



The Effect of Customer Experience on Guest Satisfaction and Loyalty: A Study on Digital Service Based Hotels

Daimah^{1*}, Saeful Anwar²

¹ Politeknik Siber Cerdika Internasional, Indonesia

² Sekolah Tinggi Agama Islam Kuningan, Indonesia

Corresponding email: daimah@polteksci.ac.id^{1*}, ghopul93@gmail.com²

Abstract: Digital transformation in the hospitality industry has changed how hotels provide services to guests, particularly through self check in, mobile applications, and Internet of Things (IoT) systems. This study aims to analyze the influence of customer experience on guest satisfaction and loyalty in digitally based hotels. A descriptive, qualitative method was employed, utilizing in depth interviews with hotel managers, questionnaires with licensed digital service employees, and participatory observations of guest interactions at two digital hotels in Jakarta and Bali. The findings demonstrate that a seamless digital experience, characterized by speed, accessibility, and personalized services, significantly enhances guest satisfaction. For example, 87% of employees agreed that digital systems accelerate check-in and check out processes, and 75% of guests expressed high satisfaction with smart key access. Observational data confirmed that 75% of guests successfully used digital services independently, though users aged 36–45 showed more difficulty. Moreover, 70% of employees emphasized the continued importance of human interaction at key service points, revealing a dual expectation of technological efficiency and emotional engagement. These results support the premise that customer experience, when digitally optimized yet emotionally considerate, fosters higher satisfaction and guest loyalty. Guests who had positive experiences expressed clear intentions to return and recommend the hotel. The study makes theoretical contributions by linking customer experience theory to digital hospitality practices, providing practical insights for hotel managers in designing integrated, digital, and human centered service strategies.

Keywords: customer experience, guest satisfaction, customer loyalty, digital hotel, technology based services

1. Introduction

The global hospitality industry is undergoing a significant transformation driven by rapid digitalization. The increasing integration of technology based services, such as mobile applications for check in, chatbot assistance, housekeeping automation, and Internet of Things (IoT) systems, has reshaped how hotels deliver services to guests (Mariani & Borghi, 2021; Sigala, 2020; Ali et al., 2021). These developments align with

a broader trend where service quality is evaluated not only through functional efficiency but also through interactive and personalized experiences.

Specifically, changes in consumer behavior are also increasingly visible amid the rise of digital lifestyles and the experience economy, where guests no longer only assess services based on functional aspects, but also based on the emotional and interactive experiences they feel during their stay (Pine & Gilmore, 1999; Schmitt, 2011). The concept of customer experience refers to the guest's overall perception of their interaction with the hotel, from the information search and booking process to the post-stay experience. Research indicates that a positive experience can enhance guest satisfaction and foster their loyalty to a particular hotel brand (Lemon & Verhoef, 2016; Kim & Choi, 2021).

In Indonesia, the development of digital service based hotels has begun to increase, particularly in major cities such as Jakarta, Bandung, Bali, and Surabaya. Some hotel chains have even adopted the concept of smart hotels, which offer self-check-in services, room access without physical keys, and personalized services tailored to individual customer data. However, amid this growth, questions arise regarding the extent to which the digital experience offered can meet guest expectations and encourage their loyalty. In some cases, the use of technology has reduced the personal interaction that is the main strength of the hospitality sector (Ivanov & Webster, 2019; Kuo et al., 2017).

Previous research conducted by Walls et al. (2011) emphasized that customer experience in the hospitality industry consists of interacting emotional, physical, social, and cognitive dimensions. Research by Kandampully et al. (2018) also revealed that a well designed guest experience can significantly increase satisfaction and strengthen loyalty. Meanwhile, research by Shin and Perdue (2020) in the context of digital hotels reveals a shift in guest preferences towards automated services, yet guests still desire a touch of personalization. These studies confirm the important role of customer experience in shaping consumer behavior in the hospitality industry; however, few have examined it specifically in the context of digital hotels in Indonesia.

