

# Research on the Protection, Inheritance, and Tourism Integration Development of Xuan Paper Making Techniques

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**Abstract:** This paper takes the national intangible cultural heritage "Xuan Paper Making Technique" as the research object to explore the path of its in-depth integration with tourism for protection and inheritance. The study points out that current integration practices face issues such as superficial cognitive communication, homogenization of experience products, and imbalance between inheritance and commercialization. To address these contradictions, this paper proposes constructing a "protection-development-communication" collaborative system, digitally upgrading experience scenarios, and establishing a multi-stakeholder governance mechanism. The aim is to form a positive cycle of "cultural identity-experience value-inheritance motivation" and provide replicable "Chinese experience" for the integration of intangible cultural heritage and tourism.

**Keywords:** Xuan Paper Making Technique; Intangible Cultural Heritage Protection; Tourism Integration; Living Inheritance; Development Countermeasures.

## 1. Introduction

In contemporary society intertwined with globalization and modernization, intangible cultural heritage (ICH) serves as the living gene of national culture, acting not only as a crucial carrier of civilizational inheritance but also as the foundation of cultural confidence. The UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage explicitly states that the protection of ICH requires "ensuring its vitality through the participation of communities, groups, and individuals." However, with the acceleration of industrialization and the decline of traditional production methods, many ICH projects face a triple crisis of "inheritance discontinuity, value dissipation, and market shrinkage"—crafts lack successors, cultural connotations are simplified into "symbolic labels," and commercial development falls into the trap of "low-end homogenization." How to keep ICH "alive" in the present has become an urgent issue of our time.

Tourism, as an important bridge connecting tradition and modernity, provides new possibilities for ICH protection. On one hand, the "experience economy" attribute of tourism naturally aligns with the "living inheritance" characteristics of ICH, where deep tourist participation can directly activate its cultural value. On the other hand, the market attribute of tourism can inject economic momentum into ICH through "cultural consumption," forming a positive cycle of "protection-development-inheritance." However, in practice, the integration of ICH and tourism often falls into a dilemma of "superficial integration": cultural distortion due to over-commercialization, shallow experience design reduced to "performance shows," or failure to reach core audiences due to inadequate communication. Therefore, exploring the internal logic and practical path of in-depth integration between ICH and tourism holds significant theoretical and practical value.

As the pinnacle representative of traditional Chinese handmade papermaking, Xuan Paper Making Technique is

among the first batch of national intangible cultural heritage and has been inscribed on UNESCO's Representative List of the Intangible Cultural Heritage of Humanity[1]. Its core processes, "108 procedures" and "binary ratio of *Pteroceltis tatarinowii* bark and Shatian rice straw," embody the ecological wisdom of "harmony between humans and nature" of ancient Chinese craftsmen. The resulting Xuan paper, renowned for its "excellent ink absorption and millennium-long preservation," is hailed as "paper of a thousand years." It serves as the material foundation of Chinese calligraphy and painting art and an important carrier for the continuity of Chinese civilization. Taking Xuan Paper Making Technique as a typical case to systematically study its in-depth integration path with tourism not only provides targeted solutions for the protection of this specific ICH project but also offers replicable "Chinese experience" for the integration practices of other ICH items.

## 2. Issues in the In-depth Integration of Xuan Paper Making Technique Protection, Inheritance, and Tourism

As a national intangible cultural heritage, the integration of Xuan Paper Making Technique with tourism should inject new vitality into traditional craftsmanship, yet it has exposed multi-dimensional contradictions in practice[2]. These issues are not isolated but reflect systemic imbalances in the "cognition-experience-inheritance" chain, manifested in three specific aspects:

### 2.1. Shortcomings in Cognition and Communication: Ineffective Transmission of Cultural Value and Craft Core

Public cognition of Xuan Paper Making Technique generally remains at a "symbolic" and "superficial" stage, with significant gaps in the transmission of its cultural value and craft essence. Most people only know that "Xuan paper is

used for calligraphy and painting" but lack understanding of core craft principles such as the "108 procedures" and "binary ratio of *Pteroceltis tatarinowii* bark and Shatian rice straw." Many individuals who have not used Xuan paper struggle to perceive its practical values like "ink absorption" and "millennium durability," dismissing it as a "common handicraft." This cognitive bias directly weakens tourists' interest in in-depth cultural experiences of Xuan paper—over half of the public show limited interest in the production process, viewing it more as a "tourist backdrop" rather than a cultural carrier worthy of exploration.

