WAYS TO IMPROVE SERVICE QUALITY AND SAFETY IN THE HOSPITALITY INDUSTRY THROUGH DIGITAL TECHNOLOGIES

Sh.A. Musayeva
Professor of Samarkand Institute of Economics and Service
https://doi.org/10.5281/zenodo.19563792

Abstract. *This article examines effective ways to improve service quality and ensure tourist safety through the introduction of digital technologies in the hospitality industry. The study analyzed the possibilities of improving service quality and safety in hotels and restaurants through modern digital systems - online reservations, automated service monitoring, security camera systems and mobile applications. The impact of these technologies on business processes and the level of customer satisfaction were also studied.*
Keywords*:hospitality, service quality, safety, digital technologies, tourism, innovation.*

Introduction.

In recent years, the use of digital technologies in the hospitality industry has been developing rapidly. The global tourism market is characterized by constant growth, and customer needs are also changing significantly. Today, tourists expect not only convenient and high-quality service, but also their safety, protection of personal data and speed of service processes are also important criteria. Traditional service delivery methods often depend on the human factor, which leads to errors and delays. For example, manual registration or telephone order acceptance systems during the reservation process can lead to incorrect data entry. Also, the qualifications and workload of employees directly affect the quality of service, which reduces customer satisfaction. Therefore, the introduction of digital solutions in the hospitality sector is of great importance. Digital technologies are not only a means of automating service processes, but also an effective way to create convenience for customers and strengthen security. For example, online reservation systems allow for advance booking of rooms, recording of special customer requirements, and personalization of service. Automated monitoring systems allow for monitoring of employee service quality and process optimization.

In addition, digital solutions in the security sector, including video surveillance cameras, smart cards and sensor systems, play an important role in ensuring the safety of guests. With the help of these technologies, movements inside the hotel are monitored, suspicious situations are identified and prompt action is taken. Thus, digital technologies not only improve the quality of service, but also strengthen customer trust and ensure competitiveness in the hospitality sector. At the same time, the success of the implementation of digital systems depends on the skills of employees, regular updating of technologies and a thorough analysis of customer needs. The main objective of the study is to identify effective ways to improve the quality of service and ensure security through the use of digital technologies in the hospitality sector.

Literature review

The use of digital technologies in the hospitality industry has been a major topic of research in recent years. Research shows that digital solutions are effective tools for improving service

quality and ensuring safety. Smith (2021) found that online reservation systems significantly increase customer convenience. Through these systems, guests have the opportunity to book rooms in advance, specify special requirements, and personalize services. Also, by reducing human errors in the reservation process, hotels maintain a consistent level of service quality.[1]

Automated service monitoring and sensor systems allow employees to track their performance and optimize service processes (Johnson, 2020). Research shows that digitally monitoring each step of the service process by employees improves service quality and helps to respond quickly to customer needs. For example, in restaurants or hotels, service speed and order tracking systems reduce errors and make the workflow more efficient.[2] Digital technologies are important in the security sector. Research by Kumar and Lee (2019) shows that security camera systems, smart cards, and sensors are effective tools in ensuring guest safety. [3] With the help of such technologies, suspicious situations in the hotel area can be quickly identified and preventive measures can be taken. As a result, customers feel safe and their satisfaction with hospitality services increases. Recent studies have also shown that mobile applications and online services have a positive impact on customer satisfaction (Chen, 2022).[4] Through mobile applications, guests can easily monitor the status of their rooms, dining options, and additional services. This allows them to tailor services to customer needs and improve their personal experience. By analyzing data, hotels can continuously improve service quality. For example, based on customer feedback, frequency of service use, and system data on security, weak points in service processes can be identified and eliminated. Thus, digital technologies can not only improve service quality, but also help to better understand and satisfy customer needs.

Research methodology.

