

New Inheritance of Farming-Reading Culture and Multi-Stakeholder Synergy: An Integrated Rural Industrialization Path in Xinzhuang Village under Beijing's "Hundred Villages Demonstration" Initiative

Shengjie Li ¹, Jie Zhang ¹, Ruoshui Yu ¹, Qiaoyun Wei ^{1,*}

¹ Beijing City University, Beijing 101309, China

*** Correspondence:**

Qiaoyun Wei

weiqiaoyun@sina.com

Received: 22 April 2026/ Accepted: 30 July 2026/ Published online: 31 July 2026

Abstract

The comprehensive revitalization of rural areas stands as a cornerstone of China's 15th Five-Year Plan for agricultural and rural modernization. While the 14th Five-Year Plan period witnessed notable advancements in rural industries, cultural development, and ecological conservation, persistent challenges remain in achieving deep industrial integration, cultivating a vibrant entrepreneurial ecosystem, and upgrading specialty products. This study takes Xinzhuang Village — a pioneer demonstration village in Beijing's "Hundred Villages Demonstration and Thousand Villages Revitalization" Project — as a typical case. Through field investigations and case analysis, this paper systematically examines the underutilized educational assets of the local "Xiangshang School" (literally "Upward School") and proposes a novel, integrated development model. The model synergistically combines: (1) the development of structured study-tour curricula linked to the strawberry industry; (2) the optimization of the village's Maker Street into a collaborative entrepreneurial ecosystem; and (3) the creation of a differentiated, school-age-targeted product matrix. By constructing a theoretical framework for multi-party collaboration among the village collective, enterprises, schools, and villagers, this research condenses a practical path for rural industrial revitalization. The findings offer both a theoretical reference and a replicable practical model for other resource-composite villages undertaking similar revitalization efforts, thereby contributing to the broader goals of Beijing's rural development strategy.

Keywords: Farming-Reading Culture; Rural Industrial Integration; Maker Ecosystem; Multi-Stakeholder Synergy; Rural Revitalization; Xinzhuang Village

1. Introduction

The strategy for rural revitalization represents a pivotal shift in China's policy framework for addressing systemic challenges in agriculture, rural areas, and farmers. In response to the national mandate, Beijing launched the "Hundred Villages Demonstration and Thousand Villages Revitalization" Project, aiming to establish model villages that can catalyze broader regional development. Within this framework, Changping District's "Ten Towns, Hundred Villages, Thousand Households" initiative seeks to foster shared prosperity. Xinzhuang Village, located in Xingshou Town, has been designated one of the first demonstration villages due to its distinctive composite resource endowments, making it a critical testing ground for developing a replicable "Xingshou Model."

Our research interest in Xinzhuang Village is motivated by its unique combination of resources and its parallel developmental bottlenecks. The village possesses a robust strawberry cultivation sector, a mature but underutilized farming-education system centered on the Xiangshang School, and an emerging cluster of makers and entrepreneurs. This composite structure of "characteristic agriculture + educational culture + emerging maker economy" renders it an ideal case for evaluating the effectiveness and challenges of the "Hundred Villages" initiative.

Our preliminary fieldwork identifies three critical bottlenecks impeding Xinzhuang Village's transition toward industrial prosperity:

First, there exists an integration deficit: agricultural and educational resources remain largely siloed, failing to synergize with the dominant strawberry industry. The current study-tour products are rudimentary, resulting in suboptimal resource utilization. Second, a collaboration gap persists: the entrepreneurial ecosystem on Maker Street operates in a fragmented manner. Individual merchants lack a collaborative framework to cultivate a cohesive "culture + economy" brand identity, limiting the collective impact. Third, value-addition lags: the village's core strawberry industry remains heavily dependent on traditional pick-your-own models. The development of higher-value derivative products, informed by the "farming-reading" ethos and tailored to key demographic groups, lags considerably behind market potential.

Addressing these challenges requires a systematic approach to integrate educational, industrial, and commercial resources. This study, therefore, aims to design and validate a scientific path for rural industrial revitalization. By analyzing the synergy between farming-education, cultural arts, characteristic industries, and maker ecology in Xinzhuang Village, we seek to construct a replicable demonstration model. This model is intended to provide a valuable practical reference for promoting integrated rural development in resource-composite villages, thereby contributing to the broader objectives of the "Hundred Villages" initiative and similar projects nationwide.

2. Literature Review and Theoretical Framework

This review explores the extant literature to identify the research gaps that this study aims to address. We organize the review around three thematic pillars critical to understanding rural

industrial integration: the role of cultural assets (specifically farming-education), the pathways of industrial convergence, and the mechanisms of multi-stakeholder collaboration.

2.1. The Role of Cultural Assets: From Farming-Education to Rural Endogenous Development

The farming-education model has long been recognized as a cornerstone of traditional Chinese rural culture, intertwining agricultural production with scholarly and moral cultivation. Contemporary scholarship has evolved from viewing this model merely as a historical relic to recognizing its potential as a driver for rural revitalization (Jiang et al, 2020). Recent studies suggest that the essence of this model—its emphasis on practical learning, local knowledge, and cultural identity—can be strategically leveraged to foster endogenous development in rural areas. For instance, initiatives that integrate agricultural experience with cultural immersion have been shown to enhance both the educational value and the economic viability of rural spaces (Ma & Guo, 2024). International parallels, such as the "field classroom" model in Europe and Japan's "One Village, One Product" strategy, further underscore the value of linking local production with education and cultural identity (Liu, 2019).

