

Innovative Research on Pathways for Upgrading Tourism Consumption Experiences in the Era of Digital Cultural Tourism

Yanling Zeng*

Hainan Vocational University of Science and Technology, Haikou 571126, Hainan, China

**Author to whom correspondence should be addressed.*

Copyright: © 2025 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

Abstract: Digital cultural tourism represents a new paradigm in the development of the cultural tourism industry, with the enhancement of consumer experiences being the core driver of its high-quality growth. Set against the backdrop of the digital cultural tourism era, this paper analyzes the key characteristics and evolution logic of tourism consumption experiences, identifies current challenges in experience enhancement at the levels of technological integration, content delivery, and service adaptation, and explores improvement pathways through technological empowerment, content innovation, and service optimization. The findings provide theoretical insights and practical recommendations for advancing the digital transformation of the cultural tourism sector and elevating the quality of tourism consumption experiences.

Keywords: Digital cultural tourism; Tourism consumption; Experience enhancement; Path innovation

Online publication: December 20, 2025

1. Introduction

The profound empowerment of digital technology has propelled the cultural and tourism industry into a new era of digital tourism and culture. Tourism consumption demands have shifted from traditional sightseeing to immersive, personalized, and experiential experiences, with the enhancement of consumer experiences becoming the core direction for the industry's development. Traditional tourism consumption experiences suffer from issues such as insufficient technological integration, homogenized content, and fragmented services, making them ill-suited to meet the demands of the digital age. Grounded in the realities of digital tourism and culture development, this paper focuses on upgrading tourism consumption experiences as its central research theme, examines the underlying logic and practical challenges of this upgrade, systematically explores innovative pathways for advancement, and aims to drive the digital and quality-driven development of the cultural and tourism sector.

2. Core characteristics and upgrade logic of tourism consumption experience in the digital cultural tourism era

2.1. Core characteristics of tourism consumption experience in the digital cultural tourism era

The tourism consumption experience in the digital cultural tourism era has transcended the traditional single-model approach of sightseeing, exhibiting core characteristics of immersion, personalization, and comprehensive coverage. Immersive experiences leverage digital technologies such as VR/AR and the metaverse to overcome physical space limitations, immersing visitors in blended virtual and real-world cultural tourism scenarios. This shifts participation from passive observation to active engagement, achieving dual sensory and emotional immersion, a feature prominently demonstrated by digital scenic areas and immersive performances. Meanwhile, digital technologies enable precise alignment between cultural tourism offerings and visitor needs, allowing travelers to customize personalized itineraries and experiences through online platforms, making personalization the central focus of the consumption experience.

Comprehensive accessibility is a defining feature of digital cultural and tourism experiences. Digital technologies seamlessly integrate online and offline cultural tourism scenarios, achieving a holistic integration of “virtual tours + physical experiences”. Tourists’ consumption experiences are no longer confined to physical attractions; they can complete the entire process, including attraction reservations, cultural education, and cultural and creative product purchases, through digital platforms, creating a closed-loop, integrated online-offline consumption experience. Furthermore, the consumption experience in the digital cultural and tourism era is highly interactive and social. Visitors can share their experiences and engage in exchanges via social media platforms and digital cultural tourism apps, transforming tourism consumption into a vital vehicle for social dissemination.

2.2. The internal mechanism of digital technology empowering the tourism consumption experience

Digital technology provides the core technological foundation for enhancing tourism consumption experiences, with its enabling mechanisms manifesting in three dimensions: scenario reconstruction, demand matching, and experience extension. At the scenario reconstruction level, digital technologies such as big data, artificial intelligence, and VR/AR break through the physical boundaries and spatiotemporal constraints of traditional cultural tourism settings, creating integrated virtual and physical consumption scenarios. These technologies transform static cultural resources into dynamic, participatory experiences, offering tourists entirely new sensory engagements and elevating the overall scenario experience.

At the demand matching level, big data technology accurately captures tourists’ consumption preferences, travel habits, and experiential needs. Through algorithmic analysis, it enables precise delivery and personalized customization of cultural and tourism offerings, addressing the mismatch between traditional tourism services and visitor demands to better align consumption experiences with individual preferences. At the experiential extension level, digital technologies facilitate the transition of tourism consumption experiences from offline to online platforms and from the travel process itself to the entire lifecycle. Visitors can explore the world from the comfort of their homes via online virtual tours, while also extending offline experiences through digital cultural products and social media check-ins, thereby continuously enhancing the overall tourism consumption experience.

