

## **A STUDY OF THE AWARENESS ABOUT PLASTIC POLLUTION AMONG STUDENT-TEACHERS OF THE B.Ed. COLLEGES IN BANGALORE CITY**

**Dr. A. Srinivasacharlu**

*Assistant Professor, New Horizon College of Education, Bangalore, Karnataka, India*

### **Abstract**

*Bangalore is the fastest-growing Indian metropolis behind New Delhi and Mumbai. Owing to better standard of living, infrastructure and being the modern face of developed Indian economy, the city is home to a large number of people who have migrated from other states to it. The city is presently home to nearly 140 million people. Due to ever increasing population, the city finds it difficult to ensure proper solid waste management. Garbage problem in Bangalore is increasing day by day and Bangalore is a victim of plastic pollution. The city is plagued with plastic menace which comprises about 20% of the total municipal solid waste of 4,000 tons a day. There has yet to be satisfactory management and control of plastic pollution in Bangalore city in spite of Karnataka Government's ban on plastic bags, covers and sheets in 2016. This is seriously affecting environment and health among people in Bangalore. Thus there is need to develop awareness about plastic pollution and its management among citizens of Bangalore city. B.Ed. student-teachers are the future teachers who have the prime responsibility to develop awareness about plastic pollution and its management among the secondary school students who are future citizens of Bangalore. The present study was conducted with the main purpose of finding out the level of awareness about plastic pollution among B.Ed. student-teachers.*

**Keywords:** *Plastic, Plastic Pollution, Awareness about Plastic Pollution, Student-teacher of B.Ed. Colleges and Bangalore City.*

### **Introduction**

Plastic is material consisting of any of a wide range of synthetic or semi-synthetic organic compounds that are malleable and so can be molded into solid objects. They are most commonly derived from petrochemicals and are widely used in daily life due to their low cost, ease of manufacture, versatility, and invulnerability to water. They have become a critical material in the modern economy thereby leading to plastic pollution. Plastic pollution is the accumulation of plastic products in the environment. Plastic is a non biodegradable substance. It doesn't get disposed off in the soil or water and its effect is worse when burnt. It is thus a challenge to dispose it off. It remains in the environment for hundreds of years and causes air, water and land pollution. It is hazardous for the humans, animals as well as the plants. Several animals, birds and marine creatures die due to plastic pollution each year. Thus plastic pollution has become a cause of global concern. It is time we must take this problem seriously and address it. India hosted world environment day on June 5th in 2018 on the theme "Beat plastic pollution". It is very pathetic to notice that younger generation of India is much behind in the concern for environmental balance for the hope of sincere action rests of them.

### Need & Significance of the Study

Bangalore is the fastest-growing Indian metropolis behind New Delhi and Mumbai. Owing to better standard of living, infrastructure and being the modern face of developed Indian economy, the city is home to a large number of people who have migrated from other states to it. The city is presently home to nearly 140 million people. Due to ever increasing population, the city finds it difficult to ensure proper solid waste management. Garbage problem in Bangalore is increasing day by day and Bangalore is a victim of plastic pollution. The silicon city of India-Bangalore is plagued with plastic menace which comprises about 20% of the total municipal solid waste of 4,000 tons a day. There has yet to be satisfactory management and control of plastic pollution in Bangalore city in spite of Karnataka Government's ban on plastic bags, covers and sheets in 2016. This is seriously affecting environment and health among people in Bangalore. Thus there is need to develop awareness about plastic pollution and its management among citizens of Bangalore city. B.Ed. student-teachers are the future teachers who have the prime responsibility to develop awareness about plastic pollution and its management among the secondary school students who are future citizens of Bangalore. This is possible only when they have the requisite level of awareness about plastic pollution. Hence the present study attempts to study the awareness about plastic pollution among B.Ed. student teachers.

### Objectives

1. To construct and validate the plastic pollution awareness test (PPAT).
2. To study the level of Awareness about Plastic Pollution among B.Ed. student-teachers.
3. To study the awareness about plastic pollution among B.Ed. student-teachers when they classified according to gender.
4. To study the awareness about plastic pollution among B.Ed. student -Teachers when they are Classified according to their locality.
5. To study the awareness about plastic pollution among B.Ed. student -teachers when they are classified according to subject.

### Variables

1. **Dependent Variable** : Awareness about Plastic Pollution (APP)
2. **Background Variables** : Gender, Subject and Locality

### Hypotheses

**H<sub>0</sub>1:** There is no significant difference between male and female B.Ed. student-teachers awareness about plastic pollution.

