

The Relationship of Visual Preference for Traditional Village Landscape with View on Development Approaches in China



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ABSTRACT

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In recent years, the sustainable development of traditional Chinese village landscapes has been constantly challenged. Thus, this study intends to explore the relationship between local residents' views on development approaches and their visual preferences for traditional village landscapes, in order to guide planners and decision-makers toward more sustainable development policies and strategies that are consistent with local residents' views. The survey results from 400 participants in Guilin, Guangxi regarding visual preferences show that the local residents mostly prefer the mixed village landscape that retains the traditional characteristics of the elements while also integrating the needs for modern living and material styles. For development approaches, the results also show that the local residents believe that the development of landscapes should be based on two main views: (a) environmental preservation and (b) moderate utilization. It is also found that the views on the development approach have a significant effect on the visual preferences of traditional villages. The visual preference for the mixed-style village landscape is most affected by the development view of moderate utilization, followed by the development view of environmental preservation.

1. INTRODUCTION

The traditional Chinese village, formerly known as "Ancient Village," refers to villages that were built before the formation of the People's Republic of China (PRC). In September 2012, the first meeting of the Expert Committee on the Conservation and Development of Traditional Villages (ECCDTV) decided to change the customary title of "Ancient Village" to "Traditional Village." The change of the title was later followed by a notice from the Ministry of Housing and Urban-Rural Development (MHURD) and the Ministry of Culture (MC), who announced that they would jointly carry out the survey of traditional villages, and clearly stated that traditional villages have rich traditional resources with certain historical, cultural, scientific, artistic, social, and economic value, thus, the villages should be conserved [1]. The proclamation acknowledges that the traditional villages are living heritages that combine tangible and intangible cultural heritage [2], and it is also argued that China's cultural roots are in the countryside and that traditional villages contain a large number of historical relics and cultural heritage. The traditional villages are unofficial recorders of China's long and splendid history, culture, and values, treasures that cannot be regenerated [3].

The survey by The Chinese Village Cultural Center of Hunan University (CVCHU) in 2004 found that there were 9,700 traditional villages in 17 provinces and 902 towns in China, but by 2010 it was estimated that only 5,709 traditional

villages remained, a stunning annual decline of 7.3% or approximately 1.6 villages every month [4]. Sadly, among the disappearing villages are those traditional villages with high historical and cultural values. It was a concern that if the situation persisted, the traditional villages would no longer exist in the near future.

Due to the realization of the importance of the traditional villages to the PRC's national identity, from 2012 to 2019, the government conducted a nationwide survey to identify traditional villages. As a result, the "List of Traditional Chinese Villages" has been published. According to the list, since 2012, a total of 6,819 villages across the country have been included in the "List of Traditional Chinese Villages," except for those in the special administrative regions of Hong Kong and Macao, and Taiwan [5]. This list constitutes the world's longest and richest living farming civilization heritage protection list.

However, one consequence of the List of Traditional Villages is that the villages have been recognized for their high tourism value, and many local governments and residents of traditional villages have turned to tourism as a way to improve their economic status. Sadly, rapid development and mass tourism have created new but often devastating impacts on the character of the traditional villages. It is observed that the character of many traditional villages have not been well organized and protected because the villagers do not yet have a strong understanding of heritage conservation and protection. Owing to a lack of understanding, some

management rights in a few traditional villages have fallen into the hands of investors who develop these villages solely for commercial purposes.

It is argued that in the interests of tourism commercial values, development often ignores the historical and cultural values of traditional villages. The irresponsible developers arbitrarily rebuilding result in the homogenization of the village character, destroying the rural and rustic style of the traditional Chinese village [6]. Another point is that the residents from the traditional villages, due to a lack of awareness and technical know-how, have blindly carried out renovations and additions, which finally caused the irreversible destruction of traditional buildings [7].

The situation raises a question: is it feasible to continue to plan to develop traditional villages without following the mass tourism or urban redevelopment model? It is believed [8] that the conservation of traditional villages needs the support of the local government and relevant management departments, and should also consider the interests of the residents. Owing to the lack of local residents' participation in traditional village landscape protection and management activities, various strategies formulated in the "Rural Revitalization Strategic Plan" have not been effectively implemented [9].

This leads to two primary questions: First, what are local residents' visual preferences for traditional village landscapes? Second, what are the views of local residents on the development of traditional village landscapes? The key to answering these questions might lie in the local residents' views of the development approach and its relationship to their visual preferences for village landscape characteristics. Only by understanding the preferences and development views of local residents on village landscapes can government departments formulate relevant development policies based on their needs to ensure the active support of local residents. Understanding these varying perceptions is a vital step in ensuring the preservation and renewal of these important cultural and heritage resources.