However, the existing literature on farming-education in China predominantly focuses on curriculum design or the construction of practice bases, with insufficient attention paid to its systemic integration with a village's leading industry. A critical gap exists in understanding how the principles of farming-education can be operationalized to create a closed-loop system where education attracts visitors, cultural heritage is preserved, and industrial innovation generates income. Research indicates that a significant majority (over 80%) of agricultural education bases in China operate in isolation from local industries, in stark contrast to the deep integration observed in some international contexts (see Table 1). This study addresses this gap by investigating how the educational resources of Xinzhuang Village can be institutionally linked to its primary strawberry industry.

2.2. Pathways to Rural Industrial Integration: Beyond Single-Industry Models

Industrial integration is widely acknowledged as a pivotal strategy to diversify rural economies and enhance their resilience (Wang, 2024). The core tenet involves dismantling traditional industrial silos to facilitate resource sharing, business model innovation, and value-chain extension, thereby unlocking new sources of growth (Wen, 2024). International experiences offer diverse models: the United States leverages large-scale agriculture for deep processing and agro-tourism, while Europe champions the development of small-scale industrial clusters that harmonize economic activity with ecological and cultural preservation.

Domestic research has proposed various integration pathways, such as "agriculture + culture/tourism" and "agriculture + health/wellness," emphasizing the need for multi-stakeholder governance frameworks (Bai & Lan, 2024; Wu, 2024). Nonetheless, the literature presents a notable oversight. Most studies concentrate on macro-level integration strategies, often overlooking the nuanced, place-based challenges of suburban villages that rely on distinctive specialty crops. For example, the specific pathways for integrating a strawberry industry with a farming-education system have not been adequately explored. This study aims to fill this gap by

examining the specific integration challenges and opportunities in Xin Zhuang Village, where the strawberry industry is the economic anchor.

Table1. Supporting Data for the Gap in Research on the Integration of Agricultural and Educational Culture with Rural Industries

Research gap categories	Core supporting data	Gap description
Lack of a closed loop between agricultural education, industry, and culture	The proportion of agricultural education and industrial literature is 7.25%; 82% of agricultural and educational bases have not connected with leading industries; The degree of industrial integration between China and the United States is 30% vs 91%	Education and industry are disconnected, without a mutually reinforcing closed loop
Lack of research on strawberry industry and agricultural culture in northern suburban areas	The proportion of cases in the north is 11.9%; Changping Xin Zhuang cultural empowerment accounts for 8% (22% nationwide)	There is a research gap in the integration of northern characteristic planting
Lack of systematic linkage between art village construction and maker economy	Keyword co-occurrence rate<5%; 78% of rural construction projects have not been linked to industries; Sino Japanese linkage accounts for 19% vs 68%	No systematic linkage mechanism

Note: The above data are derived from the thematic search results of China National Knowledge Infrastructure (CNKI) and the annual report on agricultural and rural development.

2.3. Mechanisms of Multi-Stakeholder Synergy: Value Co-Creation in Rural Settings

The construction of "art villages" and the rise of the maker economy represent a significant emerging dynamic in rural transformation, facilitating a two-way flow of urban and rural elements (Wang, 2024). The essence of art intervention in rural areas lies not in superficial beautification but in establishing a multi-party value co-creation system (Wu, 2024). This involves tapping into local cultural resources, revitalizing idle assets, and engaging a diverse set of actors, including artists, entrepreneurs, villagers, and government entities. Successful models, often found in Japan and South Korea, demonstrate a "creative incubation - industry landing - community participation" closed loop, achieving a linkage rate of over 60%.

However, Chinese practice has often faced the challenge of "emphasizing form over content" and a lack of deep integration with local industrial development (Bai & Lan, 2024; Wen, 2024). The maker economy holds promise for injecting youthful vitality and market-oriented resources into villages, but research on its synergistic relationship with local cultural assets (like farming-education) and leading industries is scant. The collaborative mechanisms between maker collectives, village collectives, and educational institutions are rarely examined systematically. Keyword co-occurrence analysis in the literature suggests a weak systematic linkage between art village construction and the maker economy, accounting for less than 20% of the research focus (see Table 1). This study addresses this lacuna by proposing and testing a "Village-Enterprise-

School-Villager" collaborative governance model, analyzing how these diverse stakeholders can co-create value for a more resilient and prosperous rural economy.

2.4. Research Gap and Theoretical Starting Point

In synthesis, while the existing literature provides a foundational understanding of rural industrial integration, three significant gaps remain: (a) a lack of models that systematically integrate farming-education with leading industries to form a closed-loop system; (b) insufficient research on the specific integration pathways for suburban villages with specialty crops, particularly in northern China; and (c) the absence of a systematic framework linking art village construction and maker economy with local cultural and industrial assets. This study addresses these gaps by taking Xinzhuang Village as a typical case. It proposes a novel integration model that synergizes farming-education, cultural arts, characteristic industries, and maker ecology. This model is grounded in the theoretical lenses of value co-creation and collaborative governance, providing a robust framework for analyzing how multiple stakeholders can work together to achieve sustainable rural revitalization.

