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BEYOND THE TRANSACTION: AI'S ROLE IN SHAPING CUSTOMER ENGAGEMENT AND LOYALTY

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ABSTRACT

This qualitative study explains how Artificial Intelligence technology, specifically chatbots and recommendation systems, impact customer engagement and loyalty on online shopping sites in Indonesia, particularly Shopee. Based on in-depth interviews with 25 users, this study examines customer experiences, attitudes, and behaviors. Chatbots have been shown to provide valuable functional engagement by providing quick and efficient answers to simple questions, such as order status and product details. However, their inability to handle complex issues and lack of human interaction mean that users still prefer to interact with humans for more complex issues. On the other hand, AI-powered recommendation systems are highly effective at triggering behavioral and affective engagement. Such one-to-one product recommendations not only impact purchasing decisions and product discovery but also provide the customer with a feeling of being "understood" by the platform, positively affecting customer loyalty. Altogether, the integration of the two technologies enables Customer Relationship Management (CRM) initiatives through its effectiveness and personalization, resulting in greater customer loyalty levels.

1. INTRODUCTION

As the digital business industry becomes increasingly competitive, organizations are continually striving to improve customer relationships through innovative Customer Relationship Management (CRM) practices. The rapid development of Artificial Intelligence (AI) has been a key driver of this progress, transforming the way organizations interact with customers. Two of the most visible applications of AI in today's CRM landscape are recommendation systems and chatbots. Chatbots, through the use of artificial intelligence to mimic human-like conversations, provide 24/7 automated customer support for a variety of requests, from order tracking to resolving customer complaints (Misischia et al., 2022). Conversely, AI-based recommendation systems track user behavior data to make personalized product recommendations, designing more relevant shopping experiences while increasing user satisfaction (Ma et al., 2021). Major e-commerce platforms in Southeast Asia, such as Shopee, have integrated both technologies into their businesses. The adoption is aligned with growing consumer demands, where over 70% of consumers desire a more personalized online shopping experience (Statista, 2023), and over 35% of purchases are made based on AI-powered recommendations (McKinsey & Company, 2021). Although this kind of technology delivers efficiency and personalization, its true worth lies in how customers perceive it and whether it is able to form an emotional connection, trust, and ultimately brand loyalty (Brodie et al., 2013). The aim of this study is to explore the actual impact of chatbots and AI recommendation systems on customer engagement and loyalty. By way of analysis of real user experiences, this study seeks to provide insight into the effectiveness of these technological tools at building improved long-term customer relationships in e-commerce enterprises.

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2. METHODS

This study uses a qualitative approach to gain in-depth and rich insight into customer experience. The study is primarily focused on comprehending the impact of customer interaction with AI recommendation systems and chatbots on customer engagement and loyalty. Primary data were collected through in-depth interviews of 25 respondents who use the e-commerce platform being researched. The respondents were selected by purposive sampling to ensure diversity of views in terms of new users, active users, loyal users, and passive users with varying shopping frequencies. The main selection factor for the respondents was that they should have interacted with the chatbot and/or received AI-based product recommendations from the platform. Collection of data was carried out online via platforms such as Zoom and WhatsApp video calls with a mean interview duration of 20 to 30 minutes per session. The interviews were recorded and transcribed to ensure data accuracy. Analysis of data was undertaken using a thematic analysis approach, where transcripts were analyzed to identify recurring patterns, trends, and themes relating to experience, attitudes, and influence of these two technologies on engagement and customer loyalty.

3. RESULTS AND DISCUSSION

Research Results

Thematic analysis of 25 in-depth interviews from e-commerce consumers revealed four interconnected major themes: (1) The experience of engaging with Chatbots as a tool for functional efficiency, (2) The influence of AI Recommendation Systems in driving engagement, (3) The overall customer engagement effect, and (4) The overall customer loyalty effect. The respondent base was made diverse on purpose to capture an overall perspective, a wide coverage of user segments from new users to old-time committed customers, frequent regular buyers, to passive or occasional customers. The demographic was predominantly Generation Z, aged 17 to 26 years and consisted mainly of university students. The diversity allows one to understand the different user segments' perspectives and interactions with AI technologies.

a. Chatbot Experience: A Tool for Functional Efficiency: A consistent finding across all user types was that chatbots are primarily utilized for functional, problem-solving interactions rather than proactive engagement. Respondents reported turning to chatbots for technical and routine queries, such as tracking order status, inquiring about delivery times, resolving simple payment issues, or asking for basic product information. The primary praised attributes were speed and 24/7 availability. Customers enjoyed the immediate answers without relying on human agents, something that they recognized as a tremendous efficiency benefit, providing a baseline of reliability for simple, transactional needs. For instance, customers would frequently mention being able to successfully trace an order late in the evening or checking if a product was available immediately without human delay. This positive feeling was tempered, however, by significant limitations. The majority of participants mentioned frustration with the failure of the chatbot to handle non-standard or complex problems. The responses were often referred to as "generic," "rigid," and "template-based," which were not adequate for questions requiring contextual understanding, such as working out a huge order or repairing an unusual product defect. This had the effect of keeping users stuck in ineffective "conversational loops," repeatedly restating questions before giving up on them. This always equated to a stated preference for human customer service representatives for any issue requiring nuanced understanding or a tailored response.
b. AI Recommendation System Experience: An Engagement and Discovery Driver: Conversely to this, the AI-driven recommendation system was viewed as a positive and effective feature across the board. Respondents in general, from experienced veterans to novice users, acknowledged the recommendations of the system were often highly relevant to interests and past activities. This dimension was determined to have a direct impact on shopping conduct in two ways: by impacting purchase behavior and by arousing product discovery. The majority of users, particularly the active and loyal ones, admitted to purchasing impulse buys of items like fashion items or electronic products that showed up on their news feed. Furthermore, the site was credited with exposing them to new products they would not otherwise have searched for, such as complementary products or substitute brands. This very high degree of personalization produced an overwhelmingly positive affective response, with

