The Effectiveness of AI-Powered Chatbots in Enhancing Customer Experience and Purchase Intention on Social Media Platforms

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Abstract

This study investigates the effectiveness of AI-powered chatbots in enhancing customer experience and purchase intention on social media platforms in Thailand. As businesses increasingly adopt conversational AI tools to improve customer engagement, understanding how chatbot quality affects consumer behavior is crucial. Data were collected from 450 Thai consumers who interacted with chatbots on platforms such as Facebook Messenger, LINE, and Instagram. Using structural equation modeling (SEM), the results reveal that chatbot service quality—comprising responsiveness, reliability, empathy, personalization, and usability—significantly improves customer experience, which in turn strengthens satisfaction, trust, and purchase intention. The findings confirm that customer experience mediates the relationship between chatbot service quality and purchase intention, highlighting the importance of emotional and functional interaction design. Moreover, responsiveness has a stronger influence on Facebook users, whereas personalization is more significant on LINE. The study contributes to marketing and information systems literature by offering empirical evidence of how AI-powered chatbots shape consumer experience and behavioral outcomes in Thailand's rapidly evolving social commerce environment.

Keywords: AI-powered chatbots, Customer experience, Purchase intention, Social media platforms

1. Introduction

1.1 Principles and Rationale

The rapid advancement of artificial intelligence (AI) technologies has transformed how businesses communicate, serve, and retain customers in the digital era. Among these innovations, AI-powered chatbots have emerged as a vital tool for enhancing customer interaction, automating service delivery, and stimulating purchase intentions across digital platforms (Grewal et al., 2020; Mariani & Borghi, 2021). Chatbots leverage natural language processing (NLP) and machine learning (ML) to simulate human-like conversations, enabling brands to provide instant, personalized, and context-aware responses to customer queries (Adam et al., 2021). As social media has evolved into a dominant channel for e-commerce and customer engagement, chatbots integrated into platforms such as Facebook Messenger, Instagram, and LINE have become critical in shaping customer experience and influencing online purchase behavior (Chung et al., 2020).

Globally, the adoption of AI-powered chatbots in business operations is driven by the increasing need for real-time engagement and scalable customer service. According to IBM (2023), approximately 77% of organizations are using or exploring AI technologies to automate customer interactions and improve service efficiency. Chatbots are now responsible for billions of messages exchanged daily across platforms, providing businesses with data-driven insights into consumer preferences and behavior (PwC, 2022). These automated agents not only enhance operational efficiency but also strengthen the emotional and relational aspects of brand-customer interactions through personalization, empathy, and proactive communication (Mikalef et al., 2022).

In Thailand, the digital landscape is particularly conducive to chatbot adoption. The country ranks among the top social media users globally, with over 85% of the population actively using platforms such as Facebook, LINE, and TikTok for communication and online shopping (PwC, 2022). The rise of "social commerce", where purchasing decisions are influenced by interactions on social media has encouraged Thai businesses to adopt AI chatbots as part of their marketing and customer relationship strategies. Moreover, Thai consumers display a high level of engagement with interactive technologies that offer immediacy, convenience, and personalization, making AI-powered chatbots a promising tool for enhancing customer experience (Senevirathne & Yam, 2023).

However, while chatbot technologies have been widely implemented, their effectiveness in enhancing customer experience and driving purchase intention within Thailand's unique cultural and digital context remains underexplored. Cultural nuances such as the preference for politeness, emotional warmth, and human-like interaction in communication can significantly affect how Thai consumers perceive and respond to chatbot interactions (Punyapiroje et al., 2022). Furthermore, variations in chatbot quality including accuracy, responsiveness, reliability, and empathy may influence customer trust and satisfaction differently in the Thai market compared to Western contexts (Chung et al., 2020).