3. Research Framework and Case Study Analysis

3.1. Research Framework: A Triadic Integration Model

This study employs a "problem-diagnosis-solution-mechanism" analytical logic, operationalized through a triadic integration research framework (see Figure 1). The framework proceeds in three stages. First, we diagnose the practical problems in Xinzhuang Village, identifying the gaps in agricultural-education synergy, the operational fragmentation of Maker Street, and the weak cultural empowerment of the strawberry industry. Second, we propose targeted solutions: the development of structured study-tour courses, the optimization of the Maker Street ecosystem, and the creation of a differentiated product matrix. Finally, we synthesize these solutions into a theoretical model for an integrated development mechanism that synergizes farming-education, cultural arts, characteristic industries, and maker ecology. This framework is designed to not only address the immediate challenges but also to generate transferable insights for similar contexts.

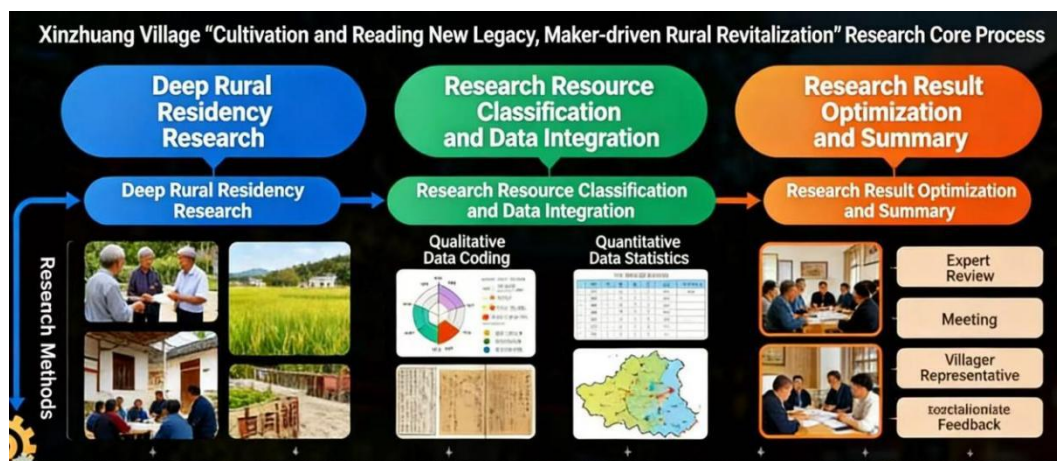


Figure 1. Research framework of "three-dimensional integration" in Xinzhuang Village

"Xiaohongshu Jingbei Internet Red First Village" with its characteristic business model, with cultural and tourism attractiveness continuing to increase.



Figure 4. Xin Zhuang Village Xiangshang School

3.2.2. Bottlenecks: A Gap between Potential and Performance

Despite its rich resources, Xin Zhuang Village faces significant obstacles to realizing its full potential, which can be conceptualized as a value co-creation deficit among its key assets.

Underutilized Educational Resources: The Xiangshang School's farming-education curriculum operates largely in isolation from the village's industrial core (see Table 2). The utilization rate of its 30-acre farm is only 40%, and its greenhouse facilities are used for educational purposes for fewer than 80 days annually. This institutional disconnect results in a failure to translate the school's cultural assets into a dynamic driver for industrial upgrading. The potential of using farming-education to attract urban families and create a unique selling point for the strawberry industry remains untapped. The existing curriculum focuses on imparting basic cultural knowledge but has not established effective and deep collaborative connections with strawberry cultivation, field management, or picking experience services. The practical function of the agricultural education model has been disconnected from the practical needs of village industrial development.

Fragmented Entrepreneurial Ecosystem: Maker Street, while successful in attracting foot traffic, suffers from a collaborative governance deficit. Merchants operate in silos, lacking a systematic mechanism to link their offerings with each other, or with the strawberry and farming-education resources. The business operations are characterized by decentralization and isolation. The operating entities of handicraft workshops, catering, and homestay industries mostly adopt independent operation models, and have not formed a complementary pattern and value linkage system around the strawberry characteristic industry and core resources of agricultural education. This makes it difficult to achieve the stacking effect and scale effect of industrial agglomeration. Furthermore, the level of interaction and integration between maker streets and village communities is relatively low. Most maker formats have not been deeply embedded in the actual rural development scenarios, and cannot form a closed-loop chain of consumption with core

industries. A value co-creation system involving multiple stakeholders has not been established, with a lack of effective interaction and interest linkage mechanisms among merchants, village collectives, villagers, and tourists. This operating model lacks multi-party collaboration, which makes it difficult for Maker Street to cultivate the endogenous driving force for sustainable development.

Table 2. Resource Utilization Data of Xiangshang School in Xinzhuang Village, Xingshou Town, Beijing

data dimension	core data
site utilization rate	The utilization rate of 30 acres of agricultural land is 40%; Annual use of breeding greenhouses $\leq$ 80 days
Course conversion	The agricultural course only covers students on campus, with no more than 3 annual cooperative courses with the strawberry industry
Linkage frequency	Annual reception of villagers for farming and reading experiences $\leq$ 5 times, with only 1 village collective sharing agreement
Conversion of output value	The annual income increase from cultivating and studying resources is only 450000 yuan (only rent), empowering the strawberry industry to account for 8% (22% nationwide)
Teacher utilization	15 agricultural and educational teachers only serve our school and do not provide training to the villagers

Note: The data from Xiangshang School is taken from the official website; the data from Xinzhuang is taken from the rural revitalization report released by Changping District; the data from the Ministry of Culture and Tourism is the national unified measurement value.