Therefore, this research will attempt to examine the local residents' views on the development of traditional villages and how it relates to the visual preferences for traditional villages. Understanding the people's perception of traditional village landscapes is deemed very important. The research findings can be used to guide government officials in how they seek to create traditional village landscape restoration programs and sustainable development strategies that are consistent with local residents.

2. LITERATURE REVIEW

This paper aims to study and understand people's understanding of the traditional Chinese village landscape. The results will provide theoretical guidance for the protection and development of the traditional Chinese village landscape. The European Landscape Convention necessitates the establishment of procedures that ensure active public participation in the management, conservation, and planning of landscapes [10]. Given the emphasis on public participation, existing expert-based approaches to landscape valuation need to be complemented by insights into public attitudes regarding landscape expression. Relevant research shows that stakeholders will have a more proactive attitude toward landscapes they prefer, which will empower them to actively engage in and contribute to landscape reconstruction

and development planning [11]. Therefore, for traditional village conservation projects to succeed, they must receive approval from both local residents and government officials. For this reason, traditional village conservation projects need to acknowledge local residents' preferences for village landscape and their views on its development, as well as the interplay between these factors.

2.1 Landscape preference

Environmental perception research can provide insights into how people react to or perceive a particular environment, the messages the environment conveys, and how people relate to it. The most important thing is to understand how people form preferences for specific environments. According to Rapoport [12], people's evaluation of environments is based on their overall affective response and judgment. According to Kaplan [13], researchers can measure this behavior using preference ratings or the CIM method. Perception results from a combination of acquired knowledge, innate reactions, and cognitive processing. Therefore, preference outcomes (the results of perception) are compilations of information about how individuals experience their environment. Clearly, the landscape preference approach is psychological in nature.

Currently, many researchers have utilized people's preferences to explore their understanding of the landscape environment. Research on environmental cognition demonstrates that the preference method is an effective and reliable means of measurement, which can be used to obtain data about which landscapes people accept and prefer [14]. The size and pattern of preferences can reveal various aspects of the underlying perception, providing valuable information about people's general attitudes towards the environment, including individual reactions to content and spatial configurations [15]. Preference methods are clearly useful research tools for expanding the understanding of environmental perception by identifying factors that affect preference.

2.2 Environmental value orientation

Through literature review, many studies have confirmed that the people's agreement of landscape benefits have a significant effect on their visual preferences from many aspects. Another important factor that may affect people's preference for traditional village landscape is personal environmental value orientation. According to the social adaptation theory, environmental value orientation is a kind of cognition that helps to adapt to the environment. It has been defined as a general and important life goal or standard that serves as a guiding principle in our lives [16] and is believed to determine attitudes and behaviors about specific aspects of the environment [17]. Values have been defined as important life goals or principles that guide people in making choices. Contrary to attitudes, values are relatively long-lasting, reflecting people's belief that certain behaviors and final states are preferable to other behaviors [18]. Therefore, people's value orientation has an important influence on their attitude and preference towards the environment.

Thompson and Barton [19] proposed that the social-altruistic and the egoistic value orientations both are expressions of human interests in avoiding damage to the environment, thus, the two types of orientations were regarded as one type, named the anthropocentric attitude. They

recognized the bio-centric value orientation proposed by Stern and Dietz [20] and named it an eco-centric attitude type. Kaltenborn and Bjerke [15] argued that people's landscape preference can be compared with the research on environmental value orientation and attitude. Many people may express a preference for a particular landscape, but for very different reasons. Some may want to preserve the landscape as it serves the utilitarian needs of humanity, while others may emphasize the value of ecological centre. Therefore, two different motivations or reasons for people's attention to the environment can be determined.

Obtaining landscape values early in the planning process may have significant benefits in terms of increasing public trust in decision-making and community support for policy measures [21]. In addition, some studies have shown that landscape preferences are different between landscape users and decision makers or landscape experts [22, 23]. The preferences of different population groups for agricultural landscapes are systematically different and also depend on the environmental value orientation of individuals [24]. Obviously, these different landscape preferences are influenced by the important underlying factors of personal values, in addition to their professional knowledge and background. These are all worthy of further study and discussion. As discussed by Raymond and Brown [25] policymakers need to take account of local community values while often having responsibility for landscapes with national public trust interests and obligations. Therefore, it is necessary to confirm the views of local residents on the development of traditional village landscapes in this study.

In a word, through literature review, individual environmental value orientations can affect people's preferences for landscape environment. This study will further explore the relationship between values and landscape preferences. It will focus on the role of four different views toward development (ecological preservation, utilization, conservation and modernization) in people's preference for traditional village landscape, in order to expand people's deep understanding of landscape preferences.

