Journal of World Architecture, 2025, Volume 9, Issue 3
https://ojs.bbwpublisher.com/index.php/JWA
Online ISSN: 2208-3499
Print ISSN: 2208-3480

Research on Innovative Design of Rural Education Practice Base in Longhe Town, Fengdu County

Yuan Zhang, Ni Lan, Feng Huang, Yuan Sun

Chongqing Institute of Engineering, Chongqing 400056, China

Abstract: This study addresses issues in the development of the rural education complex in Longhe Town, Fengdu County, such as the loss of local characteristics, chaotic landscapes, inadequate industrial chains, and fading cultural memories, and proposes solutions. Based on the report of the 19th National Congress, combined with the rural revitalization strategy and industrial integration strategy, through policy analysis, field research, and case studies, a "Five Parks and Two Zones" landscape sequence is proposed to create an experiential, cultural, and educational rural education practice base.

Keywords: Rural education; Intangible cultural heritage; Rural landscape

Online publication: July 1, 2025

1. Introduction

1.1. Project background

In recent years, the Chinese government has attached great importance to agriculture and rural development, introducing various policies to provide policy support for the landscape design of rural education practice bases. The "Rural Revitalization Strategic Plan (2018–2022)" proposes the goals of "implementing rural cultural revitalization and building beautiful villages", requiring the promotion of rural tourism and agricultural leisure development in rural areas. Documents such as the "Guidelines for the Construction of Beautiful Villages", "Overall Planning of Land and Space in Chongqing", and the "Outline of the 14th Five-Year Plan for National Economic and Social Development and the Long-Range Objectives Through the Year 2035" emphasize the development of a green economy, requiring the strengthening of green services for infrastructure and promoting the integrated development of culture and tourism [1]. These policies provide a solid foundation for the construction of the rural education practice base in Longhe Town, Fengdu County.

1.2. Design purpose

(1) Integration of education and agriculture: By combining agricultural activities with education, the aim is to

enhance agricultural education while developing agriculture, aligning with the national "Guidance Outline for Labor Education in Primary and Secondary Schools (Trial)" policy [2].

(2) Inheriting rural culture: Longhe Town is rich in local culture, but it has gradually faded due to reasons such as a lack of promotion and awareness. Therefore, integrating local cultural elements into landscape design aims to preserve rural cultural heritage, create distinctive rural cultural features, and enhance the sense of identity and pride in Longhe Town's local culture.

(3) Promoting ecological environmental protection: The site mainly consists of farmland and small water systems, maintaining a relatively primitive state. Thus, the subsequent design emphasizes strengthening ecological protection, particularly for water systems and farmland.

(4) Advancing rural revitalization: The creation of a rural education practice base aims to promote rural economic development and industrial upgrading, facilitating rural revitalization. Additionally, it integrates and extends favorable resources within and around the site, enabling multi-faceted rural revitalization efforts.

(5) Driving local economic development: By establishing a rural education practice base, the development of local tourism, agriculture, and other sectors is expected to significantly boost local economic income and diversify revenue streams.

1.3. Design significance

(1) Facilitating deep integration of agriculture and education: Designing an education practice-based landscape with agricultural characteristics aims to closely integrate agriculture and education, promoting mutual penetration and fusion. This approach is conducive to expanding the breadth and depth of education, enhancing students' comprehensive qualities and practical abilities.

(2) Preserving and inheriting rural cultural heritage: Incorporating rural cultural elements into landscape design not only preserves and inherits rural culture but also serves as an important pathway for providing rural education to students. This effort aims to foster students' sense of identity and pride in local culture, cultivating confidence in rural culture.

(3) Promoting the popularization of ecological environmental protection awareness: Emphasizing ecological environmental protection in landscape design aims to cultivate students' awareness of ecological environmental protection through green and low-carbon concepts and eco-friendly agricultural environments, thereby advancing ecological civilization construction.

