

ABSTRACT

The increasing population in Bandung City has contributed to a surge in waste volume, which presents major challenges in its management. This research attempts to overcome this problem by redesigning the user interface (UI) and user experience (UX) on the mobile-based Bank Sampah Bersinar website using a User-Centered Design (UCD) approach. This method is designed to ensure that the design meets the needs and preferences of the end user, thereby providing a more intuitive and efficient solution. Data collection was carried out through interviews and surveys, which revealed a number of shortcomings on the current website, such as the absence of a Live Chat feature, the registration process which is still manual via an external form, and the absence of a login feature. The level of user satisfaction was analyzed using the System Usability Scale (SUS), which showed a significant increase from the initial value of 60.5 (marginal, category D) to 88 (excellent, category B) after improvements were made. In addition, a heuristic evaluation was carried out by comparing the functionality of the Bersinar Waste Bank website with that of Resik Waste Bank, to identify more optimal development potential. The results of the heuristic evaluation show that there are several features that BSB does not yet have but Resik Waste Bank does, and vice versa, these results provide additional ideas for researchers to redesign the UI/UX of the Bersinar Waste Bank website. After going through several stages in this research, a UI/UX design model was produced which is expected to be able to increase the accessibility and effectiveness of the Bersinar Waste Bank website. Furthermore, it is hoped that the results of this research can encourage community participation in sustainable waste management, as well as provide innovative solutions to environmental challenges in the era of urbanization.

Keywords: UI/UX, UCD, Bersinar Waste Bank, SUS, HE, waste management.