

ASSESSING THE USABILITY OF VENDING MACHINES AND SELECTED CAR WASH SERVICES

ABSTRACT

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Automation in car wash services and vending machines offers an opportunity to reduce operational costs and enhance customer satisfaction through on-demand, eco-friendly methods. Usability plays a crucial role in determining customer acceptance and market viability of these technologies. This study assesses the usability of vending machines and selected car wash services to identify factors that influence user experience and long-term adoption. A quantitative descriptive design is employed, with purposive sampling used to recruit customers of car wash vending machines. Data are gathered via a structured questionnaire addressing key usability dimensions—accessibility, efficiency, functionality, and customization options. Convenience sampling ensures a diverse range of respondents, and results are analyzed using weighted means to evaluate levels of agreement with each usability criterion. Respondents were predominantly male (92 percent), and overall satisfaction with vending machine functionality was positive. Accessibility received an average rating of 3.19 (“Agree”), while efficiency was rated 3.28 (“Strongly Agree”). However, 28 percent of users identified limited service customization as a major drawback, highlighting a gap between automated convenience and individual preferences. Findings suggested that car wash vending machines succeeded in delivering convenient and efficient service but fell short in offering personalized options. As a result, future development should focus on enhancing customization features—such as adjustable wash cycles or add-on services—to improve user satisfaction and expand market appeal. Further research could examine the balance between automation and personalization to optimize the usability and adoption of self-service car wash technologies.

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