(4) Driving rural revitalization and development: The construction of a rural education practice base is expected to promote rural economic development and industrial upgrading, leading to rural revitalization. This is not only beneficial for rural development and prosperity but also for narrowing the urban-rural gap and achieving integrated urban-rural development.

(5) Providing new educational models and learning methods: This research project aims to offer students a new learning approach and educational model through experiential learning at the rural education practice base. This enables students to better understand and appreciate agriculture, rural culture, and ecological environments, enhancing their comprehensive qualities and practical abilities.

2. Market analysis

2.1. Location analysis

Longhe Town is situated in the heart of the mountainous region on the south bank of Fengdu County. With a total area of 139 square kilometers and cultivated land of 32 mu, it is the largest agricultural town in Fengdu. Rich in natural resources and boasting a long history, the town is built around the Long River (a tributary of the Yangtze River), making it a key location along the river's course. The town is primarily accessible via one provincial road and connected to the outside by a bridge. Internal transportation is divided into four main roads: "First Ring Road", "Second Ring Road", "Third Ring Road", and the riverside road, with the "Second Ring Road" and "Third Ring Road" being the main connecting routes. External transportation options are relatively limited but convenient, while the internal road network is dense and accessible from all directions.

2.2. Natural condition analysis

In terms of natural conditions, Fengdu is located on the Eastern edge of the Sichuan Basin, where the landscape consists of a series of parallel fold systems. The county is characterized by continuous mountains, crisscrossing rivers, and intersecting hills and valleys. The terrain is predominantly mountainous (mountains account for approximately three-fifths of the county's area), followed by hills. Narrow plains are only found in river valleys and between mountains. The alternating distribution of mountains, hills, and plains (or valleys) forms a landscape that is higher in the South and lower in the North, with "four gorges and three valleys." The highest elevation is 2000 meters, the lowest is 175 meters, and most elevations range from 200 to 800 meters. Part of the site features a terraced landscape, typical of terraced fields, while the remaining areas are generally flat, with a maximum height difference of approximately 37 meters.

2.3. Cultural resource analysis

Regarding cultural resources, Longhe Town in Fengdu County is rich in cultural heritage and has a long history. However, cultural inheritance is low, and much of the culture has been forgotten. The surrounding areas of Longhe Town are rich in scenic spots and historical sites. As a necessary path connecting multiple scenic areas, the site experiences high human activity density and good resource conditions. The surrounding infrastructure is complete, and the overall conditions are satisfactory, meeting people's daily needs.

2.4. Visual analysis

In terms of visual analysis, the overall view is relatively cluttered. However, the surrounding buildings are relatively low, providing good landscape views. The site is surrounded by farmland, with a flat terrain, abandoned fields, exposed soil, and overgrown plants. Some houses are in disrepair, and there are noticeable height differences in small parts of the site, forming typical terraced fields.

In conclusion, the overall condition of the site is currently cluttered, and the landscape view is poor. There are some old buildings on the site that require consideration for protection and renovation during the design process. Small parts of the site feature significant height differences and undulations, while the remaining areas are relatively flat. The site and its surrounding areas are rich in culture, but there is a noticeable degree of cultural abandonment and forgetfulness. Additionally, there are a few ancient trees on the site that need to be protected and reused.

3. Design principles

3.1. Feature experiential landscapes

Currently, many rural education practice bases only offer interactivity or leisure activities, with a weak overall experience and few immersive landscapes. Therefore, during the design process, it is essential to focus on enhancing the overall experience of the site, creating experiential landscapes, and integrating local characteristics into the project to create immersive landscapes with local flair.

3.2. Utilize non-material cultural heritage as a supplementary means

Given the historical significance of rural practice education bases and the unique value of non-material cultural heritage, the design should highlight and incorporate local non-material cultural elements. Emphasis should be placed on the utilization, protection, reuse, and innovation of non-material cultural heritage products and traditions, aiming to achieve a distinctive blend of cultural heritage and rural education practice.

