

Abstract

The world has progressed toward rapid developments in technology and information. These advancements play a crucial role in daily life, helping people with various everyday activities. With the emergence of the Industrial Revolution 4.0, all elements of society have undergone significant changes, including increased internet access and shifts in consumer behavior, particularly in conducting online payment transactions.

Understanding service quality is key to maintaining performance on the DANA application platform. This study adopts a sentiment analysis and topic modeling approach through user reviews. The analysis is conducted on user review data collected from Google Play Store using text classification methods based on IndoBERT and topic modeling to identify service quality dimensions and user sentiment. The mapping of E-ServQual dimensions—including reliability, responsiveness, efficiency, security, and ease of use—is carried out based on the proportion of positive and negative sentiments found.

Based on the sentiment classification results, the DANA application shows a higher proportion of positive sentiment, accounting for 60%, while negative sentiment comprises 40%. Topic modeling reveals the key topics highlighted by users in their reviews. The results from sentiment analysis and topic modeling using IndoBERT and BERTopic provide valuable insights for DANA's management to enhance service quality. The analysis indicates that the efficiency dimension is perceived most positively, while reliability is seen as the most negative.

This study offers a comprehensive overview of user perceptions regarding the service quality of the DANA application and provides strategic recommendations for improving service quality in line with user expectations. Furthermore, this research is recommended as a reference for other e-wallet companies in designing customer satisfaction improvement strategies based on data-driven insights.

Keywords: *E-Wallet, E-ServQual, sentiment, user satisfaction, topic modeling*