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## WASTE ADMINISTRATION TOWARDS ELECTRONIC SCRAP ON THE FOCUS OF PERCEPTION AMONG SOPHOMORE IN CHENNAI

*DR. G. SANGEETHA*

Assistant Professor, Department of Commerce, College of Science and Humanities,  
SRM Institute of Science and Technology, Kattankulathur

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### Abstract

The Electronic scrap is the most endangered form of pollution, now this research paper is focus to know the understanding, cognizance, insight, and assertiveness of sophomore about existent, hazard and Electronic scrap administration which is the most prominent pollution of the current environment. This paper makes to try to identify recent Electronic scrap administration experienced by the middle schoolers. To frame out the insight of sophomore regarding Electronic Scrap administration survey method of research was done. A total no of 110 sophomore were selected, out of which 55 sophomore epitomize under the professional cluster and 55 students mobilized to the non-professional cluster from diverse colleges in Chennai. The collected data were analyzed using the Simple Random sampling technique. The data collection is processed through Electronic scrap Administration Awareness Questionnaire (ESAAQ). The data collection was designed to know the issues and situations respond towards Electronic scrap made by the sophomore. It make a clear picture regarding understanding of Electronic Scrap were same irrespective to the sophomore in professional and non-professional. At the same time, this study clearly pointed out that regarding perception of hazardous which is difference among the sophomore of professional cluster with their non-professional counterparts. Both groups of sophomore streams are not acquiring with proper awareness of Electronic scrap administration.

### Introduction

In recent times more technological developments has fetched luxury and simplicity to all human life style. The usage of electrical and electronic devices were couple like a life partner with current human life, which change the pattern of consumption in electronic devices, it make an alarming situation on Electronic Scrap. The form of Electrical and Electronic instruments resulted in a mammoth environmental challenge in the form of electronic Scrap or e-waste

across the global. The approach with respect to Waste Electrical and Electronic Equipment (WEEE) is accumulated, when the electronic products turn into outmoded. The Automated sensible material is highly needed in the current environment, which is more frequent in the up gradation as a result more form of toxic substances accumulated as junks in the environment. This study defines the necessity regarding of electronic scrap administration with proper disposal ways. Similarly, these have led to assorted hitches includes the problematic hazardous waste and other wastes caused after rechargeable goods. The harmful issues and other jumbles pose a great danger to the social condition and situation. Electronic scrap is the collective name for thrown out electronic devices that enter the waste brook from various sources. The electronic devices were include the items like PCs, telephones, notebook computers, TV set, mobile Phones, electronic toys and electrical appliances like refrigerators, air-conditioners etc. which have become superseded due to expansion in technology, modification in technique, elegance and grade, looming the end of its useful life period.

All the Electric and Electronic products which are used and spoiled such as computers, laptops, game devices, mobile phones, TV and video & audio players etc. it also have certain inclined by their unusual manipulators come in the sort of Electronic scrap. The electronic goods are classified under three major heads:

- White goods which are known as Household appliances.
- Brown goods were listed as TVs, camcorders, Cameras
- Grey Goods commonly describe as Computers, printers, fax machines, Scanners.

The Electronic Scrap administration is intended for recycle of workstation which entails the complicated expertise and process, it also seems to be extremely luxurious, besides necessitate of explicit skills and guidance regarding the functions. Electronic administration is processed with the recyclers which is currently too costly with technology. However the recycle and removal of unwanted substance make impact due to emissions while extracting valuable materials.

In spite of technological advancement the process of Electronic Scrap and its method of collection are not framed in country like India. The common and most followed practice towards electronic scrap in India is to liberate the obsolete electronic device and its exchange form towards purchasing a new item. The business sector is estimated to account for 78% of all installed computers in India (Toxics Link, 2003). According to a report of Confederation of Indian Industries, the total waste generated by obsolete or broken down electronic and electrical equipment in India has been estimated to be 1,46,000 tons per year (CII, 2006)[3]. Majority of the educational institutes or charitable institutions entertain used computers for reprocess. As per a statistical data almost 1.38 million computers become as out dated. Obsolete computers from the business sector are sold by auctions.