3.3. Prioritize cultural education as the fundamental objective

Strengthen the substance of cultural education within the rural education practice base, emphasizing the educational value and purpose brought by rural education. Integrating culture and education allows visitors to experience local culture, its inheritance, and promotion at the rural education practice base, thereby fulfilling its educational significance.

3.4. Focus on rural practice as the core requirement

Enhance rural practices based on the guidelines of the rural education practice base. This involves utilizing local cultural and agricultural products, enabling visitors to engage in activities such as picking, crafting, and processing, to experience the joys of rural life and achieve the core objective of rural practice.

3.5. Adopt safe development as the central criterion

Due to the unique characteristics of rural practice education bases, which often feature varying terrain, water systems, and elevation differences, potential safety hazards may exist. Therefore, it is crucial to understand the local conditions, assess the overall water system and elevation distribution, and install protective fencing in high-risk areas. Regular safety inspections of on-site entertainment facilities, comprehensive emergency plans, and accident prevention measures should also be implemented, adhering to the design philosophy of human-centeredness.

3.6. Implement adaptation to local conditions as the basic premise

In the initial stages of project design, it is essential to conduct a comprehensive understanding and planning of the site, recognizing the unique development characteristics of the project. This is particularly important in protecting local vegetation and ancient trees, which serve as key indicators of adaptation to local conditions. By clarifying the project's theme, incorporating local cultural characteristics, terrain, and social service needs, the development goals can be tailored to the specific context.

4. Design analysis

4.1. Overview of design concept

The project site is primarily characterized by terraced fields and rivers. The design revolves around the landscape

design of a rural educational practice base, integrating local intangible cultural heritage, folk customs, and regional characteristics. The goal is to create an educational base that offers experiences, relaxation, and visual enjoyment.

Culture is the soul of the design, tapping into the local customs and traditions formed over generations to allow people to experience farming activities and rural life. With experience as the vitality, the design explores intangible cultural heritage and crafts to create an immersive educational landscape. This enables city residents to experience intangible cultural heritage firsthand, fulfilling the needs for physical and mental pleasure, cultural education, and forming a new industry to boost local economic income.

The design also considers the backdrop of rural revitalization and cultural inheritance, focusing on experiential landscapes to create educational experience spaces. By utilizing local terraced fields and other terrain features, the design aims to create a rustic rural landscape that evokes memories of the site while embodying educational values in the landscape space. This creates a landscape that integrates intangible cultural heritage, cultural education, and rural practice.

4.2. Analysis of design thinking

Guided by site-specific issues, the design establishes rural landscapes, multi-element spaces, and experiential landscapes. This addresses problems such as a lack of diverse activity spaces, the absence of rural landscapes, abandoned buildings, and fading cultural memories.

The design revolves around two main axes: culture and education. The functional structure is dominated by unique experiences and rural landscapes, combining rural revitalization, cultural inheritance, and historical context. This creates a landscape design that integrates intangible cultural heritage, cultural education, and rural practice, embodying the concept of "educating through heritage and reminiscing in the fields."

4.3. Axis analysis

The landscape axis adopts a "Five Parks, Two Zones, Multiple Points" sequence to form a connected landscape.

4.3.1. Five parks

(1) Art park: Constructs an art and culture town based on local intangible cultural heritage and traditional culture.

(2) Rice Park: Features rice as the main crop, utilizing terrain elevation differences to create a rice field agricultural landscape.

(3) Bean Park: Focuses on soybeans as the primary agricultural product, incorporating their processing and sale for an immersive experience.

(4) Folk Park: Reflects the local characteristics of people's livelihoods and life through the concentration of local customs and traditions.

(5) Bamboo Park: Creates a cultural park with ethnic characteristics based on the Gelao culture, descendants of the ancient Yelang people.

4.3.2. Two zones

(1) Rice field viewing area: Offers an enhanced experience and appreciation of rural and farming culture through the landscapes created by rice fields.