2.3. The core logic of consumption experience enhancement in the digital cultural tourism context

The core logic behind upgrading tourism consumption experiences in the digital cultural tourism context lies in leveraging digital technology as the primary driver and aligning with tourist demands to achieve a synergistic effect between the digital transformation of the cultural tourism industry’s supply side and the quality enhancement of consumer experiences. From the supply perspective, experience enhancement primarily involves utilizing digital technology to facilitate the digital conversion of cultural tourism resources, drive digital innovation in tourism products, and optimize tourism services. This approach breaks down developmental barriers in the traditional cultural tourism sector, improves the quality and efficiency

of tourism offerings, and lays the foundation for elevated consumer experiences.

From the consumer perspective, the core of experience enhancement lies in addressing tourists' evolving demands, from "material consumption" to "experience consumption" and from "standardized experiences" to "personalized experiences". By leveraging digital technologies, it provides visitors with more immersive, personalized, and convenient consumption experiences that meet their aspirations for high-quality cultural and tourism offerings. Simultaneously, the fundamental logic of experience enhancement is reflected in the digital integration of the cultural and tourism industry. Digital technologies break down barriers between its various segments and business models, enabling comprehensive industry integration and full-chain upgrades. This creates a cohesive tourism consumption experience, driving holistic implementation of enhanced experiences ^[1].

3. The real challenges in upgrading tourism consumption experiences in the digital cultural tourism era

3.1. Insufficient integration of digital technology with cultural and tourism scenarios

The integration of digital technology with cultural and tourism scenarios remains at a superficial stage, lacking sufficient depth and breadth, which poses a significant obstacle to enhancing the visitor experience. Some cultural and tourism attractions merely implement basic digital technologies such as QR code entry and online audio guides, failing to achieve deep integration between digital technologies and the sites' cultural resources or touring environments. Consequently, they struggle to create immersive experiences that blend the virtual and physical worlds, resulting in visitor experiences that differ little from traditional touring models, and the full potential of digital technology remains underutilized.

Meanwhile, the integration of digital technology with cultural and tourism scenarios faces homogenization issues. Most digital experience offerings at cultural and tourism attractions primarily focus on VR tours and AR check-in features, lacking personalized digital scenario designs that reflect their unique cultural characteristics. This results in uniform digital experiences that fail to provide differentiated consumer engagement. Furthermore, some cultural and tourism enterprises lack sufficient digital technology capabilities and professional R&D and operations teams, leading to subpar quality and weak interactivity in digital scenarios. Consequently, visitor experiences remain unsatisfactory, hindering effective enhancement of consumer experiences.

3.2. Homogenization of cultural and tourism consumption offerings with weak experiential appeal

The homogenization of cultural and tourism consumption offerings remains a prominent issue, characterized by insufficient experiential depth and innovation, making it difficult to meet tourists' demand for high-quality experiences in the digital age. Currently, most cultural and tourism products still primarily focus on traditional sightseeing, dining, and accommodation services. There is an inadequate supply of new types of cultural and tourism offerings such as digital cultural creations, immersive performances, and metaverse experiences. Moreover, some of these new offerings lack cultural substance and creative design, relying merely on superficial integration of digital technologies, which fails to provide visitors with meaningful, immersive experiences.

Meanwhile, the development of cultural and tourism consumption offerings lacks in-depth exploration of local cultural resources. Most products merely provide superficial displays of these resources without effectively integrating distinctive local cultures with digital technologies and experiential design, resulting in content that lacks regional character and cultural appeal, with severe homogenization. Furthermore, the experiential design of these offerings is inadequate; many digital cultural and tourism products still prioritize passive tourist reception over interactive or participatory experiences. This prevents visitors from fully immersing themselves in the scenarios and forming emotional connections, ultimately leading to subpar consumption experiences ^[2].

3.3. Inadequate adaptability and interconnectivity of the digital tourism service system

The development of the digital tourism service system remains inadequate, lacking sufficient adaptability and integration, which hinders its ability to effectively support the enhancement of tourism consumption experiences. In terms of adaptability, some digital tourism services remain at a standardized level and fail to provide personalized services tailored to different tourists' ages, needs, and consumption habits. For instance, elderly tourists often have limited proficiency with smart devices, yet many cultural and tourism attractions lack age-friendly design in their digital services, resulting in a suboptimal experience for this demographic.

From a connectivity perspective, the current digital tourism service system suffers from "information silos". The digital platforms of various cultural and tourism sectors, including scenic areas, hotels, transportation, and cultural and creative industries are operating in isolation, hindering data sharing and service integration. Tourists must switch between multiple platforms to complete tasks such as reservations, ticket purchases, and navigation, resulting in an inadequate travel experience. Furthermore, the intelligence level of digital tourism services remains low; features like smart customer service and navigation on some platforms still exhibit delayed responses and low accuracy, failing to meet tourists' demands for efficient and convenient services and thus limiting the enhancement of the overall travel experience.

