

# **STUDY OF E-WASTE MANAGEMENT STRATEGIES IN BANGALORE, THE IT HUB OF INDIA**

**Dr. Velmurugan R, Dr. Muruganatham A, Dr. Jyothi Manoj**

Department of Computer Science-PG, Kristu Jayanti College (Autonomous), Bengaluru-560077

## **ABSTRACT:**

E-Waste management is a growing challenge worldwide. The waste generated from electronic and electrical appliances, like gadgets, computers accessories, type-writers, mobile phones and chargers, headphones, remotes, batteries, compact discs, LCD/Plasma TVs, air conditioners, refrigerators, and fluorescent and other mercury-containing lamps etc. consist of e-waste

(1). This waste consists of Iron and steel (50%), plastics (21%), non-ferrous metals like copper aluminium and gold (13%), and other components (16%)

(2). The rapid increase of e-waste and the unawareness of society about the hazards of e-waste management poses serious threats. The careless disposal of e-waste results in contamination of air, soil and water bodies

(3). It becomes more severe in a nation like India where waste management systems are unorganized. Creating awareness among the common man and IT professionals and making an attempt to improve the e-waste management system is of utmost importance. Hence the present study intends to find the current status of awareness about e-waste management among Bangaloreans.

**Statement of the problem:** Managing e-waste is a challenge, especially in a city like Bengaluru. Since we are in the IT hub, the e-waste generated in the city also is expected to be comparatively larger when compared to many other places. Hence analyzing the awareness among the Bangalore citizens regarding the hazards of the improper e-waste management system and methods of proper handling is of greater significance.

## **Objectives of the Study**

- i. Collecting data about present strategies of e-Waste Management from Industry Professionals.
- ii. Analyze the existing scenario of e-Waste Management in IT Industries, NGOs and Households by conducting a survey and collecting secondary data.
- iii. Setting up e-Waste Management solutions in collaboration with existing NGOs/ similar organizations.

The objective of the project is to assess the awareness of citizens in Bangalore city with a specific target on Educational Institutions, Industries and Households. The project also intends to create and implement an awareness program and to analyze the impact of the awareness program.

### **Hypothesis**

- i. Bangalore city lacks an integrated approach in e-waste handling
- ii. Common man is unaware of the proper disposal of e-waste materials
- iii. Lack of knowledge of the hazardous effects created by the e-waste components

### **Methodology**

- i. Type of the study: Sample survey to analyze the present scenario and also to find the impact of the awareness program.
- ii. Sample size & Sampling Methodology: Random sample of 100 households, 3 educational institutions and 3 IT Industries
- iii. Sources of Data: Survey data from selected Industries, Government Offices, NGOs and Households and secondary data from Karnataka state pollution control board
- iv. Instrument design and validation: Survey method using Questionnaire for data collection
- v. Exploratory data analysis will be carried out to get meaningful insights.

### **Major Findings**

The study is based on a random sample of 200 adults who are students and professionals. The study reveals the shocking state of unawareness of the citizens of Bangalore city about e-waste, health hazards of e-waste and availability of formal e-waste management systems. The awareness of the components used in electronic and electrical products is comparatively high among youngsters and also professionals in the field of IT and electronics. More than women, men have a better idea about this. The awareness of the health hazards and the environmental hazards are not associated with gender, age or profession. Irrespective of all these, there is a dearth of this knowledge. The response to the query on awareness of formal e-waste management system revealed that, irrespective of age and gender. A good majority of the respondents are unaware of it. The working-class people and students of the IT sector have a better awareness of the formal e-waste disposal systems.

This throws light on the need to educate people more on the constituents of e-waste and hazards because of its improper management.

### **Conclusion**

The study hints at the immediate requirement to increase the awareness about what is e-waste, the adverse effects, unscientific handling and disposing of e-waste and also the formal systems available for e-waste management. There is an urgent need to increase the facilities/ provisions of e-waste collection and disposal in a formal way.