individuals frequently remarking on being "understood" or "catered to" by the system. While very effective, this "hyper-personalization" had some adverse consequences. A number of respondents were a little uneasy about data privacy, commenting on the system's nearly unhuman capacity to predict their needs, which they found rather "unsettling" or "like being watched."

c. Cumulative Impact on Engagement and Loyalty: Cumulatively, the effect of these AI-driven tools was seen to have a stunning aggregate increase in user engagement. The recommendation system itself was a powerful catalyst, making users open the app with increased frequency and initiate longer browse sessions. This so-called "digital window shopping" became the new norm, significantly increasing metrics like session length and app open frequency. The ease offered by both the functional efficacy of the chatbot and the affective personalization of the recommendation system instantly influenced customer loyalty. Convenience, improved efficiency, and feeling special by being communicated with in a personalized manner were identified as the key drivers for the growth in loyalty. Some of the participants themselves directly stated to have recommended the site to others which is exactly why they had good technology experiences, citing ease of product discovery and resolving issues as main reasons.

Discussion

The findings of this study illustrate a complex relationship between AI-powered tools and the core concepts of CRM—engagement and loyalty. The discussion is structured around the distinctive roles played by recommendation systems and chatbots and their collective impact on the customer experience.

a. Chatbots as Enablers of Functional Engagement: The results strongly indicate that chatbots excel in enhancing what can be termed functional engagement. Their primary value, as perceived by users, lies in providing immediate, 24/7 support for routine, low-complexity tasks. This aligns with research by Gnewuch et al. (2022), which found that rapid response times in human-chatbot interactions significantly boost initial user satisfaction. By effectively handling straightforward questions, chatbots reduce customer input and make the transactional aspects of the shopping experience easier. Yet this study also identifies a basic limitation: the impersonal, scripted quality of chatbots is incapable of forging deeper, more emotional connections. Concerned with complex or emotionally charged issues, users overwhelmingly favored human engagement. This suggests that while chatbots excel at transactional efficiency, they don't fare as well at relational capital formation, a finding consistent with literature emphasizing the importance of empathy in service recovery and loyalty establishment (Wang et al., 2023).

b. Recommendation Systems as Drivers of Affective and Behavioral Engagement: In sharp contrast to chatbots, AI-powered recommendation systems came out as powerful drivers of both affective and behavioral engagement. The system's ability to provide personalized and relevant product recommendations made customers feel "understood" and valued, which resulted in an positive emotional response (affective engagement). This sense of personalization is a key component of enhancing the customer experience and developing brand attitude (Li & Wang, 2023). Behaviorally, these recommendations directly affected user behavior by causing longer browsing times, facilitating ease of product discovery, and more often than not leading to impulse purchases. This is indicative of the system's ability to not just meet current needs but also create new ones, thereby increasing the level and incidence of users interacting with the system.

c. The Synergy of AI Tools on Overall Loyalty: There is a synergistic effect of deploying these AI tools concurrently that enhances customer loyalty. As chatbots create a foundation of consistent, efficient service, recommendation systems add an element of personalization and delight that enriches the customer-brand relationship. This two-pronged approach fulfills two critical customer needs: the need for painless problem-solving and the desire for a customized experience. The convenience and efficiency of these technologies directly contribute to satisfaction, which is a known antecedent of customer loyalty (Rukmawati, 2023). The results also sound a note of caution that such loyalty is contingent. The inability of chatbots to solve more complex issues can destroy trust, and privacy concerns with recommendation systems can create unease. Therefore, a successful CRM approach cannot only synthesize these technologies but also needs to manage their limitations through definite data policies and open human

support channels. Such a hybrid framework, blending automation with a human interface, appears most feasible for generating sustainable, long-term loyalty in the online marketplace.

4. CONCLUSION

The use of chatbots and AI-driven recommendation systems has greatly improved customer experience on e-commerce websites, adding positively to engagement and loyalty. Chatbots function pretty well as an efficiency tool for simple requests since they give a swift response, which most customers find amazing. But due to their failing in the event of complicated issues, they function optimally as a first line of service. AI recommendation technologies, on the other hand, bear a deeper impact by presenting a highly personalized and relevant shopping experience that resonates with users on an emotional level, making them appreciated and understood. Accuracy and privacy challenges apart, these technologies are resources of gigantic worth to modern CRM strategy, indeed enhancing user engagement, provoking sales, and fostering customer loyalty. For experts, it is recommended to enhance chatbot functionality, integrate hybrid systems with human support, create recommendation algorithms, and maintain a balance between technology and human interaction. Future research can measure these impacts quantitatively, compare across studies from different platforms, and investigate further user attitudes on data privacy.

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