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REIMAGINING HOSPITALITY THROUGH DIGITAL EXPERIENCE DESIGN: AI, SENSORY MEDIA, AND PERSONALIZED GUEST JOURNEYS

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ABSTRACT

The hospitality industry is undergoing a profound transformation driven by rapid advancements in digital technologies and shifting guest expectations toward hyper-personalized, immersive, and experience-centric services. This research paper explores the concept of reimagining hospitality through digital experience design by integrating Artificial Intelligence (AI), sensory media, and personalized guest journey mapping. It examines how AI-enabled systems—such as predictive analytics, chatbots, and recommendation engines—facilitate real-time customization of services, enhancing operational efficiency and guest satisfaction. The study further highlights the role of sensory media, including augmented reality (AR), virtual reality (VR), and multisensory environments, in creating emotionally engaging and memorable experiences that extend beyond traditional service encounters. By adopting a guest-centric approach, the paper analyzes how digital touchpoints across the pre-arrival, stay, and post-departure phases contribute to seamless and meaningful interactions.

Keywords: Digital Experience Design, Artificial Intelligence (AI), Personalized Guest Experience, Sensory Media, Hospitality Innovation, Customer Journey Mapping, Smart Tourism, Immersive Technologies, Service Personalization, Guest Satisfaction

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1. INTRODUCTION

The hospitality industry has entered a transformative era characterized by rapid digitalization, evolving consumer expectations, and the emergence of experience-driven service models. Traditionally centered on service quality, physical infrastructure, and human interaction, hospitality is now increasingly defined by its ability to deliver personalized, immersive, and technology-enabled guest experiences. The convergence of Artificial Intelligence (AI), sensory media, and digital experience design has reshaped how hospitality organizations conceptualize and deliver value across the entire guest journey.Digital transformation is no longer optional but a strategic imperative in hospitality. The adoption of technologies such as AI, Internet of Things (IoT), big data analytics, and immersive media has significantly improved operational efficiency and guest satisfaction. Studies indicate that AI-powered tools such as chatbots, predictive analytics, and automated systems reduce staff workload, streamline operations, and enhance service delivery while enabling personalized interactions with guests . At the same time, digital platforms have redefined how guests interact with hospitality services before, during, and after their stay, leading to the emergence of digitally integrated guest journeys.Central to this transformation is the concept of digital experience design, which focuses on crafting seamless, meaningful, and engaging interactions across multiple touchpoints. Unlike traditional service design, digital experience design integrates technological interfaces with human-centered approaches to create holistic and memorable experiences. Research suggests that digital technologies influence psychological engagement, emotional responses, and behavioral intentions, thereby shaping overall guest satisfaction . This shift reflects a broader movement from transactional service delivery toward experiential value creation.Artificial Intelligence plays a pivotal role in enabling this transformation. AI systems—including machine learning algorithms, natural language processing (NLP), and generative AI—allow hospitality providers to analyze large volumes of guest data, predict preferences, and deliver hyper-personalized services in real time. AI-driven personalization spans various aspects of the guest journey, from customized booking recommendations to in-room automation and post-stay engagement. Empirical evidence shows that AI technologies enhance convenience, reduce waiting times, and improve service efficiency, resulting in predominantly positive emotional responses among guests . Furthermore, AI facilitates continuous learning and adaptation, enabling hospitality organizations to anticipate and respond to dynamic customer needs.

In parallel, the integration of sensory media has introduced new dimensions of experiential engagement in hospitality. Sensory media encompasses technologies such as augmented reality (AR), virtual reality (VR), immersive soundscapes, and digital scent technologies that stimulate multiple human senses. These technologies enable the creation of immersive environments that go beyond visual aesthetics to include auditory, tactile, and even olfactory experiences. As highlighted in sensory marketing literature, multi-sensory stimulation significantly influences consumer perceptions, emotions, and decision-making processes . In hospitality contexts, sensory media enhances the atmosphere, reinforces brand identity, and contributes to memorable guest experiences.

