Jurnal Manajemen dan Kewirausahaan
(JUMAWA) | ISSN (e): 3031-1195
Volume 4 No. 1 (2026)

Can Chatbots Replace Human Relationships? Conversational AI, Service Authenticity, and Customer Experience Management in Digital Services: A Narrative Review

Isma Azis Riu[1]*
Universitas Negeri Makassar
E-mail: ismaazisriu@unm.ac.id

Received	: 19 September 2026	Published	: 17 November 2026
Revised	: 22 October 2026	DOI	: https://doi.org/10.59971/jumawa.v4i1.444
Accepted	: 04 November 2026	Link Publish	: https://abadiinstitute.org/index.php/JUMAWA/article/view/444

Abstract

This narrative review examines whether conversational AI chatbots can substitute for human relationships in digital services by synthesizing recent evidence on perceived service authenticity, trust formation, and customer experience outcomes. Drawing on literature published between approximately 2020 and 2025 across experiments, surveys, qualitative studies, and conceptual papers in banking, retail, tourism, hospitality, healthcare, and customer support contexts, the review shows that customers evaluate chatbots not only by efficiency or information quality but also by empathy, warmth, humanness, and social attentiveness, which together shape perceived authenticity and relational quality. Across service settings, trust emerges as the dominant mechanism linking chatbot quality to satisfaction, loyalty, continuance intention, and brand outcomes. However, the evidence also reveals clear limits: chatbots perform best in routine, low-emotion, competence-driven tasks, while human agents outperform them in emotionally charged, complaint-oriented, privacy-sensitive, and complex interactions. The review argues that chatbots are better understood as relationship emulators than relationship replacements and that hybrid human–AI service models currently offer the most credible design for customer experience management. Managerially, firms should automate routine requests, design for authenticity and trust, and maintain transparent escalation to human agents for high-stakes encounters. Overall confidence in these conclusions is high, given strong thematic convergence across the evidence base.

Keywords: Chatbot, Service Authenticity, Trust, Customer Experience, Hybrid Human–AI Service.

INTRODUCTION

Digital services increasingly rely on conversational AI to handle customer inquiries, provide information, support transactions, and manage service recovery at scale (De Keyser et al., 2019; Huang & Rust, 2018; Larivière et al., 2017). This creates a practical and theoretical question: if chatbots become more responsive, intelligent, and socially fluent, can they replace human relationships in service settings? This question matters because service relationships are not purely functional. Customers often evaluate service encounters through trust, empathy, authenticity, rapport, and the sense that the provider understands their needs (Khan et al., 2025; Puntoni et al., 2021). In digital environments, firms can design human-like cues into chatbots, but customers may still distinguish between efficient automation and genuinely relational service (Luo et al., 2019; Puntoni et al., 2021).

This review focuses on recent evidence from 2020 to 2025 and examines six linked issues: conversational AI capabilities, perceived authenticity, trust formation, customer experience outcomes, comparisons between chatbot and human service, and the boundary conditions that limit automation (Meng et al., 2023; Larivière et al., 2017). The core argument is that chatbots can support relationship-like experiences, but they do not fully substitute for human relational value.

Two foundational ideas structure this review. First, people often apply social rules to technological agents, treating them as social entities under certain conditions (Araujo, 2018). Second, anthropomorphism and social presence help explain why human-like design, warmth, and conversational style can influence

OPEN ACCESS

customer responses to chatbots (Araujo, 2018; Go & Sundar, 2019). Within service settings, authenticity is not simply an inherent property of the chatbot. It is a customer perception formed through empathy, naturalness, responsiveness, and humanness cues (Khan et al., 2025; Meng et al., 2023). Trust then acts as a downstream mechanism translating those perceptions into satisfaction, loyalty, or continuance (Chen et al., 2023; Hsiao & Chen, 2022). This framing is important because it shifts the question from "Are chatbots human-like?" to "Under what conditions do customers experience chatbot service as authentic enough to trust?"

