

The Cultural Value and Craft Development of Zigong Tie-Dyeing - Current Status, Challenges, and Prospects

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Abstract

As a national intangible cultural heritage of China, Zigong tie-dyeing has a long history and is an indispensable part of China's outstanding traditional culture. However, due to social, cultural, and other environmental factors, Zigong tie-dyeing is currently facing a series of problems such as the risk of being lost, lack of attractiveness, poor collaboration within the industry chain, and failure to achieve sustainable development. This article mainly uses the combination of 'intangible cultural heritage + tourism' to create a new way to inherit and protect intangible cultural heritage. Through relevant departments and online platforms, it aims to protect and promote Zigong tie-dyeing, leveraging its advantageous geographical location and forming an industrial chain with other local tourism IPs, providing theoretical support and practical guidance for creating a new concept of green and environmental protection.

Keywords

Zigong Tie-Dyeing; Tourism culture; Inheritance; protection.

1. Introduction

The Song Dynasty's "Phonetic Annotations to Comprehensive Mirror in Aid of Governance" states: "Dyeing is done by gathering threads into a bundle and tying them with a string, then dyeing. Once dyed, the string is untied, and everywhere keeps its original color, while the rest is dyed, resulting in brightly colored patterns." Since the Qin and Han dynasties, the Bashu region has been producing brocade, hence it is called "Shu brocade". Hundreds of years later, Shu brocade had become a high-grade fabric introduced into the Tang dynasty's court^[1]. One of the four great talented women of Shu, Xue Tao, wrote: 'In the world, do not think of the spirit of flowers as different, competing to dye the light sand with red brocade.' The Xiangshan recluse also wrote the lines: 'New clamped brocade in Chengdu, Liang and Han broken rouge.' However, since the ascension of Emperor Taizu of Song, there has been a strong advocacy for governing the country with integrity, and the entire nation has come to admire simplicity. The court therefore prohibited the production and use of brocade. Coupled with the ongoing wars, brocade reached a point where it was neglected and had no successors, surviving only in a few small regions. With the passage of time, the craft of Shu brocade has continuously developed and improved, gradually forming a distinctive craft system with strong local characteristics. During the Ming and Qing dynasties, Shu brocade reached its peak, with its products being sold far and wide both domestically and internationally, becoming a brilliant calling card for the Bashu region. However, with the arrival of the modern industrial revolution and the widespread adoption of mechanized production, traditional handicrafts such as Shu brocade have faced unprecedented impacts^[2].

The character 'brocade' in the above passage refers to what is now known as tie-dye. In ancient times, the tie-dye from the Zigong area in the Bashu region was particularly famous, which is why Shu brocade is now referred to as Zigong tie-dyeing.

2. Current Situation and Challenges

2.1. Zigong tie-dyeing is facing the risk of being lost.

The wheel of history slowly moves forward. To this day, some intangible cultural heritage has disappeared in the long river of history due to a series of factors such as social environment, inheritance methods, and geographical location; some intangible cultural heritages have regained new vitality under government support, vigorous promotion, and reform and innovation; however, there are also a large number of intangible cultural heritages in a state of "Neither high nor low.." Zigong tie-dyeing clearly belongs to the third category. Although the Zigong city government has also introduced a series of reforms and promotions for Zigong tie-dyeing, the actual effect seems to be minimal.

Firstly, with the rapid changes in today's society, when people finish a busy day at work and return home to rest, they tend to engage in faster-paced activities, such as browsing short video platforms. However, there is little attention paid to slow crafts like Zigong tie-dyeing, which require careful appreciation. Secondly, with the improvement of living standards, people's consumption levels are also further rising. Due to the pressure of life, craftsmen are forced to give up their tie-dye craft and switch to other more profitable industries^[3]. This is no different from adding insult to injury for the tie-dye craft of Zigong. At the same time, as students on campus, we have heavy academic burdens every day, leaving us with little energy or opportunity to learn about the process of making Zigong tie-dyeing. This has caused Zigong tie-dyeing to be in an awkward situation of 'no time to learn' and 'no desire to learn.' Furthermore, as China gradually enters an aging society, the craftsmen who truly understand and know about the making of Zigong tie-dyeing will gradually pass away. In the end, Zigong tie-dyeing feels like it is becoming a craft that 'future generations will not inquire about'.