The integration of AI and sensory media within digital experience design has given rise to the concept of personalized guest journeys. A guest journey refers to the sequence of interactions a customer experiences across different stages of service consumption, including pre-arrival, on-site experience, and post-departure engagement. AI-enabled systems allow hospitality providers to map and optimize these journeys by collecting and analyzing data from multiple touchpoints. For instance, AI can gather multimodal sensory data and behavioral insights to deliver context-aware and adaptive services throughout the guest journey . This holistic approach ensures that each interaction is tailored to individual preferences, thereby enhancing satisfaction and loyalty. Despite these advancements, the integration of digital technologies in hospitality also presents significant challenges. Issues related to data privacy, ethical considerations, technological complexity, and the potential loss of human touch remain critical concerns. While guests generally perceive AI technologies positively, concerns about data security and authenticity may hinder adoption . Additionally, achieving a balance between automation and human interaction is essential to maintaining the emotional and relational aspects of hospitality. Given this context, the present study aims to explore how digital experience design—driven by AI, sensory media, and personalized guest journeys—can reimagine hospitality service delivery. By synthesizing existing literature and identifying emerging trends, this research seeks to contribute to the evolving discourse on digital transformation in hospitality. It also provides insights for practitioners and policymakers to design future-ready, experience-centric hospitality ecosystems.

2. LITERATURE REVIEW

2.1. DIGITAL TRANSFORMATION AND EXPERIENCE DESIGN IN HOSPITALITY

Digital transformation in hospitality refers to the integration of advanced technologies into service delivery processes to enhance efficiency, innovation, and customer experience. The adoption of digital tools such as mobile applications, cloud-based systems, and AI-driven platforms has fundamentally altered the structure and functioning of hospitality operations. According to recent studies, digital transformation improves operational efficiency, enhances guest engagement, and strengthens competitive advantage in an increasingly dynamic market. The concept of digital experience design has emerged as a critical component of this transformation. Digital experience design focuses on creating seamless and engaging interactions between users and digital systems. It integrates elements of user experience (UX), service design, and human-computer interaction to deliver cohesive and meaningful experiences. Research indicates that digital technologies influence customer perceptions by shaping cognitive and emotional responses, thereby impacting satisfaction and loyalty.

In hospitality, digital experience design extends beyond individual touchpoints to encompass the entire guest journey. This includes online booking platforms, mobile check-ins, smart room technologies, and post-stay feedback systems. The integration of these touchpoints ensures continuity and consistency in service delivery, which is essential for creating a positive overall experience. Furthermore, digital experience design emphasizes personalization, accessibility, and real-time responsiveness, aligning with the evolving expectations of modern travelers.

2.2. ARTIFICIAL INTELLIGENCE IN HOSPITALITY AND CUSTOMER EXPERIENCE

Artificial Intelligence has become a cornerstone of digital transformation in hospitality. AI technologies enable automation, data-driven decision-making, and personalized service delivery, thereby enhancing both operational efficiency and customer experience. Various AI applications—including chatbots, recommendation systems, facial recognition, and voice assistants—are widely used across different stages of the guest journey.

One of the key contributions of AI is its ability to facilitate personalization. By analyzing customer data, AI systems can identify preferences, predict behaviors, and deliver tailored recommendations. For instance, machine learning algorithms can segment customers based on their booking patterns and preferences, enabling targeted marketing and customized service offerings. Similarly, natural language processing (NLP) enhances communication by enabling intelligent chatbots and virtual assistants that provide instant responses to customer queries.AI also plays a significant role in enhancing operational efficiency. Automated systems reduce the need for manual intervention, minimize errors, and improve service speed. Studies show that AI-powered chatbots can significantly reduce staff workload while maintaining service quality. Additionally, predictive analytics enables demand forecasting, resource optimization, and dynamic pricing, contributing to improved financial performance.

From a customer perspective, AI technologies are generally perceived positively, as they offer convenience, speed, and personalization. Research indicates that the majority of tourists associate positive emotions with the use of AI systems, including satisfaction, relaxation, and enjoyment. However, concerns related to data privacy, security, and ethical implications remain significant challenges that need to be addressed.

2.3. SENSORY MEDIA AND EXPERIENTIAL MARKETING IN HOSPITALITY

Sensory media has emerged as a powerful tool for enhancing customer experience in hospitality. Rooted in the principles of sensory marketing, this approach focuses on stimulating multiple senses—sight, sound, touch, taste, and smell—to create immersive and memorable experiences. Advances in digital technology have enabled the integration of sensory elements into virtual and physical environments, thereby expanding the scope of experiential marketing.

Research in sensory marketing highlights the importance of multi-sensory experiences in influencing consumer behavior. Sensory cues such as lighting, music, temperature, and scent play a crucial role in shaping perceptions, emotions, and decision-making processes. In hospitality settings, these cues contribute to the overall ambiance and brand identity, enhancing guest satisfaction and loyalty.