Stalled Industrial Upgrading: The flagship strawberry industry remains trapped in a low-value-added model. Over-reliance on primary sales and traditional "pick-your-own" models has led to intense competition and low profit margins. From the perspective of product supply, the proportion of strawberry fresh food is extremely high, forming homogeneous competition with surrounding similar strawberry industries. The cultural empowerment value rate of products is low, and the market competitiveness is weak. The village has not yet formed a derivative product system with cultural functions based on strawberries. From the perspective of value realization, strawberry products are still circulating in the form of primary agricultural products. The insufficient exploration of cultural connotation empowerment and economic value experience has led to a long-term low level of industrial added value. The rate of cultural and creative empowerment of strawberries is only 8%, far below the national average of 22%. This indicates a failure to leverage the cultural assets (farming-reading heritage) to create differentiated, higher-value products and experiences for the core customer demographic of urban school-age children and their families.

4. The Industrial Integration Path Led by "New Inheritance of Farming-Reading Culture"

4.1. Education Empowerment: Development of Curriculum Resources and Research Products for Xiangshang School

Rural areas regard the purpose of "agricultural education" in schools as the center, based on the strawberry industry, and transform abstract educational resources into concrete learning products according to the development concept of "purpose implementation - curriculum planning - product transformation." Finally, the combined effect of "teaching driven and learning promoted" can be achieved.

Xinzhuang Village carefully pondered the core meaning of the school's "agricultural education" purpose when organizing course resources, which is to combine agricultural activities with cultural inheritance. At the same time, combining the entire process of strawberry cultivation, three types of curriculum elements were extracted: natural understanding, labor experience, and cultural influence. Natural understanding mainly focuses on the growth patterns of strawberries, including seedling cultivation, flowering, and fruiting; labor experience focuses on agricultural skills, such as field management and picking operations; cultural influence incorporates local cultural elements, such as seasonal agriculture and intangible cultural heritage. Thus, a new three-dimensional curriculum resource system of "knowledge + skills + culture" is constructed, cultivating students who are not only growers and managers, but also lecturers and promoters. It not only cultivates talents but also saves economic costs.

Xinzhuang Village actively develops modular and short-term practical products when designing research and learning products. It can be designed as follows: the first is the "Strawberry Life Cycle Observation Course" (see Figure 5), which establishes field classrooms in 571 strawberry greenhouses, allowing students, participants in parent-child activities, and tourists to have a more intuitive understanding of the entire process of strawberry growth. Observation manuals and planting toolkits are distributed to achieve "learning by doing." The second is the "Seasonal Kitchen Workshop" (see Figure 6), which combines the 24 solar terms and strawberry eating scenes, constantly launching practical projects such as making strawberry jam, baking solar term dim sum, and connecting the manual business resources of Maker Street. The third is the "Agricultural Culture Experience Camp" (see Figure 7), which integrates intangible cultural heritage tie-dyeing, rural market practices, and other content to create an immersive study package of 1-2 days, meeting the extracurricular practice needs of urban families and primary and secondary schools.

If Xinzhuang Village clarifies the course objectives, refines the practical operation process, provides supporting material support, and forms a feasible "Xinzhuang Village Agricultural Research and Learning Activity Execution Manual" (see Figure 8), it will work together with the village collective and maker merchants to build a research and learning service system. The village collective is responsible for coordinating the use of greenhouses and ensuring safety. The merchants on Maker Street provide catering and handmade venue facilities. This not only activates the idle educational resources of Xiangshang School, allowing these resources to be

used in a complementary manner, but also attracts traffic to the strawberry industry and the maker industry, building a linkage loop of "education - industry - commerce."



Figure 5. Strawberry Life Cycle Observation Course



Figure 6. Solar Terms Kitchen Workshop



Figure 7. Farming and Reading Cultural Experience Camp



Figure 8. Activity Execution Manual Cover

4.2. Feasibility Investigation: The Ecological Map of Maker Street and the "Education Community-Driven" Model

Xinzhuang Maker Street has formed a characteristic structure of "maker economy + strawberry industry + diversified governance." Its business format is mainly divided into three categories: the first is the experiential handmade space represented by the "Gift Handicraft Workshop": research-based education formats based on local school characteristic courses, holiday study activities, and traditional agricultural activities. The second is the integration of industries represented by strawberry picking gardens and cultural and creative industries.

The town has a maker alliance that gathers more than 120 merchants and has established a property management company for village collective operation. The village collective economic cooperative has been established for unified operation and management. The rented idle rural houses brought villagers a rental income of up to 10.53 million yuan, and the district's Changping

Company provided operational support and policy guarantees, as well as intellectual support from external professional institutions such as the "Qingmei Township Creation Plan" of Tsinghua Academy of Fine Arts. All dimensions form a four-in-one collaborative governance form of "village committee coordination, state-owned enterprise operation, property execution, and maker participation."

Centered around the theme of the operating entity, the development of activities attracted a large number of visitors. The Xinzhuang Sunset Concert attracted 19,000 visitors in just one day. The village collective uses the "Weekend Changping" mini-program for digital management, and the cooperative provides a stable source of raw materials for the experience course. The close connection between the operating entities and various stakeholders forms a value co-creation system, and the elements achieve mutual integration and collaborative creation of value.

In response to this model, we have conceived a model of "farming education + cultural arts + characteristic industries + maker ecology", which relies on localized educational experiences as the fulcrum to build a learning community open to all community members. Through the cycle of "education introduction, activation, and value co-creation," this model ultimately promotes education diversion, introduces some public and private partners, and brings value increment. The model also presents three levels: education provides community connectivity and attracts multiple subjects into the governance system through participation methods such as "three-party governance association" and mentor association. The value of education has been transferred to the industry, with activities such as strawberry study projects driving product premiums exceeding 40%, and there are also cases where the rent of maker market booths has increased by 40% within a year.