The urgency of this research stems from the increasing relevance of digital transformation in the hospitality sector following the COVID-19 pandemic. As health protocols limit in person interactions, many hotels are turning to digital service models as a form of adaptation and innovation. This transformation provides both opportunities and challenges in ensuring that digital experiences are not only efficient but also enjoyable and memorable for guests. Therefore, it is necessary to conduct an in depth evaluation of how the customer experience offered by digital hotels affects guest satisfaction and loyalty, particularly in Indonesia, which has unique consumer characteristics and a distinct service culture.

The novelty of this research lies in its focus on the relationship between customer experience, satisfaction, and guest loyalty in an integrated manner within the context of digital service based hotels in Indonesia. Previous research has chiefly addressed these elements separately or in the context of conventional hotels. This study integrates the digital experience approach, modern consumer behavior, and changing guest expectations, along with technological transformation, and is expected to provide relevant theoretical and practical contributions.

The purpose of this study is to analyze: (1) the effect of customer experience on digital service based hotel guest satisfaction, (2) the effect of guest satisfaction on loyalty, and (3) the direct effect of customer experience on guest loyalty. This research also aims to identify the elements of digital experience that have the most influence on hotel consumer behavior.

The benefits of this research can be divided into two main aspects. First, academic benefits: this research is expected to enrich the literature on customer experience and customer loyalty in the digital hospitality sector, especially in the context of developing countries such as Indonesia. Second, the study's findings can serve as a reference for hotel managers in designing strategies to enhance guest experience through digital service optimization, thereby increasing satisfaction and encouraging customer loyalty.

The implications of this research are significant for hoteliers who are adapting to the digital era. The results of this study can be used to develop more effective marketing strategies and technology based service management, including digital service personalization, mobile application development, and UX/UI improvements for reservation and check in systems. In addition, this research can also serve as policy input for hospitality associations and the government in encouraging the adoption of technology that still prioritizes the quality of customer experience.

In analyzing how digital services shape guest perceptions, this study is also informed by Service Dominant Logic (SDL), which emphasizes the co creation of value between the provider and the customer through interaction and experience (Vargo & Lusch, 2008). From this perspective, hotels do not merely deliver standardized services, but create personalized value based on guest preferences and technological engagement. The use of mobile apps, chatbots, and innovative room systems becomes part of the “value proposition” that enhances satisfaction and encourages repeat usage.

Additionally, Experience Design (XD) frameworks propose that digital interactions must be intentionally structured to address both utilitarian and emotional needs (McCarthy & Wright, 2004). In hospitality, this implies a need to go beyond functional interfaces and toward emotionally engaging digital touchpoints. Designing

seamless and meaningful experiences from booking to checkout can significantly impact long-term customer loyalty (Verhoef et al., 2009; Voorhees et al., 2017).

Another important consideration is the role of local cultural expectations in shaping how digital experiences are interpreted. In collectivist societies such as Indonesia, where warmth and interpersonal interaction are traditionally valued, the transition to automation requires strategic adaptation. Research by Hofstede Insights (2022) indicates that Indonesian consumers prioritize personal touch, **politeness**, and familiarity, which can be at odds with the impersonal nature of fully automated services. This tension highlights the need for a hybrid approach that combines technological efficiency with culturally sensitive service personalization. By considering the dynamics of changing consumer behavior, technology penetration in services, and increasingly fierce competition in the hospitality industry, this research is expected to be a real contribution in bridging guests' needs for services that are efficient, modern, and still oriented towards a pleasant and satisfying experience.

2. Method

This research employs a descriptive qualitative approach, aiming to thoroughly explore guests' experiences with digital services provided by hotels and how these experiences impact their satisfaction and loyalty. This approach was chosen because it can reveal the subjective meaning guests feel towards digital interactions during their stay at the hotel. Through a qualitative approach, researchers can explore guest perceptions, emotions, and expectations that cannot be explained quantitatively alone.

