

# Research on the Development Strategy of Cultural Heritage Tourism in Yaowa Village Based on AHP

<sup>1st</sup> Chenxi Tao<sup>1</sup>, <sup>2nd</sup> Thitisak Wechakama<sup>2</sup>, \*

E-mail: 635707843@qq.com<sup>1</sup>, neoneonnong@hotmail.com<sup>2\*</sup>

<sup>1,2</sup>Faculty of Fine Applied Arts and Cultural Science, Mahasarakham University, Maha Sarakham, Thailand

Corresponding author: 0962767964

**Abstract:** With regard to heritage tourism development in Yaowa Village, it can promote the development of the local economy in Yaowa Village and improve the villagers' living standards. This paper sorts out the current status of heritage tourism development in Yaowa Village, combines the evaluation of the heritage tourism development value in Yaowa Village, provides suggestions for heritage tourism development in Yaowa Village, uses a hierarchical analysis process method to calculate the weight values of factors that evaluate the heritage tourism development in Yaowa Village, and obtains first-level criteria, second-level criteria, and comprehensive weight rankings. The single-level weights of the first-level criteria are 2.33, 1.83, and 0.50. Using the weight ranking, the focus points of heritage tourism development in Yaowa Village are determined.

**Keywords:** Heritage Tourism; Industrial Economy; Hierarchical Analysis Process

## 1. Introduction

Culture is a spiritual product and material product nurtured by a country or region during a long period of living together. The cultural industry has become a new form of industrial development, leading cultural trends with high added value and economic value with high returns, and has become a major development industry in various countries around the world.

David A. Fyfe (2008) use the village of Cooperstown in New York as a research subject, pointed out needing to think deeply about how to combine cultural heritage and tourism to avoid unnecessary impact from combining the two <sup>[1]</sup>. Francesca et al. (2015) used the central and eastern regions of Russia as a case to study how to analyze the links between traditional village cultural heritage and the local economy obtaining that was a mutually reinforcing relationship <sup>[2]</sup>. Martina Kalamarova et al. (2015) believed that cultural heritage is a kind of cultural capital which can generate cultural and economic value, and requires effective support from local governments to protect it <sup>[3]</sup>. Supoj Prompayuk et al. (2016) took Thailand and developed countries as examples to study the protection of community cultural heritage in these countries, and believed that organizations must be established to maintain community cultural heritage <sup>[4]</sup>.

Yaowa Village is located in Luoyang City, Henan Province. Yaowa Village is located in the western mountains of Luoning County, Luoyang City, Henan Province. It is located along the

coast of Guxian Reservoir in the southwest of Guxian Town. There are various material cultural heritages and intangible cultural heritages, which are sorted out in Table 1:

**Table 1** Types of cultural heritage in Yawa Village

Types of cultural heritage in Yawa Village		
Material cultural heritage	Yawagawamura Cave Group	Provincial Material Cultural Heritage
	Temple of Literature	Provincial Material Cultural Heritage
	Zhang's former house	Provincial Material Cultural Heritage
	Hodo's former house	Provincial Material Cultural Heritage
Intangible Cultural Heritage	Bamboo weaving technique	Provincial intangible cultural heritage
	The art of decoupage	Provincial intangible cultural heritage
	The art of roning's sour beef	Municipal intangible cultural heritage
	Luo Ning's steamed meat technique	Municipal intangible cultural heritage

With the support of the government's cultural tourism policies, cultural heritage tourism is a special way of protecting cultural heritage for the purpose of cultural protection and economic development. YaoWa Village is rich in cultural heritage resources, and the regional cultural style is obvious, but due to the lack of local concept of cultural heritage protection and ignoring the importance of cultural heritage protection, the cultural heritage of Yaowa Village has been disruptively developed, and no suitable path has been found for its own development. Based on this, Yaowa Village has developed a heritage tourism development path suitable for itself based on the content of its own cultural heritage, combining heritage protection methods and tourists' needs, which is one of the important tasks of the economic development of Yaowa Village.

