THE IMPACT OF THE Syva CHATBOT ON CUSTOMER SATISFACTION AND SHARIA COMPLIANCE IN KB BANK SYARIAH DIGITAL SERVICES

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Abstract

This study aims to analyze the impact of implementing the Syva chatbot on customer satisfaction and sharia compliance in digital services at KB Bank Syariah. Using a descriptive quantitative approach, data were collected through questionnaires and interviews with customers and customer service staff. The results show that chatbot features (AI capability, NLP, and responsiveness) have a significant effect on service quality, including reliability, ease of use, and sharia compliance. High service quality subsequently increases customer satisfaction. This study also identifies a literature gap by integrating User Experience (UX) and sharia compliance aspects in the context of digital Islamic banking and provides recommendations for KB Bank Syariah to optimize the Syva chatbot service.

Keywords: : Chatbot, Customer Satisfaction, Sharia Compliance, Digital Services, KB Bank Syariah, User Experience (UX)

INTRODUCTION

Islamic banking in Indonesia has grown rapidly since the establishment of Bank Muamalat Indonesia in 1991. Consolidation and foreign acquisitions, such as the entry of South Korea's KB Financial Group which formed KB Bank Syariah, have further strengthened the industry. In the digital era, customer service has become a key factor in creating customer satisfaction and loyalty. However, challenges such as long queues, extended waiting times, and limited operating hours are still frequently encountered.

Artificial Intelligence (AI) and chatbot technologies offer solutions to improve service efficiency. KB Bank Syariah launched the Syva chatbot in 2024 as part of its digital transformation. Previous studies indicate that chatbots can enhance customer satisfaction and operational efficiency; however, specific studies on chatbots in Islamic banking—particularly those integrating User Experience (UX) and sharia compliance—remain limited.

Therefore, this study focuses on evaluating the implementation of the Syva chatbot in improving customer service, customer satisfaction, and compliance with sharia principles at KB Bank Syariah.

METHODS

This study employs a descriptive quantitative approach, with data collected through questionnaires and interviews. The questionnaire was designed using a 1–5 Likert scale and distributed to customers who use the Syva chatbot at KB Bank Syariah, while interviews were conducted with customer service staff to obtain insights into the implementation and operational challenges. The research population includes all customers who use the Syva chatbot, with the sample selected through purposive sampling focused on active users.

The research instruments were tested for validity using the Pearson Product Moment correlation via SPSS, and reliability testing was conducted using Cronbach's Alpha coefficient, where the instrument was considered reliable if $\alpha \geq 0.70$. Data analysis was carried out using descriptive statistical methods to calculate percentages, means, and frequency distributions. Meanwhile, chatbot performance was measured using three main indicators: NLP accuracy (calculated from the ratio of correct responses to total questions), average response time, and user satisfaction levels based on questionnaire scores.

This study follows the stages of the Software Development Life Cycle (SDLC), which include planning, analysis, design, development, testing, implementation, maintenance, and evaluation. System requirement identification covers functional aspects such as text-based interaction and integration with an FAQ database; non-functional aspects such as data security and 24/7 service availability; and user requirements involving customers, prospective customers, and bank staff.

FINDINGS AND DISCUSSION

The research findings indicate that the implementation of the Syva chatbot in KB Bank Syariah's digital services has had a positive impact on customer satisfaction and Sharia compliance. Based on questionnaire data collected from 200 active customers who use the chatbot, it was found that the majority of respondents (aged 25–45 years) felt assisted by the chatbot in accessing general information. From a technical perspective, the Syva chatbot demonstrated good performance, achieving an NLP accuracy rate of 87% in handling FAQ-related inquiries, along with a fast average response time of 2.3 seconds. In terms of user satisfaction, the average score obtained was 4.2 on a 1–5 Likert scale, with the highest indicators observed in ease of use and response speed. Furthermore, interviews with customer service staff revealed that the chatbot successfully reduced operational workload by up to 30% for routine inquiries, allowing staff to focus more on services requiring human-centered and complex interactions.

In the discussion, these findings confirm that chatbot features—particularly AI capabilities, natural language processing (NLP), and responsiveness—significantly influence the quality of digital services. High service quality, encompassing reliability, ease of access, and compliance with Sharia principles, was found to be a strong mediator in enhancing customer satisfaction. These results are consistent with the proposed theoretical framework, in which a well-designed chatbot not only improves efficiency but also strengthens customers' perceptions of the bank's commitment to implementing Sharia values. However, the study also identified several challenges, such as the chatbot's limitations in handling contextual or emotional inquiries, as well as the need for continuous database updates to ensure accurate and Sharia-compliant responses. The implication is that the Syva chatbot has the potential to become a strategic tool in the digital transformation of Islamic banking, provided it is supported by continuous development, user training, and close integration with Sharia principles in every service interaction.

CONCLUSION

Based on the research findings and discussions that have been conducted, it can be concluded that the implementation of the Syva chatbot in the digital services of KB Bank Syariah has a positive influence on improving customer satisfaction and sharia compliance. The Syva chatbot has proven to be effective in enhancing customer service through fast response times (average 2.3 seconds), high accuracy (87%), and ease of use as perceived by customers. Additionally, the integration of sharia principles in the chatbot's design and content strengthens customer trust in the bank's commitment to upholding sharia values. However, this study also identifies limitations of the chatbot in handling complex and contextual inquiries, indicating the need for continuous development, particularly in natural language processing (NLP) capabilities and knowledge base updates. Overall, the Syva chatbot can serve as a strategic solution in supporting the digital transformation of sharia banking, provided that service optimization is continually pursued through user training, regular monitoring, and synergy between AI technology and sharia principles.Future research should prioritize pollution-resilient datasets for edge devices, lightweight Deep RL variants for real-time operation, and integration with smart city platforms linking energy optimization to environmental monitoring. By pursuing these directions, IoT energy management can evolve from isolated node optimization to scalable infrastructure for sustainable urban ecosystems and public health protection.

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