

Digital Technology – Enabled Personalized Guest Experiences and Satisfaction in Medium – Scale Accommodation Establishments in Cebu City

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Date Submitted:
March 11, 2026

Date Accepted:
April 23, 2026

Date Published:
May 26, 2026

DOI:
10.5281/zenodo.20388986

ABSTRACT

This study examined digital technology-enabled personalized guest experiences and their relationship with overall guest satisfaction in medium-scale accommodation establishments in Cebu City. Using a quantitative descriptive-correlational research design, the study involved 180 hotel guests selected through convenience sampling from five medium-scale accommodation establishments. Data were collected through a validated structured questionnaire and analyzed using frequency, percentage, weighted mean, and Pearson product-moment correlation coefficient. Results showed that guest perception of digital technology-enabled personalized experiences was rated strongly agree ($M = 3.64$), with digital technology usability receiving

the highest mean ($M = 3.69$) and personalization of guest experience receiving the lowest mean ($M = 3.59$). Overall guest satisfaction was rated very satisfied ($M = 3.62$), with service efficiency obtaining the highest mean ($M = 3.63$) and personalized services obtaining the lowest mean ($M = 3.60$). Pearson correlation analysis revealed statistically significant positive relationships between overall guest satisfaction and personalization of guest experience ($r = 0.41928$), digital technology usability ($r = 0.28614$), technology-enhanced service efficiency ($r = 0.35541$), and data privacy and trust ($r = 0.48343$), all at $p < 0.05$. The study concluded that digital technologies enhance guest satisfaction when they are usable, efficient, personalized, and trusted. The findings imply that medium-scale accommodation establishments should strengthen personalization systems, maintain user-friendly platforms, and reinforce data privacy and trust mechanisms to improve guest experiences.

Keywords: *digital technology; personalized guest experience; guest satisfaction; service efficiency; data privacy and trust; medium-scale accommodation*

INTRODUCTION

Digital transformation has reshaped hospitality operations by enabling accommodation establishments to improve service delivery, personalize guest interactions, and streamline business processes. Technologies such as online booking systems, mobile applications, contactless services, digital payment platforms, smart room features, and customer relationship management systems allow hotels to gather and use guest information to support more responsive and customized services. These developments are increasingly important because contemporary guests expect convenience, speed, personalization, and reliable digital interaction during their stay (Buhalis & Leung, 2023; Huang & Rust, 2021).

In the Philippine hospitality sector, digitalization has become an important strategy for improving competitiveness and service quality. Guests increasingly use online reservation platforms, digital feedback systems, and mobile-based services to simplify transactions and communicate with accommodation establishments. Studies in local hospitality contexts suggest that technology-supported service delivery contributes to guest convenience and satisfaction, particularly when services are efficient and responsive (Castro et al., 2023; Legaspi et al., 2023).

Cebu City provides an appropriate context for this inquiry because it is a major tourism and business destination in the Visayas region. Medium-scale accommodation establishments play a significant role in this market by offering comfortable, affordable, and technology-supported services to business and leisure travelers. However, while larger hotels and international chains often adopt advanced digital systems more rapidly, medium-scale establishments may encounter limitations in budget, infrastructure, and staff training. As a result, the extent to which digital technologies create personalized guest experiences in this segment remains an important research concern.

Previous studies have examined hospitality digitalization, smart technologies, and guest satisfaction, but many focus on large hotels, luxury properties, or general technology adoption. Limited local evidence specifically explains how guests in medium-scale accommodation establishments perceive digital technology-enabled personalization and how these perceptions relate to overall satisfaction. Addressing this gap, the present study examined guest perception in terms of personalization, digital technology usability, technology-enhanced service efficiency, and data privacy and trust, and determined their relationship with guest satisfaction in selected medium-scale accommodation establishments in Cebu City.

Literature Review

Digital Technology Adoption in Hospitality

Digital technologies are widely recognized as drivers of guest convenience, operational responsiveness, and customer engagement. Online booking platforms, contactless services, digital payment systems, mobile applications, and customer relationship management tools allow accommodation establishments to simplify service procedures and strengthen guest interaction. Buhalis and Leung (2023) described smart hospitality as an interconnected ecosystem in which technologies improve service coordination and customer value. Similarly, Kim et al. (2021) found that smart hotel technology characteristics influence guest satisfaction and behavioral intention.

Despite these benefits, the effectiveness of digital adoption depends on organizational readiness. Medium-scale hotels may use basic digital systems such as online reservations and digital payments but may have fewer resources for advanced personalization technologies. Thus, digital transformation in medium-scale accommodations should be understood not only as technology acquisition but also as the capacity to integrate technology into service processes in a way that guests perceive as useful and satisfying.