4. Implementation principles for upgrading tourism consumption experiences in the digital cultural tourism era

4.1. Core principles for combining technology empowerment with experience-oriented approach

The integration of technology empowerment and experience-centric approaches constitutes the core principle for enhancing tourism consumption experiences in the digital cultural tourism era. The application of digital technologies must prioritize improving visitor experiences as its fundamental objective, avoiding a superficial integration that overemphasizes technology at the expense of experience. While digital technology serves as a vital tool for experience enhancement, its implementation must remain grounded in the essence of cultural tourism experiences. It should be centered around tourists' experiential needs, achieving deep integration with cultural tourism settings, cultural resources, and experience design to ensure digital technologies genuinely contribute to experience improvement and elevate visitor satisfaction.

Meanwhile, adhering to an experience-centric approach in digital technology applications requires fully considering tourists' experiences and diverse needs, emphasizing comfort, interactivity, and emotional engagement while avoiding excessive technological complexity that could diminish the visitor experience. For instance, when creating immersive environments, it is essential to leverage digital technology's scene-reconstruction capabilities while integrating cultural depth and fostering emotional resonance. This enables visitors to appreciate the cultural appeal of tourism resources while experiencing digital technologies, achieving an organic integration of technological empowerment and experience-focused design.

4.2. Content principles balancing personalized customization and cross-platform integration

Balancing personalized customization with comprehensive integration constitutes the core principle for enhancing tourism consumption experiences in the digital cultural tourism era. This requires that the development of cultural and tourism offerings not only meet tourists' individualized needs but also achieve seamless, cross-domain integration. Adhering to personalized customization involves addressing tourists' specific consumption demands by leveraging big data technology to accurately identify their preferences, thereby creating diverse and tailored cultural and tourism experiences, including customized travel itineraries and personalized digital cultural and creative products, that better align with travelers' expectations.

Meanwhile, adhering to the principle of comprehensive integration requires breaking down barriers between different sectors and processes within the cultural and tourism industry, promoting the integrated development of cultural and tourism consumption content across all domains, and achieving a seamless convergence of "scenic areas + cultural

creativity + performing arts + accommodation” to establish a comprehensive, end-to-end cultural and tourism consumption ecosystem. Additionally, efforts should focus on integrating online and offline cultural and tourism offerings, fostering synergy between virtual tours and digital cultural products with offline scenic area experiences and physical consumption activities, thereby providing visitors with a holistic consumption experience and driving a comprehensive upgrade in the overall consumer experience ^[3].

4.3. Service principle: Balancing intelligent efficiency with humanistic warmth

Balancing intelligent efficiency with humanistic warmth constitutes the core service principle for enhancing tourism consumption experiences in the digital cultural and tourism era. The development of digital tourism services must deliver intelligent, efficient experiences while integrating humanistic considerations to avoid the coldness inherent in digital services. Adhering to the principle of intelligent efficiency requires fully leveraging the advantages of digital technologies such as artificial intelligence, big data, and the Internet of Things to drive the digital and intelligent transformation of tourism services. This enables one-click operations and rapid responses for services like scenic spot reservations, ticket purchases, navigation, and guided tours, thereby improving the convenience and efficiency of tourism services.

Meanwhile, while upholding the principle of humanistic warmth in digital service development, it is essential to fully consider the diverse needs of different tourists and emphasize personalized and inclusive services. For instance, tailored digital service designs should be enhanced for special groups such as elderly and disabled visitors, with offline human service channels maintained to ensure digital services remain warm and approachable. Additionally, improving the professional competence and service mindset of staff is crucial, enabling intelligent and human services to complement each other and deliver tourism experiences that are both efficient and imbued with human touch, thereby elevating the overall visitor experience.

5. Innovative approaches to enhancing tourism consumption experiences in the digital cultural tourism era

5.1. Creating an immersive cultural and tourism experience scenario with deep technological integration

Creating immersive cultural and tourism experience scenarios that integrate technologies deeply represents the core pathway for enhancing consumer experiences. This requires promoting the deep integration of digital technologies with cultural tourism resources and visitation settings to develop immersive experiences that blend the virtual and the real while showcasing distinct characteristics. On one hand, digital technologies such as VR/AR, the metaverse, and holographic projection should be leveraged to digitally transform and reconstruct local cultural resources, converting static cultural heritage and historical narratives into dynamic, participatory immersive content. This allows visitors to immerse themselves in historical settings and cultural stories, achieving profound cultural engagement.

On the other hand, it is essential to leverage the unique characteristics of cultural and tourism attractions to create personalized digital immersive experiences, avoiding homogenized designs. For instance, natural scenic areas can feature digital ecological experience scenarios, historical and cultural sites can offer digital historical experience scenarios, and folk custom attractions can develop digital folk custom experience scenarios. Simultaneously, emphasis should be placed on the interactive and participatory design of these immersive experiences. By incorporating interactive tasks and immersive games, visitors can actively engage with the scenarios, fostering emotional resonance, enhancing the quality of the immersive experience, and providing them with a completely new consumer experience.

