KIOSK TECHNOLOGY ADOPTION IN HOSPITALITY AND ITS INFLUENCE ON GUEST SATISFACTION IN PENANG

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Abstract. This study examines how kiosk technology adoption influences guest satisfaction in Penang's hospitality industry, focusing on the usability, reliability, and perceived usefulness of self-check-in kiosks. Using a quantitative survey of 202 hotel guests, the study finds that clarity of kiosk instructions, consistency of the check-in process, and simplicity of registration significantly predict guest satisfaction, with technology adoption explaining approximately 51.7% of the variance in outcomes. These findings confirm that well-implemented kiosk technology strengthens guest trust, loyalty, and positive word-of-mouth, positioning hotels for stronger competitive advantage. The study concludes that continued investment in self-service check-in, smart room controls, and reliable connectivity is essential for meeting evolving guest expectations. It recommends that hotels prioritize kiosk usability, maintain consistent system performance, communicate data security measures clearly, and integrate kiosk technology with broader digital touchpoints across the guest journey. Future research should extend data collection across multiple hotels to strengthen generalizability of these findings.
Keywords: *kiosk, technology adoption, guest satisfaction, hotels*

Introduction

The hospitality industry has built its reputation on customer satisfaction and quality service delivery (Shin and Jeong, 2020), and digital technology has become central to meeting evolving guest expectations. Artificial intelligence has been identified as a key innovation driver in the sector (Tavitiyaman et al., 2020), enabling a more customer-centered approach as client motivation becomes an increasing priority (Sun et al., 2020). Guests increasingly book through digital channels email, mobile applications, and online platforms, reflecting the sector's broader shift toward contactless, technology-enabled service (Wong et al., 2020; Liu et al., 2019). Malaysia's hospitality industry generated nearly RM4 billion through digital channels, within a global hotel market valued at approximately RM898.56 billion as of 2022 (Anguera-Torrell et al., 2020). Technology has also reshaped the guest journey beyond check-in: pre-visit bookings, digital payments, and personalized service now feature strongly in guest expectations (Shin and Jeong, 2020; Lee et al., 2020), with 86% of customers reporting that personalized service strongly influences satisfaction and purchase decisions (Huang and Philp, 2021). Big data further supports this personalization: by analyzing guest history and preferences, hospitality companies can anticipate individual needs from room temperature to dietary requirements and refine promotional strategies accordingly (Ciftci et al., 2021; Nam et al., 2020).

Malaysia's hospitality and tourism sector represents a substantial component of the national economy, with the broader tourism industry contributing 14.9% to Malaysia's GDP in 2023 (Department of Statistics Malaysia [DOSM], 2024). Within this sector, hotels have faced mounting pressure to adopt digital technologies, a trend that accelerated sharply following the COVID-19 pandemic, when many hotels turned to contactless and digitally mediated service delivery to comply with public health measures and maintain operations amid reduced staffing and shifting guest expectations (Anguera-Torrell et al., 2020). This period of enforced digital transition has left a lasting mark on the industry, embedding technologies such as self-service kiosks, mobile check-in, and automated guest services more permanently into standard hotel operations well beyond the immediate crisis that first necessitated them.

At the guest level, Malaysian consumers have shown a growing preference for digitally mediated hospitality services, with recent research indicating that affordability and convenience are key drivers of hotel booking decisions within the Malaysian market (Rosli et al., 2025). This preference for accessible, low-friction service extends into the in-stay experience, where consistent, high-quality service delivery has been shown to significantly drive customer loyalty in the Malaysian service industry more broadly (Pérez-Morón et al., 2022). However, technology-mediated services also carry risk: when online or self-service systems fail to perform as guests expect, the resulting loss of trust can quickly translate into negative word-of-mouth and reduced loyalty, a dynamic documented across online travel and booking channels (Manu and Sreejesh, 2024). Despite this growing body of evidence on hotel technology adoption at the national level, comparatively little research has focused specifically on kiosk technology as a guest-facing tool within Malaysia's hospitality industry, and even less within Penang, a UNESCO World Heritage city and one of Malaysia's most visited tourist destinations. Given Penang's reliance on tourism and its comparatively concentrated hotel market, understanding how kiosk technology adoption shapes guest satisfaction in this specific context offers both practical value for local hotel operators and a contribution to the broader literature on self-service technology in emerging Southeast Asian hospitality markets.

