

Research on the Development Path of Digitalization Empowered Tourism Industry

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ABSTRACT

Currently, artificial intelligence and information technology have gradually been applied in various industries. The development of the tourism industry is no longer limited to a one-way perception experience of "seeing, listening, touching, and smelling", but focuses on exploring and reconstructing the infinite extension of digital opportunities, innovative applications, and resource integration to form mutual integration and intercommunication. This paper explores the development path of digital empowerment in the tourism industry, providing specific transformation strategies for the digital upgrading of the tourism industry.

KEYWORDS

digitalization; tourism industry; development path; technology

1 Introduction

In the context of the digital age, it is an inevitable trend for the tourism industry to innovate and reform to optimize and upgrade its industrial structure, keeping up with the pace of the times; Digital technology has strong information processing capabilities and wide applications, which can meet various needs of tourists and provide new ideas for the transformation and upgrading of the tourism industry. [1] This study will focus on the digital empowerment of the tourism industry and provide effective references for the development path of the tourism industry from three aspects: driving the development of the tourism industry with digital technology, promoting digital products, and creating new digital business models for the tourism industry.

2 Technology Driven: the Widespread Application of Digital Technology

2.1 Providing Visual Enjoyment: The Application of Virtual Reality (VR) and Augmented Reality (AR) Technologies

The application of augmented reality technology in the tourism industry can allow tourists to experience the environment of tourist destinations up close, understand the detailed design of tourist destinations, and provide high-quality services for tourists. [2] For example, the Nanjing Jinling Intangible Cultural Heritage Lantern Festival uses VR technology to reproduce the production process and historical scenes, and uses AR technology to improve the details of the scene, allowing tourists to experience its cultural charm firsthand.

By collaborating with VR and AR technologies, it is possible to create immersive virtual scenic spots and develop virtual scenic spot tour columns, allowing tourists to intuitively experience the

beautiful scenery and rich cultural connotations of their tourist destinations. Utilizing VR and AR interactive collaboration technology can help increase the functionality of virtual routes and visually display tourist attraction routes. This will help tourists to immerse themselves in the scenic area, create tourist routes with different needs, and provide diversified and personalized tour services for tourists. Thus, this can enrich the tour content and provide visitors with intelligent device services, allowing them to understand the historical origins, cultural connotations, and historical allusions of the scenic spots through device explanations.

2.2 Providing Intelligent Services: Big Data and Artificial Intelligence Technology

The widespread application of big data and artificial intelligence technology has injected fresh vitality into the tourism industry, helping it to monitor market trends in real time and analyze market demand; This can provide high-quality tourism services for tourists. The scenic spot can use the Internet big data to collect information about users' travel preferences, travel consumption habits and other information on various platforms to form a big database; We can monitor changes in the tourism market in real-time based on data-driven information, promote the transformation and upgrading of tourism products in a timely manner, create personalized tourism products that keep up with the times, innovate tourism services, and provide tourists with diverse travel experiences. AI technology can be used reasonably to create tourism plans and promotional copy, generate tourism copy that stimulates tourists' curiosity and interest based on their reading habits and platform browsing traces, and improve the efficiency of tourism promotional copy writing. At the same time, we will launch tourism AI cultural and creative products to target the young consumer market and meet their travel consumption needs.

2.3 Improving Service Efficiency: 5G and IoT Technologies

The 5G network has increased transmission speed, reduced network latency, and laid the foundation for the emergence of network intelligent service platforms. [3] With the help of 5G network technology, scenic spots can establish information processing centers to quickly handle tourist issues and provide solutions; We can develop a tourism App to update information on weather conditions, hotel prices, and transportation in tourist destinations in a timely manner; The low latency feature of 5G network can also be utilized to provide visitors with an immersive experience through live streaming on the Internet. By utilizing IoT technology, the scenic area will build an intelligent ticketing system, promote hardware devices such as intelligent ticket gates and ticket vending machines, and enable tourists to enter the park and purchase tickets on their own, thereby reducing labor costs. Scenic areas can establish tourist flow observation centers, which can use large screens to track and update real-time changes in the number of visitors, achieving precise control over tourist flow.