LITERATURE REVIEW

Conversational AI and Social Response

Foundational work indicates that users apply politeness, reciprocity, and social expectations to computers and digital agents, establishing the basis for social response to chatbots (Araujo, 2018). More recent studies show that human-like cues and interaction framing can increase social presence and humanness, which shape company attitudes, emotional connection, and satisfaction (Araujo, 2018; Go & Sundar, 2019). At the same time, disclosure that one is interacting with a chatbot can reduce purchases and make customers perceive the agent as less knowledgeable and less empathetic, showing that social response is conditional rather than automatic (Luo et al., 2019).

Perceived Authenticity, Empathy, Warmth, and Humanness

Empathy is one of the strongest predictors of perceived authenticity in chatbot-mediated service (Khan et al., 2025). In one survey, empathy was the strongest predictor of perceived authenticity, followed by humanness and warmth; authenticity then increased trust, rapport, and satisfaction (Khan et al., 2025). Warmth repeatedly appears as a key mechanism, with social-oriented communication and anthropomorphic cues increasing warmth and thereby improving satisfaction and trust-related outcomes (Janson, 2023; Xu et al., 2023). Qualitative and mixed-method evidence adds that customers define authenticity in terms of individuality, empathy, and naturalness rather than machine sophistication alone (Meng et al., 2023). Taken together, these findings suggest that authenticity is relationally constructed through interaction style rather than purely technical accuracy (Khan et al., 2025; Meng et al., 2023).

Trust Formation and Relationship Quality

Trust is the most stable pathway from chatbot quality to customer outcomes (Chen et al., 2023; Cheng et al., 2022; Hsiao & Chen, 2022; Pan et al., 2026; Syamsudin & Ratnapuri, 2024; Wut et al., 2025; Zhu et al., 2023). Communication quality, information quality, responsiveness, anthropomorphism, and problem-solving all improve trust, which then supports satisfaction, loyalty, continuance intention, and e-brand loyalty (Cheng et al., 2022; Chen et al., 2023; Hsiao & Chen, 2022; Pan et al., 2026). In relationship terms, trust matters because chatbot service quality often works indirectly rather than directly; customers reward quality when it produces confidence in the interaction (Syamsudin & Ratnapuri, 2024; Wut et al., 2025).

OPEN ACCESS

Customer Experience Outcomes

Chatbots can improve customer satisfaction, loyalty, engagement, and continuance intention through faster responses, information quality, personalization, and problem-solving (Mohamed et al., 2025; Rita et al., 2026; Zhang et al., 2026). Satisfaction strongly predicts continuance intention, while perceived value, trust, and experience mediate many brand and loyalty outcomes (Chen et al., 2023; Pan et al., 2026). However, technical efficiency alone is insufficient; emotionally intelligent communication and perceived authenticity remain important (Rita et al., 2026; Zhang et al., 2026).

Human, Chatbot, and Hybrid Service Models

Comparative studies show that human agents usually outperform chatbots on appropriateness, helpfulness, empathy, distress reduction, and complaint handling, although chatbots can match or approach human performance in uncertain or routine inquiries and in well-designed high-contingency interactions (Muriel et al., 2026; Yang et al., 2022). Hybrid models appear especially promising: disclosing human involvement in chatbot–human systems can increase trust, even if it also raises operational workload (Gnewuch et al., 2024; Ramadhani et al., 2025). This supports an augmentation logic rather than full substitution (Huang & Rust, 2018; Larivière et al., 2017).

Boundary Conditions and Risks

Chatbots underperform in complex tasks, highly emotional situations, privacy-sensitive contexts, and high-criticality failures (Kuanr et al., 2025; Lu & Min, 2025; Wang et al., 2023). They can also generate dehumanization when interactions feel cold, unpersonalized, or emotionally attenuated (Najati, 2026). Ethical risks including privacy, bias, security, misinformation, and legal issues further limit the legitimacy of chatbot-led relationship management (Davenport et al., 2020; Dwivedi et al., 2023; Puntoni et al., 2021).