#### **CONSEQUENCE ON SURROUNDINGS AND HUMAN BEING POTENCY**

The way of disposal of Electronic scraps is a meticulous hitch face across the globe. Most of the electronic wastes which contaminate the soil and eventually pollute the water and other soil substances are the major problem on this

administration. The substance such as acids and sludge get hold of melting computer chips. The prominent example for booming of illegal electronic scrap reprocess is in Guoyu, Hong Kong, and this area now facing serious water deficiencies due to the impurity of water resources. Burning of Electronic scraps can release toxic hazes and fumes, which result in the pollution of air. The inappropriate monitor in the soil fills which basis conservation perils. The substance of mercury will filter from certain electronic devices, such as destroy of circuit breakers. The endangered form of burning Electronic scrap is the open-air sweltering of plastics which will recover copper and other metals.

The below Stall I reviews the constituents in Electronic scraps and its impact on certain health effects. When the electronic scrap are dismantled or destroyed with normal household rubbish, some toxics posture make a warning to both well-being and dynamic constituents of the ecosystem.

#### Stall I

Basis of Electronic scraps	Component	Impact on Fitness
Fuse in circuit boards, glass panels and gaskets in computer monitors	Lead (PB)	i. It effects a heavy destruction to central and peripheral nervous systems, blood systems and kidney damage. ii. Brain development of children gets affected.
Electronic device -Chip resistors and semiconductors	Cadmium (CD)	i. Irreversible Toxic substance effects on health. ii. Hoards in kidney and liver. iii. Neural damage. iv. Teratogenic.
Cabling and computer housing	Plastics including PVC	The Scorching produces dioxin. It effects i. Procreative and progressive problems; ii. Immune system damage; iii. Obstruct with regulatory hormones
Motherboard	Beryllium (Be)	i. Carcinogenic (lung cancer) ii. Breathing of fumes and dust. Causes chronic beryllium disease. iii. Skin diseases such as warts.

#### STATEMENT OF THE PROBLEM

In this present scenario the usage of electronic devices gets increased, it makes dump more electronic scrap as in the name of E-Waste. The present study has been commenced with a determination of **“Electronic scrap administration on the subject of responsiveness of sophomore.”**

#### OBJECTIVES OF RESEARCH

- To know the responsiveness of the surviving of Electronic scrap in sophomore of professional and non-professional groups in Chennai Colleges.
- To identify the perception of risk through Electronic scrap among the sophomore of professional and non-professional streams in Chennai Colleges.

- To find out the awareness of Electronic scrap administration in sophomore of professional and non-professional stream in Chennai colleges.

#### **HYPOTHESES OF RESEARCH:**

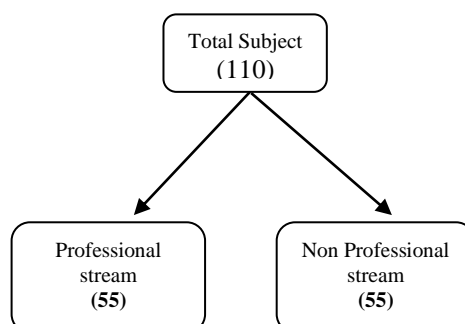
The below are the statement framed as hypotheses for the study:

- The awareness on the subject of surviving of Electronic scrap in sophomore of professional and non-professional stream has no significant difference in their view.
- Risk of Electronic scrap and its impact have same form of understanding among the sophomore of professional stream with their non-professional counterpart.
- Electronic scrap administration and its disposal methodology awareness is same among the sophomore of professional and non-professional streams.

#### **METHODOLOGY OF RESEARCH**

##### *DATA SELECTION OF SUBJECTS:*

In this study 110 data subjects were carefully chosen using Simple Random Sampling Technique from the different Colleges of University of Chennai. 55 data were subject to representing the professional (B.E, B.Tech.,) and 55 data were subject to representing the non-professional stream(B.A., B.Sc., B.com). The illustration given below has shown the selection of subjects in brief:



#### **NARRATION OF QUESTIONNAIRE:**

The questionnaire is containing 30 questions. Questionnaire was designed through the test-retest method. The validity of the test was accessed on the basis of the judgment of the experts.