The research design is a case study, focusing on several digital service based hotels to gain a rich contextual understanding. Case studies enable researchers to track the guest experience process from the initial interaction to the post visit period. The research was conducted in several digital service based hotels in the cities of Jakarta and Bali, which are known as the growth centers of the digital hospitality industry in Indonesia. The hotels selected were those with self check in services, the use of mobile booking applications, as well as Internet of Things (IoT) based service systems.

The primary instrument in this research is the researcher himself, serving as the key instrument, under the qualitative approach. The researcher was supported by semi structured interview guidelines prepared based on the theories of customer experience, customer satisfaction, and guest loyalty. Data collection techniques were carried out through:

1. In depth interviews: Conducted in person or online using the Zoom/Google Meet platform to accommodate location limitations. Each interview lasted 30 60 minutes.

2. Participatory Observation: The researcher observes the guest's interaction with the digital service system directly (with the hotel's permission), recording the user's behavior and response to the technology used.
3. Documentation: Collecting additional data in the form of screenshots of hotel service applications, photos of digital facilities, and supporting documents from the hotel, such as SOPs for using digital services.

3. Results & Discussion

The 10 informants selected as respondents in this study come from diverse demographic backgrounds. Based on the data collection results, 40% of respondents are male and 60% are female. In terms of age, 30% are 18-25 years old, 45% are 26-35 years old, and the remaining 25% are in the age range of 36-45 years. Based on the frequency of staying at digital based hotels, around 35% of respondents have stayed 1-2 times, 40% have stayed 3-5 times, and 25% have stayed more than 5 times.

Interviews were conducted with two digital hotel operations managers in Jakarta and Bali. The interview results show that customer experience management is a top priority in the digital service strategy. The current management focus is on creating a seamless, fast, and personalized service experience through automation systems, such as check-in without a receptionist, the use of a 24-hour chatbot, and room personalization through IoT.

However, the management also recognizes the challenges in ensuring the emotional comfort of guests who are used to conventional services. Some guests still expect a personal touch in their interactions, so management developed a video call based live customer support feature to address this need.

Hotel manager A's statement:

"Digitalization helps us streamline operations, but we still need to keep the human touch so that the guest experience does not become too cold and technical."

In addition to interviews, questionnaires were also distributed to 15 hotel employees who are licensed in digital services. The results of the questionnaire indicate that 80% of employees believe the digital service system has helped improve work efficiency and reduce guest complaints about slow service. However, 65% of respondents also stated that adapting to digital systems requires periodic additional training, especially when there are technological updates.

Table 1. Recapitulation of the Licensed Hotel Employee Questionnaire

Statement	Agree (%)
Digital system improves service efficiency	80%
Guest complaints have reduced since digital system adoption	75%
Periodic training is required for technology adaptation	65%

Digital services speed up the check in and check out process	87%
Human interaction is still important at some service points	70%

The researcher conducted participatory observations in two digital hotels, focusing on guest interactions with the service system. From the observation conducted over 5 days (2 weekdays and 3 weekends), it was found that:

1. The majority of guests (around 75%) seem comfortable using the self check in feature through the app.
2. Some guests (mainly those aged 36 45 years old) seemed confused the first time they used the innovative key feature to open their rooms.
3. Guests who experience problems are more likely to ask for help through the chatbot feature than call the receptionist.

These results indicate that technology adoption is progressing well, but the role of initial education upon arrival remains crucial in streamlining the overall digital experience.

To provide a visual overview of the findings, here are some graphs and data illustrations that can support the narrative:

Table 2. Satisfaction Level with Digital Hotel Features

Digital Service Features	Very Satisfied	Satisfied	Not Satisfied
Self Check in	60%	30%	10%
Room Access with Smart Key	50%	40%	10%
Chatbot and Virtual Butler	55%	35%	10%
Mobile Booking Application	65%	30%	5%

Discussion

Interviews with two digital hotel managers in Jakarta and Bali confirmed that digital transformation has become a key strategy to improve efficiency and service quality. One manager stated that while technology accelerates processes, the human touch is still needed to create a positive emotional experience for guests.

