Development of MPO (Metal-Plastic-Others) Bin: An automated Waste Segregation System

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Abstract: With the ever-increasing amount of population each year, so does the amount of waste in our environment. Thus, innovations to address this concern in our schools should be prioritized. The study was conducted to develop an automated waste segregation system for the learners of SHS in San Nicholas III, Bacoor City. A descriptive evaluative design was employed in the study. The respondents were 352 learners and 61 teaching personnel. Data were gathered through an online survey using Google Forms. Results showed that utilizing the software evaluation tool adapted from the ISO/IEC 25010, the acceptability of the developed MPO bin in terms of functional suitability, performance efficiency, compatibility, usability, reliability, security, maintainability, and portability has been rated with a grand mean of 3.88, manifesting that the MPO is very acceptable from the selected respondents. This illustrates that the system might improve the school's waste management system for the learners of SHS in San Nicholas III, Bacoor City.

Keywords: arduino; waste; waste management; waste segregation; automated waste segregation system.