The communication system suffers from an imbalance between "breadth of coverage and depth of interpretation." While short videos have become the main communication channel, content mostly focuses on visual segments such as "paper fishing" and "paper drying," lacking systematic decoding of craft principles and cultural connotations. Traditional media reports tend to be promotional, failing to address the cultural logic behind the technique. Educational communication is particularly weak, with young people's understanding often limited to the "ICH label," making it difficult to form cultural identity. Additionally, geographical and transportation constraints further reduce communication conversion efficiency—the distance between core source cities and Xuan paper production areas, coupled with inadequate scenic area shuttle services, prevents many potential tourists who "know but do not visit" from translating cognition into actual experience, hindering the effective implementation of cultural value through tourism scenarios.

## **2.2. Homogenization of Experience and Products: Insufficient Cultural Depth and Innovation**

Experience scenarios are trapped in an inefficient cycle of "repeating basic procedures." Although Xuan paper making experiences are a core selling point, most scenic spots only offer 2-3 basic procedures such as "paper fishing" and "paper drying," lacking differentiated design. Tourists commonly feedback that "processes are similar and lack in-depth interaction"—for example, failing to integrate cultural narratives of links like "raw material collection" and "ancient bleaching," resulting in experiences remaining at the "photo-taking" level and struggling to evoke deep resonance with the wisdom of "timing, geographical advantages, and human harmony" embedded in the craft. In a representative scenic area, despite high participation rates in "paper fishing experiences," revisit rates are low, with tourists commenting that "the process is repetitive and lacks storytelling," making it difficult to form lasting cultural memories.

The cultural and creative product matrix exhibits characteristics of "low quality" and "homogenization." Current Xuan paper cultural products are dominated by low-value-added items such as letter paper and couplet paper, with a severe lack of high-value derivatives like digital collectibles and artist collaborations. Many products labeled "Xuan paper cultural creations" are actually substitutes made from ordinary calligraphy paper, with prominent design homogenization. This "quantity-over-quality" development model fails to meet young consumers' demand for "culture + trends" and fails to effectively convey the "ICH premium" of Xuan paper—public willingness to pay for low-quality cultural products is generally low, while stronger interest is shown in high-value products integrating digital technology or master collaborations.

## **2.3. Contradictions Between Inheritance and Sustainable Development: The Dilemma of Balancing Craft Protection and Commercialization**

Craft inheritance faces dual dilemmas of "generational discontinuity" and "efficiency pressure." Xuan paper making relies heavily on manual experience, but practitioners are predominantly middle-aged and elderly, with a low proportion of young technicians, creating a crisis of "senior craftsmen struggling to continue, new craftsmen hard to retain." To meet tourism market demands for "instant experiences," some enterprises have compressed the traditional 108 procedures to fewer than 30, eroding craft authenticity and weakening the cultural uniqueness of the technique.

Over-commercialization has triggered a chain reaction of "cultural distortion." Market infringements and counterfeiting exist, with some merchants selling machine-made pulp products under the name of "ancient-method Xuan paper," damaging consumer trust and spreading the negative perception that "Xuan paper = cheap handicraft," threatening the sustainability of ICH cultural value. Additionally, some scenic areas have alienated "ICH experiences" into "performance shows" to pursue visitor numbers—requiring inheritors to repeat mechanical actions daily, undermining the solemnity and ritual of the craft and further exacerbating cultural distortion.

In summary, the existing issues in the integration of Xuan Paper Making Technique and tourism essentially result from the combined effects of superficial cultural cognition, inefficient experience design, and fragile inheritance ecology. To achieve sustainable development, systematic breakthroughs must be made in communication, experience, and inheritance, constructing a positive cycle of "cultural identity-experience value-inheritance motivation."