2.2. Currently, Zigong tie-dyeing lacks sufficient appeal.

Compared to the world-famous Zigong Lantern Festival and Dinosaur Museum, and the renowned Zigong brine salt, Zigong tie-dyeing seems to lack brand effect and is not well-known. The tie-dye tourism products in Zigong have fallen into homogenization. Even though they have been selected as cultural tourism projects, they are similar to tie-dye tourism models in other places, such as the Bai people's tie-dye in Yunnan. Most of them remain in a 'museum model' archive, only allowing visitors to understand Zigong tie-dyeing through a few patterns, some production tools, and a few lines of introduction. There are very few opportunities for visitors to personally experience and create the crafting process, and they hardly highlight the unique charm of Zigong tie-dyeing. At the same time, tourists lack better and more unique cultural and tourism experiences, and the threshold for ordinary tourists to visit the Zigong tie-dyeing is relatively high. Visiting alone requires a long time to digest and absorb, which can lead to a feeling of monotony and boredom during the process of observing Zigong tie-dyeing, making it difficult to resonate spiritually with the deeper culture. Tourists can only appreciate the beauty of Zigong tie-dyeing at a superficial level, which is insufficient to attract more visitors. Furthermore, the traditional patterns and styles of Zigong tie-dyeing, for example, the techniques demonstrated in the overall contour of the works are relatively delicate, and their composition and patterns are quite free, narrative, and strongly reflect daily life^[4].

Whether the folk culture of southern Sichuan aligns with the tastes of contemporary young travelers is questionable. The modernization of traditional culture has lagged behind; Zigong tie-dyeing has not integrated with modern technology and still relies on a process that takes too long and has high production costs. Even with a rich cultural heritage, Zigong tie-dyeing struggles to shine brightly.

2.3. The coordination of the tie-dye industry chain in Zigong is relatively poor.

The tie-dye tourism project in Zigong and other cultural tourism projects are overly fragmented. The interaction between tie-dye and tourism is still limited to a simplistic consumption and sightseeing experience, without integration with other tourism industries. The tourism IP of Zigong, known as the 'City of Lanterns' and the 'Capital of Dinosaurs,' has already resonated nationwide, with strong cultural tourism appeal. However, Zigong tie-dyeing seems not to have seized this opportunity to promote itself. It still adheres to its own ways, following a pattern of 'centering on itself as a whole and seeking independent development.'

Single cultural resources are difficult to support deeper cultural tourism experiences, and artisans rarely combine Zigong tie-dyeing, Zigong lanterns, and dinosaur culture. At the same time, the Zigong tie-dyeing industry rarely integrates with other industries, such as the gaming industry, which is very popular among young people. Nowadays, many intangible cultural heritages are collaborating with industries that people love across regions to keep up with the trends. For example, the murals of Dunhuang have already collaborated multiple times in the gaming field with great success, while Zigong tie-dyeing has not taken this step. Since it is rarely seen on platforms that young people mainly enjoy, it is even less known outside of that context. Moreover, the industrial chain of Zigong tie-dyeing itself is not complete. Especially in modern society, there is a significant gap between "production processing→online sales" or "visiting→experiencing" in Zigong tie-dyeing. Even if the products produced are abundant, if the sales link cannot keep up, Zigong tie-dyeing products can only accumulate as inventory in warehouses. As a result, there is even less opportunity for Zigong tie-dyeing to reach beyond Sichuan, towards the whole country and even the world.

2.4. The sustainable development of Zigong tie-dyeing needs to be improved.

In production, the traditional handicraft of batik dyeing in Zigong relies on some natural dyes (such as indigo, madder, and purple root), and large-scale production is likely to face some environmental policy restrictions^[5]. Moreover, some scarce resources have long regeneration cycles, and once they are mined on a large scale, it will certainly cause significant damage to natural resources, which goes against the country's commitment to green environmental protection in recent years. Traditional Zigong tie-dyeing, with its tie-dyeing formula applied in a single-color process, results in significant water waste and a substantial increase in wastewater. Furthermore, the traditional production methods of Zigong tie-dyeing rely heavily on manual labor, leading to low production efficiency and challenging cost control. In the pursuit of a modern industrial system that emphasizes efficiency and environmental protection, this reliance on manual labor, high energy consumption, and high pollution in production practices has become clearly outdated.