This article aims to sort out and analyze the cultural heritage content of Yaowa Village, and propose development strategies by analyzing the tourism development evaluation strategy indicators of Yaowa Village's heritage resources. The research results of this article will help the government and tourism practitioners of Yaowa Village to develop tourism for the cultural heritage of Yaowa Village, promote local economic development, and optimize the local industrial structure.

## 2. Current status of heritage tourism development in Yaowara Village

The key components of a tourist destination are attraction, accommodation, accessibility, amenities, and activities. To some extent, a tourist destination must have these five elements<sup>[5]</sup>. By applying the 5A theory, namely: Attraction, Accessibility, Accommodations, Amenities, and Activity. We will analyze the current development status of heritage tourism in Yaowa Village.

### 2.1 Attractions

The attractiveness of a tourist destination has been described as one of the key factors that determine the competitiveness of a specific destination. Tourists' perceived ability of a

destination to meet their needs is considered the attractiveness of a tourist destination. If a destination can better meet the needs of tourists, then the destination will also be attractive. From the perspective of production, living, and ecological resources, Yaowa Village has many types and quantities of resources that can be developed, and has great potential in tourism development. The connotation of historical and cultural resources is profound. The history of Yaoguo Village over 1,000 years has nurtured a large number of historical and cultural relics, including Zhang's former house, Cheng's former house, and the Temple of Literature, etc., as well as many legends.

## **2.2 Accessibility**

Tourist attractions must provide a transfer system consisting of transportation routes, vehicles, and stations. The purpose of transport operators is transporting people and goods to their destination. Transportation is one of the basic prerequisites for tourist life in the tourism industry, and can be said to be a key component connecting tourists and destinations<sup>[6]</sup>.

The location of Yaowa Village has good traffic conditions, and there are many public transportation options. There are two important county roads passing through the area, connecting the main urban area of Luoyang City and the Luoning County area. There are expressway entrances and exits within 5 km of the jurisdiction. The transportation network is very developed, and the type, quantity and coverage of traffic can meet the travel needs of residents and tourists, which provide fast, convenient, safe and economic transportation services.

## **2.3 Accommodations**

Tourist accommodation refers to a place where tourists want to stay. The reason why some tourists stay overnight at scenic spots is for the convenience of these tourists, and tourist attractions should have accommodation arrangements. In some cases, lodging plays a critical role in attracting visitors<sup>[7]</sup>.

The most unique place in Yaowa Village is lodging. Yaowa Village accommodation projects include: cave, farmhouse, RV, camping, etc., which is an important tourism resource to attract tourists to Yaowa Village. As a characteristic cave, according to the survey, there are currently 32 caves in Yaowa Village, including 26 boutique caves and 6 ordinary caves. There are 4 farmhouses with a total of 20 rooms. Motorhomes and campers require visitors to prepare their own facilities and equipment.

## **2.4 Amenities**

Amenities refer to the facilities and infrastructure of a tourist attraction, such as electricity, water supply, roads, and communication systems, that must provide the convenience that visitors want when traveling. Yaowa Village has now formed a tourist attraction with complete basic tourist facilities, which can provide electricity and water for tourists. However, the village of Yaowara still lacks some amenities such as public toilets. If visitors need to go to the toilet, they need to go back to the toilet in the hotel or borrow another villager's toilet. There is also a shortage of hospitals in the village. If visitors are injured, they will need to return to their homestay for bandage. If the condition is serious, they need an ambulance to be taken to the county hospital or other hospital for treatment.