## **3. Countermeasures for In-depth Integration of Xuan Paper Making Technique and Tourism**

To address the prominent contradictions of "shallow cognition, thin experience, and difficult inheritance," the in-depth integration of Xuan Paper Making Technique and tourism requires coordinated efforts in "protecting the foundation, activating development vitality, and strengthening communication links," leveraging digital technology to upgrade experience scenarios, and establishing a multi-stakeholder governance mechanism. The ultimate goal is to form a positive cycle of "cultural identity-experience value-inheritance motivation." Specific paths are as follows:

### **3.1. Constructing a "Protection-Development-Communication" Collaborative System: Safeguarding Authenticity and Activating Value**

The integration of Xuan paper technique and tourism essentially balances "protecting cultural authenticity" and "activating market value." Only by taking protection as the foundation, development as the driving force, and communication as the bridge—with each link interconnected—can cultural inheritance and economic

benefits be achieved simultaneously.

### **3.1.1. Protection as the Foundation: Strengthening Inheritance Roots**

Protection is the prerequisite for integration. To ensure Xuan paper technique is "passed down," solid foundations must be laid in three aspects: craftsmanship, raw materials, and institutions[3].

Firstly, craftsmanship inheritance: Senior craftsmen mentoring apprentices, villagers becoming inheritors. Xuan paper making relies on "craftsmen's experience." Traditional "father-son teaching" preserves the warmth of the craft but is limited by family size; modern education can expand inheritance scope. Therefore, a "dual-track system" is adopted: on one hand, encouraging senior craftsmen to mentor apprentices with monthly government subsidies to stabilize inheritance willingness; on the other hand, establishing "Xuan Paper Craft" majors in local vocational schools, where students study theory for two years and intern with national inheritors for three years, directly becoming technicians or scenic area instructors upon graduation. Additionally, "ICH night schools" are offered for villagers, with inheritors teaching weekly; qualified villagers can work as part-time instructors, increasing income and expanding the inheritance team.

Secondly, raw material guarantee: Cultivating "Pteroceltis tatarinowii trees" and managing "rice straw sources." The ratio of Pteroceltis tatarinowii bark and Shatian rice straw is the "soul" of Xuan paper, but raw materials have historically posed challenges. Now, a "two-pronged approach" is implemented: blockchain technology provides "identity cards" for each sheet of Xuan paper, enabling scanning to trace the origin of Pteroceltis tatarinowii trees and rice straw; farmers are incentivized to grow Pteroceltis tatarinowii with 500 yuan per mu annually to expand planting areas; local drought-resistant rice straw varieties are selected to reduce raw material risks.

Finally, institutional safeguards: Establishing rules to protect authenticity. The "Regulations on the Protection and Development of Xuan Paper" clarify that "handmade Xuan paper" must meet strict standards such as Pteroceltis tatarinowii bark content and folding endurance, prohibiting process simplification for tourism. The government has also established a "Xuan Paper Protection Fund" to support inheritor training, renovation of old paper workshops, and environmental technology upgrades, providing a safety net for protection efforts.

### **3.1.2. Development as Utility: Making Culture "Viewable, Playable, and Portable"**

Development drives inheritance. The cultural value of Xuan paper must be transformed into participatory, consumable experiences, converting tourists from "spectators" to "engaged participants."

Firstly, stratified experience design for different groups. For general tourists, "zodiac paper crafting" is offered—using traditional bamboo screens to make paper, painting zodiac signs with mineral pigments, and on-site mounting for takeaway, combining simplicity, fun, and memorability. For cultural enthusiasts, "ancient book restoration workshops" are organized, inviting Palace Museum experts to teach Xuan paper-based restoration of ancient painting fragments, with "ICH restoration experience certificates" issued upon completion to satisfy in-depth exploration needs. For professionals, "master workshops" are held, where national inheritors provide one-on-one instruction in high-difficulty

techniques like "3.3-zhang giant Xuan paper," attracting calligraphers and painters to enhance professional recognition of the craft.

