

ABSTRACT

The development of electric vehicle technology in Indonesia has shown significant growth, marked by an increase in sales from 125 units in 2020 to 17,062 units in 2023. This indicates a growing demand among the public for environmentally friendly and efficient transportation. However, there are still limitations in digital platforms that facilitate integrated electric vehicle services. This study aims to design the interface and develop the front-end of the PATRIC (Parents of Electric) mobile application, which consists of two user applications and a partner application. The user application provides features for renting electric cars and motorcycles, searching for SPKLU locations, home service, and education. Meanwhile, the partner application is used to manage rental and home service, including vehicle and technician management. The method used in this study is Goal-Directed Design (GDD), which consists of six stages: Research, Modeling, Requirements, Framework, Refinement, and Support. Usability testing was conducted by combining the Think-Aloud and Maze methods to evaluate how well the application interface design meets the needs of both users and partners. The Think-Aloud testing results were categorized into two groups: positive and negative responses. Respondents provided positive feedback regarding the app design, while others offered negative feedback and suggestions related to the design. The Maze testing results showed that the PATRIC user app achieved a Maze Usability Score (MAUS) of 95.73, while the partner app scored 92.96. Both results from the two applications fall into the high category, indicating that the interface is easy to understand and aligns with user needs. This study demonstrates that the use of the GDD method and usability testing is effective in designing the interface and developing the front-end of the PATRIC application. This method can produce designs that meet user needs and identify aspects that need improvement before the application is fully implemented.

Keywords: *Electric Cars and Motorbikes, Mobile Apps, Goal-Directed Design, Think-Aloud, Maze.*