Personalized Guest Experiences

Personalized guest experience refers to tailoring services according to guests' preferences, needs, and behaviors. Technology-enabled personalization can enhance perceived value by allowing hotels to remember guest preferences, recommend relevant services, and customize interactions. Huang and Rust (2021) emphasized that artificial intelligence in service can improve customization and service responsiveness. Tussyadiah et al. (2022) similarly noted that personalized smart tourism services influence travelers' experiences by making services more relevant and meaningful.

Personalization, however, requires reliable data use and effective service translation. Digital systems may collect guest information, but satisfaction depends on whether the information is used to produce visible and meaningful service improvements. Buhalis and Sinarta (2022) argued that real-time co-creation and personalization depend on the ability of firms to collect, interpret, and apply customer

information effectively. This highlights the importance of examining whether guests actually perceive personalization in medium-scale accommodation establishments.

Digital Technology Usability and Service Efficiency

Usability refers to the extent to which guests perceive digital systems as understandable, accessible, convenient, and easy to operate. The Technology Acceptance Model suggests that perceived usefulness and ease of use shape technology acceptance, and this assumption is reflected in hospitality studies showing that easy-to-use digital systems increase positive guest perceptions (Kim et al., 2021; Choi et al., 2024).

Technology-enhanced service efficiency involves the improvement of speed, accuracy, convenience, and smoothness of service delivery through digital systems. Contactless services, online reservation systems, digital payment platforms, and service request tools reduce waiting time and improve service coordination. Ivanov and Webster (2023) emphasized that technology adoption in hospitality can enhance operational efficiency, while Li et al. (2022) found that hotel technology amenities can influence guest experience and satisfaction. These findings indicate that digital systems are valuable when they reduce friction in the guest journey.

Data Privacy and Trust

As hotels increasingly use digital systems, guests become more concerned about how their personal information is collected, stored, and protected. Data privacy and trust are therefore central to successful digital hospitality. Shin and Perdue (2022) showed that perceived security and privacy risk influence smart hotel technology adoption. Martin et al. (2021) likewise emphasized that data privacy affects customer trust and firm performance. For accommodation establishments, transparency and secure digital infrastructures are necessary because guests may resist technology-enabled personalization if they do not trust how their data will be used.

Theoretical Anchors

The study was primarily anchored on Expectation-Confirmation Theory, which explains that satisfaction occurs when actual service performance meets or exceeds prior expectations. In this study, guests evaluated whether digital technologies delivered personalized, efficient, usable, and trustworthy services. The Technology Acceptance Model supported the study by explaining how ease of use and perceived usefulness influence guests' willingness to use digital systems. The Unified Theory of Acceptance and Use of Technology further supported the inquiry by emphasizing performance expectancy, effort expectancy, social influence, and facilitating conditions as factors shaping technology use.

METHODS

Research Design

The study employed a quantitative descriptive-correlational research design. The descriptive component was used to determine the behavioral profile of the respondents, the level of guest perception of digital technology-enabled personalized experiences, and the level of overall guest satisfaction. The correlational component was used to determine whether statistically significant linear relationships existed between guest perception dimensions and overall guest satisfaction.

Research Locale

The study was conducted in selected medium-scale accommodation establishments in Cebu City, namely Cuarto Hotel, Red Planet Hotel Cebu, Pillows Hotel Cebu, Lyf Cebu City, and R Hotel Mabolo/Capitol. Cebu City was selected because it is a major urban tourism and business hub in the Philippines and because medium-scale accommodations in the city increasingly use digital systems such as online booking, mobile check-in or check-out, digital payments, and customer relationship management tools.

Participants and Sampling Technique

The respondents were 180 hotel guests who had stayed in the selected medium-scale accommodation establishments during the data collection period. Convenience sampling was used due to the temporary and mobile nature of hotel guests and the limited access to complete guest lists. Respondents were included if they were 18 years old and above, had stayed in one of the selected establishments, had used or encountered digital technology-enabled services during their stay, and voluntarily agreed to participate.

Research Instrument

The primary research instrument was a structured questionnaire adapted from related literature and previous hospitality studies and modified to fit the study context. The instrument had three sections: behavioral segmentation, guest perception of digital technology-enabled personalized experiences, and overall guest satisfaction. Section II measured personalization of guest experience, digital technology usability, technology-enhanced service efficiency, and data privacy and trust using a four-point Likert scale. Section III measured satisfaction with personalized services, use of digital technologies, and service efficiency using a four-point Likert scale. The instrument was validated by experts in hospitality management and research methodology. Pilot testing with 30 respondents produced Cronbach's alpha values of 0.884 for Section II and 0.889 for Section III, indicating high internal consistency.

Data Gathering Procedure

Before data collection, the researchers prepared the questionnaire, secured content validation, conducted pilot testing, and requested permission from the management of the selected establishments. After approval, questionnaires were distributed to eligible guests during or immediately after their stay. Respondents were informed of the study purpose, voluntary participation, confidentiality of responses, and their right to withdraw. Completed responses were reviewed for completeness, coded, and prepared for statistical analysis.