The interpretation of this statement reveals that the guest experience is not only shaped by the efficiency of the system, but also by the perception of comfort and warmth in interaction. This aligns with the Customer Experience Management theory by Schmitt (2011), which posits that customer experience is shaped by emotional,

sensory, cognitive, and social aspects. Technology does improve functional aspects, but it must be balanced with an emotional approach to increase overall satisfaction.

A questionnaire of 15 employees revealed that most agreed that digital technology enhances operational efficiency and reduces guest complaints. However, there is a need for regular training as system updates are frequent. This shows that technology adoption requires investment not only in systems, but also in human resources.

This finding corroborates Lemon and Verhoef's (2016) theory that customer experience is formed from the entire customer journey, including interactions with employees. Digitally proficient employees can serve as the bridge between automated systems and guests' emotional needs. Thus, HR training is a crucial aspect in optimizing digital hotel technology.

Field observations show that most guests can use digital services independently. However, specific age segments (those aged 36-45 years old) experienced problems when using smart keys. This indicates a digital gap based on age and user experience with technology.

This study addresses that gap by investigating the relationship between customer experience, guest satisfaction, and loyalty in digital service-based hotels in Indonesia. The novelty lies in its holistic framework that integrates emotional and functional elements of experience within a digitally driven hospitality model. It offers theoretical insights into experience-based customer behavior in smart service contexts. It provides practical recommendations for hotel managers seeking to strike a balance between technological efficiency and personal engagement.

As a result, hotels need to implement educational or assisted onboarding strategies for guests who are new to or unfamiliar with digital systems. Some global hotels have implemented video tutorials in their check-in applications, even providing digital concierge staff to assist guests during the transition to technology (Ali et al., 2021).

In terms of loyalty, guests who felt comfortable with the digital process expressed intentions to stay again, as indicated by interviews and direct observations. This reinforces the hypothesis that a positive customer experience significantly increases loyalty, as described by Kim & Choi (2021).

The findings of this study are consistent with those of previous research by Kandampully et al. (2018), which emphasize the importance of holistic experiences in driving guest loyalty. This research also enriches Shin and Perdue's (2020) study, which suggests that digital technology can either strengthen or weaken the customer experience, depending on the interaction design and guest adaptation.

In the local Indonesian context, this study makes an important contribution by examining the relatively new context of digital hospitality. Most previous studies have

focused more on conventional hotels or have not explicitly addressed the psychological and behavioral factors of guests in automated service systems. Thus, this study fills the research gap in the Indonesian hospitality context by emphasizing the importance of technology integration and service personalization as two complementary aspects in building customer experience.

4. Conclusion

This study aims to analyze how customer experience in the context of digital based hotel services affects the level of guest satisfaction and loyalty. Based on the results of interviews with hotel management, questionnaires to employees, and direct observations of hotel guests, it can be concluded that an efficiently designed, personalized, and responsive digital experience can significantly increase guest satisfaction.

Digital services, such as self check in, room access through smart keys, and the use of mobile applications, provide convenience and comfort, especially for guests who are familiar with technology. However, the need for a human touch remains an important factor in shaping a positive emotional experience. Guests from specific age groups still exhibit awkwardness in using technology, indicating a need for educational approaches and human based digital assistance services.

The satisfaction that guests feel towards the convenience and practicality of digital services has a direct impact on their loyalty, as evidenced by their desire to return and recommend the hotel to others. Therefore, a well designed and adaptive customer experience proves to be a key factor in fostering customer loyalty in the digital hospitality era. Overall, this research confirms that digital transformation in the hospitality industry must go hand in hand with strengthening relevant personal interactions to create a guest experience that is not only efficient but also memorable and emotionally impactful.