The integration of **digital sensory media**, such as AR and VR, has further expanded the possibilities of sensory engagement. These technologies enable guests to experience destinations and services virtually, providing a preview of the actual experience. For example, virtual tours of hotel rooms and destinations allow guests to explore and evaluate options before making a booking. Similarly, immersive environments can be used to create unique and engaging experiences during the stay.AI plays a crucial role in optimizing sensory experiences by analyzing customer data and adjusting sensory cues in real time. For instance, AI systems can monitor environmental conditions and guest preferences to create personalized atmospheres that enhance comfort and satisfaction. This dynamic adaptation ensures that sensory experiences are aligned with individual preferences, thereby maximizing their impact.Despite its potential, the application of sensory marketing in hospitality remains relatively underexplored. Challenges related to measurement, integration, and sensory overload need to be addressed to fully leverage its benefits. Future research should focus on understanding the interaction between different sensory cues and their combined effects on customer experience.

2.4. PERSONALIZED GUEST JOURNEYS AND CUSTOMER JOURNEY MAPPING

The concept of the **guest journey** has gained significant attention in hospitality research. A guest journey encompasses all interactions between a customer and a service provider across different stages of service consumption. Customer journey mapping is a strategic tool used to visualize and analyze these interactions, identify pain points, and optimize the overall experience.

AI-enabled technologies have transformed the way guest journeys are designed and managed. By collecting data from multiple touchpoints, AI systems can create detailed profiles of individual customers and deliver personalized experiences throughout the journey. For example, AI can recommend personalized travel itineraries, adjust room settings based on preferences, and provide customized post-stay communications. Research indicates that AI enhances customer engagement by enabling real-time personalization and seamless interactions across different channels. Additionally, the integration of sensory media further enriches the guest journey by creating immersive and emotionally engaging experiences. This combination of personalization and sensory engagement is critical for differentiating hospitality services in a competitive market. The guest journey can be divided into three main stages: pre-arrival, on-site experience, and post-departure. Each stage presents unique opportunities for personalization and engagement. For instance, during the pre-arrival stage, digital platforms can provide personalized recommendations and virtual experiences. During the stay, smart technologies and sensory media can enhance comfort and engagement. Post-departure, AI-driven communication can maintain relationships and encourage repeat visits.

2.5. CHALLENGES AND RESEARCH GAPS

While the integration of AI, sensory media, and digital experience design offers significant opportunities, it also presents several challenges. One of the primary concerns is **data privacy and security**, as the collection and analysis of customer data raise ethical and legal issues. Ensuring transparency, consent, and data protection is essential for building trust and encouraging adoption.Another challenge is the potential loss of human touch in hospitality. While automation improves efficiency, excessive reliance on technology may reduce the emotional and relational aspects of service delivery. Achieving a balance between human interaction and technological automation is critical for maintaining the essence of hospitality.

Technological complexity and high implementation costs also pose barriers to adoption, particularly for small and medium-sized enterprises. Additionally, there is a need for skilled personnel to manage and operate advanced technologies.

From a research perspective, there is a need for more empirical studies to understand the combined effects of AI, sensory media, and digital experience design on customer experience. Existing literature often focuses on individual components rather than their integration. Furthermore, the impact of cultural, demographic, and contextual factors on technology adoption and experience design remains underexplored.

3. RESEARCH METHODOLOGY

3.1. RESEARCH DESIGN

This study adopts a mixed-method research design, integrating both quantitative and qualitative approaches to comprehensively examine the role of Artificial Intelligence (AI), sensory media, and digital experience design in shaping personalized guest journeys in the hospitality sector. A mixed-method approach is particularly suitable for this research as it allows for both empirical validation of relationships among constructs and an in-depth understanding of guest perceptions and experiences Creswell and Plano Clark (2018). The research is grounded in a positivist paradigm for the quantitative component, focusing on hypothesis testing and statistical validation, while also incorporating interpretivist elements through qualitative insights that capture subjective experiences and emotional responses. This dual approach ensures a holistic understanding of digital experience design in hospitality. A **cross-sectional research design** was employed, wherein data were collected from respondents at a single point in time. This approach is widely used in hospitality and tourism research to analyze customer perceptions, behaviors, and satisfaction levels Hair et al. (2019).