Summary Table of Themes

Table 1. Summary of Themes, Recurring Findings, and Practical Implications

Theme	Recurring Finding	Typical Contexts	Practical Implication
Authenticity	Built through empathy, warmth, humanness, naturalness (Khan et al., 2025; Meng et al., 2023)	Customer service, support, retail	Design relational cues, not only efficiency
Trust	Main mediator from quality to outcomes (Chen et al., 2023; Hsiao & Chen, 2022)	Banking, e-commerce, support	Prioritize reliability, responsiveness, clarity
Anthropomorphism	Helpful when paired with intelligence/social fit; mixed otherwise (Li et al., 2024; Nguyen et al., 2023; Tsai & Chuan, 2024)	Brand chatbots, commerce, recovery	Avoid superficial humanization
Recovery	Speed, relevance, warmth, actionable replies matter (Chih et al., 2025; Marcineková et al., 2025)	Complaint handling, failure recovery	Build recovery-specific scripts and escalation
Human vs chatbot	Humans lead in emotional and complex tasks (Yang et al., 2022)	Support, complaint, advice	Reserve human agents for high-stakes cases
Ethics	Privacy, bias, disclosure, dehumanization constrain acceptance	Cross-sector	Keep transparency and human oversight

OPEN ACCESS

	(Dwivedi et al., 2023; Luo et al., 2019; Najati, 2026)

METHOD

This study uses a narrative review design because the target literature spans experiments, surveys, qualitative studies, mixed-method studies, and conceptual papers across multiple service domains, making statistical aggregation less suitable than interpretive synthesis (Davenport et al., 2020; Larivière et al., 2017). The review scope covers approximately 2020–2025 and focuses on conversational AI, chatbot authenticity, empathy, trust, customer experience, service recovery, and human–AI service models (Meng et al., 2023; Larivière et al., 2017).

Studies were grouped by six themes: relational cues and authenticity, trust formation, customer experience outcomes, service recovery, comparative service models, and contextual moderators (Araujo, 2018; Meng et al., 2023). The synthesis gives greater evidential weight to experimental studies for causal claims about empathy, anthropomorphism, and warmth because they manipulate chatbot cues directly, while surveys and qualitative studies are used to enrich contextual understanding and customer meaning-making (Janson, 2023; Khan et al., 2025; Xu et al., 2023). Because much of the literature relies on self-reported survey data, causal interpretation should remain cautious outside the experimental evidence base (Davenport et al., 2020; Xu et al., 2023).

RESULTS AND DISCUSSION

Theme 1: Authenticity and Relational Quality

The strongest recurring result is that chatbot authenticity is inferred from relational cues rather than technical competence alone (Janson, 2023; Khan et al., 2025). Empathy, warmth, humanness, and social attentiveness improve authenticity perceptions, and authenticity then increases trust, rapport, and satisfaction (Janson, 2023; Khan et al., 2025; Xu et al., 2023). This pattern appears across both experiments and surveys, with experiments offering the strongest causal evidence (Janson, 2023; Li et al., 2024; Xu et al., 2023).

Theme 2: Customer Experience Outcomes

Service quality remains a strong predictor of satisfaction and continuance intention, especially through information quality, responsiveness, system quality, and problem-solving (Pan et al., 2026; Rita et al., 2026). Yet these effects are frequently mediated by trust, perceived competence, perceived interactivity, or satisfaction itself (Chen et al., 2023; Syamsudin & Ratnapuri, 2024; Wut et al., 2025). For loyalty and brand outcomes, quality tends to work indirectly through cognitive and affective trust, value, experience, and electronic word-of-mouth (Chen et al., 2023; Pan et al., 2026).

Theme 3: Service Recovery and Complaint Handling

Recovery performance depends heavily on response relevance, warmth, speed, and actionability (Chih et al., 2025; Lin et al., 2026). A field case reported that reducing average response time by 45.9% was associated with a 14.5% increase in customer satisfaction, underscoring the operational value of speed (Marcineková et al., 2025). However, complaint tasks expose chatbot limits: human-agent recovery often outperforms chatbot self-recovery, especially after repeated failures or in emotionally charged complaints (Lu & Min, 2025).

