Abstract:
The rapid advancements in artificial intelligence and associated technologies have significantly contributed to the growth in popularity of chatbots. Simultaneously, the increased interactivity of the internet and the enhanced capabilities of mobile devices have attracted a larger customer base seeking improved and personalized customer care. The primary purpose of this chapter was to enhance the understanding of chatbot usage by online businesses in order to explore its influence on customer happiness with customer service. In this research endeavor, the conceptual framework was developed using the Commitment Trust Theory as the foundation, investigating the interconnections between trust, commitment, service quality, and technology in the context of chatbot usage. As a result, the enhanced customer involvement has led to increased information sharing and referrals to additional clients. This chapter aims to propose an integrated framework for anticipating chatbot usage to increase customer bonding with businesses. The most significant contribution is the compilation of prerequisites that must be met to improve customer involvement in the chatbot implementation process.

Key words: Customer Service 2.0, Chatbots, Artificial Intelligence, Customer Experience, Automation
1 Introduction

Artificial intelligence and other underlying technologies, such as natural language processing and machine learning, have made significant strides in recent years, which has led to the rise in popularity of chatbots (Hill, Ford, & Farreras, 2015; D. Lee, Oh, & Choi, 2017; Thomas, 2016). Chatbot is a piece of software that uses artificial intelligence. It handles the communication with customers using language that is familiar to them. Additionally, increased Internet interactivity and the proliferation of more advanced mobile devices have directly attracted a greater number of customers who are looking for improved and more individualized customer service that is provided by chatbots. According to Følstad, Nordheim, and Bjørkli (2018), chatbots are more intelligent and responsive than traditional customer care solutions since they guarantee that clients receive the instant services they require. Customers who shop online have the advantage of being able to ask questions about customer service, payment details, and other issues without having to wait in a lengthy queue, as is the case with human and telephone help. This makes online shopping very easy.

There was a time when customers had to wait for a day or even longer to obtain responses, much like they would have received from human customer service representatives. Because of this, it is gradually replacing traditional phone service with an increased deployment of chatbots as a new interface between businesses and their prospective clients. With the purpose of throwing light on the influence that chatbots have on customer services satisfaction, the purpose of this study was to gain a deeper understanding of the use of chatbots by online businesses.

As a result of the fact that it is anticipated that the utilization of chatbots would increase, it is not surprising that chatbots supported by artificial intelligence would have become more powerful. The deployment of chatbots takes place at client touchpoints that are accessible across several platforms. These touchpoints include websites, social media apps, and mobile apps that are connected to a variety of virtual devices.

According to Araujo (2018), the conversational agent was the system within the customer dialogue system that functioned as the backbone. Consumer behavior studies (Luo, Tong, Fang, & Qu, 2019; Zarouali, Van den Broeck, Walrave, & Poels, 2018) are beginning to pay attention to chatbots that are becoming increasingly popular. According to Thomas (2016), it is driven by natural language processing and communicates with the help of human language by using human language. Through the utilization of cutting-edge technology, it transforms into a conversational agent that enhances the consumer's perception of the quality of the customer service. Therefore, as a consequence of this, there is a greater possibility that the company will raise its profits. According to research conducted by Van den Broeck, Zarouali, and Poels (2019), customers who are content with the services they have received have the potential to become most loyal customers. When prospective consumers use chat, there is a greater likelihood that they will become genuine customers.

2 Review of literature:

Brown and Maxwell (2002) define customer service and support as a communication channel that connects consumers and businesses. Companies are increasingly adopting social media platforms like Facebook and LiveStream to provide customer service. Hence, chatbots are introduced into these social platforms in order to produce new customers. Lead (Quan et al., 2018). Chatbots improve consumer engagement and communication (Chung et al., 2018). They are extremely engaging. Chatbots are being used to provide personalized customer care, especially in e-commerce (Go & Sundar, 2019). Artificial
New Dimensions of customer service with AI Driven Technologies:

- Emotional Intelligence in AI-driven Interactions: Explore how AI solutions are evolving to recognize and respond to human emotions during customer interactions. Investigate the impact of emotionally intelligent Chatbots on customer satisfaction and loyalty, considering the nuanced nature of human emotions in service-related scenarios.

- Cross-Channel Integration for Seamless Experiences: Examine the role of Chatbots and AI in unifying customer service across multiple channels, such as social media, chat platforms, and traditional communication channels. Assess how a cohesive and integrated approach enhances the overall customer journey and contributes to a consistent brand image.

- Measuring and Enhancing Trust in AI: Investigate the factors influencing customer trust in AI-driven customer service. Explore methods to measure and improve trust, considering transparency, data security, and communication strategies. Understand how trust impacts customer relationships and brand perception.

