

Research on Digitalized Territorial Tourism Landscape Planning and Design in the Context of Rural Revitalization

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Abstract:

With the continuous acceleration of China's urbanization process, issues such as resource scarcity, environmental pollution, and traffic congestion have become increasingly prominent as urban population and expansion grow. To address these problems, the important concept of rural revitalization strategy was put forward in the 19th National Congress of the Communist Party of China. This strategy aims to achieve common development of rural and urban areas by promoting agricultural modernization, rural industrial revolution, cultural and ethical progress, modernization of governance systems and capabilities, as well as the construction of beautiful countryside. As the rural revitalization strategy advances, rural tourism focusing on agritourism, folk customs, rural ecology, and leisure vacations has been vigorously developed, becoming a key driver of rural economy and tourism industry. Through the support of digital technology, rural all-for-one tourism leverages rural resources and characteristics, integrates rural tourism formats, optimizes the rural tourism value chain, and builds rural tourism brands, providing diversified tourism products and services to empower rural revitalization. It aims to achieve the informatization, intelligence, personalization, and sustainable development of rural tourism. From the perspective of holistic tourism, landscape planning and design play an important role in enhancing attractiveness, creating complete experiences, preserving cultural heritage, improving service quality, and promoting sustainable development. By utilizing digital technology and data analysis methods, holistic tourism injects innovative elements into landscape planning and design, enhancing its scientific, precise, and efficient qualities, thereby further driving the path towards sustainable development in the tourism industry.

Keywords:

Rural Revitalization, Digitalization, Territorial Tourism, Landscape Planning, Design Research

1. Introduction

With the advancement of the national rural revitalization strategy, rural tourism has been increasingly recognized as a crucial means to drive rural economic development. The application of digital technology has provided new opportunities for the development of rural tourism. By incorporating digital technology into tourism landscape planning and design, not only can the efficiency and accuracy of planning and design be improved, but also new tourism experiences and business models can be created. Currently, within the context of rural revitalization, exploring methods and strategies for digital holistic tourism landscape planning and design is beneficial for enhancing the attractiveness and competitiveness of rural tourism, as well as promoting sustained economic development in rural areas.

2. Background to the Development of Rural Tourism

2.1. Policy Guidelines Related to Rural Revitalization Strategy

Rural development and revitalization are important components of socio-economic progress. The rural revitalization strategy was formally introduced in the 19th National Congress report in 2017 and officially included in the national development strategy in 2018. To further advance rural revitalization, the Central Political Bureau held a meeting in 2018 to review the National Rural Revitalization Strategy Plan (2018-2022). The “Opinions of the Central Committee of the Communist Party of China on Implementing the Rural Revitalization Strategy”, released in February 2018, outlined the overall objectives, basic principles, and key tasks of rural revitalization. It focused on rural industrial development, improvement of rural living environment, agricultural technology innovation, and other critical areas, proposing policy measures and pathways for rural development to comprehensively promote the rural revitalization strategy. In February 2021, the National Commission for Rural Revitalization Strategy was established, with leaders from the State Council serving as the directors. The commission is responsible for coordinating and overseeing the various aspects of rural revitalization, formulating policies, and organizing implementation, further driving the implementation of rural revitalization. In the “Number One Central Document” issued multiple times from 2015 to 2023, clear instructions were given for the development of rural tourism, particularly emphasizing “leisure agriculture”, “quality rural tourism routes”, and the “construction and development of digital rural areas”. The introduction of national policies has provided greater guidance for the development of rural tourism. The development and revitalization of rural areas are also crucial in achieving the goal of building a socialist modernized and strong nation. It requires the thorough implementation of relevant policies, efforts to improve the livelihoods of farmers, and the promotion of sustainable rural economic development, making positive contributions to building a moderately prosperous society in all respects and realizing the great rejuvenation of the Chinese nation, which is the Chinese Dream [1].

