

Development of Electronic Waste Management Framework at College of Design Art, Design and Technology

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Abstract : The worldwide use of information and communications technology (ICT) equipment and other electronic equipment is growing and consequently, there is a growing amount of equipment that becomes waste after its time in use. This growth is expected to accelerate since equipment lifetime decreases with time and growing consumption. As a result, e-waste is one of the fastest-growing waste streams globally. The United Nations University (UNU) calculates in its second Global E-waste Monitor 44.7 million metric tonnes (Mt) of e-waste were generated globally in 2016. The study population was 80 respondents, from which a sample of 69 respondents was selected using simple and purposive sampling techniques. This research was carried out to investigate the problem of e-waste and come up with a framework to improve e-waste management. The objective of the study was to develop a framework for improving e-waste management at the College of Engineering, Design, Art and Technology (CEDAT). This was achieved by breaking it down into specific objectives, and these included the establishment of the policy and other Regulatory frameworks being used in e-waste management at CEDAT, the determination of the effectiveness of the e-waste management practices at CEDAT, the establishment of the critical challenges constraining e-waste management at the College, development of a framework for e-waste management. The study reviewed the e-waste regulatory framework used at the college and then collected data which was used to come up with a framework. The study also established that weak policy and regulatory framework, lack of proper infrastructure, improper disposal of e-waste and a general lack of awareness of the e-waste and the magnitude of the problem are the critical challenges of e-waste management. In conclusion, the policy and regulatory framework should be revised, localized and strengthened to contextually address the problem. Awareness campaigns, the development of proper infrastructure and extensive research to establish the volumes and magnitude of the problems will come in handy. The study recommends a framework for the improvement of e-waste.

Keywords : e-waste, treatment, disposal, computers, model, management policy and guidelines

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