This model effectively responds to the three principles of locality, participation, and systematization, empowering the countryside by injecting talents and knowledge, and cultivating the capacity for internal growth and development. Specific results: as of 2025, Xinzhuang Park has received 530,000 visitors, with operating income of 2.81 million yuan. Maker Street has driven more than 5,000 entrepreneurs. Through innovative distribution methods, the village's collective income has increased by more than 200,000 yuan per year, benefiting many parties.

Xinzhuang practice has explored a path that uses educational experience as the engine to drive rural development, integrating tourism experience products, study tours, and cultural and creative products into a carrier to attract resources into rural areas, reconnecting and reconstructing the social and economic relationship network within the countryside under the perspective of "new inheritance of farming-reading culture." In the rural embedded service market, the strong demand for rural experiential products and the possibility of their transformation into local consumption are highlighted. The construction of educational communities promotes economic development. Under the "Four Brightness and Three Guarantees" policy, the annual income of the village collective economy is 400,000 yuan, and the participation rate has increased from 23% to 81%. Conflicts and disputes have been reduced by 70%, achieving economic, social, and cultural development. It can provide a demonstration sample for other similar rural industry construction and community governance.

4.3. Product Innovation: An Age-Segmented Matrix of Strawberry-Based Derivatives

Building on the strawberry industry endowments of Xinzhuang Village, the pedagogical resources of Shangjin School, and the commercial ecosystem of Maker Street, this study developed a comprehensive user persona framework based on targeted demand surveys of children, parents, and teachers. The analysis identified distinct core needs across age groups: preschoolers focus on safety and sensory engagement, lower-grade primary students on hands-on participation, and upper-grade primary students on scientific inquiry and cultural exploration.

To implement the principles of user centricity, age appropriateness, and industry integration, this paper proposes a differentiated matrix of strawberry-based derivative products. This framework aims to establish a sustainable cycle in which products enhance the study-tour experience, and study tours in turn drive product consumption, thereby contributing to the development of a model industry under the “Hundred-Thousand” rural development initiative.

4.3.1. A Sensory-Driven Product System for Preschoolers

Given preschoolers’ developmental characteristics—such as developing motor skills and short attention spans—and parents’ primary concerns about purity, safety, and educational interactivity, we designed a product system that emphasises low entry barriers, high safety standards, and rich sensory stimulation. Using organic strawberries from the village, these products are integrated into the “One-Day Little Farmer” study-tour programme.

Strawberry infant complementary foods: This line includes organic strawberry purée and melt-in-the-mouth yoghurt drops. Made from organic strawberries sourced directly from the village’s collective greenhouses, they are processed in Maker Street’s additive-free facilities.

Strawberry sensory toys: This category includes strawberry-themed cutting toys and early-learning playsets. Paired with the introductory “Strawberry Life Cycle Observation” course, these toys allow young children to explore plant growth through tactile and hands-on play.

The development of this product line rests on three pillars: ingredient safety, ease of use, and pedagogical integration. A four-party collaborative mechanism involving educators, villagers, the collective, and merchants was established. The village cooperative supplies organic seedlings and standardised raw materials; Maker Street merchants handle additive-free processing; and educators from Shangjin School oversee the educational design of the toy sets.

This model (see Figure 9) employs a dual-channel profit strategy. Offline, products are sold through bundled study-tour packages (e.g. a trial pack included with a course, with an option to purchase full-size products) and via retail at Maker Street stores and villagers’ stalls. Online, direct-to-consumer sales are managed through a WeChat Mini Program and member communities, with SF Express cold-chain logistics ensuring product quality.

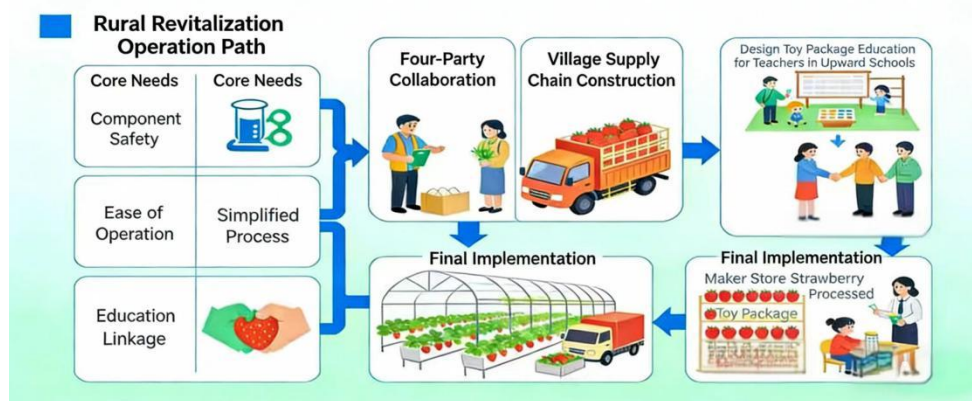


Figure 9. Development Path of Products for Young Children

4.3.2. An Experiential Learning-Oriented Product System for Lower Primary Grades

Lower-primary students display strong curiosity and a high willingness to engage in practical activities. The core concerns of parents and teachers at this stage are cultivating practical skills and providing cultural enlightenment. To address these needs, we propose developing “participatory, creative, and take-home” products that leverage Xinzhuang Village’s intangible cultural heritage and the diverse formats of Maker Street, creating a business model in which the experiential process itself constitutes the consumption scenario.