Data Analysis

Frequency and percentage were used to describe the behavioral profile of the respondents. Mean and weighted mean were used to determine the level of guest perception and overall satisfaction. Pearson product-moment correlation coefficient was used to determine the strength and direction of the relationships between the four guest perception dimensions and overall guest satisfaction. Statistical decisions were made at the 0.05 level of significance.

Ethical Consideration

The study observed voluntary participation, informed consent, confidentiality, and privacy of responses. No cash payments or rewards were provided to participants. The researchers declared no conflict of interest, and all collected data were used solely for academic purposes. Respondents were treated with respect, fairness, and dignity throughout the conduct of the study.

RESULTS AND DISCUSSION

Behavioral Profile of the Respondents

Table 1 shows that most respondents were repeat guests who had stayed 2-3 times (31.1%), followed by those who had stayed more than five times (27.2%), first-time guests (23.3%), and those who had stayed 4-5 times (18.3%). The majority stayed for 1-2 nights (55.0%), indicating that short-term stays were most common. Most respondents availed hotel accommodations (93.3%), while online booking systems were the most frequently used digital technology (46.7%). These findings indicate that digital engagement in medium-scale accommodation establishments was concentrated mainly at the booking stage rather than in advanced in-property technologies.

Table 1. Behavioral profile of the respondents (n = 180)

Variable	Category	f	%
Number of times stayed	First time	42	23.3
	2-3 times	56	31.1
	4-5 times	32	18.3
	More than 5 times	49	27.2
	Length of stay	1-2 nights	99
Length of stay	3-5 nights	55	30.6
	More than 5 nights	26	14.4
	Type of accommodation availed	Hotel	168
Type of accommodation availed	Resort	7	3.9
	Hostel	4	2.2
	Pension	1	0.6
	Digital technology used	Online booking system	84
Digital technology used	Mobile check-in and check-out	13	7.2
	Digital room key	24	13.3
	Free high-speed Wi-Fi	17	9.4
	In-room smart TV	14	7.8
	Digital payment	28	15.6

Guest Perception of Digital Technology-Enabled Personalized Experiences

Table 2 summarizes the level of guest perception on digital technology-enabled personalized experiences. The aggregate mean was 3.64, interpreted as strongly agree. Among the four dimensions, digital technology usability obtained the highest factor mean (M = 3.69), suggesting that guests perceived the digital systems as easy to understand, user-friendly, and comfortable to use. Personalization of guest experience obtained the lowest factor mean (M = 3.59), indicating that although guests perceived personalization positively, this was the least developed dimension compared with usability, service efficiency, and data privacy and trust.

The result suggests that medium-scale accommodation establishments in Cebu City have already established user-friendly digital service systems, but deeper personalization remains an area for improvement. This finding aligns with studies showing that usability is often achieved before advanced personalization because personalization requires stronger data integration and service customization capabilities (Buhalis & Sinarta, 2022; Choi et al., 2024).

Table 2. Guest perception on digital technology-enabled personalized experiences

Dimension	Mean	SD	Description
Personalization of guest experience	3.59	0.43891	Strongly Agree
Digital technology usability	3.69	0.38369	Strongly Agree
Technology-enhanced service efficiency	3.66	0.38442	Strongly Agree
Data privacy and trust	3.62	0.40593	Strongly Agree
Aggregate Mean	3.64	0.04414	Strongly Agree

Overall, Guest Satisfaction with Digital Technology-Enabled Personalized Experiences

Table 3 shows that overall guest satisfaction was rated very satisfied, with an aggregate mean of 3.62. Among the satisfaction dimensions, service efficiency obtained the highest mean (M = 3.63), followed closely by use of digital technologies (M = 3.62) and personalized services (M = 3.60). These results show

that guests were generally satisfied with digital technology-enabled personalized experiences, but they valued efficiency and convenience slightly more than personalized service features.

This finding supports Expectation-Confirmation Theory because guests reported high satisfaction when digital systems met expectations for convenience, smooth transactions, and efficient service delivery. It also suggests that in medium-scale establishments, the most visible contribution of digital technology may be operational convenience rather than advanced personalization.

Table 3. *Overall guest satisfaction with digital technology-enabled personalized experiences*

Dimension	Mean	SD	Description
Personalized services	3.60	0.45218	Very Satisfied
Use of digital technologies	3.62	0.45325	Very Satisfied
Service efficiency	3.63	0.39292	Very Satisfied
Aggregate Mean	3.62	0.01528	Very Satisfied

Relationship Between Guest Perception and Overall, Guest Satisfaction

Table 4 presents the Pearson correlation results. All four guest perception dimensions showed statistically significant positive relationships with overall guest satisfaction, leading to the rejection of the null hypotheses. Data privacy and trust had the strongest correlation with overall guest satisfaction ($r = 0.48343$, $p = 6.24167E-12$), followed by personalization of guest experience ($r = 0.41928$, $p = 4.67832E-9$), technology-enhanced service efficiency ($r = 0.35541$, $p = 9.78183E-7$), and digital technology usability ($r = 0.28614$, $p = 0.00010$).