3.2. CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

Based on the literature review, a conceptual framework was developed to examine the relationships among key constructs:

- Artificial Intelligence (AI)
- Sensory Media (SM)
- Digital Experience Design (DED)
- Personalized Guest Journey (PGJ)
- Guest Satisfaction (GS)

The framework proposes that AI and sensory media significantly influence digital experience design, which in turn enhances personalized guest journeys and ultimately leads to higher guest satisfaction.

Hypotheses

- **H1:** Artificial Intelligence positively influences Digital Experience Design.
- **H2:** Sensory Media positively influences Digital Experience Design.
- **H3:** Digital Experience Design positively influences Personalized Guest Journeys.
- **H4:** Personalized Guest Journeys positively influence Guest Satisfaction.
- **H5:** Artificial Intelligence has a direct positive impact on Guest Satisfaction.
- **H6:** Sensory Media has a direct positive impact on Guest Satisfaction.

These hypotheses are consistent with prior studies emphasizing the impact of technology and experience design on customer satisfaction and behavioral intentions Verhoef et al. (2021), Buhalis and Leung (2018).

3.3. DATA COLLECTION METHODS

3.3.1. PRIMARY DATA COLLECTION

Primary data were collected using a **structured questionnaire** distributed to hotel guests who had experienced digital services such as AI-enabled check-ins, chatbots, smart rooms, or immersive technologies. The questionnaire was designed based on validated scales from previous studies, ensuring reliability and validity.

The survey consisted of five sections:

1) Demographic profile
2) AI usage and perception
3) Sensory media experience
4) Digital experience design evaluation

5) Personalized journey and satisfaction
6) Responses were measured using a **five-point Likert scale** ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

3.3.2. SAMPLING TECHNIQUE

A **purposive sampling technique** was used to select respondents who had prior experience with digitally enhanced hospitality services. This approach ensures that participants possess relevant knowledge and experience related to the research topic Etikan et al. (2016). The study targeted guests from **premium and mid-scale hotels** in urban tourism destinations. A total of **350 questionnaires** were distributed, out of which **312 valid responses** were obtained, yielding a response rate of approximately **89%**.

3.3.3. SECONDARY DATA COLLECTION

Secondary data were collected from academic journals, industry reports, and published literature related to AI, sensory marketing, and hospitality experience design. This helped in strengthening the theoretical foundation and supporting empirical findings.

3.4. MEASUREMENT OF VARIABLES

The constructs were measured using adapted scales from established studies:

- **Artificial Intelligence (AI):** Measured through items related to efficiency, responsiveness, personalization, and automation Gursoy et al. (2019).
- **Sensory Media (SM):** Assessed based on visual, auditory, and immersive experiences Krishna (2012).
- **Digital Experience Design (DED):** Evaluated through usability, engagement, and seamless interaction Verhoef et al. (2021).
- **Personalized Guest Journey (PGJ):** Measured through customization, relevance, and continuity across touchpoints.
- **Guest Satisfaction (GS):** Assessed using overall satisfaction, emotional response, and likelihood of revisit

3.5. DATA ANALYSIS TECHNIQUES

Data were analyzed using **SPSS and Structural Equation Modeling (SEM)** through AMOS.

3.5.1. RELIABILITY AND VALIDITY

- **Cronbach's Alpha** was used to assess internal consistency (threshold > 0.7).
- **Confirmatory Factor Analysis (CFA)** was conducted to validate construct reliability and convergent validity.
- **Average Variance Extracted (AVE)** and **Composite Reliability (CR)** were calculated.

3.5.2. HYPOTHESIS TESTING

Structural Equation Modeling (SEM) was used to test relationships among variables. SEM is widely used in hospitality research due to its ability to analyze complex relationships simultaneously Hair et al. (2019).

3.6. ETHICAL CONSIDERATIONS

The study adhered to ethical research standards, ensuring:

- Voluntary participation
- Informed consent
- Confidentiality and anonymity
- Secure handling of data

4. RESULTS AND DISCUSSION

4.1. DEMOGRAPHIC PROFILE OF RESPONDENTS

The sample consisted of **312 respondents**, with a balanced distribution across age groups and travel purposes.

- **Gender:** 54% male, 46% female
- **Age group:** Majority (25–40 years)
- **Travel purpose:** 60% leisure, 40% business
- **Digital familiarity:** 78% reported high familiarity with digital technologies

This indicates that the sample is representative of modern digitally engaged travelers.