OPEN ACCESS

Theme 4: Human versus Chatbot versus Hybrid Models

Human agents generally perform better in empathy, appropriateness, helpfulness, and emotional regulation (Yang et al., 2022). Chatbots perform relatively well in routine or uncertain inquiries, and under some conditions more empathetic chatbots can approach human evaluations (Muriel et al., 2026). Hybrid models provide the strongest balance: chatbots can deliver speed and scale, while human handoff preserves trust and supports complex recovery (Gnewuch et al., 2024; Ramadhani et al., 2025; Tyagi & Singh, 2025).

Theme 5: Contextual Moderators and Limits

Task complexity, emotional intensity, privacy sensitivity, criticality, prior experience, and culture moderate outcomes (Kuanr et al., 2025; Li et al., 2024; Lu & Min, 2025; Wang et al., 2023). Personalization can mitigate privacy concerns in embarrassing contexts, but chatbots still underperform in subjective and emotionally intense situations (Kuanr et al., 2025; Wang et al., 2023). This shows that chatbot success is conditional, not universal.

Table 2. When Chatbots Succeed, Fail, or Need Human Support

Service Condition	Likely Best Mode	Why	Evidence
Routine information request	Chatbot	Speed, consistency, low emotional demand	Mohamed et al. (2025); Okot & Jiménez (2026)
Uncertain but simple inquiry	Chatbot or hybrid	Chatbots may respond helpfully and quickly	Yang et al. (2022)
Complaint handling	Human or hybrid	Empathy, repair, convenience, trust restoration	Lu & Min (2025)
High emotional distress	Human	Better warmth, reappraisal, emotional regulation	Wang et al. (2023)
Privacy-sensitive interaction	Hybrid or human	Automation may feel embarrassing or impersonal	Kuanr et al. (2025)
High-criticality service failure	Human	Lower discomfort and brand avoidance	Kuanr et al. (2025)

Discussion

Theoretical Interpretation

The evidence supports a model in which conversational AI affects customer experience through designed relational cues, which shape perceived authenticity, which then drives trust and downstream outcomes (Khan et al., 2025; Puntoni et al., 2021). This extends social presence and trust perspectives by showing that authenticity is not reducible to anthropomorphism alone; it depends on whether social cues feel contextually appropriate and emotionally meaningful (Araujo, 2018; Li et al., 2024; Nguyen et al., 2023).

Why Human Relationships Remain Distinct

Humans remain distinct because they provide contextual judgment, flexible empathy, and emotional interpretation that chatbots only partially simulate (Lu & Min, 2025; Yang et al., 2022). This implies that chatbot relationships are best understood as functional–relational approximations rather than full social substitutes. Confidence in this proposition is moderate, as it is a synthesis across studies rather than a directly tested claim.

OPEN ACCESS

Managerial Implications

Managers should adopt a relational triage model: automate routine and low-risk requests, augment medium-complexity interactions with chatbot support, and escalate emotional, complaint-oriented, privacy-sensitive, or high-stakes cases to human agents (Gnewuch et al., 2024; Marcineková et al., 2025). Chatbot design should prioritize relevance, warmth, clarity, responsiveness, and trustworthy problem-solving over superficial humanization (Chih et al., 2025; Syamsudin & Ratnapuri, 2024). Transparent handoff protocols are especially important because hybrid disclosure can improve trust (Gnewuch et al., 2024).

Ethical and Implementation Considerations

Firms should not treat ethical issues as secondary. Privacy, bias, security, misinformation, disclosure effects, and dehumanization directly shape customer acceptance and the legitimacy of AI-led service relationships (Davenport et al., 2020; Dwivedi et al., 2023; Luo et al., 2019; Najati, 2026). Over-automation may improve efficiency while damaging relational credibility.

Future Research

Future work should prioritize longitudinal relationship development, real-world field studies, qualitative meaning-making, cross-cultural comparison, and employee-side effects of human–AI escalation models (Araujo, 2018; Larivière et al., 2017). More comparative research is also needed in high-trust sectors such as banking and healthcare.