2.2. Rural Tourism Market Development Trends

According to the big data analysis by China Tourism Academy, in 2019, the total number of rural tourism trips in China reached approximately 3 billion. Despite the overall contraction of national tourism in the past three years, rural tourism in the outskirts of cities has shown a growth trend. Rural tourism and other business activities are carried out in nearly 60,000 administrative villages in our country, with

various segments such as sightseeing, leisure, wellness, and summer retreats developed. In 2020, the total revenue from rural tourism reached 1.81 trillion yuan, with a year-on-year growth of 11.3%. In the first half of 2021, the scale of rural tourism reached 860 million trips, a year-on-year increase of 55.5%. Rural tourism has become the first market to recover against the trend. Data shows that the rural tourism golden development zone lies within a 20-150 km radius from urban areas. In 2022, the trend of local weekend trips and nearby tours for 1-2 days is rapidly emerging. It is estimated that by 2025, the revenue from leisure agriculture and rural tourism in China will exceed 1.2 trillion yuan, with a compound annual growth rate of 14.87% from 2020 to 2025. These data not only reflect the new changes in tourism demand in our country but also demonstrate the enormous development potential of rural tourism [2].

2.3. Functional Transformation and Development of Villages

As an independent spatial and regional system, the earliest core function of rural areas was to provide food to urban areas as agricultural production zones. Since the reform and opening-up, rural areas in China, especially in developed regions, have undergone changes in population and industrial structure, leading to a transformation in rural functions. Traditionally, rural functions mainly included agricultural production, rural residence, and social services. With economic and social development, the functions of rural areas have gradually evolved from traditional agriculture to encompass modern agriculture, cultural tourism, and other comprehensive functions. The rise of rural tourism is an important social phenomenon in the later stage of urban social development. The theory of "Lucid waters and lush mountains are invaluable assets" fully affirms the ecological value and development potential of rural areas.

In the process of rural revitalization, ecotourism and rural tourism have become increasingly prosperous. The repositioning and transformation of rural functions play a crucial role in the development of rural economies. Rural functions have also experienced a series of transformative changes. Firstly, the agricultural function has undergone a transformation. Traditional agricultural production has shifted from grain-focused agriculture to diversified, efficient, and ecological agriculture. Farmers are no longer just involved in farming but also engage in modern agricultural technologies and management skills. By developing specialty agriculture, ecological agriculture, and leisure agriculture, the agricultural output value and farmers' income are improved. Secondly, the residential function in rural areas has diversified. With the continuous increase in urban population and accelerated urbanization, the residential function in rural areas has undergone a transformation. On the one hand, urban residents are moving to rural areas in search of livable environments and a higher quality of life, promoting the development of rural residential functions. On the other hand, rural residents have gradually improved their housing conditions, enhancing the renovation and construction of residential environments. At the same time, rural tourism has become a leisure and vacation choice for both rural and urban residents, driving the transformation and development of rural residential functions. Lastly, social services have been continuously improved. Rural social services include education, healthcare, culture, sports, and other aspects. With economic development and urbanization, rural social service facilities and overall capacity have significantly improved, while basic social services such as primary education and basic healthcare have been widely accessible. Additionally, rural cultural activities and sports have

become more active, providing more social services to rural residents. Overall, traditional rural functions have diversified, become efficient, and embraced ecological agriculture under the influence of urbanization. The residential function in rural areas has diversified, including the improvement of living environments and the development of rural tourism. Social service functions have been enhanced, including basic education, healthcare, culture, and sports.

3. The Role of Territorial Tourism in Rural Revitalization

Destination-oriented tourism, or holistic tourism, aims to achieve sustainable development in the tourism industry by integrating various tourism resources and providing comprehensive tourism services. It transforms the traditional regional or attractions-based tourism model into a tourism product that encompasses the entire region, utilizing local cultural, natural, and human landscapes as tourism resources for integrated development. The core philosophy of holistic tourism lies in diversity, integration, and connectivity. It requires the integration of various types of tourism resources within a region to provide comprehensive and diversified tourism products and services. It also calls for close collaboration and linkage among different tourism destinations, forming a tourism industry chain and value chain, and realizing resource sharing and complementary development. Holistic tourism maximizes the advantages of tourism resources within a geographical area, achieving sustainable growth in the tourism industry, promoting local economic development, and contributing to social prosperity in terms of industries, ecology, and culture.