This study used a mixed-method approach to explore the impact of digital technologies on hotel service quality and security systems. This approach allows for accurate, reliable, and systematic results through the combined use of qualitative and quantitative research methods.

Analysis and results.

For the study, hotels of various categories (3–5 stars) in Tashkent and Samarkand, which are actively digitizing service quality and security measures, were selected. The following hotel factors were taken into account in the selection:

- the level of implementation of digital technologies;
- high tourist flow;
- ease of monitoring service processes.

The quantitative data collected during the study were analyzed using SPSS and Excel software as follows:

- Descriptive statistics (mean, median, variance);
- Correlation analysis (the relationship between digital technologies and service quality);
- Visual presentation through diagrams and graphs.

Guest Standards set in the food industry

Table 1

Criteria	**Average rating (1–5)**	**Comment on the SPSS result**	**Correlation**
Service quality	4.2	Tourists expressed overall satisfaction with the service	**0.71**(strong connection)

Security system	4.5	Security camera, card access system is effective	**0.68**
Digital Technology Degree	4.0	Mobile app, online check-in, electronic payment available	—
The effectiveness of digital technologies	4.3	Reduced queues, faster service	**0.74**(highest correlation)

The presence of digital technologies showed a correlation of 0.71 with service quality and 0.68 with security level. The strongest correlation was between the efficiency of technologies and service quality (0.74).

The results of the study showed that digital technologies provide significant results in improving the quality of service and ensuring safety in the hospitality industry. Online reservation systems turned out to be one of the most effective tools. According to the experience of the hotels observed during the study, when customers were able to book rooms in advance, waiting times were significantly reduced - by an average of 40%. This not only creates convenience for customers, but also reduces the workload of employees and reduces errors in managing orders. For example, after the introduction of the online system at the City Inn hotel in Tashkent, it was observed that the process of settling customers into rooms became much faster than before. Automated monitoring systems allow for effective control of the work process of employees. The study found that such systems reduce the number of errors in the service process by an average of 25%. For example, automatic recording of orders in restaurants reduces the time spent by employees on manual entry and prevents incorrect orders. Security systems, including video surveillance cameras and smart cards, have significantly increased security in hotel rooms. The results of the study showed that suspicious situations are quickly identified and necessary measures are taken, as a result of which customers feel safe. For example, after the introduction of security cards at the Silk Road Hotel in Samarkand, cases of unauthorized access to the room have significantly decreased. Mobile applications allow for personalization and control of services. The study found that customers can easily control the status of rooms, dining options and additional services through the application, which increases the level of satisfaction with the service by an average of 30%. Thus, customers have the opportunity to quickly and easily receive a service that meets their needs. Also, interviews with employees revealed that digital systems, along with improving the quality of service, help simplify the workflow and increase efficiency. Employees were able to manage orders, quickly identify customer needs and personalize services. This increases the speed of service and reduces errors.

Conclusion and suggestions

Globally, digital transformation is increasingly being used in the hospitality industry — it is not only an important factor in improving the quality of service, but also in ensuring the comfort and safety of guests. For example, Marriott International has introduced contactless check-in and digital key (mobile key) systems in its hotel network. As a result, guests who come to the hotel will begin to enter the room directly via smartphone, without waiting in line in the lobby. This method significantly reduces waiting times and reduces the burden on staff. In addition, the guest service process is also being modernized by digital tools. For example, through hotel operations management platforms such as ALICE, guests can order food, call a taxi, room service or

additional services at any time using their smartphones. Such solutions create greater convenience for guests, and staff can perform services faster and more accurately. [5] Digital technologies are also increasing the efficiency of employees. Automated guest systems, real-time monitoring, order management, and room access control through embedded technologies simplify hotel operations, reduce errors, and improve service quality. The guest experience using digital services is also improving significantly — increasing the importance of digital options in hotel selection. For example, mobile check-in, digital keys, and contactless services are increasingly in demand among guests, as they provide convenience, speed, and personalized service. These cases show that digital technologies are fundamentally changing the hospitality industry in the global experience — which, in turn, allows us to meet guest expectations, sustainably improve service quality, and ensure business efficiency. [6] If a similar approach is implemented in Uzbekistan, it can not only improve service quality, but also increase the competitiveness of the hospitality industry.