Literature review

Technology adoption in the hotel industry

Technology adoption in the hotel industry has accelerated across multiple fronts, driven by both guest expectations and operational necessity. The adoption of artificial intelligence and robotics, including self-service kiosks and robot concierge systems, has become a central focus of hospitality innovation, as hotels seek to automate routine guest interactions while maintaining service quality (Nam et al., 2020; Shin and Jeong, 2020). This shift has been particularly pronounced in self-service technologies, with research in the Chinese hotel market showing that adoption is shaped by a combination of guest readiness and hotel-level implementation factors (Liu et al., 2019). At the organizational level, however, technology adoption is not solely a guest-facing decision: hotel employees' acceptance of new systems is itself shaped by cultural values, meaning that successful implementation depends as much on internal buy-in as on external demand (Sun et al., 2020). Mobile technology adoption has followed a similar pattern, with hotel managers navigating both opportunities for efficiency and challenges around staff training, system integration, and guest trust (Han et al., 2021). The COVID-19

pandemic further accelerated this transition, pushing hotels toward contactless and digitally mediated service as an operational response to public health measures, embedding many of these technologies more permanently into standard hotel operations (Anguera-Torrell et al., 2020).

Beyond adoption itself, the literature points to both the benefits and risks that come with hotel technology use. When implemented effectively, technology has been linked to improved service quality and productivity (Han et al., 2021), stronger guest satisfaction and loyalty (Tai et al., 2021), and more personalized guest experiences enabled by big data analytics and online quality ratings (Ciftci et al., 2021; Shamim et al., 2021). Tourists' willingness to adopt hotel technology is also shaped by individual differences, such as prior experience and education level, suggesting that adoption outcomes are not uniform across guest segments (Tavitiyaman et al., 2020). At the same time, technology adoption carries risk: when AI-based services fail to meet guest expectations, the resulting breakdown in guest trust can lead to negative word-of-mouth, undermining the very loyalty that well-implemented technology is meant to build (Huang and Philp, 2021). This tension underscores why broader managerial and technological innovation strategies in tourism emphasize not just adopting new systems, but managing their implementation carefully to sustain guest confidence over time (Das, 2023; Giotis and Papadionysiou, 2022).

Technology influence on guest satisfaction

A growing body of research has examined how hotel technology directly shapes guest satisfaction outcomes. Guests' evaluations of technology-enabled services are strongly influenced by expectation-based processes: satisfaction tends to follow when technology performance confirms or exceeds prior expectations, a pattern consistent with the broader logic of Expectation Confirmation Theory as applied to online reviews and IS continuance behavior (Lee and Kim, 2020; Mamun et al., 2020). In the hotel context specifically, guests' intentions to adopt technologies such as robot concierge services are shaped by how well these systems are perceived to meet functional and emotional needs during the guest journey, with satisfaction closely tied to perceived ease of use and reliability (Shin and Jeong, 2020). Similarly, research on online travel agent platforms has shown that technology-mediated touchpoints from booking through to in-stay service play a measurable role in shaping overall guest satisfaction with hotel providers, extending the influence of technology beyond the property itself into the wider digital booking ecosystem (Wong et al., 2020). Factors such as responsiveness, consistency, and personalization delivered through technology have also been identified as key influences on how satisfied guests feel with their overall hotel experience (Lee et al., 2020).

When well-implemented, technology has been shown to generate satisfaction benefits that extend into loyalty and advocacy. Studies on service innovation indicate that both technology-based and human-delivered service improvements enhance customer satisfaction, delight, and loyalty in hospitality settings, suggesting that technology's influence on satisfaction is strongest when paired with, rather than substituted for, quality human service (Tai et al., 2021). Big data-driven personalization and online quality ratings further reinforce this relationship, as hotels that effectively leverage guest data to anticipate needs tend to see stronger satisfaction outcomes and more favorable customer-generated reviews (Shamim et al., 2021). Broader innovation strategies in tourism encompassing both managerial and technological dimensions have

similarly been linked to improved guest experience outcomes when implementation is approached strategically rather than piecemeal (Das, 2023; Giotis and Papadionysiou, 2022). However, this influence is not unconditional: when AI-based or self-service technologies fail to perform as expected, the resulting breakdown in guest trust can just as easily produce dissatisfaction and negative word-of-mouth, underscoring that technology's effect on guest satisfaction is contingent on consistent, reliable execution rather than adoption alone (Huang and Philp, 2021).

