

THE ACTIVATION AND INHERITANCE PATH OF FOLK HOUSE ARCHITECTURE IN YAO MOUNTAINOUS AREAS OF GUANGXI PROVINCE

Ying XU¹ and Pisit PUNTIEN²

1 Doctoral Student of Philosophy Program in Visual Arts and Design, Faculty of Fine
and Applied Arts, Suan Sunandha Rajabhat University, Bangkok, Thailand;
s63584948001@ssru.ac.th

2 Advisor in Visual Arts and Design, Faculty of Fine and Applied Arts, Suan Sunandha
Rajabhat University, Bangkok, Thailand; pisit.pu@ssru.ac.th

ARTICLE HISTORY

Received: 25 August 2023 **Revised:** 15 September 2023 **Published:** 25 September 2023

ABSTRACT

Guangxi Yao mountain residential architecture has unique architectural culture and regional cultural characteristics. The article first outlines and discusses the cultural background of Guangxi Yao mountain residential architecture, and then, through a literature survey, field research, and other methods, conducts an in-depth study of the architectural structure, architectural elements, and characteristics of Guangxi Yao mountain residential architecture and summarises the important influence elements between Yao mountain residential architecture and modern architecture. This paper provides a better theoretical basis and reference framework for the future architectural design of residential buildings in the mountainous areas of ethnic minorities by examining the cultural background and design methods of Yao mountain residential buildings in Guangxi. Its research results are a new exploration of the inheritance and innovation of traditional residential architecture.

Keywords: Guangxi Yao, Mountain dwellings, Architectural space, Cultural heritage

CITATION INFORMATION: Xu, Y., & Puntien, P. (2023). A Study on the Activation and Inheritance Path of Folk House Architecture in Yao Mountainous Areas of Guangxi Province. *Procedia of Multidisciplinary Research*, 1(9), 2.

INTRODUCTION

Yao is a representative ethnic group in the history of Guangxi with a long history, and the residential buildings in the Yao mountainous areas of Guangxi have inherited the traditional architectural elements. It contains rich Yao culture and living habits in the location, function, spatial structure, and building materials of the architectural space. The building materials and decorative language used have typical characteristics of Yao folk houses. However, with the rapid development of the times, the practical functions of traditional residential buildings need to be optimised and updated with the rhythm of the times, and the traditional residential buildings of the Yao Mountains are direct proof of the glory of the culture of the ethnic minorities in China. Due to the proliferation of modern building materials and design languages, the inheritance and innovation of traditional ethnic cultures are especially important.

This research aims to study and explore the regional cultural influence and design innovation of the architectural space of Yao people's mountain dwellings, analyze problems and propose sustainable development plans to promote the inheritance of Yao people's culture and integrate local tourism resources.

LITERATURE REVIEWS

The study of residential architecture in the Yao mountainous areas of Guangxi can be summarised in four main areas:

One is to take a single Yao mountain village as an example and conduct an investigation and research on the morphology and architectural features of the village. Xu Yingying et al.(2010) investigated the ancient buildings and settlements of Langshan Village, a flatland Yao village in Gongcheng County, Guangxi, and proposed corresponding protection and utilisation strategies in the Study on the Protection and Utilisation Strategies of Ancient Residential Buildings in Langshan Village, Gongcheng Yao Autonomous County, Guangxi. The typical features of traditional Yao villages and architecture in the mountainous areas of northern Guangxi were studied by taking Longsheng Xiaozhai village residence in Guilin as an example in "Research on the design and application of Guangxi Yao dry-rail type residential architecture based on sustainable development: taking Longsheng Xiaozhai village residence as an example" (Cong, 2017). Zheng Lipeng and Guo Xiang conducted detailed research on Nangang Gu Pai in the northern region of Guangdong, and in Nangang Gu Pai: Yao Villages and Architecture (Zheng & Guo, 2009), they summarised the basic features, architectural forms, and ethnic characteristics of the villages in Nangang Gu Pai, a Yao village in the northern region of Guangdong. Xuan Chen, in "Longsheng Xiaozhai Settlement and Dwelling Forms" (Xuan, 2011), studied the settlement forms and architectural features of Longsheng Xiaozhai Village in Guilin and summarised the basic ideas on how to inherit and protect the settlement forms and dwelling features under the current situation.