CONCLUSION

The central conclusion is straightforward: chatbots can support relationship-like service experiences, but they do not fully replace human relationships in digital services. Their strengths lie in speed, scale, consistency, and the ability to deliver selected social cues; their limits appear in emotionally demanding, complex, complaint-oriented, and trust-sensitive interactions. The most credible service future is therefore not human replacement but hybrid customer experience management: automation for routine efficiency, paired with human escalation for empathy, judgment, and trust repair. Firms that design for authenticity, maintain transparency, and preserve human judgment at critical moments will be best positioned to deliver credible and sustainable customer experiences in increasingly automated digital service environments.

OPEN ACCESS

REFERENCES

Araujo, T. (2018). Living up to the chatbot hype: The influence of anthropomorphic design cues and communicative agency framing on conversational agent and company perceptions. *Computers in Human Behavior, 85*, 183–189. https://doi.org/10.1016/j.chb.2018.03.051

Chen, Q., Lu, Y., Gong, Y., & Xiong, J. (2023). Can AI chatbots help retain customers? Impact of AI service quality on customer loyalty. *Internet Research, 33*(6), 2219–2243. https://doi.org/10.1108/INTR-09-2021-0686

Cheng, X., Bao, Y., Zarifis, A., & Mou, J. (2022). Exploring consumers' response to text-based chatbots in e-commerce: The moderating role of task complexity and chatbot disclosure. *Internet Research, 32*(2), 496–517. https://doi.org/10.1108/INTR-08-2020-0460

Chih, W.-H., Wang, K.-Y., & Banda, H. W. (2025). Chatbots at the frontline: Unveiling antecedents of customers' willingness to accept chatbot intervention in service recovery. *Journal of Retailing and Consumer Services, 84*, 104254. https://doi.org/10.1016/j.jretconser.2025.104254

Davenport, T., Guha, A., Grewal, D., & Breßgott, T. (2020). How artificial intelligence will change the future of marketing. *Journal of the Academy of Marketing Science, 48*(1), 24–42. https://doi.org/10.1007/s11747-019-00696-0

De Keyser, A., Köcher, S., Alkire, L., Verbeeck, C., & Kandampully, J. (2019). Frontline service technology infusion: Conceptual archetypes and future research directions. *Journal of Service Management, 30*(1), 156–183. https://doi.org/10.1108/JOSM-03-2018-0082

Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., Kar, A. K., Baabdullah, A. M., Koohang, A., Raghavan, V., Ahuja, M., Albanna, H., Albashrawi, M. A., Al-Busaidi, A. S., Balakrishnan, J., Barlette, Y., Basu, S., Bose, I., Brooks, L., Buhalis, D., ... Wright, R. (2023). "So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management, 71*, 102642. https://doi.org/10.1016/j.ijinfomgt.2023.102642

Gnewuch, U., Morana, S., Hinz, O., & Maedche, A. (2024). More than a bot? The impact of disclosing human involvement on customer interactions with hybrid service agents. *Information Systems Research, 35*(3), 1054–1072. https://doi.org/10.1287/isre.2022.0152

Go, E., & Sundar, S. S. (2019). Humanizing chatbots: The effects of visual, identity and conversational cues on humanness perceptions. *Computers in Human Behavior, 97*, 304–316. https://doi.org/10.1016/j.chb.2019.01.020

Hsiao, K.-L., & Chen, C.-C. (2022). What drives continuance intention to use a food-ordering chatbot? An examination of trust and satisfaction. *Library Hi Tech, 40*(4), 1091–1110. https://doi.org/10.1108/LHT-08-2021-0274

Huang, M.-H., & Rust, R. T. (2018). Artificial intelligence in service. *Journal of Service Research, 21*(2), 155–172. https://doi.org/10.1177/1094670517752459

Janson, A. (2023). How to leverage anthropomorphism for chatbot service interfaces: The interplay of communication style and personification. *Computers in Human Behavior, 149*, 107954. https://doi.org/10.1016/j.chb.2023.107954

Khan, M. I., Tarofder, A. K., Gopinathan, S., & Haque, A. (2025). Designing authentic customer-chatbot interactions: A necessary condition analysis of emotional intelligence and anthropomorphic