While a substantial body of research has examined technology adoption in the hotel industry, most existing studies have focused on hotel technology adoption at a broad or aggregate level encompassing artificial intelligence, robotics, and mobile applications collectively rather than isolating kiosk-based self-service technology as a distinct object of study (Han et al., 2021; Nam et al., 2020; Shin and Jeong, 2020). Similarly, studies on self-service technology adoption have largely been conducted in markets such as China (Liu et al., 2019), leaving comparatively limited empirical evidence on how these dynamics unfold within Southeast Asian hospitality markets, and Malaysia specifically. Where Malaysian hospitality research does exist, it tends to center on booking behavior and service quality more broadly (Rosli et al., 2025; Pérez-Morón et al., 2022) rather than on guest-facing technology adoption within the hotel itself.

Furthermore, although Expectation Confirmation Theory has been applied to explain satisfaction outcomes in online reviews and information systems continuance (Lee and Kim, 2020; Mamun et al., 2020), and to robot concierge adoption specifically (Shin and Jeong, 2020), few studies have used this theoretical lens to examine kiosk technology adoption as a distinct guest-facing intervention. Existing research has also tended to treat technology adoption and guest satisfaction as directly linked, with limited attention to the mediating role of confirmed expectations, or to guest loyalty and word-of-mouth as distinct downstream outcomes (Huang and Philp, 2021; Tai et al., 2021). Finally, no study to date has specifically examined kiosk technology adoption within Penang's hospitality industry, a UNESCO World Heritage city with a tourism-dependent economy and a comparatively concentrated hotel market. This study addresses these gaps by examining kiosk technology adoption as a distinct construct, grounded in Expectation Confirmation Theory, within the specific context of Penang's hotel industry.

Theoretical framework

This study is grounded in Expectation Confirmation Theory (ECT), originally proposed by Oliver (1980), which explains how expectations toward a product or service shape subsequent attitudes and purchase intentions (Lee and Kim, 2020). Guests evaluate hotel kiosk technology against their prior expectations; when performance confirms or exceeds those expectations, satisfaction follows. The theory implies that hospitality companies should adopt ethical, transparent communication about their services to build long-term guest trust and loyalty (Meira and Hancer, 2021; Mamun et al., 2020), often through digital channels such as apps, websites, and social media that keep guests informed in real time. Prior research further distinguishes between macro-models, which compare service performance across an organization's broader offerings, and micro-models, which examine specific dimensions of guest satisfaction in more granular detail. Together, these frameworks provide the theoretical basis for examining how kiosk technology adoption shapes guest satisfaction in Penang's hospitality industry.

Research framework

Building on Expectation Confirmation Theory, this study proposes a framework in which kiosk technology adoption, comprising ease of use, reliability, and responsiveness, and perceived usefulness, shapes guests' confirmed expectations, which in turn influence guest satisfaction and, subsequently, guest loyalty and positive word-of-mouth. *Figure 1* illustrates this framework and the hypothesized relationships. Based on this framework, the following hypotheses are proposed: (H1): Kiosk technology adoption is positively associated with guests' confirmed expectations (trust) regarding hotel technology; (H1a): Ease of use of the kiosk system is positively associated with confirmed expectations; (H1b): Reliability and responsiveness of the kiosk system are positively associated with confirmed expectations; (H1c): Perceived usefulness of the kiosk system is positively associated with confirmed expectations; (H2): Guests' confirmed expectations are positively associated with guest satisfaction; (H3): Guest satisfaction is positively associated with guest loyalty and positive word-of-mouth.