**H<sub>0</sub>2:** There is no significant difference between Arts and Science B.Ed. student-teachers towards awareness about plastic pollution.

**H<sub>0</sub>3:** There is no significant difference between urban and rural B.Ed. student-teachers towards awareness about plastic pollution.

## Method of the Study

Survey method was used for the present study.

## Tools

For the present study, the researcher had constructed PPAT (Plastic Pollution Awareness Test) to study the level of plastic pollution awareness among B.Ed. student-teachers. The tool was validated by experts. The final tool has twenty multiple choice item questions.

## Sampling Procedure

For the present study multistage purposive sampling technique was used. Eighty six second year B.Ed. student-teachers studying in two of the B.Ed. colleges in Bangalore city were taken as sample for the present study. They were arranged into Male and Female, Rural and Urban, Science and Arts B.Ed. students.

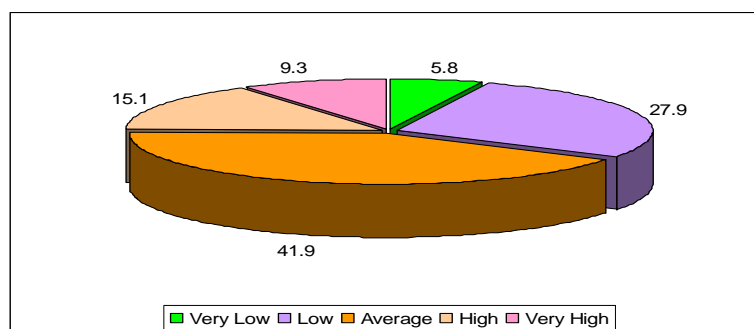
**Table 1: Classification of B.Ed. Student-Teachers According to Gender, Locality and Discipline**

B.Ed. Programme	Male	Female	Arts	Science	Rural	Urban
Second year Student teachers	32	54	42	44	26	60
<b>Total</b>	Eighty Six (86)					

## Statistical Analysis and Interpretation of Data

**Table 2: Percentage Analysis of AAP among Student-Teachers from B.Ed. Colleges**

Level of Plastic Pollution Awareness						
	Very Low	Low	Average	High	Very High	Total
<b>Frequency</b>	5	24	36	13	8	86
<b>Percentage</b>	5.8	27.9	41.9	15.1	9.3	100%



**Graph 1: Graphical representation of the level of awareness about plastic pollution among B.Ed. student-teachers**

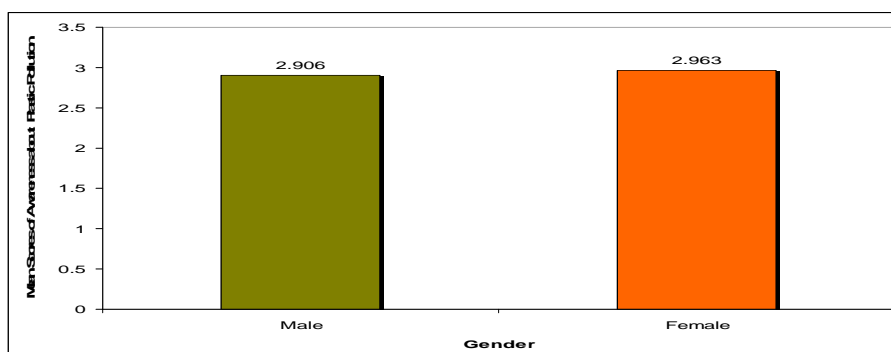
From the above table and graphical representation it can be inferred that there is a variation in the level of awareness about plastic pollution among B.Ed. student-teachers.

**H<sub>0</sub>1:** There is no significant difference between male and female B.Ed. student-teachers awareness about plastic pollution.