3. RESEARCH METHODS

There is a need to have good strategy to develop or conserved but before any conservation can be done especially in regards to the landscapes. It is argued that for any conservation to be successful, support from the local residents is crucial. Therefore, this section describes the methods used to identify local residents' preferences towards traditional village landscapes as well as local residents' views toward development of traditional village landscapes. This part discusses the research method used in the design which include survey questionnaire of the local residents of the visual preferences and participant agreement on development approach.

3.1 Survey of local residents

This research aims to understand local residents' visual preferences of traditional village landscapes of Guilin in the Guang Xi Province. The survey questionnaire would investigate local residents' visual preferences and view of development of the traditional village landscape. The visual preferences of traditional village landscapes would be treated

as the dependent variable, and the independent variables would be development view of traditional village landscape.

The location of this study is at Guilin in Guangxi, People Republic of China (PRC). Ministry of Housing and Urban-Rural Development and other related ministries and commissions had initiated the protection of traditional villages in 2012, in which Guilin is listed as one of the effected region. According to the Ministry of Housing and Urban-Rural Development, PRC from 2012 to 2019, a total of 280 villages in Guangxi Province were included in the list of traditional Chinese villages. Among them, Guilin city has 138 traditional villages which accounted for almost half of Guang Xi province. For survey questionnaires exercise, only five villages were selected and they were Chang Gangling, Jiu Xian, Yue Ling, Qing Shui, and Dong Jing Village. They were chosen due to these reasons as follows:

1. Each village has a history of more than 700 years, and the resident population exceeds more than 500 people.
2. At present, these five villages are included in the list of traditional Chinese villages in Guangxi, which received central financial support in 2019.
3. The villages are selected as demonstration villages for the protection which Guilin Municipal Government has focused on.

Specifically, the survey was conducted at five traditional village residents in Guilin. The resident population of each traditional village is estimated at 500 to 800 people according to Seventh National Census 2020. This study employed a non-probability sampling technique. Because the sample participating in the survey needs to be selected from five different villages specified, the age must be over 18 years old and is a permanent resident of the village.

For the non-probability sampling technique, it is important to ensure that the number of participants is large enough for reliable and robust statistical analysis. According to a study by Mitra and Lankford [26], at least 10% of the total population should be surveyed. Therefore, the research would survey for at least 400 people with 80 people will be surveyed in each village. The number was adequate, as it would represented about 9.5% of the total population of the five traditional villages. Furthermore, this number was sufficient to guarantee a sampling error of 5.6% at a 95% confidence level.

3.1.1 Visual preferences

Landscapes visual preferences data was collected and the information. The preference method was chosen because it is the most appropriate and widely used measurement concept to gauge people visual preferences, including traditional village landscapes. Preference is the cumulative reflection of a person's knowledge, innate responses, and cognitive processes that occur in the human brain. It is hoped that the study of preference patterns can reveal people's basic views on specific types of landscapes. Furthermore, many researchers have used preference methods to understand how people respond to their natural environment. According to Daniel and Vining [27], preference methods have proven to be reliable and effective.

In order to select the traditional village scene suitable for the study preferences survey, the scenes were sample into several groups according to traditional village various landscape styles. Out of the 200 pictures taken, 48 pictures were selected by three landscape architecture experts at Universiti Putra Malaysia. Each photo selected must be approved by three experts simultaneously, and as long as one expert objects, it cannot be selected. According to Kaplan and

Kaplan [15], 45 pictures were effectively enough. The experts have adequate understanding about landscape thus reducing bias and increase the validity of survey questionnaire. For this study, scenes were categorized according to landscape styles and features which are traditional-style village landscapes, modern-style village landscapes, mixed-style village landscapes and natural landscape. The experts also exclude photos that contain prejudicial content, such as scenes with people, overexposed and blurred photos. The scenes that are not belong to the four group were also deleted with the condition that the scenes are acting independently or belong to a group that has less than 4 scenes.

After all 48 scenes numbered the participant were asked to give rating. This study uses 40 scenes for the analysis the first four scenes and the last 4 picture are not included in the analysis. The first four act as buffer for familiarity and the last four were buffer for visual fatigue as well as to prevent participants from anticipating that the survey will be over. Thus, the analyses of picture in this study shall use the picture number 5 to number 44. Finally, the booklet is printed and bound with a color laser printer. Participants were later asked to view 48 photos of traditional villages and to rate their preferences by using 5-point Likert scale (1 = not prefer at all, 2 = not prefer, 3 = acceptable, 4 = prefer and 5 = very prefer).