Strawberry DIY craft kits: Incorporating elements of national intangible cultural heritage such as tie-dyeing, these kits contribute to cultural inheritance and artistic engagement in rural areas.

Strawberry fun snack series: This includes items such as strawberry fudge and cartoon-packaged lollipops, with packaging designs featuring the IP imagery of Xinzhuang Maker Street.

The development pathway involves collaboration with intangible cultural heritage inheritors on Maker Street to standardise craft techniques, while the village cooperative guarantees a supply of high-quality raw strawberries. A university student team is responsible for the IP-based packaging design, which integrates the “Farming-Reading + Maker” logo of Xinzhuang Village. These DIY kits are embedded as a core component of the study-tour curriculum, allowing students to take home their creations (e.g., strawberry rubbings, clay sculptures), thus achieving a seamless integration of experience, creation, and consumption.

Revenue is generated through bundled study-tour fees (where the DIY kit is a required material for the “Intangible Heritage Tie-Dye Workshop”) and through a designated “Strawberry Handicraft Experience Zone” on Maker Street, which charges a fee for single-session experiences, creating a diversified income stream.

4.3.3. A Knowledge-Enrichment and Cultural- Identity Product System for Upper Primary Grades

Upper-primary students have developed preliminary inquiry and cognitive construction abilities. Their focus shifts towards systematic knowledge acquisition and the formation of local cultural identity, with clear demands for popular science content and cultural memorabilia. Accordingly, we propose developing composite products that offer both functional utility and communicative

value by drawing on the history of Xinzhuang's strawberry industry, the essence of its farming-reading culture, and its maker spirit.

Strawberry popular science and cultural products: This includes items such as a “Strawberry Growth Cycle Handbook” and “Beautiful Xinzhuang” themed postcards, co-developed by educators from Shangjin School and university students.

Functional strawberry derivatives: This line features products like strawberry tea bags and high-fibre strawberry biscuits.

The development strategy involves collaborating with the village committee to systematically document the history of the farming-reading culture and the strawberry industry (see Figure 10). Core narratives—such as “The Transformation of Maker Street from Idle Factory to Creative Block” and “The 12 Steps of Organic Strawberry Cultivation”—are integrated into product design. Advanced freeze-drying technology is used to preserve nutrients, and specific low-acid, high-fibre strawberry varieties are selected as raw materials.

This model generates profit by bundling popular science products with in-depth study-tour courses as tangible outcomes of the learning experience. Simultaneously, an online-offline linkage mechanism is established: offline “Xinzhuang Culture Theme Zones” are set up in Maker Street’s cultural and creative stores, while online live-streaming and IP marketing are conducted via platforms such as Douyin. This strategy aims to achieve both customer attraction and sales channel expansion, helping Xinzhuang’s strawberry industry transition from pure commodity production to the dissemination of cultural value.

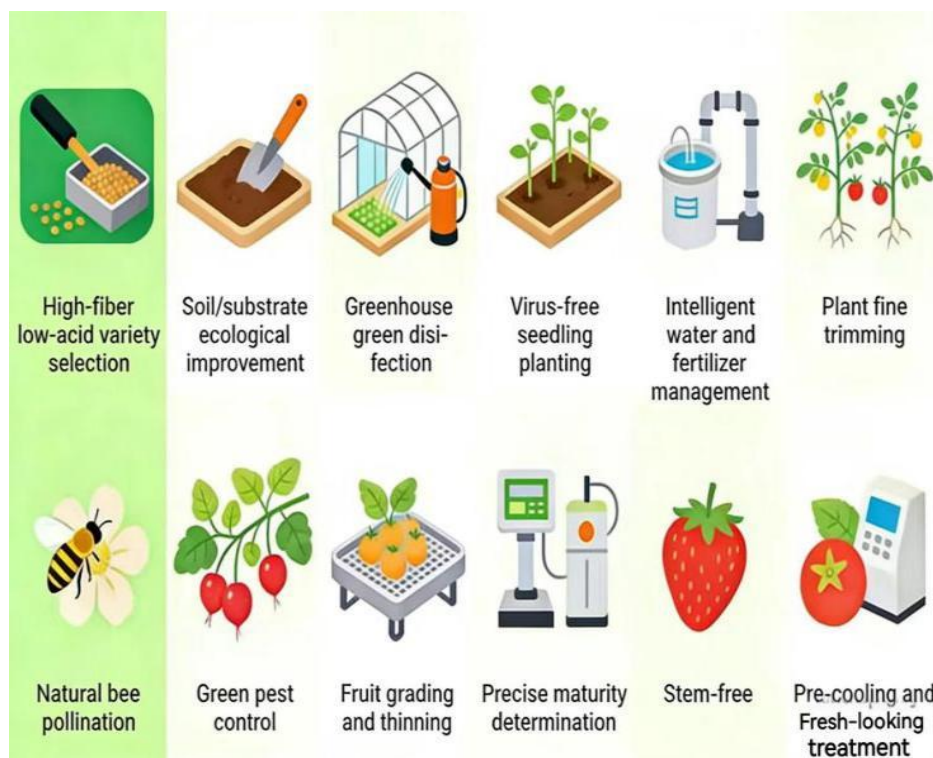


Figure 10. 12 Processes for Organic Strawberry Cultivation

4.4. Mechanism Collaboration: Multi-party Co-construction Model of "Village-Enterprise-School-Villager"

In the process of promoting the cultivation of demonstration industries for the "Hundred Villages Project," Xinzhuang Village has gradually broken the old way of relying solely on a single entity for operation. In the perspective of "new inheritance of farming-reading culture," a governance model of "government (village collective) - enterprises (merchants/cooperatives) - schools - villagers" has been newly established, involving four parties working together. The core idea of this model is equal rights and responsibilities among all parties, mutual recognition, sharing of interests, achieving win-win results, and dynamically adjusting according to actual situations. In rural development, some problems are often encountered, such as scattered resources, lack of endogenous motivation, and unsmooth cooperation among all parties. The four-party model can precisely solve these problems. The key to the sustainable development of villages lies in accurately responding to the needs of all parties and innovating and transforming local practices.