## **2.5 Activities**

Activities refer to what visitors can do during breaks and trips to make their trips and rest more fun and enjoyable. These tourism activities should be diverse and satisfy the needs of tourists. Some tourists think that the tourism programs in Yaowa Village are similar to the surrounding area of Luoyang City, and that the attractions in the county town are also similar, which lacks tourist appeal. Rural tourism practitioners and local people in Yaowa Village also believe that tourism resources and products in Yaowa Village are underdeveloped, and that it is necessary to enrich the tourism industry from various aspects such as agricultural experience, folk culture, leisure and vacation, and popular science education to create an advantageous and competitive tourism industry. In order to promote the sustainable development of rural tourism in YaoWa Village, it is necessary to improve forms and products.

## **3. Establishment of an evaluation system for heritage tourism development strategies**

### **3.1 Selection of evaluation methods for heritage tourism development strategies in Yao Wa Village**

The evaluation method for heritage tourism development strategies in YaoWa Village requires the establishment of a target level. The weight of cultural heritage tourism development in YaoWa Village can be obtained by calculating the weight of the standard layer and sub-standard layer. Based on the calculated weight results, it is possible to accurately and intuitively determine tourists' demand for heritage tourism in YaoWa Village. The establishment of an evaluation system plays an important role in the subsequent development and evaluation of heritage tourism in Yaowacun, so it is particularly significant to establish a scientific evaluation system and select effective evaluation methods. Analytic Hierarchy Process (AHP) not only has qualitative analysis and subjective judgment, but also can attach importance to quantitative analysis and objectivity. In the analysis of the heritage tourism development evaluation system in Yao Wa Village, there are different indicators and the indicators are interrelated, making quantitative analysis difficult. However, objective results are obtained through multi-level analysis, structural model construction and weight determination<sup>[8]</sup>.

### **3.2 Yaowa Village heritage tourism development evaluation settings**

This paper will derive strategies and models for heritage tourism development in Yao Wa Village based on this research method, and cleverly apply the AHP hierarchical analysis method to the hierarchical structure of heritage tourism development in YaoWa Village in this study; In the process of decision analysis of the complex AHP system for heritage tourism development, it will determine the goals of the system and formulate guidelines for achieving the overall goal. When the factors included in the problem are divided into different layers (such as target layers, guideline layers, and sub-criteria layers), it also uses a block diagram to elucidate the hierarchical structure and subordination of factors. These three indicators form the standard level of the evaluation index system. These three criteria layers also have their own influencing indicator factors, forming a sub-criteria layer in Table 2

**Table 2** Evaluation indicators of heritage tourism development strategies in Yaowara Village

Target layer	Criterion layer	Subcriteria layer
Evaluation Index of Heritage Tourism Development Strategy in Yaowa Village	C1 Historical and cultural value	C11 places importance on nurturing heirs
		C12 Digital protection of cultural heritage
		C13 creates a characteristic cultural tourism brand
	C2 Economic value of tourism development	C21 creates special travel souvenirs
		C22 creates a characteristic homestay in a cave
		C23 develops local food culture
	C3 Tourism-related supporting facilities	C31 improves tourism infrastructure
		C32 strengthens tourism policy supervision
		C33 Complete training special tourism personnel

## 4 Evaluation system analysis based on AHP

### 4.1 AHP scoring rules and calculation steps

The hierarchical analysis method has various factors that influence each other in the heritage tourism development problem in Yaowa Village. These problems are hierarchized to form a multi-level analytical structural model. Then, using a combination of mathematical methods and qualitative analysis, through hierarchical ranking, and finally decisions are assisted based on the weight calculated at the program level.

Each level item is calibrated according to the hierarchical analysis method (AHP). The calibration value range is 1-6, and the judgment matrix is calibrated in Table 3

**Table 3** 1-6 calibration method

Calibration $b_{ij}$	Definition
1	The importance of factor i is consistent with factor j
2	Factor i is slightly more important than factor j
4	Factor i is more important than factor j
6	Factor i is absolutely more important than factor j
3、5	The median of two adjacent judgments

The criterion layer is scored through expert interviews. Five experts and scholars, 15 tourism industry practitioners from Yaowa Village, and 10 visitors from Yaowa Village were invited. Finally, the survey information is comprehensively summarized and processed, representative indicators are selected, and a three-level index system for target evaluation is established. This structural hierarchy reflects obvious multi-hierarchy and multi-factorial nature, and is suitable for problems where general research subjects have levels of connotations, factors and complex indicators.