OPEN ACCESS

features in human-computer interaction. *International Journal of Human-Computer Interaction*. Advance online publication. https://doi.org/10.1080/10447318.2025.2495118

Kuanr, A., Moharana, T. R., Yan, M., & El-Manstrly, D. (2025). When chatbots cause trouble: How agent type and conversation style shape consumer responses to service failures. *European Journal of Marketing, 59*(4), 892–921. https://doi.org/10.1108/EJM-08-2023-0663

Larivière, B., Bowen, D., Andreassen, T. W., Kunz, W., Sirianni, N. J., Voss, C., Wünderlich, N. V., & De Keyser, A. (2017). "Service Encounter 2.0": An investigation into the roles of technology, employees and customers. *Journal of Business Research, 79*, 238–246. https://doi.org/10.1016/j.jbusres.2017.03.008

Li, Y., Hou, R., & Tan, R. (2024). How customers respond to chatbot anthropomorphism: The mediating roles of perceived humanness and perceived persuasiveness. *European Journal of Marketing, 58*(5), 1177–1204. https://doi.org/10.1108/EJM-11-2022-0827

Lin, W.-S., Hung, H.-Y., & Maneesai, T. (2026). From frustration to satisfaction: The effectiveness of chatbot communication styles in service recovery. *Journal of Hospitality and Tourism Technology*. Advance online publication. https://doi.org/10.1108/JHTT-03-2025-0227

Lu, Z., & Min, Q. (2025). Self-recovery or human intervention? Understanding the role of task type and failure frequency in chatbot failure recovery. *Journal of Retailing and Consumer Services, 85*, 104444. https://doi.org/10.1016/j.jretconser.2025.104444

Luo, X., Tong, S., Fang, Z., & Qu, Z. (2019). Frontiers: Machines vs. humans: The impact of artificial intelligence chatbot disclosure on customer purchases. *Marketing Science, 38*(6), 937–947. https://doi.org/10.1287/mksc.2019.1192

Marcineková, K., Janáková Sujová, A., & Dürica, R. (2025). Implementing AI chatbots in customer service optimization—A case study in micro-enterprise. *Information, 16*(12), 1078. https://doi.org/10.3390/info16121078

Meng, L. M., Li, T., Shi, X. C., & Huang, X. (2023). Double-sided messages improve the acceptance of chatbots. *Annals of Tourism Research, 102*, 103644. https://doi.org/10.1016/j.annals.2023.103644

Mohamed, J. A., Mohamed, A. A., Abdulle, A. Y., & Osman, M. M. (2025). How Hormuud's WhatsApp chatbot services influence customer experience and loyalty: Using structural equation modeling. *Mathematical Modelling of Engineering Problems, 12*(9), 3421–3432. https://doi.org/10.18280/mmep.120914

Muriel, L. D. A., Silva, A. J. P., Santamaria-Ruiz, M. J., & Carrasquilla, G. C. (2026). Consumer preferences in automated customer service: A comparative case study between traditional chatbots and humanized conversational agents. *Procedia Computer Science*. Advance online publication. https://doi.org/10.1016/j.procs.2026.08.418

Najati, I. (2026). Perceived dehumanization in human–AI service encounters: A framework for understanding chatbot-mediated customer experience. *Social Sciences and Humanities Open, 13*, 103400. https://doi.org/10.1016/j.ssaho.2026.103400

Nguyen, M., Casper Ferm, L.-E., Quach, S., & Thaichon, P. (2023). Chatbots in frontline services and customer experience: An anthropomorphism perspective. *Psychology & Marketing, 40*(11), 2201–2218. https://doi.org/10.1002/mar.21882

Okot, T., & Jiménez, Y. M. S. (2026). Sustainable automation in financial services: Evaluating chatbot efficiency, equity, and experience in Costa Rica's digital transformation. *Studia Universitatis Vasile*

OPEN ACCESS

Goldis Arad, Economics Series. Advance online publication. https://doi.org/10.2478/sues-2026-0014