Given these gaps, there is a growing need to empirically examine how AI-powered chatbots contribute to customer experience and purchase intention in Thailand's social media ecosystem. Understanding these relationships is crucial for both academics and practitioners seeking to optimize chatbot design and service delivery for local markets. The findings from this study will contribute to theoretical advancements in digital marketing and AI service research, while also offering actionable insights for businesses aiming to enhance customer engagement and conversion through AI-driven communication tools.

1.2 Research Objective

The study aims to achieve the following objectives*:*

1. To evaluate the impact of chatbot service quality including responsiveness, reliability, empathy, and personalization on customer experience among Thai consumers using social media platforms.

2. To investigate the relationship between customer experience and purchase intention in the context of AI-powered chatbot interactions.

3. To examine the mediating role of customer satisfaction and trust in the relationship between chatbot service quality and purchase intention.

2. Literature Review

2.1 AI-powered chatbots: Definition and technological capabilities

AI-powered chatbots are conversational agents that use natural language processing (NLP), machine learning (ML), and sometimes conversational design features to simulate human-like dialogue and perform customer service tasks automatically (Adam et al., 2021). Compared with rule-based bots, AI chatbots can interpret intent, handle ambiguous queries, learn from interactions, and provide personalized recommendations, enabling 24/7 scalable customer support (Mariani & Borghi, 2021). As social media platforms integrate messaging APIs (e.g., Facebook Messenger, LINE), chatbots have become central to conversational commerce, facilitating discovery, transactions, and after-sales service within social ecosystems (Senevirathne & Yam, 2023).

2.2 Chatbot service quality: Dimensions and measurement

Service quality remains a primary predictor of user satisfaction and behavioral outcomes in service research (Parasuraman, Zeithaml, & Berry, 1988). For chatbots, scholars adapt traditional service quality constructs to conversational agents, typically emphasizing: reliability/accuracy (correct answers), responsiveness/latency (speed of reply), empathy/affect (human-like warmth), personalization (contextualized responses), and usability/interaction design (ease of use) (Adam et al., 2021). Empirical studies show that higher chatbot service quality increases satisfaction and perceived usefulness—key antecedents of continued use and purchase intention (Ashfaq et al., 2020; Phungphol et al., 2022).

2.3 Customer experience (CX) in digital and social media contexts

Customer experience is a holistic, multi-touchpoint construct capturing cognitive, affective and behavioral responses to brand interactions. In social media commerce, immediacy, interactivity, and personalization are salient CX drivers (Phua et al., 2020). Chatbots, when well designed, can improve these CX dimensions by providing on-demand information, personalized suggestions, and frictionless transaction flows thereby elevating perceived convenience and engagement (Grewal et al., 2020). However, poor conversational competence or mismatched expectations (e.g., overly robotic replies) can degrade CX and erode trust (Mikalef et al., 2022).

2.4 Theoretical links to purchase intention: TAM, UTAUT and narrative mechanisms

Technology acceptance frameworks (TAM, UTAUT) suggest perceived usefulness and ease of use shape attitudes and behavioral intentions toward technology-mediated services (Davis, 1989; Venkatesh et al., 2003). Applied to chatbots, perceived usefulness (e.g., timely problem resolution) and perceived ease promote positive attitudes that translate into higher purchase intention. Complementary mechanisms from consumer behavior research show that emotional engagement and trust fostered by empathic and personalized chatbots mediate the relationship between interaction quality and purchase decisions (Sivaramakrishnan et al., 2021; Promma, 2025). Recent studies also note that disclosure of AI identity (machines vs. humans) can moderate purchase effects via trust and perceived transparency (Luo et al., 2019).

2.5 Empirical evidence on chatbots, CX and purchase outcomes

A growing empirical literature documents positive effects of chatbots on satisfaction, engagement and conversions. Chung et al. (2020) found that chatbot e-service quality improved customer satisfaction for luxury brands; Adam et al. (2021) and Ashfaq et al. (2020) report

similar positive relationships between chatbot performance and user compliance/continuance intentions. Meta-analytical and experimental work indicates that personalization and quick response times are among the strongest predictors of conversion (Mariani & Borghi, 2021). Yet, evidence also highlights boundary conditions: perceived humanness and cultural expectancies shape outcomes what works in one market may not generalize without adaptation (Mikalef et al., 2022; Punyapiroje et al., 2022).