3 Application Innovation: Development and Promotion of Digital Products

3.1 Digital Display and Marketing

Strengthening digital display and marketing is an effective means to promote innovation in tourism industry applications and achieve the development and promotion of digital products. Through digital means, the natural scenery, cultural landscapes, historical and cultural content of tourist destinations can be digitally displayed; Such as establishing digital museums, and virtual scenic spots to build interactive platforms between scenic spots and tourists, can digitally display

real-time content of scenic spots. New media platforms can be utilized for marketing and promotion, developing digital cultural and creative products on the Internet. Through digital dissemination such as secondary innovation, collaboration, and animation, it can promote the digital innovation and development of scenic spots, and attract more potential tourists through social media, short video platforms, etc; For example, the Jinling Intangible Cultural Heritage Lantern and Rural Tourism Digital Promotion Action have achieved remarkable results through three-dimensional display and thematic promotion through Tiktok, Xiaohongshu and other platforms. We can launch marketing activities for scenic spots, implement online discounted ticket prices for scenic spots, and launch online lucky draws; A scenic spot membership points system can also be established to provide various benefits for scenic spot members, such as point redemption, discounts on surrounding hotels, and discounted package tickets; You can also publish travel guides and other graphic and textual information online, and collaborate with travel bloggers to create videos.

3.2 Intelligent Tourism Services

Intelligent tourism services are the direction of digital transformation in the tourism industry, which can improve the quality of tourism services and optimize the tourist experience. [4] By constructing intelligent tourism supporting facilities and establishing a city scenic area route planning system, it helps to achieve intelligent planning of tourism routes and increase the variety of transportation options available; We should establish full coverage of wireless networks in scenic areas, provide self-service tour guides for scenic areas, develop translation functions for scenic area explanations, and cover diverse types of tourists. Analyzing Internet data such as visitor clicks, discussion and microblog popularity through large computer databases can push more personalized tourism information for tourists and increase the exposure of tourism destinations; We can also develop an AI intelligent customer service platform to reduce manual consumption, answer basic questions, and provide travel advice.

3.3 Social Media Travel Promotion

Promoting tourism through social media has become one of the important strategies in the current tourism industry to enhance its development. Content, discussion popularity, and attention can be posted on social networks to extract target users of scenic spots and accurately target them; We can also provide various travel modes, travel guides, and travel bloggers based on the diverse and personalized travel consumption needs of the audience. For the elderly population, we can collaborate with tourism companies to launch various tour group services such as group buying and senior tours; For young users, promotion can be focused on social platforms such as Weibo, WeChat, and Xiaohongshu. For example, Jinling Intangible Cultural Heritage Lanterns have accurately docked with young users through platforms such as Xiaohongshu and Tiktok, forming a trend of beautiful colored lanterns punching, and strengthening the influence of intangible cultural heritage lanterns.

4 Business Model Transformation: Building Digital Business Models

4.1 Construction of Digital Platform

A comprehensive digital tourism platform should be constructed to integrate tourism resources and services, providing tourists with convenient and comprehensive tourism experiences. The

platform can improve the conversion rate and repurchase rate of tourists through data analysis and intelligent recommendation technology. The tourism digital platform provides remote intelligent tourism solutions for the tourism user group, promoting the intelligent, diversified, and personalized development of the tourism industry. This can change the original manual ticketing and on-site ticketing models, provide convenient online services for tourists, and achieve intelligent office management in the tourism industry. By optimizing the construction of digital platforms, and beautifying the website promotion layout of scenic spots, can provide rich content of tourist attractions. At the same time, to ensure the normal operation of digital architecture, a powerful digital platform backend system can be built to ensure data processing speed; Scientific digital system processing can also be carried out, excellent digital design professionals can be recruited, and the digital intelligence platform "system design" can be promoted to achieve "one-stop service" for smart platforms.