3.1.2 Development views

The factor that may affect people's visual preference is person (in this study equivalent to local resident) view toward development for traditional village landscapes. Some people may think that the traditional rural landscape needs to be conserved for their traditional look but they maybe others who may be more concerned about their practicality which is probably closer to the development direction of modern urban landscape. To understand their views on the suitable development approach of traditional villages, participants were asked about their agreement regarding development for traditional village landscapes by rating their agreement with statements, like "any activities that pollute the air in the village should be prohibited."

As mentioned in the previous literature review on environmental value orientation, people's environmental values have a significant impact on their preferences. Meanwhile, two different motivations or reasons for people's attention to the environment have been found in existing research. There are 16 statements regarding development approach were designed based on these existing research, and participants were asked to rate the agreement towards the statements by using a 5-point Likert scale (1 = Strongly disagree, 2 = Disagree, 3 = Neither disagree nor agree, 4 = Agree, and 5 = Strongly agree). These 16 statements represent four distinct development perspectives, which are can be classified as "environmental preservation", "utilization", "conservation", "modernization". The statement about "environmental preservation" in this study is intended to capture individuals' emphasis on development of ecological natural environment. The statement about "utilization" is intended to capture individuals' emphasis on adaptive reuse of original objects. The statement about "conservation" is intended to capture individuals' emphasis on conservation of architectures and cultural customs. Finally, statement about "modernization" is intended to capture individuals' emphasis on villages tend to develop towards modern urban standards.

The recovered questionnaire data were sequentially entered into the database for analysis. Data analysis was performed

using the Statistical Program for Social Scientists (SPSS) for this study. The analysis includes:

- 1) Variables dimension analysis, used for the local residents of Visual preference, and views on the development approach. There were two steps involved in the variables dimension analysis: A factor analysis or category identifying method (CIM) and the ranking of the factor dimensions.
- 2) A correlation analysis to test the strength of relationships between local residents' visual preference and the views on the development approach. Pearson correlation is an appropriate method of analysis because it eliminates the possibility of standard deviation effect or covariance on the correlation.
- 3) A multiple regression analysis to identify the best predictors for the local residents' visual preferences among the views on the development approach for traditional village. The study used a multiple regression analysis with stepwise method because the method has a more reasonable independent variable screening mechanism, which can avoid the affect of non-statistically significant independent variables on the regression equation. Further, to minimize the affect of colinearity, only the independent variables that were correlated significantly to the dependent variables would be used to predict the dependent variable (visual preferences dimensions). All statistical analyses were tested at a significance level of 95%, as this provided a more relaxed interpretation of the data: less forgiving and less restrictive.

4. RESULTS

This section is organized around the results of the preferences survey of the local residents in traditional villages, and local residents' agreement on the development of traditional village landscape.

4.1 Visual preferences of traditional village landscapes

The research objective is to identify the visual preference of local residents for traditional village landscapes because this information can guide government officials to formulate scientific conservation and development strategies. In order to identify the visual preferences of the local residents, the participants were asked to rate 40 of scenes of traditional Chinese landscapes villages by using 5 point Likert scales (1 = not prefer at all, 2 = not prefer, 3 = acceptable, 4 = prefer, 5 = very prefer). Preference dimension analyses were conducted and ranking. This section discusses the results of analyses.

To further understand participants' preference for traditional village landscape, all the scenes are grouped into several preferences dimension. Preference dimension analysis involves two processes:

- 1) Confirmatory factor analysis to validate the preference groups or dimensions that were previously identified during the site observation.
- 2) Calculation of the average preference mean score rating of each dimension according based on mean and to sort the preference dimension according to the mean rating score.

For confirmatory factor analysis, 40 images used by this study were tested for their dimension loading by using data

reduction techniques. The data analysis reveal that seven factors or dimensions are revealed but the factor or dimension loading for the 5th, 6th, and 7th dimension is not greater than 0.4, meaning the factors do not have enough variance values. As a result, 11 images are omitted based on factor analysis (see Table 1).

Dimension 1

Eight scenes constitute this dimension and they are scenes nos. 9, 13, 17, 25, 29, 33, 37, and 41 (Figure 1). Based on the situation about the scenes of Dimension 1, it can be said that they represent the original traditional landscape scene. Therefore, Dimension 1 is named as ‘Traditional Style’.



Figure 1. Scenes for preferences Dimension 1

Dimension 2

Six scenes are loaded into Dimension 2 and the scenes are nos. 6, 10, 14, 18, 30 and 34 (Figure 2). Because the scenes in Dimension 2 represent combination of landscapes and architectural features that are traditional and modern, it is suggested that the dimension 2 is named as ‘Mixed Style’.