The results indicate that guests' satisfaction increases when they perceive digital systems as secure, trustworthy, personalized, efficient, and usable. The strongest association with data privacy and trust suggests that guests value confidence in data protection even more than convenience alone. This finding supports hospitality technology literature emphasizing that privacy, security, and trust are critical in encouraging positive digital service experiences (Martin et al., 2021; Shin & Perdue, 2022). The comparatively weaker relationship between usability and satisfaction suggests that ease of use is necessary but not sufficient; guest satisfaction is strengthened further when digital services are trustworthy and meaningfully personalized.

Table 4. *Pearson correlation between guest perception dimensions and overall guest satisfaction*

Pair of Variables	r	p-value	Decision
Personalization of guest experience and overall guest satisfaction	0.41928	4.67832E-9	Reject H0
Digital technology usability and overall guest satisfaction	0.28614	0.00010	Reject H0
Technology-enhanced service efficiency and overall guest satisfaction	0.35541	9.78183E-7	Reject H0
Data privacy and trust and overall guest satisfaction	0.48343	6.24167E-12	Reject H0

Proposed Usability Enhancement Framework

Based on the findings, the study proposed a framework for improving technology-driven personalized guest experiences in medium-scale accommodation establishments. The framework emphasizes strengthening personalization, reinforcing data privacy and security, maintaining service efficiency, ensuring user-friendly digital systems, and training hospitality staff to support guests in digital service interactions.

Table 5. *Proposed enhancement framework for digital technology-enabled personalized guest experiences*

Focus Area	Recommended Action	Expected Outcome
Personalized guest services	Use CRM systems and guest data analytics to record preferences, booking history, and service needs.	More individualized and meaningful guest experiences.
Data privacy and trust	Provide transparent data privacy notices and strengthen secure digital transactions.	Greater guest confidence in technology-enabled services.
Technology-supported service efficiency	Maintain and upgrade online reservation, digital payment, and contactless service systems.	Faster, smoother, and more reliable service delivery.
Digital usability	Simplify interfaces, provide clear instructions, and ensure responsive technical assistance.	Improved ease of use for guests with different levels of digital familiarity.
Staff digital competence	Conduct continuous staff training on digital hospitality operations, guest assistance, and privacy practices.	Better guest support and more consistent service quality.

CONCLUSION

The study concluded that guests in selected medium-scale accommodation establishments in Cebu City perceived digital technology-enabled personalized experiences positively and were very satisfied with these services. Digital technology usability emerged as the strongest perception dimension, showing that guests found the systems easy to understand and use. However, personalization of guest experience received the lowest perception mean, suggesting that medium-scale establishments need to strengthen their ability to provide more customized and individualized service interactions.

The study further concluded that all dimensions of digital technology-enabled personalized experiences were significantly related to overall guest satisfaction. Data privacy and trust had the strongest relationship with satisfaction, indicating that guests place high value on secure and trustworthy digital systems. Overall, the findings demonstrate that digital technologies contribute to guest satisfaction not only through convenience and efficiency but also through personalization, transparency, and confidence in data protection.

Recommendations

Medium-scale accommodation establishments in Cebu City should strengthen personalized guest services by improving the use of customer relationship management systems, guest preference records, and data analytics. Hotels may provide customized room preferences, personalized recommendations, and tailored guest interactions based on previous stays and booking behavior.

Accommodation establishments should also enhance data privacy and security measures because data privacy and trust showed the strongest relationship with guest satisfaction. Clear data privacy policies, secure online transactions, and transparent explanations of how guest information is collected and protected should be provided to strengthen trust.

Hotel managers should maintain and upgrade digital systems that improve service efficiency, including online reservation platforms, digital payment systems, contactless service processes, and digital service request tools. These systems should be regularly monitored to minimize technical issues and maintain smooth service delivery.

Digital systems should remain user-friendly and accessible. Clear instructions, simplified interfaces, and available technical assistance should be provided for guests with varying levels of

technology familiarity. Hotel personnel should also receive continuous training on digital hospitality operations, customer assistance, and data privacy practices.

Future researchers may conduct similar studies using larger samples, different hospitality sectors, or mixed-method and longitudinal designs. Additional variables such as artificial intelligence, customer loyalty, service quality, pricing, physical amenities, and brand reputation may also be explored to provide a broader understanding of digital hospitality experiences.

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