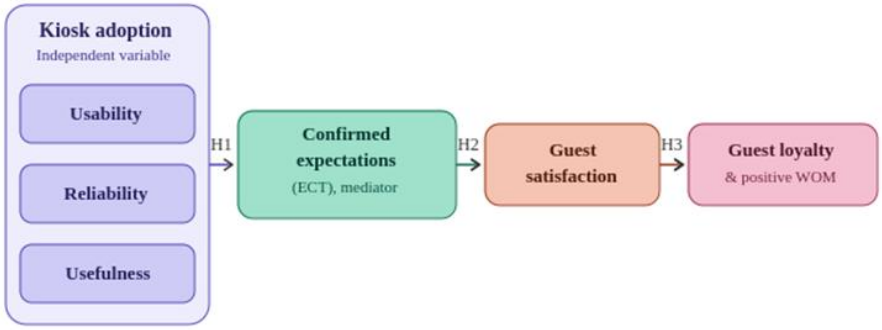


Figure 1. *Proposed research framework.*

Materials and Methods

This study adopts a positivist philosophy combined with a deductive approach, applying existing theoretical frameworks to examine how kiosk technology adoption shapes guest satisfaction in Penang's hospitality sector. In this study, stratified sampling was employed. The sample was specifically chosen to include respondents who had direct, first-hand experience using the hotel's self-check-in kiosk technology. Stratified sampling allowed guests with the required experience to be deliberately targeted rather than drawing from the general hotel guest population indiscriminately. Before participation, respondents were screened with a filter question confirming whether they had personally used the hotel's self-check-in kiosk, and only those who met this criterion were invited to complete the full survey. Data were collected using a structured survey with a 5-point Likert scale, distributed to guests at Sunway Hotel Georgetown Penang for over 10 days. A total of 390 responses were successfully collected, however, only 202 (51.7%) were selected for analysis after excluding respondents who had not experienced using hotel's kiosk. The data were analyzed using SPSS (Statistical Package for the Social Sciences) to conduct descriptive, relationship, and regression analyses. The confidentiality of respondents was maintained throughout the research process.

Results and Discussion

Descriptive, correlation, and regression analyses were used to examine guest responses across demographic profile, expectations, and perceived performance of kiosk technology. Overall, guest expectations were consistently high across check-in, customization, and communication. As *Table 1* shows, mean scores across all items exceeded 4.4 on a 5-point scale, with low standard deviations, indicating that guests were consistently satisfied with the hotel's kiosk technology. This supports the view that technology adoption plays a crucial role in improving service delivery in hospitality (Tai et al., 2021). Guests highlighted the ease of interacting with digital interfaces and the ability to customize their experience through automated systems, both of which positively shaped their perception of service quality. Reliable kiosk performance, accurate processing, prompt assistance, and quick issue resolution further contributed to guest trust and a smoother overall journey. The regression model, presented in *Table 2*, was statistically significant, $R = .714$, $R^2 = .510$, $F(7, 194) = 28.824$, $p < .001$, indicating that kiosk technology adoption explains approximately 51% of the variance in guest satisfaction outcomes. Among the individual predictors, clarity of kiosk instructions, consistency of the check-in process, and simplicity of registration emerged as the strongest significant contributors ($p < .001$ to $p = .047$), while overall guest satisfaction and technology adoption were positively correlated ($r = .78$). These results reinforce the importance of technological implementation in hospitality operations (Giotis & Papadionysiou, 2022a): features such as mobile check-in, smart room controls, and high-speed internet contribute meaningfully to guest satisfaction by making services faster and more tailored to guest expectations.

Table 1. *The items and descriptive analyses*.

Survey item	N	Mean	SD
Self-check-in kiosk instructions are clear and understandable	202	4.50	.818
Self-check-in kiosk makes the registration process simpler	202	4.42	.896
The check-in process was consistent	202	4.49	.812
I received a prompt response to my requests from the kiosk	202	4.43	.784
The kiosk quickly resolved problems that I encountered	202	4.49	.836
I like to check in at hotels through a self-service kiosk	202	4.50	.818
Self-service kiosks are the clearest, best option for check-in	202	4.42	.855
I would say positive things about kiosk check-in to others	202	4.48	.812
Electronic transactions should be confirmed later in writing	202	4.49	.774
I do not feel confident doing business with an online-only place	202	4.57	.765
I do not consider it safe to give a credit card number online	202	4.45	.846

Table 2. *Regression model summary*.

R	R^2	Adj. R^2	F	df	Sig.
.714	.510	.492	28.824	7, 194	< .001

The confirmatory analysis suggests that guests' expectations were consistently matched or exceeded by kiosk technology performance, particularly with respect to mobile applications, smart room controls, and high-speed internet connectivity (Shamim et al., 2021). This supports the hypothesized positive association between technology adoption and guest satisfaction, consistent with prior literature indicating that technology improves guest satisfaction by delivering more convenient, individualized service (Tai et al., 2021). As hotels adopt more advanced technologies, guests are expected to complain less, remain more loyal, and provide the hotel with a stronger competitive edge. For Penang's hospitality industry specifically, these findings imply that continued investment in mobile check-in, smart room controls, and reliable internet

connectivity is important for sustaining and improving guest satisfaction (Pérez-Morón et al., 2022). This is consistent with research emphasizing that superior technology improves both service quality and productivity (Han et al., 2021), and that guests exposed to well-implemented, user-friendly technology tend to report higher satisfaction when performance exceeds their expectations (Das, 2023). Hotel managers should therefore continue to incorporate and test advanced technologies in their operations, while pairing this investment with clear guest communication, to strengthen loyalty, improve reviews, and secure a stronger competitive position in the market.