Pan, Z., Quan, C., Wang, X., & Yang, Q. (2026). E-commerce chatbot conversations that retain customers: The roles of communication quality and language style. *KSII Transactions on Internet and Information Systems, 20*(4), 1456–1478. https://doi.org/10.3837/tiis.2026.04.017

Puntoni, S., Reczek, R. W., Giesler, M., & Botti, S. (2021). Consumers and artificial intelligence: An experiential perspective. *Journal of Marketing, 85*(1), 131–151. https://doi.org/10.1177/0022242920953847

Ramadhani, A. P., Luhukay, D., & Lindrianasari, L. (2025). AI in customer service: The impact of human involvement disclosure on customer trust and communication style with hybrid agent services in e-commerce. In *2025 12th International Conference on Advanced Informatics: Concept, Theory and Application (ICAICTA)* (pp. 1–6). IEEE. https://doi.org/10.1109/ICAICTA67604.2025.11335112

Rita, P., Vong, C., & Correia, C. (2026). How AI-driven chatbots shape customer satisfaction and loyalty to chatbot usage in digital service experience. *Computers in Human Behavior Reports, 13*, 101017. https://doi.org/10.1016/j.chbr.2026.101017

Syamsudin, D. Q., & Ratnapuri, C. I. (2024). Analysis of the influence of trust and service quality on customer satisfaction in using AI chatbot as customer service Veronika. In *Proceedings of the 6th International Conference on Informatics, Multimedia, Cyber and Information System (ICIMCIS)* (pp. 312–317). IEEE. https://doi.org/10.1109/ICIMCIS63449.2024.10957031

Tsai, W.-H. S., & Chuan, C.-H. (2024). How effective are anthropomorphic chatbots? A study of consumer-chatbot communication in Taiwan. *International Journal of Communication, 18*, 22. https://ijoc.org/index.php/ijoc/article/view/21084

Tyagi, M., & Singh, P. (2025). AI chatbots vs human agents: A comparative study of customer engagement. In *Progressive Computational Intelligence, Information Technology and Networking* (pp. 1–8). CRC Press. https://doi.org/10.1201/9781003650010-126

Wang, C., Li, Y., Fu, W., & Jin, J. (2023). Whether to trust chatbots: Applying the event-related approach to understand consumers' emotional experiences in interactions with chatbots in e-commerce. *Journal of Retailing and Consumer Services, 73*, 103325. https://doi.org/10.1016/j.jretconser.2023.103325

Wut, T. M., Lee, S. W., Xu, J., & Kwok, M. L. J. (2025). Do trusting belief and social presence matter? Service satisfaction in using AI chatbots: Necessary condition analysis and importance-performance map analysis. *Informatics, 12*(3), 91. https://doi.org/10.3390/informatics12030091

Xu, Y., Niu, N., & Zhao, Z. (2023). Dissecting the mixed effects of human-customer service chatbot interaction on customer satisfaction: An explanation from temporal and conversational cues. *Journal of Retailing and Consumer Services, 74*, 103417. https://doi.org/10.1016/j.jretconser.2023.103417

Yang, C.-H., Yen, J.-C., & Wang, T. (2022). Human vs machine: Do customer service chatbots perform better? In *Pacific Asia Conference on Information Systems (PACIS) 2022 Proceedings*. Association for Information Systems. https://aisel.aisnet.org/pacis2022/89

Zhang, Y., Özsomer, A., Canlı, Z. G., & Baghirov, F. (2026). Artificial intelligence chatbots versus human agents in customer satisfaction: The role of warmth and competence. *Journal of Interactive Marketing*. Advance online publication. https://doi.org/10.1177/10949968251366265

CC BY OPEN ACCESS

Zhu, Y., Zhang, R. R., Zou, Y., & Jin, D. (2023). Investigating customers' responses to artificial intelligence chatbots in online travel agencies: The moderating role of product familiarity. *Journal of Hospitality and Tourism Technology, 14*(2), 224–242. https://doi.org/10.1108/JHTT-02-2022-0041

OPEN ACCESS