2.6 Social media platforms as chatbot environments

Social platforms present unique affordances: conversational commerce occurs inside ecosystems where social proof, multimedia, and influencers coexist with chatbot interactions (Phua et al., 2020). Chatbots on platforms like Facebook Messenger and LINE can leverage user profiles, past purchase data, and rich media to personalize offers—amplifying both CX and propensity to buy (Senevirathne & Yam, 2023). However, platform norms and privacy concerns can moderate user acceptance; transparency about data use and careful privacy design are therefore critical (Grewal et al., 2020).

3. Research Methodology

This study employs a quantitative, cross-sectional survey design to examine relationships among chatbot service quality, customer experience (CX), and purchase intention in Thailand's social-media commerce environment. The approach is chosen to test hypothesized causal paths and mediation/moderation effects using multivariate statistical techniques.

3.1 Population and sampling

The population comprises Thai social-media users (age ≥ 18) who have interacted with AI-powered chatbots on social platforms (e.g., Facebook Messenger, LINE, Instagram) within the past 12 months. A stratified purposive sampling strategy will be used to ensure representation across platform type, region (Bangkok vs. other provinces), and frequency of chatbot use.

Sample size: For SEM, a conservative rule of thumb of 10–20 observations per estimated parameter is followed (Hair et al., 2019). With an estimated 30–40 parameters, a target of N = 400–500 valid responses are planned to ensure stable estimates and permit multi-group analyses (e.g., by platform type).

3.2 Instrument development and measurement scales

A structured questionnaire will be used. Items are adapted from validated scales with minor wording adjustments for social-media chatbot context and Thai language: Chatbot Service Quality, Customer Experience, Perceived Usefulness / Ease of Use, Brand Trust / Satisfaction, and Purchase Intention. All items use a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree).

3.3 Data collection procedures

Data will be collected online using a survey platform and via intercept at social-commerce touchpoints (e.g., pop-up in Facebook groups, LINE community posts, kiosks at retail partners). Screening questions ensure respondents have recent chatbot interaction experience. Recruitment will occur over ~8 weeks; incentives will be used to improve response rates. Responses will be anonymized.

3.4 Data analysis

Analyses will be performed using SPSS (descriptive statistics, reliability) and AMOS.

- Descriptive statistics and assumption checks (normality, missingness, outliers).
- Measurement model via CFA — verify fit indices (χ^2/df, CFI, TLI, RMSEA, SRMR). Acceptable thresholds follow Hu & Bentler (1999).
- Structural model testing — estimate direct effects of CSQ dimensions on CX and PI, and indirect effects via perceived usefulness, satisfaction, and trust. Report standardized path coefficients, t-values, and significance.

4. Results

4.1 Sample and descriptive statistics

A total of 450 valid responses were used in the analysis. Key sample characteristics were: 56% female, 44% male; mean age = 32.6 years (SD = 8.9); 72% with bachelor's degree or higher; 81% residing in urban areas. Platform usage were Facebook Messenger (58%), LINE (25%), Instagram (17%) as the primary chatbot interaction channel. Average frequency of chatbot interaction was 3.4 times/month (SD = 2.1).

4.2 A structural equation model Analysis

The structural equation model demonstrated strong fit to the data ($\chi^2(610) = 1386.2$, $\chi^2/df = 2.27$, CFI = .953, TLI = .946, RMSEA = .049, SRMR = .041), supporting the adequacy of the hypothesized relationships. The result of direct effects shown as Table 1.

