
Opportunities and Challenges of Technology Adoption in Customer Service in the Hotel Industry - A Conceptual Study

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ABSTRACT: The hospitality industry is facing a pervasive technological paradigm shift driven by Artificial intelligence (AI) and automatic communication tools like chatbots. This study examines the role of chatbots and technology in improving personalized guest experience and operational efficiency through literature review. Even though the chatbots improve the customer satisfaction significantly there are also challenges in this regard such as job replacement, data privacy and lacking mechanical empathy. The study concludes that achieving the sustainable digital modernisation and for being a market leader organisation must adopt the dual service framework.

KEYWORDS: Hospitality, Chatbot, Artificial intelligence, Technology, customer experience.

INTRODUCTION

The world is changing from traditional models to high tech models. In the year 2010 with the consolidation of industrial revolution 4.0. In the industrial revolution 4.0 their main motive was to improve the competence of the organisations. The main paradigm shift in the hotel industry is caused by the use of AI chatbot because they have entirely changed the way hotels interact with their customers and how they provide around the clock service for the customer and they can handle multiple queries simultaneously it also decrease the operational cost for the organisation many organisation could not adopt this new technological advance because of their integrational issues, technical factors and their constraints in adoption. But the adoption of these technologies rocketed during the COVID-19 pandemic which created demand for contactless interaction. But after the COVID-19 pandemic the reputation and the competitiveness of the hotel is being influenced by this new technological adoption.

OBJECTIVE

To study the latest technological features, opportunities and challenges in the adoption of technology.

REVIEW OF LITERATURE

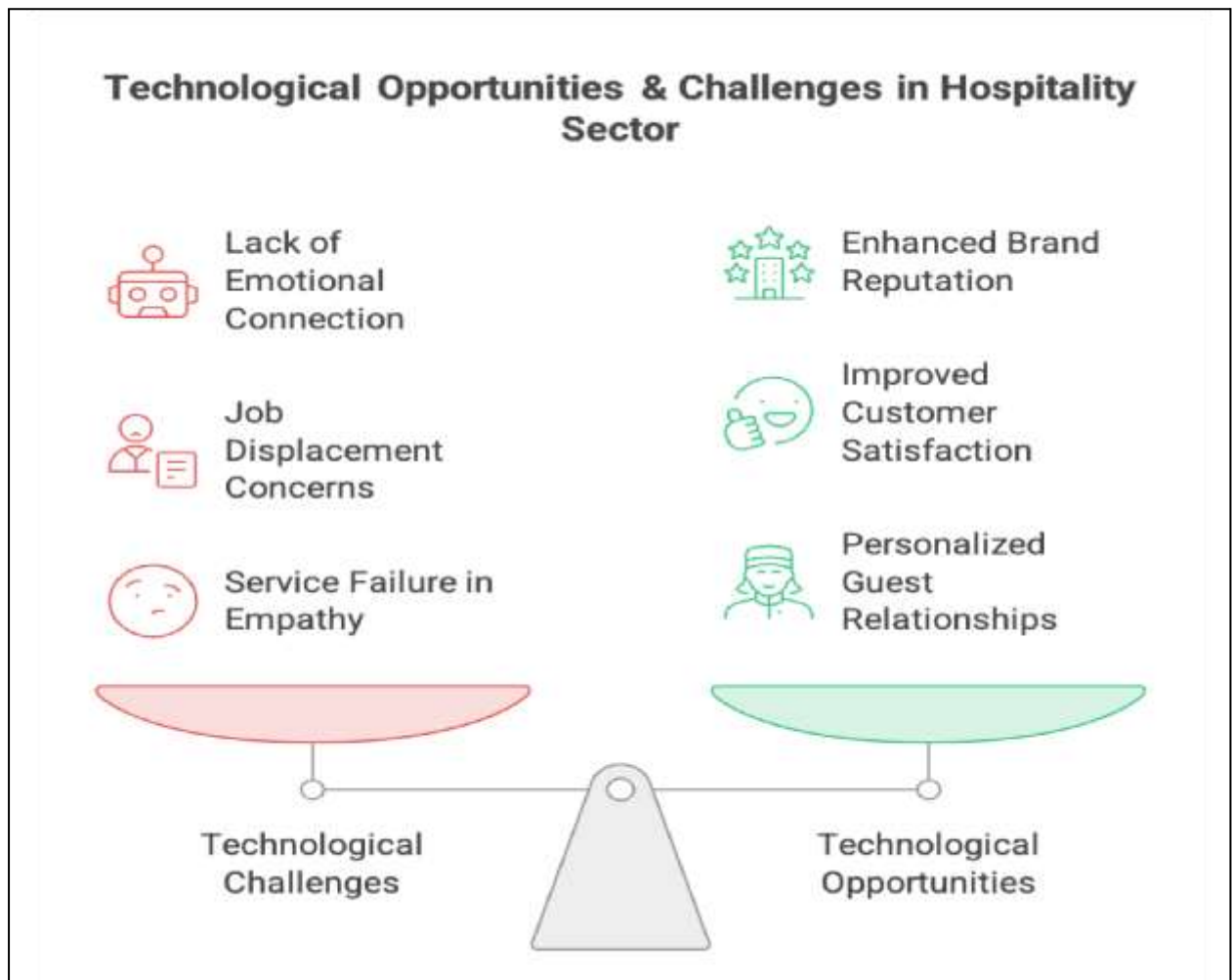
Fateh Mohd Khan et al (2023) in their study analysed the use of chatbot in hospitality and tourism in India. The sample size was found to be 164 articles as a bibliometric paper. The major research area is related to chatbot technology. The study majorly highlighted that chatbots in the hospitality sector are used widely and there is a need for further research into their application and impact on hotel services.