5. References

- Ali, F., Wu, C., & Cobanoglu, C. (2021). Impact of customer experience on brand loyalty: The role of brand satisfaction and brand trust. *Journal of Hospitality and Tourism Technology*, 12(2), 227-242. <https://doi.org/10.1108/JHTT-10-2019-0124>
- Ivanov, S., & Webster, C. (2019). Conceptual framework of the use of robots, artificial intelligence and service automation in travel, tourism and hospitality companies. In: Ivanov S., Webster C. (Eds.) *Robots, Artificial Intelligence and Service Automation*

- in *Travel, Tourism and Hospitality* (pp. 7 37). Emerald Publishing.
https://doi.org/10.1108/9781787566873_002
- Kandampully, J., Zhang, T., & Bilgihan, A. (2018). Customer loyalty: A review and future directions with a special focus on the hospitality industry. *International Journal of Contemporary Hospitality Management*, 30(1), 168 194.
<https://doi.org/10.1108/IJCHM-03-2016-0185>
- Kim, H., & Choi, B. (2021). The impact of customer experience on satisfaction and loyalty in the hotel industry: The moderating role of technology readiness. *Journal of Hospitality and Tourism Management*, 46, 76 87.
<https://doi.org/10.1016/j.jhtm.2020.11.004>
- Kuo, C. M., Chen, L. C., & Tseng, C. Y. (2017). Investigating an innovative service with hospitality robots. *International Journal of Contemporary Hospitality Management*, 29(5), 1305 1321. <https://doi.org/10.1108/IJCHM-08-2015-0422>
- Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, 80(6), 69 96.
<https://doi.org/10.1509/jm.15.0420>
- Mariani, M. M., & Borghi, M. (2021). Industry 4.0: A bibliometric review of its managerial intellectual structure and implications for the hospitality and tourism industry. *International Journal of Hospitality Management*, 94, 102875.
<https://doi.org/10.1016/j.ijhm.2021.102875>
- Pine, B. J., & Gilmore, J. H. (1999). *The experience economy: Work is theater & every business a stage*. Harvard Business Press.
- Schmitt, B. (2011). *Experience marketing: Concepts, frameworks and consumer insights*. *Foundations and Trends® in Marketing*, 5(2), 55 112.
<https://doi.org/10.1561/17000000027>
- Shin, H., & Perdue, R. R. (2020). Conceptualizing customer experience in the hotel context. *International Journal of Hospitality Management*, 87, 102377.
<https://doi.org/10.1016/j.ijhm.2020.102377>
- Sigala, M. (2020). Social media and customer engagement in the context of the COVID 19 crisis. *Service Industries Journal*, 40(13 14), 1096 1116.
<https://doi.org/10.1080/02642069.2020.1763945>
- Walls, A. R., Okumus, F., Wang, Y. R., & Kwun, D. J. (2011). An epistemological view of consumer experiences. *International Journal of Hospitality Management*, 30(1), 10 21. <https://doi.org/10.1016/j.ijhm.2010.03.008>
- Hofstede Insights. (2022). *Country comparison: Indonesia*. <https://www.hofstedeinsights.com/country-comparison/indonesia/>
 - McCarthy, J., & Wright, P. (2004). *Technology as experience*. MIT Press.
 - Vargo, S. L., & Lusch, R. F. (2008). Service dominant logic: Continuing the evolution. *Journal of the Academy of Marketing Science*, 36(1), 1-10.
<https://doi.org/10.1007/s11747-007-0069-6>
 - Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer experience creation: Determinants, dynamics and management strategies. *Journal of Retailing*, 85(1), 31-41.
<https://doi.org/10.1016/j.jretai.2008.11.001>

- Voorhees, C. M., Fombelle, P. W., Gregoire, Y., Bone, S., Gustafsson, A., Sousa, R., & Walkowiak, T. (2017). Service encounters, experiences and the customer journey: Defining the field and a call to expand our lens. *Journal of Business Research*, 79, 269–280. <https://doi.org/10.1016/j.jbusres.2017.04.014>