Through deep cooperation, the four parties have formed a closed-loop operating system. The village collective is mainly responsible for overall coordination, relying on policy support to integrate the existing high-quality resources in the village, including 571 strawberry greenhouses and 200 acres of modern agricultural park. The village improves its infrastructure and optimizes the functional layout of public spaces through small-scale renovation and clever updates. At the same time, it actively connects with district-level financial funds and project resources to lay a solid foundation for the high-quality development of demonstration industries.

Enterprises (merchants/cooperatives) are the main body of market operation, taking the regional public brand "Berry Mountain and Water" as the core, developing strawberry-related derivative products, expanding traditional handmade experiences and other business projects, and also undertaking supporting services for study tours, so that the unique resources of rural areas can be efficiently transformed into market value.

The school has deeply explored the concept of "farming education" and systematically transformed industry-related content such as strawberry planting technology and intangible cultural heritage handicraft inheritance into distinctive research-based courses, bringing stable passenger flow to the development of rural industries through the method of "guiding traffic through education."

Villagers create value together through two-way participation. Local villagers in the village can earn labor income through field management, assisting in research and study activities, and other labor; foreign makers combine creative design with modern operational experience, forming a pattern of "local talents + foreign makers" complementing each other.

The sustainability of this collaborative model is mainly supported by three core aspects.

First, the mechanism of interest binding. By consolidating everyone's strength and formulating a distribution rule of "basic income guarantee + value-added income dividends" through the sharing of interests among all parties, the village collective, enterprises, schools, and villagers

have become a community of shared interests, with one prospering and the other suffering, effectively breaking down the institutional barriers of decentralized management.

Second, the mechanism for clarifying rights and responsibilities. This mechanism clarifies the core responsibilities and collaboration boundaries of all parties, establishes a normalized communication and negotiation channel, conforms to the collaborative governance framework of "government guidance, market operation, and villagers as the main body," and also follows the collaborative principle of "layer by layer transmission and hierarchical implementation," which can ensure the smooth implementation of policies and promote efficient industrial operation.

Third, the dynamic adaptation mechanism. Enhancing the flexibility of village development, the strawberry industry has seasonal characteristics, and all parties will work together to develop off-season specialty products and customized study packages. According to market demand, optimize service content at any time, continuously attract more entities to participate, avoid rigid models, and achieve the long-term goal of "self-organization, self-governance, and self-development" of villages.

The innovative practice model of Xin Zhuang Village not only responds to the core idea of "multi-party participation and value creation" in the construction of art villages, but also integrates the practical experience of urban-rural integration development and suburban village upgrading. This provides replicable and promotable practical examples for the construction of many "Hundred Villages Project" demonstration villages and the collaborative development of similar villages.

5. Conclusions and Implications

5.1. Theoretical Contributions and a Synthesis of the "Farming-Reading+" Model

This study set out to investigate how resource-composite villages can overcome integration bottlenecks to achieve industrial revitalization. Through a detailed case analysis of Xin Zhuang Village, we have developed and validated the "Farming-Reading+" integrated model. The core of this model is a quadruple-loop operational system that synergizes farming-education, cultural arts, characteristic industries, and maker ecology. Its operation can be summarized by four interconnected mechanisms.

First, educational empowerment as the engine: by transforming the Xiangshang School's idle resources into structured, modular study-tour curricula, the village effectively creates a "pull factor," attracting urban families and school groups. This addresses the gap identified in the literature by demonstrating a tangible pathway for linking education with the leading industry.

Second, business model innovation as the bridge: the optimization of Maker Street from a collection of independent merchants to a collaborative ecosystem creates multiple touchpoints for "education-driven" traffic to be converted into local consumption. This integration of picking, cultural experiences, and creative workshops provides the necessary commercial infrastructure for the model.

Third, precise product adaptation as the interface: by developing a differentiated matrix of strawberry-derived products tailored to the needs of specific school-age groups, the village ensures a precise match between supply and market demand, thereby enhancing the value capture of its agricultural output. This is a novel and practical response to the universal challenge of product commoditization.

Fourth, multi-stakeholder collaboration as the guarantor: the "Village-Enterprise-School-Villager" governance model is the foundational element that enables the entire system to function sustainably. It creates a structured platform for interest sharing, role clarification, and dynamic adaptation, ensuring the model's resilience.

