How Personalized Chatbots Win Customer Loyalty

Jaeha Lee, North Dakota State University
Dooyoung Choi, Old Dominion University

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Introduction

Technology continues to significantly transform customer service experiences. Specifically, chatbots are revolutionizing customer service experiences in the retail industry. A chatbot, also known as a conversational bot, is software capable of engaging in dialogue using natural language through text or audio. The chatbot market is forecasted to reach approximately 1.25 billion U.S. dollars by 2025, marking a substantial increase from its 2016 size of 190.8 million U.S. dollars (Thormundsson, 2023). Customer service remains the primary domain for businesses to integrate conversational bots, with the online retail sector demonstrating particularly high acceptance among consumers. The utilization of AI techniques can enhance the intelligence of chatbots, leading to increased personalization (Ostrom et al., 2019). Chatbots facilitate real-time communication and personalized language resembling human speech, thereby enhancing user satisfaction and fostering customer loyalty. However, there is a lack of studies that have investigated the impact of personalized chatbot services on customer loyalty.

A significant trend in the marketplace involves retailers leveraging personalization technologies to build stronger relationships with customers. Personalization entails tailoring offerings and communications to meet customer preferences based on observed and predictive data (Aguirre et al., 2015). The advantages of personalized marketing are significant: it has the potential to lower customer acquisition expenses by as much as 50%, elevate revenues by 5-15%, and enhance marketing return on investment by 10-30% (What is personalization?, 2023). Moreover, higher-quality personalization correlates with greater trust in the recommendation agent and increased consumer store loyalty (Zhang et al., 2011). The purpose of this study is to explore the impact of chatbot's personalization technologies on customer loyalty. Specifically, this study investigates how the perceived level of personalization of a chatbot affects cognitive, affective, and social drivers of customer loyalty, and in turn leads to loyalty intention.

Conceptual Frameworks and Hypotheses

Retailer loyalty is defined as consumers' preference for, consistent repurchase from, and support for a specific retailer over time (Oliver, 1999). Liu-Thompkins et al. (2022) categorize a broad set of antecedents of loyalty into three main categories: cognitive, affective, and social drivers. Cognitive drivers encompass factors influencing customer loyalty through a deliberative, cognitive evaluation process. Affective drivers involve components of the retail experience that evoke feelings toward a retailer and associated shopping experiences. Social drivers pertain to factors related to social interactions and relationships that can influence consumer loyalty toward a retailer.

Tyrväinen et al. (2020) have demonstrated that personalization affects both cognitive and affective components of the customer experience. Commercial personalization features utilize customers' demographic and psychographic data to design personalized offerings aimed at increasing sales. In contrast, relational personalization leverages the social and relational aspects of customers to fulfill their emotional and socialization needs (Chandra et al., 2022). For instance, chatbots may offer social support to online retail customers through simulated social cues such as human-like greeting messages and their role as shopping assistants. Thus, personalization also influences the social components of the customer experience.

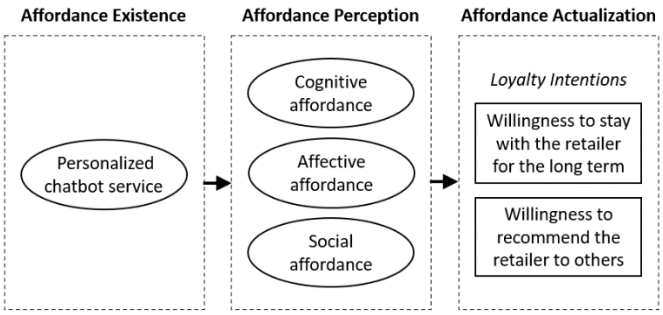

Figure 1. Research Framework

Affordance theory elucidates the relationship between the existence, perception, and actualization of affordances (Wang et al., 2018). Affordances result from interactions between objects and actors, where objects can be information technologies or systems, and actors can be groups, teams, business units, or individuals. In this study, the object is a chatbot, and the actor is a customer who interacts with it. During this interaction, affordances are perceived, including cognitive, affective, and social qualities of the chatbot. Affordance actualization occurs when individuals take actions to realize the affordances they perceive, with loyalty intention considered as affordance actualization in this study (Figure 1). Therefore, the following hypotheses are proposed. H1: Higher levels of perceived personalization will increase loyalty intentions, and H2: The effects of perceived personalization on loyalty intention will be mediated by cognitive, affective and social affordances.

Method

Data were collected through an online survey among students, faculty and staffs enrolled in a listserv at a state university in the US. Participants watched a short video depicting conversations between a consumer and a chatbot, then responded to questions on perceived personalization, the three loyalty affordances (i.e., cognitive, affective, social), and two types of loyalty intentions (a: willingness to stay with the retailer for the long term; b: willingness to recommend the retailer to others). These constructs were adapted from previous studies and measured using 5-point Likert scales. A total of 220 completed data were collected (mean age: 37; female 65%; Caucasians or White 90%). The data were analyzed using SPSS 28.

Results

Results from the PROCESS Macro Model 4 with 5,000 bootstrap samples (Hayes, 2018) for the parallel mediation analyses showed that all paths were significant between personalization and consumer's willingness to stay (b=.604, *p*=.000, 95% CI [.470: .738]). Specifically, personalization had a direct effect (b=.140, 95% CI [.007: .274]; supporting H1a) along with stronger indirect effects on willingness to stay (b=.463, 95% CI [.349: .592]) through

all three loyalty affordances (Cognitive: b=.179, 95% CI [.091: .283]; Affective: b=.154, 95% CI [.086: .228]; Social: b=.100, 95% CI [.027: .189]), supporting H2a.

The effects of personalization on consumer's willingness to recommend the retailers to others were slightly different. Although the total effects of personalization on willingness to recommend the retailers to others were statistically significant (b=.549, *p*=.000, 95% CI [.416: .682]), the direct effect was not significant (b=.088, 95% CI [-.042: .218]; rejecting H1b) as well as the indirect path through the social affordance (b=.010, 95% CI [-.055: .081]). However, the indirect effects through the cognitive and affective affordances were significant (Cognitive: b=.291, 95% CI [.188: .400]; Affective: b=.160, 95% CI [.089: .207]), partially supporting H2b.

Conclusions

This study broadened the scope of affordance theory by substantiating the relationship among the existence, perception, and actualization of affordances within the framework of customer loyalty through personalized chatbot services. The findings of this study demonstrate that personalized chatbot service can foster loyalty intentions among consumers. Specifically, the study highlights the importance of cognitive, affective, and social qualities in chatbot, as they enhance consumers' loyalty intentions. Notably, the results suggest that an increase in perceived personalization is more effective in fostering willingness to stay loyal to a retailer over the long term but has limited direct impact on word-of mouth intentions. If companies aim to capitalize on word-of-mouth marketing, it will be better to prioritize cognitive and affective qualities of chatbot over social qualities, because the latter did not contribute significantly to word-of-mouth intentions about the retailer.

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