Figure 2. Scenes for preferences Dimension 2

Dimension 3

Nine scenes constitute Dimension 3 and they are scenes nos.7, 8, 11, 12, 23, 26, 35, 39, and 43 (Figure 3). In summary, the scenes in Dimension 3 present the style and character of a modern urban landscape. So, this Dimension 3 is named as ‘Modern Style’.

Table 1. Factor loadings — landscape visual preferences (values <.4 are deleted)

	Dimension 1	Dimension 2	Dimension 3	Dimension 4
Scene 9	0.69			
Scene 17	0.67			
Scene 25	0.53			
Scene 33	0.48			
Scene 29	0.41			
Scene 37	0.74			
Scene 13	0.66			
Scene 41	0.61			
Scene 30		0.72		
Scene 18		0.69		
Scene 6		0.42		
Scene 10		0.65		
Scene 14		0.46		
Scene 34		0.41		
Scene 43			0.77	
Scene 39			0.58	
Scene 35			0.46	
Scene 8			0.71	
Scene 12			0.51	
Scene 7			0.65	
Scene 11			0.57	
Scene 23			0.53	
Scene 26			0.72	
Scene 28				0.66
Scene 24				0.46
Scene 36				0.43
Scene 40				0.55
Scene 16				0.54
Scene 15				0.45



Figure 3. Scenes for preferences Dimension 3

Dimension 4

Six scenes constitute Dimension 4 and the scenes are nos. 15, 16, 24, 28, 36, and 40 (Figure 4). Based on the characters of the scenes in Dimension 4 which represents abundance of natural landscape as the main feature, this Dimension 4 is named as ‘Natural Landscape’.



Figure 4. Scenes for preferences Dimension 4

Table 2. Local resident visual preferences dimensions

Rank	Dimension Name (Number of Scenes)	Mean	Std.Dev	Alpha
1	Mixed style (6)	3.62	0.57	0.69
2	Natural Landscape (6)	3.51	0.58	0.65
3	Traditional style (8)	3.36	0.63	0.82
4	Modern style (9)	3.35	0.59	0.70

Confirmatory factor analysis has extracted and confirming four dimensions from the visual preference data of participants. The mean score for each dimension is calculated and the dimensions are sorted according to the mean scores. The results show that the mean value of preference dimension Mixed Style received the highest mean score (mean = 3.62, Sd = 0.57), followed by Natural Landscape (mean = 3.51, Sd = 0.58), Traditional Style (mean = 3.36, Sd = 0.63) and Modern Style (mean = 3.35, Sd = 0.59) (Table 2).

According to the results sorted by the visual preference dimension, the result seems to be beyond expectations because they do not rate the original traditional village scenes higher either. On the contrary, their choice seems to be more eclectic, choosing the Mixed Style scenes that retain some traditional characteristic elements while adapting to the needs of current life. It can be said that those elements of mixing modern and traditional able to convey a common culture and memory, as well as the environment that meets the needs of the modern life of the villagers. It can be seen that local residents are not blindly pursuing a city like living environment, but rather hoping to preserve some traditional characteristics. Meanwhile, they also aspire to improve the quality of their living environment. In addition, the Natural Landscape dimension was ranked second indicating that a good natural environment has a significant impact on the preferences of local residents. It seems just logical to state that vegetation, mountains and water features enhance their preferences.

4.2 Views toward development approach for traditional village landscapes

In order to understand how the participants prefer the villages to be develop, their views on the development of traditional village landscapes were gauge. It is presumed that if the participants believe that the development direction of the traditional village landscape is contrary to their wishes, they may refuse to support the “so called” conservation and development strategy of the traditional village landscape by any party especially the government. This section discusses the results of the participants’ views on the development approach of the traditional village landscapes (Table 3).

The agreement scores of the opinions related to the development of traditional village landscape shows that the local residents have a higher degree of agreement with all the statements which range from 3.09 – 4.27 mean score. According to the listing of the items, the 4 highest-scoring statements include "all activities that encroach on or pollute water bodies should be removed and the original ecological features of the traditional village waters should be restored" (mean = 4.27, Sd = 0.74), followed by "traditional village should be developed by concern on traditional handicraft work and skills"(mean = 4.12, Sd = 0.72), "the development of the traditional village by using the unique landscape should be encouraged"(mean = 4.11, Sd = 0.66), and "any development should be strongly support out all kinds of folk customs, cultural etiquette and architecture values"(mean = 4.05, Sd = 0.64). The result is expected, because the ecological environment of traditional villages is directly related to the health of local villagers, especially the pollution of water resources, so it is the most concerned issue of the participants. Secondly, the participants strongly agreed to make appropriate use of the characteristic resources of traditional villages to promote the development of the villages. This may be because local residents believe that there are many resources that are

not being used well at present, so they show strong agreement with these items.