The second is to study and classify the characteristics of the Yao settlements in a certain Yao settlement area. Zhu Tao investigated the Yao settlement in Jinxiu, Guangxi, and pointed out in "Visiting the Architecture of the Yao in Jinxiu" (Zhu, 2009) that the multi-ethnic origin of the Yao people makes the architecture of the Yao people of different clans within the same geographical area also show differences. In "Architectural Characteristics of Yao Folk Houses in Yongzhou" (Yao, 2014), the architectural characteristics of the mountain Yao in the Yongzhou region are discussed in terms of ethnic concepts, architectural types, and architectural decorations. In "Generating New Settlement Forms and Architectural Forms Based on Regional Culture: Taking Jinxiu Eco-Museum Park Planning as an Example" (Lu, 2015), an article that examines the new paradigm of modern design in Jinxiu Yao Autonomous County in Guangxi under the influence of regional culture, the characteristics of Yao folk residence architectural culture and its application in modern design are described. Wang Mengpi wrote "Changes in the Cultural Changes of Huaban Yao Folk Houses and Architecture" (Wang, 2007) after a field

study of the Jinxiu Dayaoyao Mountain area in Guangxi and summarising the characteristics and changes of the Huaban Yao folk houses and architectural culture, which provides a good model for the study of the Yao mountainous area's folk houses and architecture. In *Guangxi Folk Habitat* (Lei, 2005), Yao architecture is studied from the perspective of ethnicity, and Yao architectural cases are studied and analysed so as to put forward strategies for the protection and development of Yao residential architecture, but the focus of the whole book is not only on the study of Yao mountainous area residential architecture but also on the study of residential architecture of other ethnic groups.



Figure 1 Entrance of Mentou Village, Jinxiu, Guangxi

Source: Author's own photo

Thirdly, it is a comparative study of the settlements of many ethnic groups in a certain minority settlement area and the folk dwellings of the Yao people. In Zhao Zhi's *Research on Traditional Settlements and Folk Houses of Guangxi Zhuang* (Zhao, 2012), the folk houses of the Zhuang folk settlement area in Guangxi are classified and compared according to their ethnicity, and at the same time, the characteristics of the folk houses of Yao, Miao, and Dong are compared horizontally. By comparing a number of geographically similar but ethnically different villages, the conclusion is drawn that the ethnicity of the settlement and the regional coexistence are reached. The *"Folk Architecture of Northern Guangxi"* (Li, Quan & Lu, 1990) completed by Li Changjie and his colleagues also involves the comparison between Yao and other ethnic minorities, and a large number of dwellings, drum towers, and wind and rain bridges of Zhuang, Dong, Miao, and Yao villages in the minority areas of northern Guangxi are surveyed and mapped, which provides a rich and exquisite demonstration of Guangxi's ethnic minority architecture. In the early 1990s, the architectural profession made an important achievement of the ethnic minorities' residential buildings, *"Guangxi Ethnic Traditional Buildings"*, which comprehensively depicted the representative traditional buildings of the Han people and many ethnic minorities in Guangxi, including residential buildings, gardens, temples, ancestral halls, ancient bridges, ancient pagodas, academies, drum towers, etc., and carried out a large number of measurements and photographs, recorded the social and cultural information of the residential buildings and the villages where they were located in detail, and displayed the residential buildings of the 12 typical ethnic minorities in Guangxi, which also became the most important and beautiful display of ethnic minorities' architecture. The book is a detailed record of residential buildings and the social and cultural information of the villages in which they are located, showing a catalogue of the dwellings of 12 typical ethnic minorities in Guangxi, and it has also become a major reference work for the study of ethnic architecture.



Figure 2 Yao villages built on mountains

Source: Author's own photo

Fourthly, it summarises the Yao settlements and dwelling forms and explains the factors that have an impact on their forms. In *Cultural Psychology and Yao Residential Architecture* (Zhao, 2009), the main architectural forms of the Yao are summarised, as well as the influence of religious beliefs, family ethics, and national consciousness on the architectural forms of Yao settlements. Xiong Wei's doctoral thesis, "Research on Traditional Vernacular Architectural Culture of Guangxi" (Xiong, 2012), comprehensively applies multidisciplinary theories and methods of geography, history, society, ethnicity, etc. to study the differences and summarise the architectural and cultural forms of residential architecture between residential architecture of other regions of Guangxi and that of the mountainous region of the Yao people, so as to comprehensively and systematically expound and sort out the architectural culture of Guangxi.

