

ABSTRACT

*Bandung faces a serious challenge in managing plastic waste, particularly Low-Density Polyethylene (LDPE), which is widely used for shopping bags and food packaging. This study aims to design a wristwatch made from LDPE plastic waste using an upcycling method, as an eco-friendly merchandise product that supports the concept of a circular economy. The research also utilizes plastic waste from Saung Angklung Udjo, a well-known center for Sundanese cultural preservation, to be transformed into a value-added product that serves as a distinctive merchandise item promoting environmental sustainability. This research uses a qualitative approach, with data collection techniques including observation, interviews, and questionnaires directed at potential consumers. Data were analyzed descriptively to understand design needs in terms of aesthetics and functionality, as well as consumer preferences for eco-friendly products. This design research resulted in a wristwatch titled Kala, developed as an educational souvenir based on sustainability by utilizing laminated bamboo (*Gigantochloa apus*) and LDPE plastic waste. The product underwent expert validation and field testing with subjects aged 13–18 years. Expert validation showed a “Very Good” rating with a “Feasible” category and “Evaluation” recommendation, while field testing also resulted in a “Feasible” category with an “Evaluation” recommendation. These results indicate that the product meets the feasibility standards as an educational sustainability-themed souvenir and remains open to further development in terms of visuals, materials, and production strategies.*

Keywords: LDPE plastic waste, upcycling, watch, Merchandise, Saung Angklung Udjo.