3.1. The Promotion of Territorial Tourism on the Deep Integration of One, Two and Three Industries

Holistic tourism efficiently integrates rural resources, develops core industries, builds a destination-oriented tourism industry chain, and drives the development of tourism, agricultural sightseeing, and the sale of agricultural products. It revitalizes cultural creativity, educational study tours, the health industry, and optimizes the industrial structure, thereby improving the quality and efficiency of rural industries [3].

3.2. Territorial Tourism as a Driver of Rural Eco-Livability

Holistic tourism focuses on the protection of rural ecological environment, ancient villages and towns, natural resources, and cultural consistency. By creating an ecologically livable new countryside, improving the quality of farmers' lives, and promoting environmental restoration, it aims to build beautiful rural areas that harmoniously blend natural beauty and cultural charm, ultimately creating ecologically livable new rural communities.

3.3. The Pioneering Role of Territorial Tourism on the Civilized Style of Villages

Culture is the soul of the tourism industry, and the tourism industry should rely on culture. Holistic tourism must delve into and protect local cultural heritage, rural historical and cultural aspects, regional cultural characteristics, ethnic folklore culture, traditional farming culture, etc., in order to enhance the level of rural civilization, promote the construction of a civilized countryside, and foster the prosperity of regional cultural characteristics, forming a civilized rural trend [4].

3.4. The Leading Role of Territorial Tourism in Rural Common Wealth

Tourism is a comprehensive industry, and holistic tourism promotes the development of rural industries through various means such as promoting integrated development, enhancing rural brand image and public services. It creates opportunities for entrepreneurship and employment, increases farmers' income, and improves their quality of life, making important contributions to achieving the goal of shared prosperity.

3.5. The Role of Territorial Tourism in Promoting Rural Normative Governance

Holistic tourism is a comprehensive and complex system project, and its implementation requires cooperation and joint efforts from the government, enterprises, and all sectors of society. The government should strengthen policy guidance and planning management, provide excellent infrastructure and public services. Enterprises should focus on product innovation and service quality to enhance competitiveness. All sectors of society should provide support and participation in the tourism industry, creating a favorable atmosphere for promoting tourism development throughout society.

4. Advantages of Digital Territorial Tourism Landscape Planning and Design

Digital holistic tourism landscape planning and design is a way of using digital technology and data analysis methods for tourism landscape planning and design. It involves the use of tools such as geographic information systems (GIS), remote sensing technology, 3D visualization technology, and big data analysis to digitally organize and analyze the natural, cultural, and human resources of tourist areas, in order to achieve optimized planning and design of tourist destinations. The digital holistic tourism landscape planning and design have advantages such as improving visitor flow and management efficiency, and facilitating sustainable utilization of resources.

4.1. Streamlining the Design Process

Digital landscape planning and design enable interactive data visualization, precise spatial positioning, optimized spatial functional planning, improved design quality, and increased efficiency and accuracy in the design process [5].

4.2. Enhancing Design Quality

Digital landscape planning and design facilitate more detailed and accurate design outcomes through interactive design in a three-dimensional simulation, ultimately enhancing the overall design quality.

4.3. Achieving Comprehensive, All-scenario, and Full-lifecycle Smart Services

Digital holistic tourism landscape planning and design integrate various resources such as dining, accommodation, transportation, sightseeing, shopping, and entertainment by incorporating real-time data from ticket gates, operators, and traffic management systems. This integration establishes a smart service platform that covers all aspects, scenarios, and stages for intelligent enhancement of the tourist destination's management and operation capabilities.

4.4. Elevating Visitor Experience Through Digital Services

Digital holistic tourism destinations leverage data support, visual displays, predictive analysis, and precise management to offer more efficient and convenient tourism services, such as guided tours and explanations. This enhances the overall visitor experience within the tourist destination, leading to higher levels of visitor satisfaction [6].

4.5. Enhancing Rural Image and Brand Influence

Digital holistic tourism landscape planning and design can enhance the image and brand influence of a city, attract more tourist traffic, increase the value of rural brands, and expand their overall influence.

5. The Main Contents of Digital Territorial Tourism Landscape Planning and Design Research

Digital regional tourism landscape planning and design is mainly through the use of modern scientific and technological means and digital technology, from the macro and micro point of view to re-plan and build the tourism landscape of rural areas, to enhance the attractiveness and competitiveness of rural tourism. Specifically, it mainly includes the following aspects.

5.1. Resource and Environmental Assessment

Comprehensive assessment and analysis of various landscape resources in rural areas, including natural, cultural, historical, and environmental planning, ecological planning, and supporting facilities. This assessment provides fundamental data and references for planning and design in rural tourism, helping identify core attractions and unique landscapes.

5.2. Tourism Product Planning

Systematic planning for different tourism products, including scenic areas, resorts, rural tourism demonstration areas, and demonstration sites. Market research and analysis of visitor demands are conducted to align landscape planning and design with visitor interests and preferences, ensuring the match between landscape tourism products and visitor needs [7].

5.3. Digital Tourism Landscape Planning and Design

Implementing digital technologies in tourism landscape planning and design, including the layout design of scenic areas, attraction design, and tourism route planning. This involves planning the spatial layout, conducting three-dimensional simulations, and visualizing the rural tourism landscapes to maintain their original charm and environmental sustainability, while enhancing visitor experiences and the attractiveness of the destination.

5.4. Tourism Services and Supporting Facilities Design

Researching comprehensive supporting services in the tourism industry, including travel agencies, hotels, restaurants, transportation, etc. This also involves developing new experiential projects and picking activities to boost the appeal of tourism offerings and increase visitor stay times. Matching services and optimizing transportation are studied, including facility support, transportation modes, route optimization, etc., to improve service quality, transportation efficiency, and meet

visitor demands [8].

6. The Implementation Path of Digital Territorial Tourism Landscape Planning and Design

The implementation of digital regional tourism landscape planning and design requires the combination of digital technology, landscape design, and tourism expertise to optimize and enhance the tourist attractions through data collection and integration, data analysis and mining, planning and design, application of digital technology, implementation and monitoring, and construction of a smart service platform.

6.1. Utilizing Digital Technology for Scenic Area Planning and Design

Utilizing technologies such as 3D modeling, virtual reality, and augmented reality to construct digital models of scenic areas for simulation and visualization, testing the feasibility and effectiveness of planning and design. Additionally, data analysis and mining can provide insights into visitor demands and behavior patterns, identifying areas for improvement and optimization in order to further enhance the planning and design.

6.2. Developing a Smart Tourism Service Platform

Integrating various resources within scenic areas, including ticket sales, guided tours, interpretation, hotel reservations, etc., to provide comprehensive, scenario-based, and full-lifecycle smart services, enhancing the overall management and operational capabilities of the scenic area. Real-time data analysis and monitoring can also provide insights into the operational status of the scenic area, enabling precise management and scheduling [9].

6.3. Strengthening Scenic Area Management and Maintenance

Utilizing digital technology to enhance management and maintenance within scenic areas, including environmental monitoring, cultural heritage preservation, security surveillance, etc., ensuring the sustainable development and long-term value of the scenic area.[10]

6.4. Promoting Industry Collaboration and Innovation

Leveraging digital technology to drive collaboration and innovation within the tourism industry, including tourism product innovation, quality service improvement, integration of the tourism industry chain, etc., facilitating the sustainable development of the tourism industry.

7. Conclusions

Within the context of rural revitalization, conducting research on digital holistic tourism landscape planning and design can enhance the brand attractiveness and competitiveness of tourism scenic areas, improve operational management, enhance service quality and experience, promote the development and innovation of the tourism industry, and contribute to the local economic development. It is important to balance the preservation of the originality and cultural customs of rural landscapes, achieving a balance between cultural heritage and sustainable development, and realizing the goals of rural revitalization strategies.

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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