RESEARCH METHODOLOGY

The steps of the researchers' study and analysis are as follows

The first step is to study the cultural background of the group. This paper provides a preliminary collation and summary of the large amount of data obtained from the Yao regional cultural survey, with a view to identifying the inherent patterns and trends in these data.

In the second step, research and collect field data for the study area. Collect historical background knowledge about the study area, including the application of architectural elements, architectural materials, architectural structures, and decorative techniques of residential architecture in Yao mountainous areas, and study the project site through the following methods:

1. Interview method In-depth interviews and group discussions were used to conduct the interviews. House builders, local residents, experts in the field of design, tourists, and government department personnel from the Dayao Mountain area of Jinxiu Yao Autonomous County, Laibin City, and Guangxi Zhuang Autonomous Region
2. Observation methods, including participatory and non-participatory observation.
3. Evaluation method, according to the traditional evaluation method commonly used in the comprehensive evaluation of experts, experts from various professions to form a group of experts, experts in accordance with relevant laws and regulations, standards and norms, etc., on the historical and architectural status of the Yao residential buildings to analyze, and make an evaluation, so as to come up with the results of the evaluation.
4. Through visiting local residents, mapping data, processing data, visiting material heritage, and recording relevant images in pictures, we can further analyze the research object in an all-round way. The fieldwork provided real and effective data for the study, learning and analyzing the data by using relevant creative design theories and concepts to analyze the innovative design of residential buildings in the Yao mountainous areas of Guangxi.

In the third step, the quantitative study explores the existing opinions of sample experts and local residents and tourists on the residential architecture of the Yao mountainous areas of

Guangxi, and is reflected in the final design, where the designed architecture is evaluated in the study and outlined through interviews, questionnaires, and assessments.

The fourth step is to summaries. Through the research on the folk residence architecture in the Yao mountainous areas of Guangxi, the inheritance and innovation path of the folk residence architecture in the Yao mountainous areas of Guangxi is summarized.

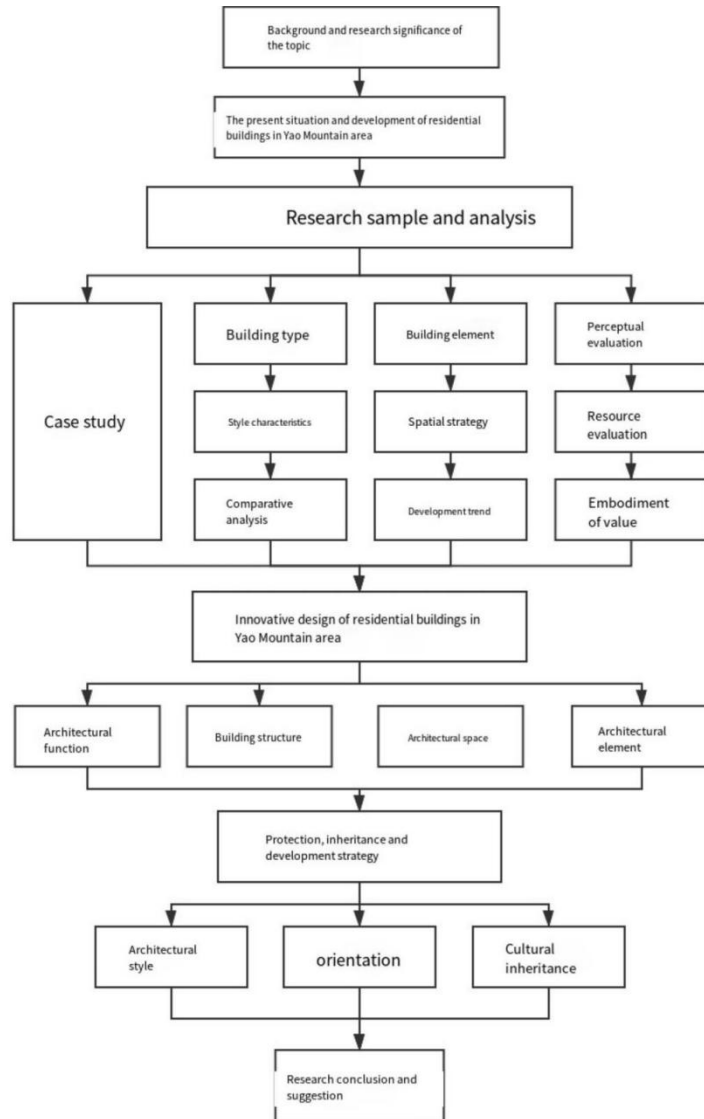


Figure 3 Research framework

Source: Author's own drawing

RESEARCH RESULTS

Path of revitalization and inheritance of residential architecture in Yao mountainous areas of Guangxi:

1. Adherence to cultural heritage and modern integration

In today's social context, how to maintain the balance between traditional culture and modern fashion is an important topic. In response to this challenge, by retaining traditional architectural styles while cleverly incorporating modern design elements, the residential architecture of the Yao mountainous areas in Guangxi has maintained its historical and cultural heritage while presenting a unique fashionable charm. For example, in the design of the building exterior, the geometric forms of modern art and the local Yao patterns are integrated to form a unique architectural language, so that tradition and modernity can coexist harmoniously in the space. By retaining the traditional architectural style while cleverly integrating modern design

elements, the residential architecture of the Yao mountainous area presents a fashionable and unique charm on the basis of maintaining the historical and cultural inheritance, and meets the aesthetic needs of people in different times.



Figure 4 Residential Houses of the Yao Nationality in Jinxiu County, Guangxi

Source: Author's own photo

2. Architectural Heritage and Innovative Practice

To inherit the cultural essence of residential architecture of Yao mountainous areas in Guangxi, it is necessary to carry out innovative design on the basis of maintaining the connotation of national culture.

2.1 Focus on sustainable design

Sustainable development and technological innovation are indispensable factors in the revitalization and inheritance of residential architecture in the Yao mountainous areas of Guangxi. Finding a balance between tradition and modernity is an important goal of this study. The introduction of new materials and the application of modern technology not only provide better stability and durability for the residential buildings in the Yao mountainous areas, but also improve the quality of living. The introduction of intelligent technology makes the residence more convenient and comfortable. The implementation of the concept of green environmental protection not only provides a healthier living environment for the Yao mountainous areas, but also fits with the goal of sustainable development.

2.2 Optimize building structure and functional layout

In the process of revitalization and inheritance of residential buildings, optimizing the architectural structure and functional layout is particularly crucial. Topography and climate are important factors affecting the architectural layout, while the lifestyle and social needs of the residents must also be fully considered. In optimizing the building structure, this study fully integrates the modern engineering technology and the traditional dwelling mode of the Yao people to ensure the stability and comfort of the building. Meanwhile, in terms of functional layout, the flexible planning of different spaces enables the residence to satisfy the residents' daily life needs and to adapt to the changing needs of different scenarios, which enhances the multifunctionality of the building.

2.3 Focus on building safety and stability

Due to the special geographical location and environment of residential buildings in the Yao mountainous areas of Guangxi, considerations of building safety and sustainability are crucial. This study emphasizes the safety performance of the building in terms of earthquake resistance, fire prevention and waterproofing to ensure the safety of the lives of the residents and tourists. At the same time, energy-saving materials and green building technologies are used in the design and construction process to reduce the impact on the environment, realizing the sustainable development of the building and creating a better living environment for future generations.

3. Resident Intervention and Integrated Benefits of Co-Constructive Pathways

The participation of local residents plays a crucial role in the cultural heritage of residential architecture in the Yao mountainous areas of Guangxi. It is important to emphasize the subjective position of local residents and encourage their active participation in the design and renovation process, so that the architecture can be closer to the actual needs. This co-construction approach not only promotes cultural heritage, but also improves community cohesion and well-being. In addition, the co-construction approach has also brought about a positive impact on economic and social benefits and stimulated wider development momentum.



Figure 5 Guangxi Jinxiu County Tourist Attractions

Source: Author's own photo

In addition, in addition to the needs of local residents, it is also necessary to enhance the experience of local foreign tourists, which can be achieved by emphasizing pattern decoration and the display of traditional elements, so that the building becomes a cultural carrier, which demonstrates the rich history and way of life of the Yao people. At the same time, integrating the architecture with local tourism resources to provide tourists with a richer cultural experience not only injects a new impetus for local economic development, but also provides strong support for the inheritance and development of Yao culture in the new era.