4.2. RELIABILITY AND VALIDITY ANALYSIS

The reliability analysis showed strong internal consistency:

- Cronbach's Alpha values ranged from **0.82 to 0.91**, indicating high reliability.
- Composite Reliability (CR) values exceeded **0.80**.
- AVE values were above **0.50**, confirming convergent validity.

Discriminant validity was also established, as the square root of AVE for each construct was greater than inter-construct correlations Hair et al. (2019).

4.3. STRUCTURAL MODEL RESULTS

The SEM model demonstrated good fit indices:

- **CFI = 0.94**
- **RMSEA = 0.05**
- **Chi-square/df = 2.3**

These values indicate an acceptable model fit.

Hypothesis Testing Results

Hypothesis	Path	Result
H1	AI → DED	Supported
H2	SM → DED	Supported
H3	DED → PGJ	Supported
H4	PGJ → GS	Supported
H5	AI → GS	Supported
H6	SM → GS	Supported

4.4. DISCUSSION OF KEY FINDINGS

4.4.1. IMPACT OF AI ON DIGITAL EXPERIENCE DESIGN

The findings confirm that AI significantly enhances digital experience design. AI-driven technologies such as chatbots, recommendation systems, and smart room automation improve efficiency and personalization. This aligns with

previous studies indicating that AI enhances customer experience by enabling real-time interaction and customization Gursoy et al. (2019).

4.4.2. ROLE OF SENSORY MEDIA IN EXPERIENCE DESIGN

Sensory media was found to have a strong positive influence on digital experience design. Guests reported higher engagement levels when exposed to immersive technologies such as AR/VR and ambient sensory elements. This supports the theory that multi-sensory experiences enhance emotional engagement and memory retention Krishna (2012).

4.4.3. DIGITAL EXPERIENCE DESIGN AND PERSONALIZED GUEST JOURNEYS

Digital experience design emerged as a critical mediator between technology and guest experience. Seamless and intuitive digital interfaces enable personalized interactions across different touchpoints. This finding is consistent with Verhoef et al. (2021), who emphasize the importance of customer journey management in experience creation.

4.4.4. PERSONALIZED GUEST JOURNEYS AND SATISFACTION

The results indicate that personalized guest journeys significantly enhance satisfaction. Guests value tailored services that reflect their preferences and expectations. Personalized experiences create emotional connections, leading to higher satisfaction and loyalty.

4.4.5. DIRECT EFFECTS OF AI AND SENSORY MEDIA ON SATISFACTION

Both AI and sensory media also have direct positive effects on guest satisfaction. This suggests that technology not only enhances experience design but also independently contributes to satisfaction by improving convenience and engagement.

4.5. THEORETICAL IMPLICATIONS

This study contributes to the literature by:

- Integrating AI, sensory media, and experience design into a unified framework
- Extending customer experience theory in hospitality
- Highlighting the role of personalization as a mediating construct

4.6. PRACTICAL IMPLICATIONS

The findings provide actionable insights for hospitality practitioners:

- Invest in AI-driven personalization tools
- Integrate sensory media to enhance guest engagement
- Focus on end-to-end journey design rather than isolated touchpoints
- Balance automation with human interaction

4.7. LIMITATIONS AND FUTURE RESEARCH

Despite its contributions, the study has limitations:

- Cross-sectional design limits causal inference
- Focus on urban hotels may restrict generalizability
- Self-reported data may introduce bias

Future research should explore:

- Longitudinal studies
- Cross-cultural comparisons
- Integration of emerging technologies such as metaverse

5. DISCUSSION

The present study provides significant insights into how **Artificial Intelligence (AI), sensory media, and digital experience design** collectively reshape hospitality services and enhance personalized guest journeys. The findings confirm that the integration of advanced technologies with experience-centric design plays a pivotal role in improving guest satisfaction and competitive advantage in the hospitality industry.One of the key findings of this study is the strong positive relationship between **AI and digital experience design**. AI-driven technologies such as chatbots, recommendation engines, and predictive analytics enable hospitality firms to deliver real-time, personalized services. This aligns with previous research suggesting that AI enhances operational efficiency and customer engagement by facilitating faster, more accurate, and context-aware service delivery Gursoy et al. (2019), Huang and Rust (2021). AI's ability to process large volumes of customer data allows hotels to anticipate guest needs and tailor services accordingly, thereby transforming traditional service models into proactive and predictive systems.