Secondly, developing high-value, innovative cultural products[4]. Upgrading existing low-value Xuan paper products such as letter paper and couplet paper through collaborations: partnering with the Palace Museum and Dunhuang to launch "A Thousand Miles of Rivers and Mountains" replica Xuan paper sets and Dunhuang mural-themed paper, priced at 2000-5000 yuan to leverage cultural value; collaborating with luxury brands to create Xuan paper-element bags and scarves, transforming "millennium durability" and "ink beauty" into fashion symbols as "cultural business cards" overseas; developing "108 procedures" digital blind boxes—each containing a 3D animation of a procedure, redeemable for offline experience coupons, appealing to young people's preference for "online interaction + offline visits."

### **3.1.3. Communication as a Bridge: Making Culture "Break Circles and Enter Minds"**

Communication links integration. To break the cycle of "knowing the label but not the content," diverse channels are needed to make Xuan paper technique visible and understandable to more people[5].

Engaging audiences through short videos and interaction: Producing "Xuan Paper Craftsmen" short video series showcasing daily lives of craftsmen and details of the 108 procedures, combining warmth and substance; developing a "cloud paper fishing" mini-program to simulate paper making online, with points redeemable for offline experience coupons, lowering participation barriers through gamification.

Breaking circles via variety shows and documentaries: Collaborating with programs like National Treasures and Running Manto design "ancient papermaking" challenge tasks, conveying craft logic through entertainment; producing documentaries like Paper of a Thousand Years to systematically cover Xuan paper's history and craftsmanship, serving as a "encyclopedia" for public understanding.

Showcasing internationally: Hosting "Xuan Paper Art Tours" in Belt and Road countries, exhibiting replica ancient paintings and luxury brand collaborations to attract international tourists; partnering with Japanese Echizen washi and Korean hanji to create "East Asian Handmade Paper" co-branded products, entering global markets with "dual ICH certification."

## **3.2. Digitally Upgrading Experiences: Making Tradition "Live" in the Present**

Young people today crave novelty, requiring technology to "refresh" traditional experiences. Digital technology reconstructs scenarios[6], transforming Xuan paper technique from an "old artifact" into a "new experience"[7].

### **3.2.1. AR/VR: "Viewing" Craftsmanship Across Time and Space**

At the Xuan Paper Cultural Park, AR navigation devices enable "time travel" by scanning paper-drying walls—simultaneously displaying Ming Dynasty craftsmen and modern technicians demonstrating drying techniques across eras for intuitive inheritance observation; VR "ancient papermaking metaverse workshops" allow users to embody Tang Dynasty craftsmen, cutting Pteroceltis tatarinowii, washing rice straw, and making/drying paper in virtual scenes, with interactions with "virtual Zhang Yanyuan" to learn Xuan

paper history, enhancing immersion.

### **3.2.2. Data-Driven Optimization: Smarter Experiences, More Convenient Visits**

Scenic areas are equipped with smart cameras and sensors to monitor visitor hotspots and preferences in real-time, enabling flexible route adjustments. For example, adding cultural product stores and rest areas near crowded "3.3-zhang giant Xuan paper production zones"; using AI to predict peak visitor flows during holidays, deploying additional AR devices to reduce waiting times from 40 to 15 minutes. "Cultural check-in points" (e.g., *Pteroceltis tatarinowii* forest adoption areas, ancient paper-drying zones) are established, where visitors posting photos on social media receive 50-yuan cultural product coupons to drive secondary dissemination.

### **3.2.3. Digital Marketing: New "Grassroots Promotion" for Young People**

Launching "Xuan Paper Cultural Flagship Stores" on Tmall and JD.com with "virtual ink testing"—uploading calligraphy works to simulate ink absorption effects of different Xuan paper types (e.g., "Jingpi" and "Tejing") to assist selection; selling "108 procedures" digital blind boxes with 3D animations of each procedure, redeemable for offline experience coupons, catering to young people's preference for "blind boxes + experiences."

## **3.3. Multi-Stakeholder Governance: Ensuring Protection "Has Stewards and Motivation"**

To resolve contradictions of "senior craftsmen struggling to continue, new craftsmen hard to retain" and "over-commercialization," governments, enterprises, and communities must collaborate with defined roles and shared benefits.