Taken together, these findings align closely with the literature reviewed in this study. The consistently high mean scores across kiosk-related items, coupled with the significant regression model explaining 51% of the variance in guest satisfaction, support the study's grounding in Expectation Confirmation Theory: guests' confirmation of their expectations regarding kiosk usability, reliability, and usefulness appears to translate directly into satisfaction, consistent with Lee and Kim (2020) and Mamun et al. (2020) application of ECT to technology-mediated service contexts. The prominence of instruction clarity and process consistency as significant predictors also mirrors earlier findings on self-service technology adoption, which identified guest readiness and system usability as central determinants of successful implementation (Liu et al., 2019). Similarly, the positive correlation between kiosk technology and guest satisfaction reinforces prior evidence that well-implemented hotel technology enhances both service quality and guest loyalty (Han et al., 2021; Tai et al., 2021), while the emphasis guests placed on trust-related items such as confidence in online transactions echoes earlier concerns in the literature that technology-mediated services carry inherent risk when guest trust is not adequately addressed (Huang and Philp, 2021). Collectively, these results extend the existing literature by demonstrating that these previously identified adoption and satisfaction dynamics hold specifically within the context of kiosk technology in Penang's hotel industry, a setting that had not been directly examined in prior research.

Based on the findings of this study, several recommendations are proposed for hotel operators in Penang's hospitality industry. First, hotels should prioritize the usability of self-check-in kiosks, since clarity of instructions and simplicity of registration were among the strongest predictors of guest satisfaction. This can be achieved through intuitive interface design, multilingual support given Penang's diverse international visitor base, and visual step-by-step prompts that reduce guest uncertainty during check-in. Second, consistency and reliability of kiosk performance should be treated as an operational priority rather than a one-time implementation task. Regular system maintenance, prompt technical support, and contingency staffing (e.g., front-desk personnel available to assist when a kiosk malfunctions) would help sustain the high satisfaction levels observed in this study and prevent isolated failures from undermining guest trust. Third, given that guests expressed some hesitancy around online transactions and credit card security, hotels should communicate their data protection and payment security measures more visibly at the point of use, for instance, clear signage or on-screen assurances during the kiosk transaction, to reduce perceived risk and strengthen confirmed expectations. Fourth, since mobile check-in, smart room controls, and high-speed internet connectivity were associated with stronger satisfaction outcomes, hotels should consider integrating kiosk check-in with these broader digital touchpoints, creating a more seamless technology ecosystem across the guest journey rather than treating kiosks as an isolated feature. Finally, hotel management should

establish a continuous feedback mechanism such as short post-checkout surveys or kiosk-based rating prompts to track guest sentiment toward kiosk technology over time and identify emerging pain points before they affect loyalty or word-of-mouth.

Conclusion

This study highlights the significant influence of kiosk technology on guest satisfaction in Penang's hospitality sector. By adopting technologies such as self-service check-in, smart room controls, and reliable connectivity, hotels can more effectively meet and exceed guest expectations, resulting in stronger loyalty, more efficient operations, and improved service quality. The findings suggest that Penang hotels should continue to invest in and refine guest-facing technology to remain competitive, as doing so strengthens guest relationships while improving operational efficiency. Hotels that successfully leverage technology in this way can position themselves as leaders in guest satisfaction, encouraging positive word-of-mouth, repeat business, and long-term profitability. This study is limited by its geographical and sampling scope: only one hotel in Penang was identified as using self-check-in kiosk technology at the time of data collection, which constrained the pool of eligible respondents. Data collection was also affected by logistical constraints, including the authors' internship and academic commitments and their location in different states during the study period.

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Conflict of interest

The authors confirm that there is no conflict of interest involving any parties in this research study.

REFERENCES

[1] Anguera-Torrell, O., Aznar-Alarcón, J.P., Vives-Pérez, J. (2020): COVID-19: Hotel industry response to the pandemic evolution and to the public sector economic measures. – Tourism Recreation Research 46(2): 148-157.

[2] Ciftci, O., Berezina, K., Kang, M. (2021): Effect of personal innovativeness on technology adoption in hospitality and tourism: Meta-analysis. – In: Wörndl, W., Koo, C., Stienmetz, J.L. (eds.) Information and Communication Technologies in Tourism 2021, Springer 13p.

[3] Das, P. (2023): Technology and guest experience: Innovations reshaping hotel management. – International Journal for Multidimensional Research Perspectives 1(3): 76-95.