#### **ADMINISTRATION OF THE QUESTIONNAIRE**

Each subject was communicated individually & informed about the purpose of the study. Necessary with regard to follow up of questionnaire was imported and questionnaire was distributed. Questionnaire was categorized into 3 parts. Description of questionnaire has been designed as under.

<b>Part A</b>	Questions on the subject of survival of Electronic scrap. Total no of questions 10.
<b>Part B</b>	Interrogations on the subject of danger of Electronic scrap. Total no of questions 10.

<b>Part C</b>	Enquiries on the subject of administration of Electronic scrap. Total no of questions 10.
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### COLLECTION OF DATA

On the basis of the manual, the responses were evaluated and data was collected.

### Statistical Tools

This research study makes analyse using SPSS package, the tools such as Mean, SD and t-tests were the statistical tools used to construe the acquired data.

### ANALYSIS AND INTERPRETATION OF DATA

#### Objective 1:

- The awareness on the subject of surviving of Electronic scrap in sophomore of professional and non-professional stream has no significant difference in their view.

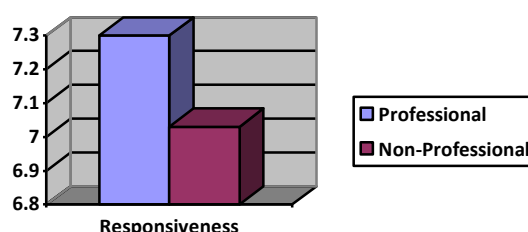
The null hypothesis was formulated and critical test ratio was calculated. t-value of the scores of the responsiveness on the subject of surviving of Electronic scrap in sophomore of professional and non-professional streams is 0.00724 which is less than the table values at .05 and .01 level of significance and null hypothesis is accepted. It shows that there is no significant difference in the responsiveness on the subject of surviving of Electronic scrap in sophomore of professional and non-professional streams.

#### Counter 1

Comparison of responsiveness on the subject of surviving of Electronic scrap in sophomore of professional and non-professional streams

Group	N	Mean	*Std.	Std Error mean	t-value
Professional	55	7.30	0.49089	0.06628	0.00724
Non-Professional	55	7.03	0.50971	0.06871	

Figure 1: Graphical Presentation of Responsiveness about Surviving of Electronic scrap between Professional & Non-Professional Groups



#### Objective 2:

- To identify the perception of risk through Electronic scrap among the sophomore of professional and non-professional streams in Chennai Colleges.

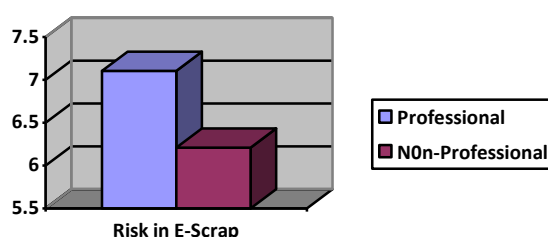
To accomplish the objective a null hypothesis was framed and critical test ratio was calculated. t-value of the scores of the awareness on the subject of

risk of Electronic scrap in college going sophomore of professional and non-professional streams is 1.5075 which is greater than the table value at .01 level of significance and null hypothesis is rejected. It shows that there is significant difference in the alertness on the subject of risk of Electronic scrap in sophomore of professional and non-professional streams.

Table 2  
Comparison of alertness on the subject of risk of Electronic scrap in college going sophomore of professional and non-professional streams

Group	N	Mean	*Std.	Std Error mean	t-value
Professional	55	7.10	0.454	.0357	1.5075
Non-Professional	55	6.21	0.858	.1347	

Figure 2: Graphical Presentation of Alertness about risk of Electronic scrap between Professional & Non-Professional Groups



### Objective3:

- To find out the awareness of Electronic scrap administration in sophomore of professional and non-professional stream in Chennai colleges.

The framed objective is analyzed using t-test through formulating the null hypothesis. T-value of the scores of the wakefulness regarding Electronic scrap administration among sophomore of professional and non-professional streams is 0.31653 which is less than the table value at .05 and .01 level of significance and null hypothesis is accepted. It shows that there is no significant difference in the awareness on the subject of administration of Electronic scrap in sophomore of professional and non-professional streams.