### **3.3.1. Government: Establishing Standards and Strengthening Supervision**

The government, aligning with the "China Traditional Craft Revitalization Plan," has established a "Xuan Paper Cultural Tourism Integration Fund" to support digital transformation and community participation. Based on the "Xuan Paper Geographical Indication Standard," it mandates "handmade Xuan paper" must contain  $\geq 40\%$  *Pteroceltis tatarinowii* bark and  $\geq 3000$  folds, collaborating with e-commerce platforms to combat counterfeits and labeling authentic products. A "red-black list" system is implemented—counterfeit enterprises are excluded from government projects; those adhering to traditional craftsmanship receive a 10% tax reduction to encourage authenticity preservation.

### **3.3.2. Communities: From "Bystanders" to "Beneficiaries"**

Communities are pivotal. Allocating 5% of tourism ticket and cultural product revenue to a "community cultural fund" for renovating old paper workshops and training inheritors; encouraging villagers to invest land and craftsmanship in cultural tourism projects for profit-sharing. Continuing "Xuan Paper Night Schools" with regular inheritor classes—qualified villagers become scenic area instructors, addressing inheritance gaps while enabling villagers to transition from "cultural guardians" to "cultural earners," fostering intrinsic inheritance motivation.

### **3.3.3. Phased Implementation: From Pilot to Promotion**

Integration requires phased implementation. Short-term: Piloting digital projects like AR navigation and metaverse

workshops in leading enterprises, funded by ICH grants; establishing an "ICH community" in Dingjiaqiao Town covering 3 villages to test the "forest-paper-cultural tourism" model. Medium-term (3-5 years): Expanding the "ICH community" to 10 villages in Jing County, realizing a full chain of "raw material cultivation-craft inheritance-tourism development." Long-term: Developing specialty Xuan paper, applying for international patents; promoting the "Xuan Paper Model" to other ICH items like Huizhou ink sticks and She inkstones, building an "international brand of Chinese ICH-cultural tourism integration," and providing a "Chinese solution" for global ICH protection.

## **4. Conclusion**

Amid globalization and modernization, Xuan Paper Making Technique—an "living gene" of Chinese civilization—represents not merely a cultural project but a profound practice in "how tradition engages with modernity." This study systematically analyzes deep-seated contradictions in ICH-tourism integration and proposes a holistic solution centered on "protection as roots, development as utility, and communication as bridges." Its core lies in fostering a positive cycle of "cultural identity-experience value-inheritance motivation," offering replicable "Chinese experience" for ICH living inheritance.

Practically, in-depth integration of Xuan paper craftsmanship and tourism inherently safeguards both "cultural authenticity" and "market value." The three core contradictions identified—superficial cognition, inefficient experience, and fragile inheritance—reflect universal challenges in traditional ICH's modern transformation. The "protection-development-communication" framework, combining dual-track inheritance, blockchain traceability, regulatory safeguards, stratified experience design, high-value cultural product development, and multi-channel communication, not only resolves Xuan paper's inheritance dilemma but validates a fundamental logic: preserving cultural essence enables tourism's developmental potential, while deep experiential engagement fosters public commitment to inheritance.

Theoretically, the Xuan paper model offers a "Chinese paradigm" for ICH-tourism integration. Its innovations include embedding digital technology into traditional scenarios, transforming "108 procedures" from "craftsmen's memories" into "youth experiences," and breaking the "protection vs. development" dichotomy through multi-stakeholder governance. This model is adaptable to other ICH items like Huizhou ink and She inkstones, contributing "Chinese wisdom" to global ICH protection.

Future efforts should explore metaverse and AI integration as Generation Z emerges as primary consumers, and strengthen dialogue with international handmade paper ICH under the Belt and Road Initiative to build an "East Asian Handmade Paper Cultural Circle." Ultimately, prioritizing cultural authenticity, public participation, and collaborative governance will ensure Xuan paper's "millennium longevity" evolves into "perpetual cultural inheritance," allowing traditional craftsmanship to thrive in modernity.

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