4.2 Cross Border Cooperation and Win-Win Situation

Cross border cooperation between the tourism industry and other industries is an important way to make up for the shortcomings of the tourism industry itself, enrich the connotation of the tourism industry, and provide diversified product services. The tourism industry should break free from its own industry constraints and actively seek cooperation with other fields such as information technology, culture, art, or finance, to launch new cultural and tourism industry formats through cooperation. Strengthening cultural tourism cooperation and development, engaging in cultural exchange and interaction, helps to enhance cultural integration and enrich cultural connotations. Through cross-border cooperation between the cultural and tourism industry and the art media industry, a new path for high-quality development of the cultural and tourism industry in the future can be created, which can achieve new experiences in new scenarios, concepts, technologies, and products. Promoting the integration of tourism and finance industries can help launch new types of tourism finance products. We can strengthen the characteristic connotation of scenic area development, broaden our commercial vision, and carry out tourism characteristic development projects. It is also possible to strengthen the combination of education and tourism, invite experts to conduct on-site inspections, and conduct interdisciplinary research in geology, traditional culture, landscape architecture, and other fields. We can also develop a tourism industry group model, strengthen the development of tourism industry clusters through enterprise integration, form a new model of comprehensive tourism industry development from top to bottom, and enhance the brand awareness of tourism.

4.3 To Introduce High-Quality Commercial Capital

We should actively finance and promote the economic development of the tourism industry in order to build a business model for the tourism industry and carry out industrial upgrading and innovation with a more open attitude. We should change the previous situation of the tourism industry fighting alone, expand financing channels for the tourism industry, and explore various financing methods; Financing methods such as bank loans, issuance of tourism enterprise bonds, and stock financing can be used to improve the financial structure of tourism enterprises and promote the economic development of the tourism industry. We should actively establish a specialized financing channel for the tourism industry, encourage social commercial capital investment, establish tourism industry investment funds, and attract high-quality commercial capital to participate in the construction and development of the tourism industry. The government takes the lead in providing a favorable communication environment for capital investment and the

tourism industry, deepening exchanges, and promoting mutual understanding between commercial capital and tourism enterprises. Tourism enterprises should actively open up dialogue, establish specialized departments for commercial capital negotiations, and clarify the capital negotiation process. Multiple contact methods such as private messaging, email, and phone communication through online accounts can be used to expand communication channels for enterprises.

5 Conclusion

Digitization will continuously create new resources for the tourism industry, giving rise to new forms of "digital plus" tourism integration. By driving technology, applying innovation, and transforming business models, we aim to empower the tourism industry with digitalization and inject fresh vitality into it. This can enhance the effective supply level of the tourism industry, meet consumers' demand for high-quality and personalized cultural and tourism products, and inject new impetus into the sustainable development of the tourism industry.

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References

- [1] Liu Yang, Xu Zhenyu. Interpretation of the Connotation, Realistic Challenges, and Promotion Mechanism of Digitalization in Culture and Tourism [J]. Qinghai Social Sciences, 2023, (02): 80-93.
- [2] Ye Ziqing, Liu Yijun, Wang Pengfei. The Mechanism and Policy Suggestions of Big Data Promoting High Quality Development of Tourism Industry [J]. Enterprise Economy, 2022,41 (08): 132-141.
- [3] Lin Yongjun, Cheng Daolei. Research on Smart Tourism Cloud Platform Based on Internet of Things and 5G [J]. Jiangxi Communication Science & Technology, 2022, (02): 20-22.
- [4] Wu Jiang. Research on the Promotion of Smart Tourism Innovation through the Integration of Tourism and Tourism in the Digital Perspective [J]. On Economic Problems, 2022, (05): 75-81
- [5] Xiang Zheng, Ding Yusi, Li Ke. Information Technology and Tourism: From Digitization to the Age of Information Acceleration [J]. Tourism Tribune, 2020, 35 (01): 11-12