(2) Soybean experience area: Allows for the full experience of crop and product processing through various

sales models such as self-picking, self-making, and self-selling. This not only provides agricultural cultural education but also boosts local economic income and enhances participant engagement.

4.3.3. Multiple points

These are the various landscape nodes formed around the five parks and two experience zones.

5. Business model design

5.1. Self-purchased product formats

(1) Direct sales products: Provide high-quality agricultural products such as soybeans and rice directly to customers. These products can be packaged in eco-friendly materials, highlighting their green and healthy features.

(2) Brand story: Create a brand story for the products, emphasizing their cultural and educational value, such as introducing the planting history and traditional farming methods of the products.

(3) Experiential purchase: Although customers can directly purchase products, short experience activities such as tasting freshly made soybean products or rice can also be provided to enhance the shopping experience.

5.2. Participatory product formats

(1) Interactive experience: Design an interactive experience zone where customers can participate in the production process of soybeans and rice, such as planting, harvesting, hulling, and milling.

(2) Educational workshop: Hold educational workshops to teach customers how to make traditional foods using soybeans and rice, emphasizing the cultural and nutritional value of traditional foods.

(3) Customization service: Provide customization services so customers can choose different product formulations or packaging based on their preferences, increasing product personalization.

(4) Souvenir creation: Encourage customers to add personalized markings or designs to the products they make, turning them into unique souvenirs.

(5) Sharing and display: Set up a sharing area for customers to showcase their creations, and provide convenient photo-taking and social media sharing options to increase the social influence of the project.

5.3. Product design combined with education

(1) Curriculum integration: Integrate the product manufacturing process with educational curricula such as agriculture, ecology, and nutrition, providing educational practical activities.

(2) Study tours: Design study tour programs for schools and educational institutions, allowing students to learn agricultural knowledge and traditional culture through hands-on experience.

5.4. Social welfare and poverty alleviation

(1) Designing poverty alleviation paths: Exploring design poverty alleviation paths for collaborative design innovation of the intangible cultural heritage of the Gelao ethnic group, creating a cultural brand with characteristics of the Gelao ethnic group's intangible cultural heritage, promoting the revival of intangible cultural heritage operas, opening intangible cultural heritage workshops, and injecting new vitality into the rural economy.

6. Technical implementation

6.1. Project features

(1) Superior geographical location: The project site is surrounded by mountains on one side and water on the other, integrating naturally with the environment to create a unique rural landscape. This provides excellent natural conditions and site characteristics for carrying out rural education practices.

(2) Deep cultural heritage: The site contains many old buildings and stilt houses, rich in historical and cultural connotations. Combining local intangible cultural heritage and rural customs, it can add a unique cultural atmosphere to the project and attract more tourists and participants.

(3) Diversified educational experience: The project design combines unique experiences, rural landscapes, and rural revitalization, integrating cultural inheritance, historical context, and rural practices. This provides participants with a rich and colorful experience of intangible cultural heritage and learning opportunities, promoting the inheritance and development of cultural education.

(4) Sustainable development: In improving the current situation, enhancing cultural and diversity aspects, environmentally friendly and energy-saving technologies, as well as intelligent sensing technologies, can be used to build a green and sustainable rural education practice base. This supports local rural revitalization and sustainable development.

(5) Highlighting local characteristics: Through in-depth research on the internal conditions, advantages, crops, and vegetation of the site, combined with human customs, a rural education practice base with distinct local characteristics can be created. This enhances the project's visibility and attractiveness, injecting new vitality into local economic and cultural development.

6.2. Innovations

(1) Injecting vitality into the integration of education and agriculture: By combining agricultural activities with education, agricultural education is strengthened while developing agriculture. This can also be synchronized with the "Guidance Outline for Labor Education in Primary and Secondary Schools (Trial)" policy launched by the country [3].