## 4.2 AHP hierarchical analysis method weight calculation

Quantifying the weight of each criterion is the basis for subsequent design practice, and the two-by-two evaluation of the indicators at each level according to the AHP method is shown in Table 4.

**Table 4** Yao Wa Village Heritage Tourism Development Strategy Criteria Level Judgment Matrix

Indicators	C1	C2	C3
C1	1	4	4
C2	1/4	1	1/2
C3	1/4	2	1
Single layer weights	0.50	2.33	1.83

According to the formula, it was calculated that the maximum characteristic root of the guideline layer judgment matrix for the heritage tourism development strategy of Yao Wa Village was calculated. A consistency test was also performed on this judgment matrix, and the calculation obtained that  $CR = 0.046$ , which is less than 0.1. Therefore, the judgment matrix passed the consistency test, and this scheme is valid.

According to the weight calculation results of the hierarchical analysis method, it can be obtained that in the standard rules for evaluating heritage tourism development strategies in Yaowa Village, the weight value of tourism development is 2.33; Having tourism-related supporting facilities ranks second, with a weight value of 1.83; Historical and cultural value ranks third, with a weight value of 0.5. Based on the calculation results of Analytic Hierarchy Process, the economic value of tourism development is the main reason for the development of heritage tourism in Yaowa Village.

We construct a comparison matrix and calculate the weight values of all secondary demand indicators under the three primary indicators. The CR values are respectively: 0.047, 0, 0.061, 0 are all less than 0.1, and all meet the consistency inspection standards.

By calculating the product of the second-level weight of each requirement item and the first-level weight selection and performing an overall hierarchical ranking, the comprehensive weight of each sub-criteria level can be determined, and the degree of influence of each requirement item on consumers can be intuitively measured. The results are shown in Table 5.

**Table 5** Summary table of judgment matrix weights

First level criteria	First level weight	Second level criteria	Second-level weight	Comprehensive weight	Weight ranking
C1	0.5	C11	0.2100	0.11	7
		C12	0.1300	0.07	8
		C13	0.6600	0.33	4
C2	2.33	C21	0.2900	0.68	3
		C22	0.5700	1.33	1
		C23	0.1400	0.33	5
C3	1.83	C31	0.1696	0.31	6
		C32	0.4283	0.78	2
		C33	0.4021	0.03	9

Among them, building a characteristic cultural tourism brand and valuing the cultivation of heirs are the most important criteria for evaluating historical and cultural value indicators. The weight values are 0.33 and 0.11, respectively, and should be considered in protecting the historical and cultural value of the cultural heritage of Yaowa Village. In evaluating the economic value of tourism development in Yaowa Village, the top two indicators of value were to show the construction of homestays with special cave characteristics and the creation of special tourist souvenirs. Among them, the value of building a homestay with a characteristic cave ranked first, so it can be seen that the cave group in Yaowa Village is one of the activities with the largest economic value for tourism development. In evaluating tourism-related supporting facilities, the biggest weight is to strengthen tourism policy support. The weight is 0.78. In considering tourism-related supporting facilities, emphasis should be placed on strengthening tourism policy support.

## **5. Research strategy for heritage tourism development in Yaowa Village**

Through the analysis of the comprehensive weight of each indicator, the Yaowa Village heritage tourism development strategy mainly focuses on building characteristic homestay with cave dwellings, strengthening tourism policy supervision, creating special tourist souvenirs, creating cultural tourism brands, and developing local food culture. The development of Wacun heritage tourism provides strategies to make subsequent heritage tourism development more targeted.