Table 3  
Comparison of awareness on the subject of administration of Electronic scrap in sophomore of professional and non-professional streams

Group	N	Mean	*Std.	Std Error mean	t-value
Professional	55	2.5633	0.769	0.1121	0.31653
Non-Professional	55	2.4166	0.550	0.0840	

Figure 3: Graphical Presentation of Wakefulness about Administration of Electronic scrap between Professional & Non-Professional Groups

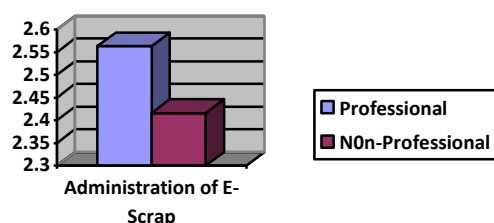
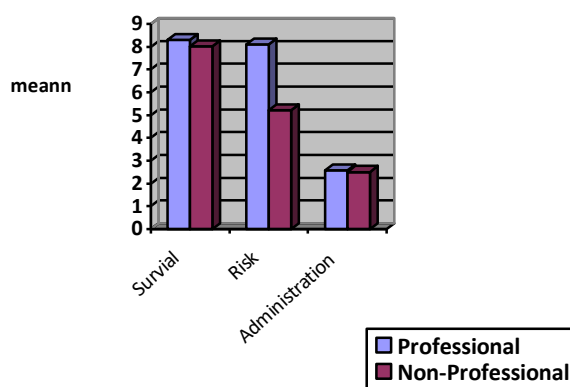


Figure 4: Comparison between the Sophomore Of Professional & Non-Professional Stream. On the Subject of Surviving, Threat & Administration of Electronic scrap



#### FINDINGS:

Overall findings of this study make a clear picture that the responsiveness of the sophomore irrespective of Professional or Non-Professional have no significant difference on the survival of Electronic Scrap. The known factor of endanger risk on the Electronic scrap have difference of opinion that professional sophomore have more knowledge about the risk than non-professional sophomore. Regarding the third objectives the Administration of Electronic scrap is not well aware among the both group of sophomore.

#### CONCLUSION AND SUGGESTIONS

The administration of Electronic scrap is highly required to manage the electronic devices waste; it happens due to the up-gradation and advancement of technology. By considering the endangered risk and the problem, it is imperative that certain administration options be adopted to handle risk of Electronic scraps. Following are some of the administration options suggested for the government, industries and the public. Governments should set up and maintain regulatory agencies; Governments should be responsible for providing good and strong system of laws, controls and administrative procedures for hazardous waste administration (Third World Network. 1991). Existing laws concerning Electronic scrap disposal be reviewed and revamped. A comprehensive law that provides Electronic scrap regulation and administration and proper disposal of hazardous wastes is required. Government should enforce certain laws with high description for the dismantling of electronic devices and methodology to disposal and reprocessing. Of course certain

responsibility and role of industries were prevailing to overcome the problem of Electronic scrap administration. Generators of wastes should take responsibility to determine the output characteristics of wastes and if hazardous, should provide administration options. Companies can and should adopt waste minimization techniques, which will make a significant reduction in the quantity of Electronic scrap generated and thereby lessening the impact on the environment. As a normal human being each and every person has certain responsibilities as the Citizen to know about the hazardous of electronic scrap. They can donate electronics for reuse extends the lives of valuable products and keeps them out of the waste administration system for a longer time. But care should be taken while donating such items i.e. the items should be in working condition.

Finally the study frames a clear picture on the responsiveness of the endangered risk and administration of Electronic scrap are extremely stumpy and imperative measures are mandatory to contemplate this subject. Be act as a responsible human being, everyone should performance a character in Electronic scrap administration as contributing electronics items for reprocess, which spread the range of the lives on valuable products and keep them out of the waste administration system for a long time.

While the world is moving towards the technological revolution, countries like India are facing an imminent risk of Electronic scrap. Developed countries dispose their wastes to India, China, Pakistan and other Asian countries.

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