[4] Department of Statistics Malaysia (2024): Tourism Satellite Account 2023. – Department of Statistics Malaysia, Putrajaya 100p.

[5] Giotis, G., Papadionysiou, E. (2022): The role of managerial and technological innovations in the tourism industry: A review of the empirical literature. – Sustainability 14(9): 20p.
[6] Han, S.H., Lee, J., Edvardsson, B., Verma, R. (2021): Mobile technology adoption among hotels: Managerial issues and opportunities. – Tourism Management Perspectives 38: 10p.
[7] Huang, B., Philp, M. (2021): When AI-based services fail: Examining the effect of the self-AI connection on willingness to share negative word-of-mouth after service failures. – The Service Industries Journal 41(13-14): 877-899.
[8] Lee, J., Kim, Y. (2020): Online reviews of restaurants: Expectation-confirmation theory. – Journal of Quality Assurance in Hospitality and Tourism 21(5): 582-599.
[9] Lee, M., Cai, Y., DeFranco, A., Lee, J. (2020): Exploring influential factors affecting guest satisfaction. – Journal of Hospitality and Tourism Technology 11(1): 137-153.
[10] Liu, C., Hung, K., Wang, D., Wang, S. (2019): Determinants of self-service technology adoption and implementation in hotels: The case of China. – Journal of Hospitality Marketing and Management 29(6): 636-661.
[11] Mamun, M.R.A., Senn, W.D., Peak, D.A., Prybutok, V.R., Torres, R.A. (2020): Emotional satisfaction and IS continuance behavior: Reshaping the Expectation-Confirmation Model. – International Journal of Human-Computer Interaction 36(15): 1437-1446.
[12] Manu, C., Sreejesh, S. (2024): Do not be deteriorated by service failures, learn from them and start managing it: Conditions and mechanisms for managing online service failures. – Journal of Retailing and Consumer Services 81: 12p.
[13] Meira, J.V.S., Hancer, M. (2021): Using the social exchange theory to explore the employee-organization relationship in the hospitality industry. – International Journal of Contemporary Hospitality Management 33(2): 670-692.
[14] Nam, K., Dutt, C.S., Chathoth, P., Daghfous, A., Khan, M.S. (2020): The adoption of artificial intelligence and robotics in the hotel industry: Prospects and challenges. – Electronic Markets 31(3): 553-574.
[15] Oliver, R.L. (1980): A cognitive model of the antecedents and consequences of satisfaction decisions. – Journal of Marketing Research 17(4): 460-469.
[16] Pérez-Morón, J., Madan, S., Cheu, J.Y., Kee, D., Cheong, L.C., Chin, R., Cheng, J., García, A.R.M. (2022): Effect of service quality and customer satisfaction on customer loyalty: A case study of Starbucks in Malaysia. – International Journal of Tourism and Hospitality in Asia Pasific 5(1): 62-74.
[17] Rosli, I.N., Zainal Abidin, F., Danurdara, A.B. (2025): Factors shaping budget hotel booking intentions in Malaysia: Regional implications for Indonesia. – International Journal of Research and Innovation in Social Science 9(9): 5567-5576.
[18] Shamim, S., Yang, Y., Zia, N.U., Shah, M.H. (2021): Big data management capabilities in the hospitality sector: Service innovation and customer-generated online quality ratings. – Computers in Human Behavior 121: 12p.
[19] Shin, H.H., Jeong, M. (2020): Guests' perceptions of robot concierge and their adoption intentions. – International Journal of Contemporary Hospitality Management 32(8): 2613-2633.
[20] Sun, S., Lee, P.C., Law, R., Zhong, L. (2020): The impact of cultural values on the acceptance of hotel technology adoption from the perspective of hotel employees. – Journal of Hospitality and Tourism Management 44: 61-69.
[21] Tai, Y., Wang, Y., Luo, C. (2021): Technology- or human-related service innovation? Enhancing customer satisfaction, delight, and loyalty in the hospitality industry. – Service Business 15(4): 667-694.
[22] Tavitiyaman, P., Zhang, X., Tsang, W.Y. (2020): How tourists perceive the usefulness of technology adoption in hotels: Interaction effect of experience and education level. – Journal of China Tourism Research 18(1): 64-87.

[23] Wong, E., Rasoolimanesh, S.M., Sharif, S.P. (2020): Using online travel agent platforms to determine factors influencing hotel guest satisfaction. – Journal of Hospitality and Tourism Technology 11(3): 425-445.