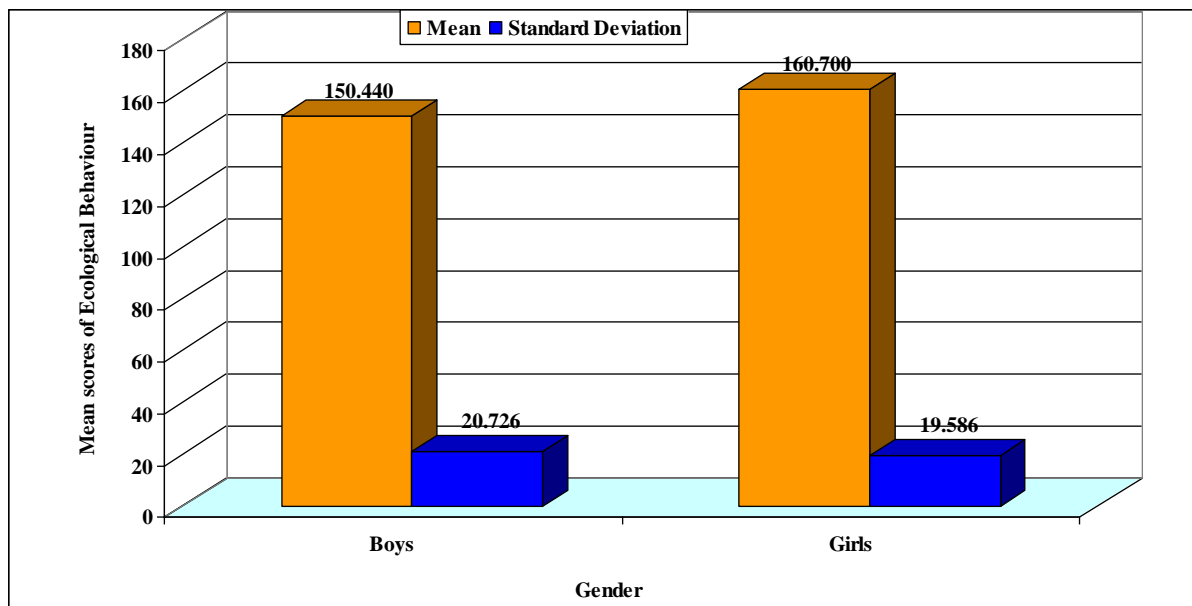


Fig.1: Comparison of mean Ecological Behaviour scores of school boys and girls.

Table-2: Independent 't' test results related to Ecological Behaviour of high school students with regard to type of school.

Type of School	No.	Mean	Std. Deviation	't' Value	Sig. level
Government	35	144.710	11.646	2.71	**
Private Aided	35	155.110	19.194		
Private Aided	35	155.110	19.194	2.32	*
Private Unaided	35	167.030	23.485		
Government	35	144.710	11.646	5.04	**
Private Unaided	35	167.030	23.485		

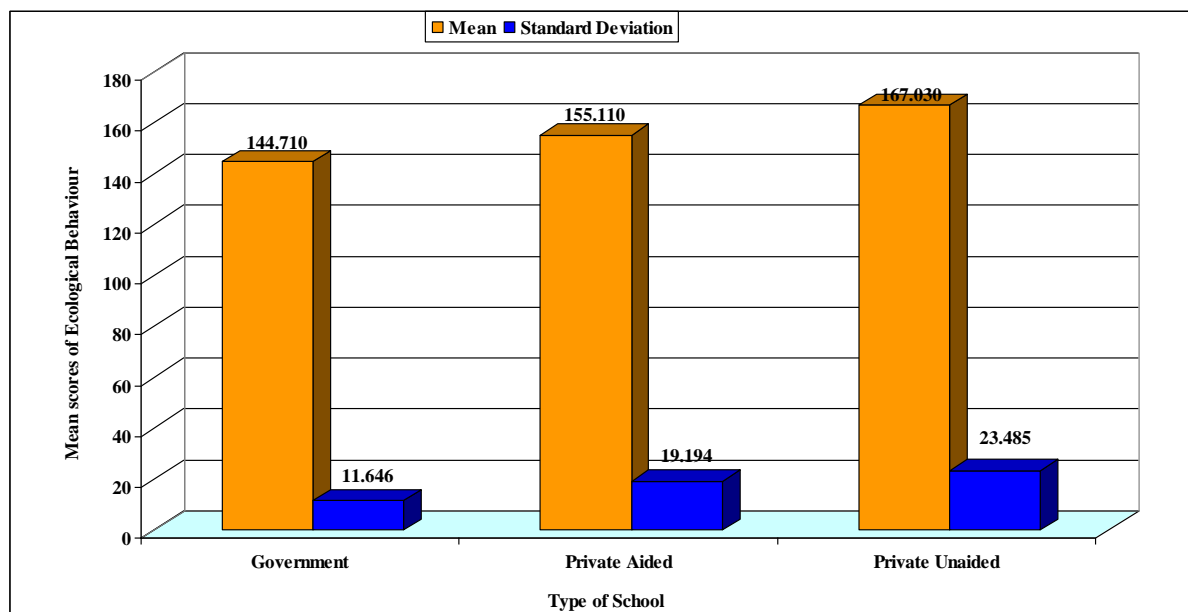
\*Significant at 0.05 level; \*\*Significant at 0.01 level (N=70; df=68, 0.05=2.00; 0.01=2.65)