In sales, unscrupulous tie-dye companies or counterfeit vendors exploit the name of Zigong tie-dyeing to deceive and swindle. The tourism market is flooded with low-quality counterfeit products, making it difficult for ordinary tourists to distinguish between genuine and fake, which in turn lowers their trust and desire to purchase traditional handicrafts, thereby damaging the cultural value of Zigong tie-dyeing.

3. Research and Suggestions on Countermeasures

3.1. Inherit the tie-dye tradition of Zigong, starting from the three major aspects of government, society, and schools.

The inheritance and protection of Zigong tie-dyeing is urgent. For the government and lawmakers, it should not be limited to making promises on paper, but should truly take action, transforming from passive preservation to proactive measures. Increased funding for Zigong tie-dyeing can be allocated, encouraging relevant enterprises to vigorously develop Zigong tie-

dyeing, and providing certain tax incentives so that companies can innovate and reform more boldly, thereby increasing their production volume, which in turn will lead to qualitative changes^[6].

In society, inheritors can obtain help through foundations, social service organizations, and other non-profit legal entities, and vigorously develop Zigong tie-dyeing through donations and the provision of human resources and technology. Additionally, they can recruit volunteers from the community to promote Zigong tie-dyeing using personal efforts, which can bring together people from various industries, creating a multi-point blooming effect and allowing Zigong tie-dyeing to truly thrive in people's hearts.

At the school, targeting universities, especially those rooted in the local area of Zigong, such as Sichuan University of Science & Engineering and Sichuan Vocational College of Health and Rehabilitation, a specialized tie-dye program is being developed. Professionals in the field are invited to become classroom teachers, allowing students who are passionate about intangible cultural heritage to participate. Meanwhile, the school can also establish a tie-dye club, which not only enriches students' daily lives but also injects new life and strength into Zigong tie-dyeing culture.

For primary and secondary school students, Zigong tie-dyeing can be integrated into study tours and extracurricular lectures, thus planting a seed of admiration for Zigong tie-dyeing in their hearts. In this way, a seamless connection can be achieved between Zigong tie-dyeing and the younger generation.

3.2. Through the Internet, the technology of light industry improves attractiveness.

Today, the rapid development and innovation of Internet technology leave unlimited possibilities for the transmission of intangible cultural heritage in the virtual world.(1) Utilizing the internet, through short video apps, cultural websites, and other content platforms, briefly describe the origins and current status of the intangible cultural heritage of Zigong tie-dyeing and the cultural sentiments it embodies, gradually bringing it into the public's view.(2) By using online live broadcasts, we can allow Zigong tie-dyeing to engage in face-to-face conversations with people across different regions and histories, bringing people closer to Zigong tie-dyeing, transitioning from unfamiliarity to familiarity, and creating an aesthetic feeling of wandering through intangible cultural heritage.(3) Set up shop on e-commerce platforms such as JD, Pinduoduo, and Taobao, using the method of 'offline production, online sales' to develop a unique clothing market, allowing young people to have a greater opportunity to experience the magical charm of Zigong tie-dyeing.

Looking back, the handmade production of Zigong tie-dyeing was difficult and took a long time^[7]. But times have changed; the national technological strength has entered the international forefront. Producers can cleverly use technology to reduce production time, costs, and other factors without damaging the original production process of Zigong tie-dyeing. For example, using computer-generated technology for design assistance, and introducing modern technologies such as laser cutting and eco-friendly dyeing, can greatly reduce the consumption of raw materials^[8]. Producers can also use VR/AR technology to restore the production process of Zigong tie-dyeing, especially showcasing unique processes like immersion dyeing, clamp dyeing, and discharge dyeing, allowing visitors to personally experience it, greatly increasing people's curiosity about Zigong tie-dyeing.

3.3. The environment around Zigong tie-dyeing is excellent, and the potential for collaborative cooperation in the industrial chain is limitless.