### **5.1 Make full use of the cave and upgrade it to a special homestay**

As a cultural heritage site, the cave complex in Yao Wa Village is the most attractive tourist resource in Yao Wa Village. In order to play the role of cultural capital, cave culture is combined with tourist accommodation. Therefore, villages need to understand the accommodation needs of tourists, implement homestay projects according to rural characteristics, and build rural homestays. When building a homestay, we should rely on rich natural landscapes and deep historical and cultural heritage to develop high-quality guest rooms with ancient colors and styles. It is necessary to be close to nature, create a rural atmosphere that returns to nature, and maintain the characteristics of rural colors.

### **5.2 Strengthen tourism policy support**

We need to strengthen the supervision of the tourism industry, strengthen the rural tourism service environment, vigorously carry out skill training in the tourism service industry, effectively carry out service training for tourism enterprises, review, apply and evaluate relevant industry qualifications, promote the further development of scenic spots, improve civilized services, improve the environmental landscape, rectify tourism order, improve service quality, improve team quality, implement rural management, and make tourism complaint hotline public, Handle tourism complaints, implement tourism administrative law enforcement, and improve the tourism safety system of Yaowa Village.

### **5.3 Create unique travel souvenirs**

In the development of tourist souvenirs in YaoWa Village, first, tourist products that highlight the village culture and local cultural characteristics of YaoWa Village, and use the Paper Cuttings and bamboo weaving skills of YaoWa Village to highlight the characteristics of the intangible cultural heritage of YaoWa Village; The second is to adopt a production technology that combines high-tech and traditional handicraft production technology, providing different types of products according to different market demands, and improving product quality; The third is to carry out brand building, create a brand of Paper Cuttings handicrafts, and improve product awareness.

### **5.4 Build a cultural tourism brand**

We need to further increase external publicity efforts, strengthen ecological environment protection, strengthen infrastructure construction, enhance the brand awareness of Yaowa Village's heritage tourism, and achieve a win-win situation of social and economic benefits. We should make full use of big data and other technologies to strengthen passenger traffic analysis, and use new media terminals such as mobile phones and tablets to combine traditional media such as newspapers and magazines to promote the cultural tourism brand of Yaowa Village in a targeted manner, so that heritage tourism can better meet the growing tourism and leisure needs of the masses.

### **5.5 Develop local food culture**

The specialty snacks of Yaowa Village, such as sour beef, steamed meat, millet, apples, and cold-water fish from Xizi Lake, have been extremely local and renowned. There is a saying called "food, lodging, travel, shopping and entertainment." Because food is one of the six major elements of the travel experience, food culture must be ingeniously designed. First, in the food production process, it is necessary to let visitors understand the detailed performances as much as possible and highlight local characteristics. Secondly, food packaging showcases folk stories, legends, and related tourist attractions, increasing the tourist attraction of Yaowa Village. Third, visitors are invited to participate in the live production, or the production process is filmed as a promotional video and broadcast on online platforms such as Weibo and WeChat accounts, so as to attract visitors to experience the local culture of Yaowa Village.

## **6. Conclusions**

While cultural heritage tourism development continues to bring economic benefits and meet the needs of tourists, starting from the long-term benefits of tourism development, its ultimate goal is for more tourists to deeply perceive and discover China's rich and beautiful regional landscape, deep rich historical and cultural heritage, and an innocent and simple traditional lifestyle. We can make the history and culture be passed down forever on the basis of maintaining its original nature. After analysis through the hierarchical analysis method, the weight rankings for having economic value for tourism development, relevant supporting facilities, and historical and cultural value in the Yaowa Village heritage tourism development strategy were 2.33, 1.83, and 0.50, respectively. Therefore, when evaluating heritage tourism development in Yaowacun, we need to pay more attention to the economic value of tourism

development. After passing the analysis of the second-level guidelines, the top five were to build a special homestay in a cave, strengthen tourism policy supervision, create special tourist souvenirs, build a cultural tourism brand, and develop local food culture. Therefore, when developing heritage tourism in Yao Wa Village, we focus on developing these five aspects.

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