Table 2 reports the outcome of an independent 't' test on the ecological behavior of high school students according to the type of school they attend. The results are as follows:

- The obtained 't' value (t=2.71) for the ecological behaviour of students in government and private aided schools is higher than the tabulated value (2.65) at the 0.01 confidence level. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted, which states that there is a significant difference in the ecological behaviour of students in government and private aided schools.
- The obtained 't' value for students of private aided and private unaided schools is found to be higher than the tabulated value at the 0.05 confidence level (t=2.32>2.00). Thus, the null hypothesis is rejected and the alternative hypothesis is accepted with the result indicating a difference in the ecological behavior of the students in private aided and private unaided schools.

- The value of 't' that is obtained ( $t=5.04$ ) for the ecological behavior of students in government and private unaided schools is higher than the tabulated value (2.65) at a 0.01 level of confidence. Hence, the null hypothesis is rejected and the alternative hypothesis is accepted, indicating the existence of a significant difference in the ecological behavior of students between government and private unaided schools.

In terms of mean scores, private unaided students ( $M=167.030$ ) have higher ecological behavior scores than both private aided students ( $M=155.110$ ) and government school students ( $M=144.710$ ). This indicates that private unaided school students exhibit more favorable ecological behavior compared to their peers in private aided and government schools, as indicated in Figure 2.



**Fig.2:** Comparison of mean ecological behaviour scores of government, private aided and private unaided high school students.

## 9. RESULTS

1. There was a significant difference in the Ecological Behaviour of high school boys and girls.
2. There was a significant difference in the Ecological Behaviour of high school students studying in government and private aided schools.
3. There was a significant difference in the Ecological Behaviour of high school students studying in private aided and private unaided schools.
4. There was a significant difference in the Ecological Behaviour of high school students studying in government and private unaided schools.

## 10. DISCUSSION OF RESULTS

From the study, differences were realized in the ecological behavior of the high school students between the gender and type of school. Girls were seen to have more eco-friendly behaviors than boys, which concurred with previous findings made by Manjunatha (2022) where he indicated that girls are more concerned with environmental issues. This is possibly due to gender socialization where girls are encouraged to nurture and maintain sustainable practices.

The study also found a high difference in ecological behaviors among students of government, private aided and private unaided schools. Students from the government school portrayed more

responsible ecological behaviors than the others, possibly due to an emphasis on social responsibility in such institutions, as noted by Kumari (2014) and Manjunatha (2022). The students from private aided schools portrayed more sustainable behaviors compared to the students in private unaided schools, probably because of the difference in resources and the structure of environmental education programs.

## 11. CONCLUSION

This study concludes that both gender and school type significantly influence the ecological behaviors of high school students. Girls and students in government or private aided schools tend to engage more in sustainable practices. These findings suggest that gender and institutional factors should be considered when designing environmental education programmes to promote sustainability across all student groups.

## 12. EDUCATIONAL IMPLICATIONS

The findings suggest that the needed approach to environmental education should be directed to consider gender differences and types of schools. The school needs to actively involve boys and girls into sustainability activities equally. Secondly, the government as well as private unaided schools may also need structured programmes like those implemented in the private aided schools. A generalistic, hands-on approach with involvement from families as well as communities would have supported the consolidation of practices by reinforcing ecological responsibility outside of school life.

## REFERENCES

- [1]. Beheram, Jagabandhu & Samal, Rebati Mani (2015), Pro-Environmental Behaviour of Secondary School Students: A Topographical Analysis, *International Journal of Science and Research (IJSR)*, 4(5), 698-703.
- [2]. Kaul, L. (2010), *Methodology of Education Research*, New Delhi: Vikas Publication House Pvt., Ltd.
- [3]. Kumari, Sudha (2014), Environmental Awareness of Government and Private Secondary School, 70-82.
- [4]. Mangal S.K. (2016), *Essentials of Educational Psychology*, Delhi: PHIL Learning Private Limited.
- [5]. Manjunatha B.K. (Dr.) (2022), A Study on Environmental Behaviour of Adolescent Students, *International Journal Research Trends And Innovation*, 2(12), 928-942.
- [6]. Ntanos, Stamatios; Grigorios L. Kyriakopoylos; Garyfalios Arabatzis; Vasilios Palios & Miltiadis Chalikias (2018), Environmental Behaviour of Secondary Education Students: A Case Study at Central Greece, *Sustainability*, 10(5), 1663. Retrieved from <https://doi.org/10.3390/su10051663>.
- [7]. Sowmya C. & Kumar C.R. Sharath (2023), A Study on Environmental Attitude among Secondary School Students of Mysore District, *The International Journal of Indian Psychology*, 11(4), 1861-1868.