DISCUSSION & CONCLUSION

The study emphasizes the importance of sustainable design, optimizing architecture, and ensuring safety in revitalizing Yao ethnic homes in the mountainous regions of Guangxi, China. It suggests finding a balance between tradition and modernity by incorporating new materials and modern technology, enhancing stability, and promoting a higher quality of living while aligning with environmental sustainability. The integration of modern engineering with traditional living styles enhances structural stability and functionality. Safety measures, including earthquake resistance and eco-friendly construction materials, are crucial for a sustainable approach. The study also stresses involving local residents in the design process, promoting cultural preservation and community cohesion. Furthermore, leveraging architectural designs to showcase Yao culture attracts tourism, supporting economic growth and cultural heritage.

The research results on the revitalization and inheritance path of residential architecture in the Yao mountainous areas of Guangxi provide a useful example for the integration of traditional cultural preservation and the needs of modern society. By integrating traditional Yao patterns with modern art styles, optimising building structures and functional layouts, and emphasizing the co-construction approach of resident involvement and sustainable development, a feasible

development path has been formed. This study not only makes substantial progress in the field of residential architecture in the Yao mountainous areas of Guangxi, but also provides useful inspiration for the revitalization and inheritance of architecture in other regions, creates strong support for the inheritance of traditional culture and community prosperity, and demonstrates the harmonious coexistence of culture and modern needs.

ACKNOWLEDGEMENT

Researcher would like to express her sincere to the thesis advisor, Asst. Prof. Dr. Pisit Puntien for his invaluable help and constant encouragement throughout the course of this research. In addition, the researcher has to give thanks to all lecturers for their assistance: Asst. Prof. Dr. Akapong Inkuer and Asst. Prof. Dr. Chanoknart Mayusoh. At the same time, the researcher gratefully thanks to Miss Kanyanee Phuangsua, Miss Sasanant Rattanapornpisit, Miss Visitha Chintaladdha, Mr. Chat Sukarin, and others who give great supports. Finally, the researcher would like to express her gratitude to the Faculty of Fine and Applied Arts, Suan Sunandha Rajabhat University for supporting in every aspect.

REFERENCES

- Cong, S. Q. (2017). *Research on the architectural design and application of Guangxi Yao dry bar type residential buildings based on sustainable development* (Master's thesis, Guangxi Normal University)
- Lei, X. (2005). *Guangxi Folk Habitat*.
- Li, C. J., Quan, X., & Lu, Y. L. (1990). *Folk architecture of northern Gui*.
- Lu, Y. B. (2015). Generating New Settlement Forms and Architectural Forms Based on Regional Culture-Taking the Planning of Jinxiu Ecological Museum as an Example. *Guangxi Township Construction* (04), 86-89. doi: CNKI:SUN:GTMJ.0.2015-04-015.
- Wang, M. P. (2007). *Cultural Changes of Hualan Yao Folk House Architecture* (Master's thesis, Guangxi University for Nationalities).
- Xiong, W. (2012). *Research on Traditional Vernacular Architectural Culture in Guangxi* (Doctoral dissertation, South China University of Technology).
- Xu, Y. Y. et al. (2010). Research on the protection and utilisation strategy of ancient residential buildings in Langshan Village, Gongcheng Yao Autonomous County, Guangxi. *Anhui Agricultural Science* (36), 20823-20826+20840.
- Xuan, C. (2011). *Study on the Settlement and Residential Formation of Longsheng Xiaozhai Village* (Master's thesis, Hunan University).
- Yao, H. (2014). Architectural characteristics of Yao folk houses in Yongzhou. *Journal of Hunan Institute of Science and Technology* (04), 203-205.
- Zhao, X. Q. (2009). Cultural psychology and Yao residential architecture. *Journal of Central University for Nationalities (Philosophy and Social Science Edition)*(04),121-124.
- Zhao, Z. (2012). *Research on Traditional Settlements and Folk Houses of Guangxi Zhuang* (Doctoral dissertation, South China University of Technology).
- Zheng, L. P., & Guo, X. (2009). Nangang Ancient Pai - Yao Villages and Architecture. *Central China Architecture* (12), 132-137.
- Zhu, T. (2009). Jinxiu Yao Architecture. *Guangxi town construction* (02), 107-110.

Data Availability Statement: The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Conflicts of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.



Copyright: © 2023 by the authors. This is a fully open-access article distributed under the terms of the Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0).