**Table 3: Comparison of Scores of Male and Female B.Ed. student-teachers w.r.to AAP**

Gender	N	Mean	S.D.	't' Value	'P' Value at 0.05 Levels of Significance (LoS)
Male	32	2.906	1.027	0.28	0.805
Female	54	2.963	1.027		*NS

\*NS – Not Significant [df=84, t table value at \*0.05 level =1.98; \*\*0.01 level = 2.64]



**Graph 2: Mean scores of male and female B.Ed. student-teachers w.r.to AAP**

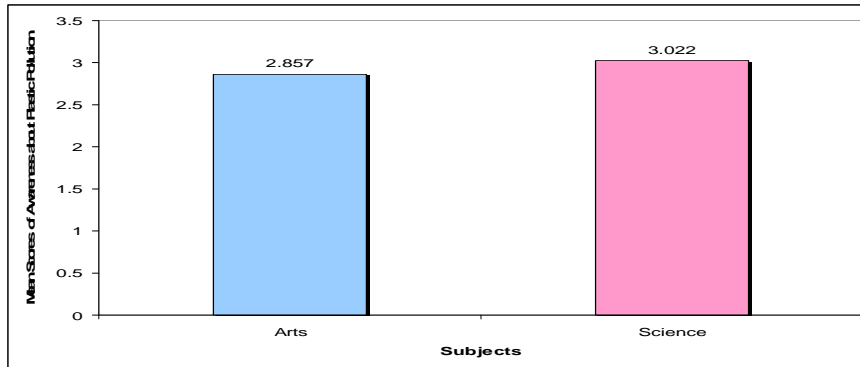
The obtained 't' value 0.28 is less than the tabled 't' value 1.98 and 'P' value 0.805 is more than tabled 'P' value 0.05 level of significance with degree of freedom 84. So the null hypothesis is accepted. This means that both male and female student teachers of B.Ed. colleges have same level of awareness about plastic pollution.

**H<sub>0</sub>2:** There is no significant difference between Arts and Science B.Ed. student-teachers towards awareness about plastic pollution.

**Table 4: Comparison of Scores of Arts and Science B.Ed. Student-Teachers w.r.to AAP**

Discipline	N	Mean	S.D.	't' Value	'P' Value at 0.05 Levels of Significance (LoS)
Arts	42	2.857	1.049	0.75	0.456
Science	44	3.022	0.999		*NS

\*NS – Not Significant [df=84, t table value at \*0.05 level =1.98; \*\*0.01 level = 2.64]



**Graph 3: Mean scores of Arts and Science B.Ed. student-teachers w.r.to AAP**

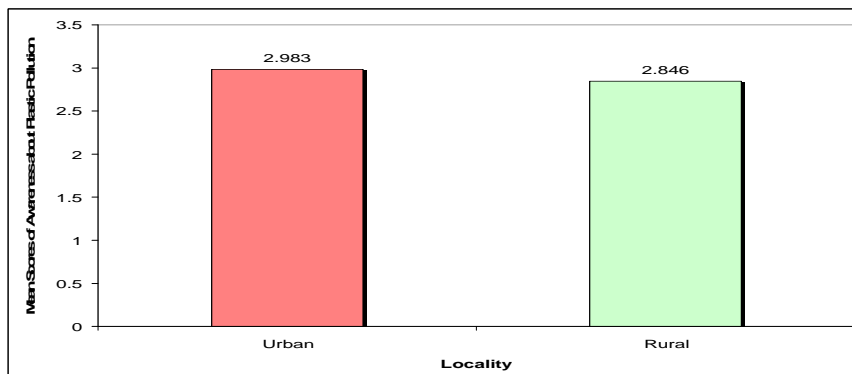
The obtained ‘t’ value 0.75 is less than the tabled ‘t’ value 1.98 and ‘P’ value 0.456 is more than tabled ‘P’ value 0.05 level of significance with degree of freedom 84. So the null hypothesis is accepted. This means that both Arts and Science student teachers of B.Ed. colleges have same level of awareness about plastic pollution.

**H<sub>03</sub>:** There is no significant difference between urban and rural B.Ed. student-teachers towards awareness about plastic pollution.

**Table 5 Comparison of Scores of Urban and Rural B.Ed. Student-Teachers w.r.to AAP**

Locality	N	Mean	S.D.	‘t’ Value	‘P’ Value at 0.05 Levels of Significance (LoS)
Rural	60	2.983	1.033	0.57	0.568
Urban	26	2.846	1.007		*NS

\*NS – Not Significant [df=84, t table value at \*0.05 level =1.98; \*\*0.01 level = 2.64]



**Graph 4: Mean scores of urban and rural B.Ed. student-teachers w.r.to AAP**

The obtained ‘t’ value 0.57 is less than the tabled ‘t’ value 1.98 and ‘P’ value 0.568 is more than tabled ‘P’ value 0.05 level of significance with degree of freedom 84. So the null hypothesis is accepted. This means that both Urban and Rural student teachers of B.Ed. colleges have same level of awareness about plastic pollution.