This study makes a significant theoretical contribution by moving beyond a simple description of successful practices to provide a theoretically grounded model of multi-stakeholder value co-creation in a rural context. While the existing literature on rural integration often proposes macro-level "agriculture + X" pathways, the "Farming-Reading+" model offers a granular, sector-specific framework. It operationalizes the concepts of value co-creation and collaborative governance by specifying the roles, responsibilities, and interaction mechanisms among four key stakeholder groups: the village collective, enterprises/makers, the school, and villagers. It demonstrates that the success of such initiatives hinges not just on resource availability but on the establishment of institutional mechanisms that facilitate the continuous and dynamic collaboration of diverse actors, an aspect often underexplored in prior research. Our findings, such as the 40% price premium achieved through study-tour-linked products, provide empirical evidence of the model's effectiveness, offering a replicable blueprint for achieving "self-organization, self-governance, and self-development" in similar villages.

5.2. Policy and Practical Implications for the "Hundred Villages" Project

Based on our findings, we propose the following policy recommendations to enhance the effectiveness of the "Hundred Villages" project and similar initiatives, using Xinzhuang Village as a reference point.

First, foster a collaborative support system for diversified businesses. Policies should incentivize synergy rather than isolated growth. This includes differentiated support (e.g. tax breaks, subsidized rent) for businesses that directly support and integrate with the village's core industry, such as agricultural product processing and off-season cultural services. Creating a shared regional resource platform can facilitate the cross-disciplinary flow of talents, capital, and information.

Second, implement specialized policies for agricultural-education resource valorization. Given the proven impact of educational resources on industrial development, special funding and technical assistance should be directed towards developing standardized, modular study-tour courses. Villages should be guided to systematically map and activate their local resources for educational purposes, with subsidies for curriculum R&D and facility upgrades.

Third, establish a tiered demonstration and promotion system. A "playbook" of best practices should be developed, categorized by village type (e.g. based on primary industry, location, resource endowment). Pairing support mechanisms and experience-sharing platforms can

facilitate the efficient and contextualized dissemination of successful models like the one in Xinzhuang.

Fourth, promote the "Village-Enterprise-School-Villager" collaborative model. Policy should actively encourage and formalize multi-stakeholder governance structures. This can be achieved by establishing clear guidelines for rights, responsibilities, and benefit-sharing; providing incentives for business entities to participate; and simplifying administrative processes to grant village collectives more autonomy and agility in decision-making.

Fifth, support evidence-based product R&D. Establish a product innovation fund targeting "school-age-adapted" and "family-customized" products. Linking this fund with university expertise for consumer research and product design can significantly reduce market risks and improve the precision of product development, ensuring that supply closely matches evolving urban demands.

By implementing these recommendations, the "Hundred Villages" project can more effectively catalyze sustainable, endogenous rural development, enabling villages like Xinzhuang to serve as powerful models for the comprehensive revitalization of China's vast rural landscape.

Author Contributions:

Conceptualization, Shengjie Li; methodology, Shengjie Li and Jie Zhang; investigation, Jie Zhang and Ruoshui Yu; data curation, Jie Zhang and Ruoshui Yu; formal analysis, Shengjie Li, Jie Zhang, and Ruoshui Yu; visualization, Jie Zhang and Ruoshui Yu; writing—original draft preparation, Shengjie Li, Jie Zhang, and Ruoshui Yu; writing—review and editing, Shengjie Li; supervision, Shengjie Li; project administration, Shengjie Li. All authors have read and agreed to the published version of the manuscript.

Funding:

This work was supported by the Innovation and Entrepreneurship Training Program for College Students at Beijing City University.

Institutional Review Board Statement:

Not applicable.

Informed Consent Statement:

Not applicable.

Data Availability Statement:

The raw data supporting the conclusions of this article will be made available by the authors on request.

Conflict of Interest:

The authors declare no conflict of interest.

References

- Bai, J. Y., & Lan, H. Y. (2024). Practice and strategy of contemporary "artistic township construction" from the perspective of rural revitalization: A case study of Ruifen Town, Jiangmen City. *Beauty and Times (Urban Edition)*, (5), 135-137.
- Jiang, W. Q., Liu, Z. B., & Li, Y. H. (2020). Summary of rural development models at home and abroad. *Rural Economy and Technology*, 31(13), 279-281.
- Liu, J. H. (2019). The enlightenment of European rural urbanization experience on China. *Economic and Social History Review*, (2), 26-38, 127.
- Ma, H., & Guo, Z. X. (2024). Foreign experience of agricultural and rural modernization and China's mirror: A comparative analysis based on Japan, South Korea, the United States, and the European Union. *Journal of Hebei University (Philosophy and Social Sciences Edition)*, 1-15.
- Wang, G. Y. (2024a). Exploration and practice of enhancing the path of suburban integration villages in the context of rural revitalization strategy: Taking Daping Village in Pingtan Comprehensive Experimental Zone as an example. *Fujian Architecture*, (5), 1-6.
- Wang, G. L. (2024b). The paradigm construction and practical exploration of art intervention in rural construction. *Art and Design (Theory)*, 2(6), 59-61.
- Wen, Y. (2024). Research on the challenges and long-term development strategies of village construction under the background of urban-rural integration: A case study of Y Village. *Rural Economy and Technology*, 35(2), 60-63.
- Wu, W. L. (2024). Art township construction: Building a value co-creation system. *Art Market*, (5), 22-25.

License: Copyright (c) 2026 Author.

All articles published in this journal are licensed under the Creative Commons Attribution 4.0 International License (CC BY 4.0). This license permits unrestricted use, distribution, and reproduction in any medium, provided the original author(s) and source are properly credited. Authors retain copyright of their work, and readers are free to copy, share, adapt, and build upon the material for any purpose, including commercial use, as long as appropriate attribution is given.