Meanwhile, for the 4 lowest rated items are "I believe the landscape design of the traditional village can imitate the city" (mean = 3.09, Sd = 0.99), "village residents can learn the lifestyle and habits of city residents" (mean = 3.20, Sd = 0.96), "it is important for me to build more modern buildings to improve the housing conditions of the traditional village" (mean = 3.58, Sd = 1.02), and "traditional villages should vigorously develop intensive agricultural industries"(mean =

3.61, Sd = 0.80). In it presumed that the statements with the lowest mean scores from the participants indicate that they are not very in agreement. Based on the four lowest ranked items, surprisingly, the participants do not seem to fully agree that traditional villages imitate urban landscapes and lifestyles. This may be because of their original feelings of nostalgia for their hometown and their worries about the shortcomings that the city is currently showing, especially the pollution and crowding of the environment.

Table 3. Agreement on development for traditional village landscapes by local resident

Item	N	Mean	Std.Dev
All activities that encroach on or pollute water bodies should be removed and the original ecological features of the traditional village waters should be restored.	400	4.27	0.74
Traditional village should be developed by concern on traditional handicraft work and skills.	400	4.12	0.72
The development of the traditional village by using the unique landscape should be encouraged.	400	4.11	0.66
Any development should be strongly support out all kinds of folk customs, cultural etiquette and architecture values.	400	4.05	0.64
The original natural environment should not suffer any damage during the development of the traditional village.	400	4.03	0.86
I believe that the original architectural forms of traditional village are important for development.	400	4.01	0.73
The traditional village architecture style and usability should be maintained.	400	4.00	0.75
Any activities that pollute the air in the traditional village should be prohibited.	400	3.95	0.93
Traditional village should have design a more dynamic water landscape for people to watch and interact.	400	3.89	0.76
We should vigorously develop traditional village based on their land resources and unique natural environment.	400	3.84	0.76
The development of traditional villages must sensitive to the existence of biological diversity.	400	3.81	0.72
The unique lifestyles that villagers have formed in long-term farming and production life should be maintained in the new development.	400	3.77	0.70
Traditional villages should vigorously develop intensive agricultural industries.	400	3.61	0.80
It is important for me to build more modern buildings to improve the housing conditions of the traditional village.	400	3.58	1.02
Village residents can learn the lifestyle and habits of city residents.	400	3.20	0.96
I believe the landscape design of the traditional village can imitate the city.	400	3.09	0.99

Table 4. Factor loadings and dimensional ranking of local residents' views on development

Rank	Dimension and Items	Factor Loadings	Mean	Std.Dev
1	Environmental preservation		4.01	0.56
	The development of traditional villages must sensitive to the existence of biological diversity.	0.55	3.81	0.72
	Any activities that pollute the air in the traditional village should be prohibited.	0.76	3.95	0.93
	All activities that pollute water bodies should be removed and the original ecological features of the traditional village waters should be restored.	0.72	4.27	0.74
	The original natural environment should not suffer any damage during the development of the traditional village.	0.63	4.03	0.86
2	Utilization		3.99	0.46
	Traditional village should be developed by concern on traditional handicraft work and skills.	0.66	4.12	0.72
	Traditional village should have design a more dynamic water landscape for people to watch and interact.	0.55	3.89	0.76
	We should vigorously develop traditional village based on their land resources and unique natural environment.	0.54	3.84	0.76
	The development of the traditional village by using the unique landscape should be encouraged.	0.62	4.11	0.66
	Traditional villages should vigorously develop intensive agricultural industries.	0.62	3.61	0.80
3	Conservation		3.95	0.47
	Any development should be strongly support out all kinds of folk customs, cultural etiquette and architecture values.	0.73	4.05	0.64
	I believe that the original architectural forms of traditional village are important for development.	0.68	4.01	0.73
	The traditional village architecture style and usability should be maintained.	0.65	4.00	0.75
	The unique lifestyles that villagers have formed in long-term farming and production life should be maintained in the new development.	0.66	3.77	0.70
4	Modernization		3.37	0.62
	I believe the landscape design of the traditional village can imitate the city.	0.75	3.09	0.99
	Village residents should learn the lifestyle and habits of urbanites.	0.73	3.20	0.96
	It is important for me to build more modern buildings to improve the housing conditions of the traditional village.	0.62	3.58	1.02

Table 5. The relationship of visual preferences and the views on the development

Visual Preference/Views on the Development	Traditional Style	Mixed Style	Modern Style	Natural Landscape
Environmental Preservation	3 (0.196)	2 (0.141)	2 (0.240)	1 (0.139)
Utilization		1 (0.126)		
Conservation	1 (0.174)			
Modernization	2 (0.185)		1 (0.222)	2 (0.173)