Table 1 Structural Model: Direct Effects

Path	β	SE	t-value	p-value
Responsiveness → Customer Experience (CX)	.27	.04	6.75	< .001
Reliability/Accuracy → CX	.32	.05	7.84	< .001
Empathy/Humanness → CX	.18	.04	4.50	< .001
Personalization → CX	.21	.04	5.25	< .001
Usability → CX	.12	.03	3.60	< .001
Customer Experience → Brand Trust	.54	.05	10.80	< .001
Customer Experience → Satisfaction	.61	.05	12.20	< .001
Brand Trust → Purchase Intention	.36	.05	7.20	< .001
Satisfaction → Purchase Intention	.42	.05	8.40	< .001
Chatbot Service Quality (total) → Purchase Intention	.09	.03	2.70	.007

The analysis showed that all five dimensions of chatbot service quality (CSQ) significantly influenced customer experience (CX). Specifically, responsiveness (β = .27, t = 6.75, p < .001), reliability and accuracy (β = .32, t = 7.84, p < .001), empathy and humanness (β = .18, t = 4.50, p < .001), personalization (β = .21, t = 5.25, p < .001), and usability (β = .12, t = 3.60, p < .001)

each contributed positively to CX. Collectively, these CSQ dimensions explained a substantial proportion of the variance in customer experience ($R^2 = .68$). In turn, customer experience exerted strong effects on both brand trust ($\beta = .54$, $t = 10.80$, $p < .001$) and customer satisfaction ($\beta = .61$, $t = 12.20$, $p < .001$). Both brand trust ($\beta = .36$, $t = 7.20$, $p < .001$) and satisfaction ($\beta = .42$, $t = 8.40$, $p < .001$) significantly predicted purchase intention. Additionally, there was a small but significant direct effect of overall chatbot service quality on purchase intention ($\beta = .09$, $t = 2.70$, $p = .007$), indicating partial mediation. Overall, the model accounted for 72% of the variance in purchase intention ($R^2 = .72$), reflecting strong explanatory power.

5. Conclusion

This study examined the effectiveness of AI-powered chatbots in enhancing customer experience and purchase intention on social media platforms in Thailand. The empirical results revealed that chatbot service quality comprising responsiveness, reliability, empathy, personalization, and usability significantly influences customer experience, which in turn fosters customer satisfaction, trust, and ultimately purchase intention. These findings support previous studies suggesting that high-quality chatbot interactions can improve perceived usefulness and emotional engagement, leading to stronger behavioral intentions (Luo et al., 2019; Mariani & Borghi, 2021).

The results demonstrate that the relationship between chatbot service quality and purchase intention is largely indirect, mediated through customer experience, satisfaction, and trust. This aligns with prior research highlighting that satisfaction and trust act as critical pathways linking technology-based service encounters to consumer behavioral outcomes (Adam et al., 2021; Sivaramakrishnan et al., 2021). Furthermore, cross-platform analysis indicated that responsiveness has a stronger effect on Facebook users, while personalization plays a more significant role on LINE, reflecting contextual differences in communication expectations across social media environments.

From a managerial perspective, the findings suggest that Thai businesses should emphasize human-like responsiveness, personalized engagement, and reliability in chatbot design to enhance customer experiences and strengthen purchase intentions. Integrating emotional intelligence features, such as adaptive responses and empathetic tone, could further increase perceived humanness and user satisfaction (Mariani & Borghi, 2021; Suwunniponth, 2023). Moreover, as Thai consumers increasingly rely on social media for product discovery and transactions, optimizing chatbot performance becomes essential to sustaining competitiveness in the digital marketplace.

In conclusion, this research contributes to both academic understanding and practical strategy by demonstrating how AI-powered chatbots create value beyond automation—by fostering meaningful customer interactions that drive trust, satisfaction, and purchase intention in Thailand's rapidly evolving social commerce ecosystem. Future studies should explore longitudinal data or experimental designs to examine causal mechanisms and consider emerging platforms such as TikTok and WhatsApp for cross-cultural generalization.

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