**Major Findings**

1. Both female and male student teachers of B.Ed. colleges have same level of awareness about plastic pollution.
2. Both arts and science student teachers of B.Ed. colleges have same level of awareness about plastic pollution.
3. Both urban and rural student teachers of B.Ed. colleges have same level of awareness about plastic pollution.

**Educational Implications**

1. B.Ed. student-teachers as future secondary school teachers need to play a decisive role in developing awareness and management of plastic pollution among secondary school students.
2. In the B.Ed. curriculum, there can be special emphasis on covering the topic on plastic pollution as a part of Environmental Education.
3. B.Ed. student-teachers should be encouraged to study and report about the level of plastic
4. pollution awareness among school students during their school internship. This can give them valuable insights about the kind of role they are expected to play in future in developing and plastic pollution awareness among secondary school students.
5. The Center for Environmental Education (CEE), Bangalore can come up with workshop on methods and techniques to teach about plastic pollution for B.Ed. student-teachers and teacher educators.
6. The Ministry of Environment, Ministry of Human Resources Development of both central and state governments and Centre for Science and Environment (CEE), New Delhi can develop the learning materials like pamphlets handbooks, posters, charts and documentaries that help to create awareness on plastic menace and promote plastic control practices among B.Ed. student-teachers.
7. Both print and electronic media can take up initiatives to promote awareness on plastic management among B.Ed. student-teachers through wide news coverage and provision for interaction.

**Suggestions for Further Study**

1. The present study can be extended to other sample like B.Ed. teacher educators, D.Ed. student-teachers, primary and secondary school teachers, primary and secondary school students to the level of their awareness about plastic pollution and its controlling practices.
2. A more in-depth awareness tool on plastic pollution, attitude towards controlling plastic pollution and practices to manage and control plastic pollution can be constructed and standardized for different samples.
3. The present study can be extended to study the influence of other variables like family, age, marital status, socio-economic status, distance, academic qualification etc. on the awareness about plastic pollution among B.Ed. student-teachers.

4. A comparative study can be under taken to study the awareness about plastic pollution, attitude towards controlling plastic pollution and practices to manage and control plastic pollution among first and second year student-teachers B.Ed. colleges.

### Conclusion

It's important to note that initiatives by governments, NGOs etc. alone is not suffice to control the plastic menace in Bangalore city. Family and communities also hold the key to control plastic pollution in Bangalore. B.Ed. student-teachers being future teachers should play pivotal role in developing awareness, attitude and practices to control w.r.to plastic pollution among secondary school students who are the future citizens of Bangalore city which has many pressing issues beside plastic pollution like mammoth increase in population, open defecation, lack of effective waste management measures, rapid concretization, massive increase in vehicles, water scarcity etc.

### References

1. Abdullah Ambusaidi, Edward Boyes, Martin Stanis Street and Neil Taylor (2011). A Study on Omani Pre-service Science Teachers views on Global Warming, Beliefs about Actions and Willingness to Act, *International Journal of Environmental and Science Education*, vol. 7, no. 2, pp. 233-251.
2. Pallavi S. and Lalitha Maharana (2014). A Study on People's Motive towards Climate Change and Environmental Conservation in Bangalore, Bangalore, Unpublished Research.
3. Parvathamma (2014). An Analytical Study on Problems and Policies of Solid Waste Management in India - Special Reference to Bangalore City, *IOSR Journal of Environmental Science, Toxicology and Food Technology*, vol. 8, no. 10, pp. 6-15.
4. Sandhya Gihar, Manoj Kumar Saxena and Kukreti, B.R. (2006). Developing Environment Friendly Behaviour among Students: Role of Video Intervention. *University News*. Vol. 44, no. 12, pp. 20-26.
5. Srinivasacharlu A. and M.S. Talawar (2016). A Study on the Effectiveness of Climate Change Instructional Package (CCIP) on Paper Conservation Practices among B.Ed. Student-Teachers in Bangalore in City, *INIGO Edu Research Journal*, vol . 1, no. 5, pp. 1-7.
6. Tse KaHo Alan (2013). A Study on Students perceptions on Climate Change and Engagement in Low-Carbon Behaviours: Implications for Climate Change Education in Hong Kong, University of Hong Kong, Hong Kong.
7. UNEP (2010). Waste and Climate Change–Global Trends and Strategy Framework, Osaka/Shiga, Report.