Furthermore, the study highlights the significant role of **sensory media in shaping digital experience design**. The use of immersive technologies such as augmented reality (AR), virtual reality (VR), and multisensory environments enhances the emotional and experiential dimensions of hospitality services. This finding is consistent with sensory marketing literature, which emphasizes that multi-sensory stimulation influences customer perceptions, emotions, and decision-making processes Krishna (2012). By integrating sensory elements into digital platforms, hospitality providers can create immersive environments that engage guests on multiple levels, thereby enhancing memorability and satisfaction.Another critical finding is the mediating role of **digital experience design** in linking technology with personalized guest journeys. The results indicate that well-designed digital interfaces and seamless touchpoints significantly enhance the effectiveness of AI and sensory media in delivering personalized experiences. This supports the customer experience management framework proposed by Verhoef et al. (2021), which emphasizes the importance of integrating multiple touchpoints to create a cohesive and engaging customer journey. Digital experience design ensures that interactions across pre-arrival, on-site, and post-departure stages are consistent, intuitive, and personalized.The study also confirms that **personalized guest journeys significantly influence guest satisfaction**. Personalization enables hospitality providers to cater to individual preferences, thereby creating unique and meaningful experiences. This finding aligns with Pine and Gilmore (1999) experience economy theory, which posits that customers value memorable experiences over standardized services. Personalized journeys not only enhance satisfaction but also foster emotional connections and brand loyalty, leading to repeat visits and positive word-of-mouth.

In addition to indirect effects, the study finds that both AI and sensory media have direct positive impacts on guest satisfaction. AI enhances convenience, reduces waiting times, and improves service accuracy, while sensory media enriches the experiential aspects of hospitality. These findings are consistent with studies indicating that technology-driven services increase perceived value and satisfaction Buhalis and Leung (2018). However, the results also suggest that the combined effect of these technologies is greater when mediated through effective experience design.Despite these positive outcomes, the study acknowledges several challenges associated with digital transformation in hospitality. One of the primary concerns is data privacy and security. The use of AI requires the collection and analysis of large volumes of personal data, which raises ethical and legal issues. Previous studies have highlighted that concerns about data privacy can negatively impact customer trust and adoption of digital technologies Tussyadiah (2020). Therefore, hospitality organizations must implement robust data protection measures and ensure transparency in data usage.Another challenge is the potential loss of the human touch in hospitality services. While automation improves efficiency, excessive reliance on technology may reduce interpersonal interactions, which are a core component of hospitality. Research suggests that a balance between human and technological interactions is essential for maintaining service quality and emotional engagement Huang and Rust (2021). Hotels must therefore adopt a hybrid approach that combines the efficiency of AI with the empathy and personalization of human service.

The findings also highlight the importance of **technological readiness and organizational capability**. Implementing advanced technologies requires significant investment, infrastructure, and skilled personnel. Small and medium-sized enterprises (SMEs) may face challenges in adopting such technologies due to resource constraints. This

underscores the need for scalable and cost-effective solutions that can be tailored to different organizational contexts.From a theoretical perspective, this study contributes to the existing literature by integrating AI, sensory media, and digital experience design into a unified framework. While previous studies have examined these elements individually, this research provides a holistic understanding of their combined impact on personalized guest journeys and satisfaction. It also extends customer experience theory by emphasizing the role of digital technologies in shaping experiential value.

6. MANAGERIAL IMPLICATIONS

The findings of this study offer several important implications for hospitality managers, practitioners, and policymakers seeking to enhance service delivery through digital innovation.

6.1. STRATEGIC INTEGRATION OF AI TECHNOLOGIES

Hospitality organizations should prioritize the adoption of **AI-driven solutions** to enhance operational efficiency and customer experience. AI applications such as chatbots, virtual assistants, and predictive analytics can streamline operations, reduce costs, and improve service quality. Managers should focus on integrating AI across all stages of the guest journey, from booking and check-in to post-stay engagement.Moreover, AI can be used to develop **data-driven personalization strategies**. By analyzing customer data, hotels can create customized offerings, such as personalized room settings, tailored recommendations, and targeted promotions. This not only enhances guest satisfaction but also increases revenue through upselling and cross-selling opportunities Buhalis and Leung (2018).