Diana Ponce Guevara et al (2022) in their study examined the 'Perceptions of Artificial Intelligence Service Chatbots and Brand Affection in the Hotel Industry in Australia'. This study used a qualitative case study approach and the findings highlighted that chatbot has a positive impact because of high efficiency and its ability to provide convenient services to customers.

Technological Features and Functions - An Overview

- **Embedding with the core system:** Technology such as Chatbots are used in hotel management systems, customer relationship management (CRM) and the booking platforms. These technological features help the organisations in reducing the repetitive tasks and simplifies the services provided in the hotels such as check-ins, room services and also in taking reservations for the hotel.
- **24 hours availability and immediate responses:** Chatbots provide services around the clock and address the issues immediately and give assistance all the time when the customer needs it. They also enhance trust of the customers through the features like personalisation and anonymity of the customer.

TECHNOLOGICAL CHALLENGES & OPPORTUNITIES



Source: Authors Own Conceptualization, illustrated using AI.

Technological Challenges

- **Technological limitations:** Customers can feel the lack of emotional connection. Despite the growth of AI technologies, it faces struggles bridging the gap between their competency and genuine human connection. This can be a hindrance in developing a deeper connection with the customer relationship in the hospitality sector
- **Job displacement:** Integration of AI in the hotel sector has reduced repetitive tasks such as bookings, check-ins and check-outs. Which has created a concerns about the job displacement among the industry professionals
- **Service failure:** Chatbots are not as effective in understanding the scenarios where empathy and judgements are required in such places the effectiveness of the artificial intelligence and chatbots will have a negative impact.

Technological Opportunities

- **Guest relationship:** Relationship with the customer can be enhanced by customising the replies given by the chatbot. It can be customized to reply more empathetically and that will build trust among the customers.
- **Customer satisfaction:** The implication of Artificial intelligence and chatbots have highly impacted the customer satisfaction. Providing the details of the hotels any time around the clock and immediate access to the information has provided smooth customer interaction.
- **Brand reputation:** Artificial intelligence and chatbot has helped in enhancing the brand reputation by showing innovation and care towards the customer. Personalised responses have helped the customers to have a positive experience for them. The quality of the chatbot has a direct impact on the star rated hotels around the world.

CONCLUSION

Artificial intelligence and chatbots has become an integral part of the hospitality sector. Features such as the 24- hours availability and customer relationship management (CRM) and booking platforms have improved the efficiency of the organisation and also

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has simplified the work in the organisation. Though there are a lot of opportunities present in the integration of Artificial intelligence and Chatbot there are also few limitations present in this which particularly affects the situation where empathy and judgement is needed. Therefore, the study suggests that rather than completely relying on Artificial intelligence and automation in the area of customer service the organisation can use a dual service approach for more efficiency in the organisation which will also help in the sustainable digital transformation.

REFERENCES

- 1) T. K. Vashishth, V. Sharma, M. K. Sharma, and R. Sharma, "Enhancing Hotel Customer Service with AI-Powered Chatbots," *Advances in hospitality, tourism and the services industry (AHTSI) book series*, pp. 83–114, Dec. 2024, doi: [10.4018/979-8-3693-7127-5.ch004](https://doi.org/10.4018/979-8-3693-7127-5.ch004).
- 2) C. W. Mei, R. Konar, and J. Kumar, "The Role of AI Chatbots in Transforming Guest Engagement and Marketing in Hospitality", doi: [10.4018/979-8-3693-7122-0.ch029](https://doi.org/10.4018/979-8-3693-7122-0.ch029).
- 3) "Perceptions of artificial intelligence service-chatbots and brand affection in the hotel industry in Australia," Nov. 2024, doi: [10.25439/rmt.27598122](https://doi.org/10.25439/rmt.27598122).
- 4) A. Sarkar, "The Impact of Chatbots in Enhancing Guest Experience in the Hospitality Industry in Bangalore," Apr. 2025, doi: [10.5281/zenodo.15244565](https://doi.org/10.5281/zenodo.15244565).
- 5) S. Athikkal and J. Jenq, "An Implementation of Voice Assistant for Hospitality," *Signal and image processing: an international journal*, vol. 13, no. 4, pp. 1–11, Aug. 2022, doi: [10.5121/sipij.2022.13401](https://doi.org/10.5121/sipij.2022.13401).
- 6) F. M. Khan, and M. K. Azam, "Chatbots in hospitality and tourism: a bibliometric synthesis of evidence," *Journal of the Academy of Business and Emerging Markets*, vol. 3, no. 2, pp. 29–40, Nov. 2023, doi: [10.5281/zenodo.10183134](https://doi.org/10.5281/zenodo.10183134).
- 7) D. Ponce Guevara, "Perceptions of artificial intelligence service-chatbots and brand affection in the hotel industry in Australia," Master's thesis, School of Media and Communication, RMIT University, Melbourne, Australia, 2022, doi: [10.25439/rmt.27598122](https://doi.org/10.25439/rmt.27598122).



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