(2) New inheritance of old culture: Longhe Town is rich in various local cultures, but some, such as the Gelao sacrificial altar culture, have gradually faded due to lack of promotion and awareness. Therefore, integrating local cultural elements into the landscape design, inheriting the rural Gelao cultural heritage, and creating a rural intangible cultural heritage feature can also enhance the sense of identity and pride in Longhe's local culture [4].

(3) Utilizing new energy to promote green environmental protection: Adopting environmentally friendly and energy-saving technologies in project construction, such as solar power generation systems and rainwater collection and utilization systems, reduces the consumption of natural resources and creates a green and sustainable rural education practice base.

(4) Advancing rural revitalization: The creation of a rural education practice base helps promote rural economic development and industrial upgrading, facilitating rural revitalization. Additionally, it allows for the integration and extension of favorable resources within and around the site, enabling multi-faceted rural revitalization.

(5) Boosting the economy through new landscape design: By building a rural education practice base, it drives local economic development, particularly in tourism and agriculture, thus increasing local economic income in multiple ways.

(6) Introducing new technologies into design: Applying virtual reality technology to design a virtual scenic area navigation system provides participants with an immersive experience, showcasing the history, characteristics, and stories of intangible cultural heritage and rural landscapes [5]. Simultaneously, virtual reality technology can be utilized to develop interactive education projects, enhancing participants' learning effectiveness and experience [6].

7. Conclusion

This project will further study the internal conditions, site advantages, vegetation situation, and human customs of the site. It aims to improve the current situation, enhance the site's cultural and diversity aspects, and create an experiential, cultural, and educational countryside. This will promote the deep integration of agriculture and education, protect and inherit rural cultural heritage, facilitate the popularization and promotion of ecological environmental awareness, drive rural revitalization and development, and provide new educational models and learning methods. Based on this, the project mainly revolves around the two main axes of culture and education. The functional structure is dominated by unique experiences and rural landscapes, combined with rural revitalization, cultural inheritance, and historical context. This creates a rural education practice-based landscape design featuring "heritage fields and learning valleys" with intangible cultural heritage characteristics, integrating cultural education and rural practices.

Funding

Chongqing Institute of Engineering Innovation Training Project: "Yitian Xuegu"–Innovative Design Research on the Rural Education Practice Base in Longhe Town, Fengdu County (Project No.: CXCY2024011); National Innovation Training Project–Landscape Design of Education and Research Base Based on Mine Ecological Restoration - Taking the Restoration of Datukuang in Xinhe Village, Dadukou District as an Example (Project No.: 202312608002X); Chongqing Institute of Engineering School-level Project: Research on Urban Waterfront Landscape Design Based on the Concept of River Ecological Restoration–Taking the Section of Huaxi River in Chongqing Institute of Engineering as an Example (Project No.: 2022xskz02)

Disclosure statement

The authors declare no conflict of interest.

References

[1] Xie K, 2020, Exploration of Terraced Field Landscape Planning in Rural Design. Daguan, 2020(6): 47–48.

[2] Chen W, 2018, Planning of Water Conservancy Scenic Spot with Terraced Fields as the Theme, thesis, Nanchang: Nanchang Institute of Technology.

[3] Chen J, 2022, Research on the Landscape Design of Tourism-Oriented Food Industrial Parks from the Perspective of Intangible Cultural Heritage Live Protection, thesis, Chongqing: Chongqing Jiaotong University.

[4] Li X, 2022, Cultural Tourism Landscape Design of Experiential Landscape. Urbanism and Architecture, 19(14): 196–198.

[5] Chen Z, 2020, Research on the Collaborative Innovation Development of Ethnic Minority Folk Art Industry and Local Economy in Chongqing Ethnic Regions. Art Sea, 2020(11): 158–159.

[6] Zhang Y, 2022, Integration of Traditional Village Landscape Design and Intangible Cultural Heritage Inheritance–Taking Kangjiawei Village in Shaanxi Province as an Example. Modern Horticulture, 45(08): 104–106.