Note: 1 Order of significance, () Cumulative R Square; All the significance predictors are significance at $p < 0.05$

To further examine and explore the participants' views on the development of traditional village landscapes, all the items or statement were grouped by all the items or statement were grouped by extracting common regression coefficient. The results show that the items load into 4 factors with eigenvalues greater than 1 and altogether explained 74% of the variance. 5 items related to the development of appropriate utilization are the first factor, so this factor is called 'utilization'. Meanwhile, 4 statements related to cultural landscape conservation are loaded into the second factor, followed by 4 items related to environmental preservation load into the third factor, so these two factors are called 'conservation' and 'environmental preservation'. Last 3 items related to the development with modernization are loaded into the fourth factor, is called 'modernization' (Table 4).

Based on the factor loading value, it extracted four dimensions from the development view of traditional villages (Table 4). The dimensions are sorted by mean, and the results show that the mean value of environmental preservation dimension (mean=4.01, Sd=0.56) is higher than other dimensions. The utilization dimension ranks second (mean=3.99, Sd=0.46), with only a slight gap in the mean value. Followed by conservation dimension (mean=3.95, Sd=0.47). The lowest score is the modernization dimension (mean=3.37, Sd=0.62). The Cronbach alpha value of the factor is medium (between 0.67 and 0.74), indicating that the dimension are related to each other, thus providing dimensions that are reliable and coherent.

According to the ranking results of the four dimensions, it seems not to have expected that the local residents have the highest agreement on environmental preservation of development view, followed by appropriate utilization and conservation of development view. Meanwhile, the local residents have the lowest agreement with the development view of modernization. This may be because the local residents of traditional villages have felt the trouble of blindly imitating the development mode of modern urban landscape, and gradually realized the importance of a good ecological environment. In addition, they may think that only the protection and restoration of traditional village landscapes cannot improve their quality of life, and they must be appropriately updated and transformed to meet the current modern life.

4.3 The relationship of development view and visual preferences for traditional village landscapes

In the visual preferences analysis, 4 visual dimensions have been identified and they are traditional style, mixed style, modern style and natural landscape. In addition, the analyses of participants' views on the development approach also identify 4 constructs which are environmental preservation, utilization, conservation and modernization. To understand the relationship of the visual dimension and views on the development approach, multiple regression analysis able to identify if views on the development approach of traditional villages landscapes do relate to visual preferences dimension

and to predict the best construct relate to the visual preferences dimensions. The results are shown in Table 5.

Firstly, the result reveal that conservation in the views on the development approach have the greatest effect on visual preferences for traditional style. This result is expected, because participants who agreed with the development view of cultural landscape conservation would prefer to see traditional and historical landscapes in the village preserved intact.

Secondly, the result reveal that utilization in the views on the development approach have the greatest effect on visual preferences for mixed style. This result seems to be reasonable, because those participants who agree to utilize and transform the village landscape appropriately may prefer to see new changes in the village landscape, but do not completely destroy the original landscape and build a new one.

Furthermore, the result reveal that modernization in the views on the development approach have the greatest effect on visual preferences for modern style. This result is expected, because participants who agree to develop village landscapes in a modernization way that imitation cities are likely to prefer urban living environments.

Finally, the result reveal that environmental preservation in the views on the development approach have the greatest effect on visual preferences for natural landscape. This result is expected, because participants who agree with the viewpoint of environmental preservation to develop village landscapes, they may pay more attention to natural landscapes such as mountains, water, vegetation, etc., and will not easily destroy them.

In conclusion, the views on the development approach have a significant effect on the visual preferences of traditional villages. The specific relationship between each visual preference dimension and constructs for the views on the development approach are summarized in Table 5.

According to the results, environmental preservation was always be the predictor for visual preference dimension, it appeared 4 times, and also had the highest cumulative R square value among the four constructs of the views on the development approach. This shows that the view for environmental preservation is one of the most important constructs affecting the visual preference of traditional villages. In addition, the study also found that modernization is the second most important construct to the visual preference of traditional villages behind environmental preservation, it appeared 3 times. The findings of the study are interesting, the development view of environmental preservation and modernization is important for the visual preference of traditional villages. Meanwhile, different development views have a significant effect on the corresponding visual preference dimension, environmental preservation corresponds to effect the visual preference for natural landscape, utilization corresponds to effect the visual preference for mixed style, conservation corresponds to effect the visual preference for traditional style, and modernization corresponds to effect the visual preference for modern style.