5.2. Building a personalized and diverse digital cultural and tourism consumption content system

Establishing a personalized and diversified digital cultural and tourism consumption content system is the key pathway to upgrading the tourism consumption experience in the digital era. Its core lies in addressing tourists' differentiated

needs, deeply exploring the essence of regional cultural resources, and promoting the digital transformation, innovative development, and systematic construction of cultural and tourism content. This approach breaks through the limitations of traditional cultural and tourism content being monolithic and homogeneous, ensuring that consumption offerings precisely align with tourists' experiential needs. First, it is essential to vigorously promote diversified development of cultural and tourism content by enriching the supply of new formats such as digital cultural creations, immersive performances, online virtual tours, metaverse experiences, and digital educational tours. This breaks away from the traditional single-model sightseeing approach, covering diverse consumption scenarios including leisure, educational tours, wellness, and entertainment, thereby providing rich experiential choices for tourists of all ages and preferences and comprehensively meeting their varied consumption needs.

Secondly, leveraging digital technologies such as big data and artificial intelligence enables personalized customization of cultural and tourism consumption experiences. By accurately capturing tourists' consumption preferences, travel habits, and experiential needs through cultural tourism platforms, algorithms can construct detailed tourist profiles to deliver tailored content and customized experiences, including bespoke travel routes, personalized digital cultural products, and immersive activities, transforming tourism consumption from standardized offerings to truly personalized adaptations. Additionally, it is crucial to emphasize the cultural depth of tourism offerings by deeply integrating local cultural characteristics, intangible heritage skills, and historical narratives with digital technologies and experiential design. This approach prevents digital content from becoming superficial and instead creates distinctive cultural tourism experiences that combine profound cultural heritage with cutting-edge digital interaction, enhancing both the cultural appeal and core competitiveness of offerings. Consequently, tourists can appreciate cultural richness while engaging with digital tourism experiences, achieving a qualitative and substantive upgrade in their travel consumption experiences.

5.3. Improve the integrated, intelligent tourism service support system

Establishing a comprehensive, regionally integrated smart tourism service support system serves as a crucial pathway for enhancing the consumer experience. This requires breaking down information silos and advancing the digital, intelligent, and holistic upgrade of tourism services. First, a regionally coordinated digital cultural and tourism service platform should be developed to integrate resources and data from various sectors, including scenic areas, hotels, transportation, cultural and creative industries, and catering, enabling seamless data sharing and service coordination across platforms. This allows tourists to complete their entire travel experience through a single platform, significantly improving the convenience and efficiency of tourism services.

Secondly, efforts should be made to advance the intelligent upgrading of tourism services by enhancing smart features such as AI-powered customer service, navigation systems, and audio guides, thereby improving response speed and accuracy to deliver efficient and user-friendly intelligent services. Simultaneously, emphasis should be placed on human-centered care and inclusivity in tourism services, with improved designs tailored for elderly and disabled visitors, while maintaining physical human service channels. This will facilitate the seamless integration of intelligent and human services, making tourism experiences warmer and more welcoming. Additionally, the operation and management of digital tourism services must be strengthened through the establishment of specialized teams that promptly update service offerings and optimize workflows, providing robust support for enhancing the overall travel experience.

6. Conclusion

Upgrading tourism consumption experiences in the digital cultural tourism era constitutes the core mission of the industry's digital transformation and represents an essential approach to meeting tourists' demand for high-quality services. This paper establishes a research framework encompassing four dimensions, key characteristics and upgrading logic, practical challenges, implementation principles, and innovative pathways, clarifying the fundamental direction and actionable strategies for experience enhancement. By integrating technologies to create immersive environments, innovating content

to build diversified offerings, and optimizing services with intelligent support systems, current pain points in experience upgrading can be effectively addressed, driving tourism experiences toward greater immersion, personalization, and quality. Simultaneously, the cultural tourism sector must consistently prioritize tourist needs, foster deep integration of digital technologies, and achieve bidirectional synergy between supply and demand sides, thereby facilitating high-quality development and delivering superior tourism experiences for visitors.

Disclosure statement

The author declares no conflict of interest.

References

- [1] Zhao L, 2025, Research on the Influencing Factors of College Students' Participation in Local Tourism Consumption in Changchun City, thesis, Dalian International Studies University.
- [2] Zhang H, 2025, Fully Exploiting the Consumption Potential of Inbound Tourism. China Accounting News, 2025-05-09(014).
- [3] Zhang L, Wei L, Liang H, et al., 2025, Reconstructing the Pathways of Tourism Consumption Upgrading from the Perspective of the Experience Economy: A Study on Scenario-Based Design and User Behavior Guidance of Slow Tourism Apps. Business Exhibition Economy, 2025(17): 79–82.

Publisher's note

Whoice Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.