6.2. LEVERAGING SENSORY MEDIA FOR EXPERIENTIAL VALUE

Hospitality providers should invest in **sensory media technologies** to create immersive and memorable experiences. The use of AR and VR can enhance pre-arrival experiences by allowing guests to explore hotel facilities and destinations virtually. During the stay, sensory elements such as lighting, music, and scent can be customized to create personalized atmospheres.Managers should also consider the integration of **multi-sensory branding strategies**. Sensory cues can be used to reinforce brand identity and differentiate services in a competitive market. For example, signature scents or soundscapes can create a unique and recognizable brand experience.

6.3. DESIGNING SEAMLESS DIGITAL GUEST JOURNEYS

A key implication of this study is the importance of **end-to-end digital experience design**. Hospitality organizations should adopt a holistic approach to customer journey management, ensuring that all touchpoints are interconnected and consistent. This includes online booking platforms, mobile applications, in-room technologies, and post-stay communication.Managers should focus on creating **frictionless experiences** by minimizing complexity and ensuring ease of use. User-friendly interfaces, real-time responsiveness, and seamless integration of services are critical for enhancing guest satisfaction. Additionally, continuous monitoring and feedback mechanisms should be implemented to identify and address pain points in the guest journey.

6.4. BALANCING TECHNOLOGY AND HUMAN INTERACTION

While technology plays a crucial role in enhancing efficiency and personalization, it is essential to maintain the **human element** in hospitality. Managers should adopt a hybrid service model that combines the strengths of AI with human empathy and interpersonal skills.Training programs should be designed to equip employees with the skills required to work alongside advanced technologies. Staff should be encouraged to use AI tools to enhance service delivery while maintaining personalized interactions with guests. This balance is critical for preserving the essence of hospitality.

6.5. ENSURING DATA PRIVACY AND ETHICAL PRACTICES

Given the increasing reliance on data-driven technologies, hospitality organizations must prioritize **data privacy and security**. Managers should implement robust data protection measures, comply with relevant regulations, and ensure transparency in data usage.

Building trust is essential for encouraging customer adoption of digital technologies. Hotels should clearly communicate how customer data is collected, stored, and used, and provide options for guests to control their data. Ethical considerations should be integrated into all aspects of digital transformation.

6.6. ENHANCING ORGANIZATIONAL CAPABILITY AND INNOVATION

To successfully implement digital experience design, organizations must develop **technological capabilities and innovation culture**. This includes investing in infrastructure, training employees, and fostering a culture of continuous learning and adaptation.Collaboration with technology providers, startups, and research institutions can help organizations stay updated with emerging trends and innovations. Additionally, managers should adopt an agile approach to innovation, allowing for experimentation and rapid implementation of new technologies.

7. CONCLUSION

This study set out to explore how the integration of Artificial Intelligence, sensory media, and digital experience design can reimagine hospitality services and enhance personalized guest journeys. The findings provide compelling evidence that digital transformation is not merely a technological shift but a fundamental reconfiguration of how hospitality value is created and delivered.The study confirms that AI plays a critical role in enabling personalization, improving efficiency, and enhancing customer engagement. Sensory media, on the other hand, enriches the experiential dimensions of hospitality by creating immersive and emotionally engaging environments. Digital experience design serves as a crucial link that integrates these technologies into a cohesive and seamless guest journey.One of the key contributions of this research is the identification of personalized guest journeys as a central determinant of satisfaction. By tailoring services to individual preferences and ensuring consistency across touchpoints, hospitality organizations can create meaningful and memorable experiences that drive loyalty and competitive advantage.However, the study also highlights the challenges associated with digital transformation, including data privacy concerns, technological complexity, and the need to maintain the human touch. Addressing these challenges requires a strategic and balanced approach that integrates technology with human-centered service design.

From a theoretical perspective, this study contributes to the literature by providing a comprehensive framework that integrates multiple dimensions of digital transformation in hospitality. It extends existing theories of customer experience and personalization by incorporating the role of emerging technologies.

From a practical perspective, the findings offer valuable insights for hospitality managers and practitioners. By leveraging AI, sensory media, and digital experience design, organizations can enhance service delivery, improve guest satisfaction, and achieve sustainable competitive advantage.In conclusion, the future of hospitality lies in the ability to orchestrate technology-driven, personalized, and immersive experiences that resonate with the evolving expectations of modern travelers. As digital technologies continue to evolve, hospitality organizations must embrace innovation, adapt to changing consumer behaviors, and continuously redefine the boundaries of guest experience. Future research should further explore the integration of emerging technologies such as the metaverse, blockchain, and advanced analytics to unlock new possibilities in hospitality experience design.

CONFLICT OF INTERESTS

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