5. CONCLUSION

The study started with a question: why are the local residents of traditional villages are not very positive about the conservation and development of their traditional villages? It is speculated that the reason for this negative attitude is that local residents have different views of traditional villages from government officials, and the government departments ignore the needs of local residents when formulating strategies for the conservation and development of traditional villages. If not resolved, this perception conflict will undermine the traditional village landscape conservation and development plan, the government accountability system, and landscape architecture project intention and professionalism.

Therefore, this study aims to understand people's preferences of traditional village landscapes and explore whether the view of development is an important factor affecting visual preferences. To answer the research question thus meeting the research objectives, data were obtained through the surveys of the local residents.

5.1 Summary of the significant findings

The first question of this study is to identify the visual preferences of local residents towards traditional village landscapes? According to the findings, local residents are found to mostly prefer traditional village landscapes with mixed styles which refer to the scenes of the villages that have been upgraded, while retaining certain traditional elements. The situation might reflect the desire of the residents to have modern lifestyle but yet maintaining traditional quality. It is noted that the residents do not show a strong preferences for the village landscape that completely traditional in style or completely modern in style. The second question that this study focuses on is what are the views of local residents on the development of traditional village landscapes? This further promotes the exploration of the relationship between their preferences and development views. This study found that local residents' view of village landscape development influences visual preferences. In the context for the development for traditional villages, the local residents have views that the development of traditional village landscapes shall based on these the two types of views, (a) environmental preservation and (b) moderate utilization. The residents also show lower agreement for the development with the modernization style. Among them, the mixed-style village landscape is most affected by the development view of moderate utilization, followed by the development view of environmental preservation. The findings of this study reveal the important factors that influence the local residents' preference for mixed-style village landscapes. It provides key theoretical support for the formulation of strategies for the conservation and development of traditional village landscapes in the future.

5.2 Limitations of the study

These findings broaden our understanding of people's preferences for traditional village landscapes and the factors that influence their preferences. However, there are still some limitations to the research.

This study only considered local residents' perceptions of traditional village landscapes. Future research could also take into account the perceptions of tourists about traditional village landscapes. This can more comprehensively reflect the

public's views and opinions on traditional village landscapes. Provide more accurate guidance for the tourism development of traditional village landscape in the future.

The 48 image scenes selected in this study are 26 villages in Guilin, Guangxi. However, these scenarios do not include all existing traditional village types in Guangxi province, as the study only focuses on traditional villages currently closer to the urban area of Guilin. It is inevitable that it cannot reflect the overall characteristics of traditional villages in Guangxi. In addition to broadening the selection area of traditional villages, the dimensional classification of the investigated traditional village landscapes can be more refined.

5.3 Implication for the conservation and development of traditional village landscape

Based on the above significant findings, the following suggestions and implications are put forward for the conservation and development of traditional village landscapes in Guangxi, China. One of the significant findings of this study is that the local residents prefer traditional village landscapes with mixed styles. It can also be seen as a landscape environment with moderate human intervention.

Therefore, first of all, in the planning and design of traditional village landscapes projects, it is necessary to identify valuable heritage and conservation elements. Relevant designers can obtain the real preserved lifestyle and habits of local residents through on-site conversations and observations, in order to determine the necessary cultural elements for inheritance. Only in this way can we truly inherit and maintain the basic cultural characteristics of traditional villages.

Second, the designer integrates modern and traditional materials into the design of the village. In the design process, the advantages of modern industrial materials will make up for the shortcomings of traditional materials. Meanwhile, traditional materials are presented in traditional village design using modern design techniques.

Finally, expand the functions of traditional village spaces by combining modern lifestyles. In order to meet the needs of local residents for diversified modern life, modern living space and functions are integrated into the village planning and design, and expressed using local traditional elements.

In addition, this study also found the extent of agreement with the development view of environmental preservation and moderate utilization for village landscapes significantly affects people's preference for mixed-style village landscapes. The government advocates the development view of environmental preservation and moderate utilization for traditional village, which will enhance local residents' preference for mixed-style village landscapes.

1) Advocating the development view of environmental preservation is the premise of the sustainable development of traditional villages. Any conservation and development method must respect the ecological environment, and cannot exchange for the development of the local economy at the expense of the environment. Traditional village restoration and construction minimize damage to the environment, respect the original topography, maintain species diversity, reduce the plunder of non-renewable resources, and preserve plant growth environments and natural habitats for wild animals.

2) The conservation and development of traditional village landscapes cannot only focus on the single protection of certain objects and blindly pursue the expansion of new things.

The conservation and development of traditional villages should follow the development concept of moderate utilization, that is, the core of traditional village landscape conservation and development is the significant improvement of the living environment.

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