During the Spring Festival in 2025, 17 A-level scenic spots in Zigong City received 1.6484 million visitors, a year-on-year increase of 23.53%. The three major museums welcomed

339,700 citizens and tourists, a year-on-year increase of 3.15%^[9]. Among them, Zigong Lanterns, Fantawild, and dinosaurs are the highlights of Zigong's tourism industry.

From this perspective, Zigong tie-dyeing can take advantage of the favorable conditions caused by convenient transportation, such as highways, high-speed rail, and public transport, to establish a Zigong tie-dyeing museum or experience zone in a suitable location. By connecting cultural IPs like Zigong lanterns and dinosaurs, the development of Zigong tie-dyeing can be promoted through these major IPs, quickly integrating and forming a tourism loop of 'Zigong Lanterns - Zigong Tie-dyeing - Dinosaurs.' This not only enriches the experience for visitors but also greatly promotes Zigong tie-dyeing, making it another significant cultural new IP for Zigong City, alongside 'Zigong Lanterns, Dinosaurs, and Zigong Well Salt.' Then, Zigong tie-dyeing can also collaborate with the local catering and accommodation industry, placing Zigong tie-dye artworks in prominent positions in hotels and restaurants to integrate Zigong tie-dyeing into the city. This allows visitors to appreciate the beauty of Zigong tie-dyeing while enjoying Zigong cuisine. Additionally, Zigong tie-dyeing can engage in cross-regional cooperation with other industries. For example, in the popular milk tea industry and the gaming field favored by young people, Zigong tie-dyeing can actively collaborate by offering small gift boxes related to Zigong tie-dyeing with drink purchases, printing Zigong tie-dye patterns on milk tea cups, or selling tie-dye clothing as skins in a game. This will spark curiosity and affection for Zigong tie-dyeing among people, making them want to learn more about it and pay attention to it.

3.4. Enhance sustainable development and create new concepts of green and environmental protection.

In order to avoid destroying the ecological environment, the tie-dye enterprises in Zigong should vigorously develop the cultivation of natural plant dyes (such as indigo, gardenia, etc.). This will reduce dependence on chemical dyes and create a pure natural, pollution-free commercial label. At the same time, they should research low-pollution dye-fixing technologies to improve the color fastness of natural dyes. For example, using lower temperatures and dyeing under neutral conditions can reduce the hydrolysis of the dye. During the dyeing process, using a low liquor ratio, adding neutral electrolytes to promote dyeing, and appropriately extending the dyeing time can increase the dye fixation rate. Then, establish a raw material residue recovery system to recycle usable raw material residues for reprocessing and reproduction, thus eliminating waste.

At the same time, after being improved by inheritor Renjie Xu, the new dyeing method called 'one bath multiple colors' achieved through adjusting the dye ratios has transformed the traditional single-color dyeing into multi-color dyeing through multiple immersions using a single formula^[10]. This not only breaks through traditional dyeing methods but also reduces water resources and dye costs. It is essential to improve the wastewater discharge system to prevent wastewater from entering rivers.

Furthermore, apply for international environmental protection certifications (such as GOTS - Global Organic Textile Standard) to enhance the premium space of the products. Establish a chain system from 'planting to consumption' to meet consumers' demand for green, environmentally friendly, and healthy consumption. In the market, open specialized stores for Zigong tie-dyeing and actively cooperate with the police to combat counterfeit and pirated goods, allowing tourists and friends to truly purchase authentic Zigong tie-dyeing clothing and other souvenirs. This not only prevents low-quality merchants from profiting unethically but also maintains the cultural image of Zigong tie-dyeing.

4. Summary

Zigong tie-dyeing has transformed from a trickling stream into a massive wave leading the times, and later became obscure and flowed slowly again due to various reasons. Today, Zigong tie-dyeing has reached a critical juncture in history, where it must either disappear into the endless river of history or once again become a trend leading the times, moving forward boldly. We look forward to Zigong tie-dyeing seizing this opportunity, through government support, social attention, and the cultivation of schools, as well as continuous innovation and the in-depth practice of green and environmentally-friendly concepts, to once again radiate vitality. Let the ancient artistic treasure of Zigong tie-dyeing shine more brilliantly in the new era, becoming an important force in leading fashion trends and inheriting Chinese culture.

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