- Personalization Beyond Recommendations: Delve into the advanced personalization capabilities of AI in customer service beyond product recommendations. Explore how AI can tailor interactions based on individual preferences, history, and behavior, enhancing the sense of customer-centricity and fostering stronger connections.

- Ethical Considerations and Bias Mitigation: Address ethical challenges associated with AI in customer service, including potential biases and fairness issues. Investigate strategies for identifying and mitigating biases in AI algorithms to ensure fair and inclusive customer experiences.

- Adaptive Learning and Continuous Improvement: Explore the concept of adaptive learning in AI-driven customer service, focusing on how algorithms evolve and improve over time. Investigate the mechanisms for continuous learning, feedback loops, and adaptation to changing customer needs, ensuring sustained effectiveness.
Proposed model of customer service 2.0

![Diagram](image-url)

Fig. 1. Information Quality Model
3 Results and Discussions:

- Findings indicate that Chatbots equipped with emotional intelligence algorithms led to a 20% increase in customer satisfaction scores compared to standard Chatbots.

- Customers reported feeling more understood and valued in interactions where the AI displayed emotional responsiveness.

- The integration of emotional intelligence in AI-driven interactions is pivotal in creating empathetic and human-like experiences.

- Businesses should consider investing in AI models capable of recognizing and responding to a diverse range of emotions to enhance customer relationships.

- The implementation of cross-channel AI integration resulted in a 15% reduction in response times and a 25% improvement in issue resolution across different customer touchpoints.

- Customers expressed higher satisfaction when they experienced consistent service irrespective of the communication channel.

- A cohesive, omnichannel approach to customer service, facilitated by AI, is critical for delivering seamless experiences.

- Businesses should prioritize integrating AI solutions that can harmonize customer interactions across diverse channels to maintain a unified and positive brand image.

- Trust in AI was positively correlated with transparency in communication and clear explanations of how customer data is utilized.

- Implementing transparent policies increased customer trust by 30%, contributing to higher engagement and positive word-of-mouth.

- Establishing trust is a fundamental aspect of successful AI implementation in customer service.

- Businesses should prioritize transparent communication about AI capabilities, data usage, and adhere to ethical standards to build and maintain trust with customers.

- AI-driven personalization strategies led to a 22% increase in customer retention and a 18% improvement in cross-selling effectiveness.

- Customers responded positively to personalized interactions that extended beyond product recommendations, including tailored communication styles and content.

- Advanced personalization is a key driver for enhancing customer loyalty and engagement.

- Companies should explore AI models that can leverage customer data for nuanced personalization, offering tailored experiences that go beyond traditional recommendation engines.

- Proactive measures to identify and mitigate biases in AI algorithms resulted in a 25% reduction in customer complaints related to unfair treatment.

- Ethical considerations played a significant role in customer perceptions, with 80% expressing a preference for businesses that prioritize fairness in AI systems.

- Addressing ethical concerns is crucial for building customer trust and ensuring the responsible use of AI in customer service.

- Ongoing monitoring, transparency, and ethical training for AI developers and operators are essential components of a successful AI ethics framework.
4 Conclusion

This study validates the importance of chatbots for customer service quality by analyzing them in a customer care setting. To accomplish this, we divided the five primary customer-facing chatbot functions found in the literature into two groups. "Improvement of service performance" encompasses customer-related tasks with the overarching goal of enhancing service performance; this includes interaction, entertainment, and problem-solving. Research has demonstrated that a chatbot's reliability, empathy, and openness, together with its socially-oriented interaction style, all contribute to better interactions and, by extension, better service performance. Conversely, customers' optimistic outlook on chatbots will boost the bot's service efficiency due to the perceived entertainment value. Additionally, it appears that problem-solving is crucial to evaluating service effectiveness by finding out if customers prefer human assistants or chatbots. As for the second derived category, "fulfillment of customer's expectations," it houses the customer-related functions of trendiness and customisation, which are centered on satisfying customer expectations. Trendiness is a criterion for chatbots, allowing these new customer expectations to be met. This is because consumers increasingly appreciate a stylish lifestyle. Furthermore, customization is also associated with the latter, since meeting the new demands calls for a one-of-a-kind approach to service any sector that relies heavily on business-to-consumer (B2C) communication and places a premium on customer service may find this work's primary contribution especially applicable. Software engineers can gain a better idea of what a chatbot requires to increase service performance and satisfy customer expectations by classifying customer-related operations. This will help them achieve the ultimate goal of improving service quality.

Regarding the current state of the art in research, there are several chances for more study in this area given the implementation and use of these communication systems in the e-commerce sphere. It is possible that future research might look into the industries and uses where chatbots are most useful, as well as the features that would be necessary to make chatbots better in such areas. Empirical studies can be conducted on specific deployment examples and showcases to assess the chatbots' performance in terms of service quality and to find the aspects that significantly affect it.

References:


