Research on the Modes and Developing Countermeasures of Intelligent Tourism in Hangzhou West Lake

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Abstract. On the basis of on-site investigation and data collection, this paper summarizes the specific measures, which were taken by Hangzhou West Lake during its development of intelligent tourism. Many aspects are included, which are the intelligence of tourist communication, intelligence of ticketing, intelligence of public information distribution, intelligence of payment, intelligence of self-service and so on. Besides, this paper also analyzes the shortcomings and then it will put forward the following suggestions: strengthening the propaganda of intelligent tourism service facilities, applying intelligent tourism system to security insurance, increasing the humanized intelligent electronic guidance, designing tourism products based on the cultural heritage of West Lake, and exploring the functions of intelligent tourism in improving tourists’ quality experience.

Introduction

Intelligent tourism is aimed to provide the integration of means for providing tourism information services for tourists, which mainly involves the marketing, management and service of tourist destinations. West Lake is not only a world-famous tourist destination, but also the first batch of state key scenic attraction announced by the State Council. Besides, it is also the first ten national civilized scenic attraction in China. In 2011, "Hangzhou West Lake Cultural Landscape" was successfully listed on the World Heritage List. The success of West Lake can not be separated from its long-term exploration and practice of intelligent tourism. At the same time, the huge number of tourists has brought a great challenge to the management of the West Lake. In this paper, the modes of intelligent tourism in West Lake is analyzed and reasonable developing suggestions are put forward, as well.

Modes of Intelligent Tourism in West Lake

Tourist Communication is intellectualized. Through on-site observation, the author found that the Scenic Attraction has free and open WIFI. At the same time, wireless broadband network covers the Scenic Attraction. In addition, there are telephone alarm points, public telephone and other facilities.

Ticketing is intellectualized. Most view spots of the Scenic Attractions have been free of tickets. Some spots have converted paper tickets into electronic tickets.

Public Information Distribution is intellectualized. The scenic attraction has established a media matrix, which takes portal website, new media public number and mobile app as the main components. Therefore, a portal website was established—West Lake Travel Network (http://www.toxihu.com/web/main.htm). It is aimed to provide online consultation, ticket booking, hotel booking, travel route recommendation, souvenir direct sales and other services. Furthermore, a Wechat public platform was launched, which is called "West Lake Tourism", so as to provide VR panoramic display and the latest information of the scenic attraction timely. Therefore, it has a strong
real-time performance. "Palm West Lake" has also been launched as a mobile phone App. At the same time, the internal function is very humanized, so as to provide tourists with information about public facilities, such as toilets, service kiosks, public transport points, service terminals. Besides, it also can achieve the navigation, catering hotel booking, visitor exchanges and comments, and some other functions.

Payment is intellectualized. Hangzhou is known as Chinese "Smart City". Third-party online payments have become the highlight of Hangzhou, like Alipay. Therefore, most of shops support the online payments, which include the open-air tea breaks, coffee shops, restaurants, specialty shopping, photo booths and so on. Moreover, some restaurants even support mobile phone online order. In addition, there are fleets of Lake cruisers along the West Lake coast and some ticket sales windows support online mobile payment.

Self-service is intellectualized. The most popular public facilities are West Lake gift vending machines and self-service beverage machines. In addition, the Scenic Attraction also has the self-service tourism terminals, the functions of which are corresponding to the portal website.

Developing Measures for the Development of Intelligent Tourism in West Lake

Although the West Lake has made some achievements in the development of intelligent tourism, there are still some problems needed to be improved, such as the lack of Intelligent Tourism products, the lack of awareness of Intelligent Tourism facilities, the poor experience of intelligent tourism, and so on. At present, the developing countermeasures are put forward, which are shown in the followings.

Strengthen the Propaganda of Intelligent Tourism Service Facilities

The intelligent tourism service facilities in the West Lake are relatively perfect. However, the utilization rate of tourists is not high. For example, many tourists don't know the official website, Wechat public platform and other platforms established by the West Lake. Therefore, the West Lake should publicize the functions and usages of these facilities, such as placing two-dimensional codes in the scenic attraction, advertising on urban buses and subway buses.

Apply Intelligent Tourism System to Security Insurance

The functions of wisdom tourism in West Lake mostly serves for the consumption and guidance of tourists. However, the potential of intelligent tourism in tourists' safety is required to be developed. Therefore, information collection system should be established and cultural landscapes and historic sites should be monitored, as well as road traffic and tourist volume. Besides, different indicators and frequencies should be set in accordance to the reality. The collected data are analyzed and predicted. Then, these information will be processed by professional personnel according to the relevant standards. In addition, emergency response system is designed to release emergency response information through short messages and websites.

Increase the Humanized Intelligent Electronic Guidance

There are abundant historical sites and intangible cultural resources in the West Lake. Explanation is indispensable if tourists want to understand these tourism resources in depth. Therefore, "Self tour guide" module can be set up in the official APP, which can automatically read the tour guide words through fixed-point scanning. At the same time, photos, audio and video can be dynamically displayed. In addition, it will also introduce historical allusions, current situation and other related information in details. With the help of three-dimensional, virtual video, augmented reality technology and other technologies, we can display tourism-related culture from various angles such as audio-visual. For example, two-dimensional codes can be set on the broken bridge. Therefore, the tourists can reproduce the love story of Xu Xian and White Lady by scanning of mobile phones. In addition, there are many scenic attractions in the West Lake. Most tourists will not visit each scenic attraction. Therefore, official APP should provide individualized and customized routes for tourism, which means that it integrates several scenic attractions of each visitor, so as to create the most
convenient tourist routes for each visitor. In the process of guides, tourists can also find their friends by locating them. At the same time, initiate dialogues can be taken at any time during the journey.

**Design Tourism Products Based on the Cultural Heritage of West Lake**

Hangzhou is an ancient capital of the Song Dynasty. Besides, it is not only a canal city, but also a place where many myths and legends are spread. These long history will bring great influence to the products of tourism. Especially when combined with high-tech means, it will have amazing effects. Firstly, it optimizes and integrates the ancient capital culture, canal culture and myth and legend culture on the website of West Lake Tourism. At the same time, West Lake cultural heritage can be shaped in high-tech entity and activity content, such as the development of augmented reality postcards. Shooting postcards by using mobile phones can emerge customs and culture of West Lake.

**Explore the Functions of Intelligent Tourism in improving Tourists' Quality Experience**

It has a great effect on improving the quality experience of tourists if using high-tech means reasonably. Intelligent tourism elements are implanted into many aspects, which includes food, shelter, travel, tourism, purchase and entertainment. Therefore, tourists can be satisfied with their requirements of emotional, communication and self-realization. Moreover, each hotel can set the intelligent ordering, robotic feeding and electronic recipe system. Besides, intelligent upgrading of high-end hotels in scenic attraction is supported. Furthermore, several systems can be set, which include intelligent check-in system, intelligent access control system and intelligent scene lighting system. Visitors can see the overlapping scenes of virtual objects and real scenic attraction by using augmented reality technology, so that they can enjoy the different styles and features of West Lake in different ages. In addition, 4D cinemas and small 4D theatres can be built in the scenic attraction. When watching the theme movies such as Legend of White Snake, visitors can enhance their experience of special effects, accompanied by storms, lightning, water spraying, impact and other effects.

**Adhere to Government Guidance**

Intelligent scenic spots grow up in intelligent cities. Intelligent scenic spot construction is not the task of the scenic spot itself. It requires the government to organize relevant departments at all levels to coordinate human, material and financial resources through unified arrangements and planning. Local government departments devote themselves to the construction of intellectualization, publicize the relevant knowledge of intellectualization, concentrate all resources to take the lead in the construction of intellectualization, pay attention to market dynamics, and pay particular attention to the needs of customers and residents of scenic spots. These work of governments should be actively utilized by the West Lake scenic spots. At the same time, the market reflects the change of customer demand through the function of feedback, and provides information and basis for government decision-making on the construction and management of intelligent scenic spots.

**References**