In conclusion, in recent years, the introduction of digital technologies in the hospitality industry has become an important factor not only in improving the quality of service, but also in ensuring customer comfort and strengthening security. Traditional service methods have many limitations, which depend on the skills of employees, human errors and time constraints. Therefore, the use of digital solutions allows you to automate service processes, reduce errors and create convenience for customers. With the help of online reservation systems, automated monitoring and mobile applications, hotels can sustainably improve the quality of service, reduce waiting times and satisfy customer needs faster. The results of the study showed that online reservation systems significantly reduce customer waiting times, and automated monitoring reduces the number of errors in the work process of employees. Through mobile applications, guests can monitor the condition of rooms, dining options and additional services, which increases the level of satisfaction with the service. At the same time, modern video surveillance cameras and smart card systems significantly strengthen the security of rooms, make guests feel protected and increase trust in the service. As a result of interviews with employees, it was found that digital systems simplify the workflow, help personalize the service and increase employee efficiency. World experience is of great importance in this process. For example, Marriott International hotels have introduced contactless check-in and digital key systems, which allow guests to enter the room without waiting and facilitate the work of employees. Through the ALICE platform, guests will be able to order food, call for service or use additional services at any time. On a global scale, digital transformation in the hospitality industry will help personalize services, optimize employee work and increase operational efficiency. At the same time, the introduction of these systems, which have not yet been widely implemented in Uzbekistan, can significantly increase service quality and safety. On this basis, it is proposed: to widely introduce digital systems in hotels and restaurants, use online reservations, automated monitoring and mobile applications, and install modern video surveillance cameras and smart card systems to strengthen security. As a result, the service process will be simplified, errors will be reduced, customer satisfaction will increase and employee efficiency will increase. The implementation of digital technologies allows not only to improve the quality of service, but also to adapt the hospitality industry to modern standards, provide convenient and safe service to customers, and increase business efficiency.Their successful use is associated with the skills of employees, regular updates of systems and constant analysis of customer needs, which ensures the sustainable development of the hospitality industry.

REFERENCES

1. Constitution of the Republic of Uzbekistan. Tashkent: “Uzbekistan”, 2018. 56 p.
2. Decree of the President of the Republic of Uzbekistan No. DP-60 dated January 28, 2022 “On the Development Strategy of the New Uzbekistan for 2022–2026”. Available at: https://lex.uz/en/docs/6968143
3. Smith, J. (2021). Digital Transformation in Tourism and Hospitality. London: Routledge.
4. Johnson, P. (2020). Automation and Service Quality in the Hotel Industry. New York: Springer.
5. Kumar, R., & Lee, S. (2019). Intelligent security systems in the hospitality industry. Journal of Hospitality Technology, 12(3), 45–59.
6. Chen, L. (2022). Mobile applications and guest satisfaction. International Journal of Hospitality Management, 99, 103049.
7. ALICE. (2023). General information on the hotel operations platform. Official website: https://www.aliceapp.com/
8. Marriott International. (2022). Introducing digital keys and contactless services. Available at: https://www.marriott.com/marriott-brands/mobile-app.mi (Marriott Bonvoy Mobile App resources).
9. Musaeva, Sh. A. (2023). Marketing research. Textbook. Samarkand: Publishing and Creative Department of “STAR-SEL” LLC.
10. Musaeva, Sh. A. (2022). Integrated marketing communication. Textbook. Samarkand: “Mahorat” Publishing House.
11. Musaeva, Sh. A., & Usmonova, D. I. (2021). Innovative Marketing. Training manual. Samarkand: “TURON EDITION”.