

Study of the Transmission and Inheritance Channels of Intangible Cultural Heritage in the Qinzhou-Lingshan Segment of the Pinglu Canal

Xinyuan Wei*

Guangxi Vocational Normal University, Nanning 530007, Guangxi, China

**Author to whom correspondence should be addressed.*

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Abstract: This study focuses on three intangible cultural heritage (ICH) projects along the Pinglu Canal in Qinzhou, Guangxi: the Lingshan Tiaolingtou, Lingshan Red *Camellia sinensis*, and Lingshan Giant Zongzi. Through field research, it provides a necessary interpretation of the challenges and innovative opportunities faced by the interactive development of “canal + ICH.” The investigation reveals that ICH inheritance is confronted with dual crises of intergenerational rupture and technological closure, policy implementation deviations, and cultural decoding deficiencies. In terms of ICH dissemination, challenges include weakened cultural identity, a widening digital divide, industrial bottlenecks, and cross-cultural communication barriers. Although the current development trend of ICH culture is generally stable and positive, vulnerabilities persist in the dual-chain interaction of “inheritance-dissemination.” The paper suggests a three-dimensional collaboration solution by means of digital empowerment, living inheritance, and localized distribution as a way of exploring the dynamism of the balance between engineering and culture further, which would promote synergy in the process of innovation between the ICH culture and regional economic growth.

Keywords: Intangible cultural heritage; Inheritance; Dissemination

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1. Collection of intangible cultural heritage materials in Lingshan, Qinzhou

Following the line directly to Hengzhou and then crossing over to the Qinzhou district by the Xijin Reservoir, there is a route known as the “Yong-Qin Salt Road” which is a river road starting at Qinzhou and going up to the Lushan Lujiu Wharf (or Jiuzhou Wharf). Qinzhou Lingshan has long been an important transportation artery. The present research will begin with the construction of the Qishi Hub at Lingshan as a segment of the Century Project Pinglu Canal, in order to obtain a better insight into the development of cultural tourism productivity across Guangxi through innovation. With the help of the Lingshan County People’s Government of Qinzhou City, a field investigation was carried out in Lingshan County, Qinzhou. The key point of the

research is the development of the intangible cultural heritage and its implementation process, and it focuses on the economic belt of the canal area and the innovative possibilities of integrating the intangible cultural heritage of Lingshan and canal development ^[1].

1.1. Intangible cultural heritage boasts a rich diversity in quantity

As of 2023, Lingshan County in the province of Qinzhou, Guangxi has a total of 2 national-level intangible cultural heritage items, 12 autonomous region-level intangible cultural heritage items, 28 municipal-level intangible cultural heritage items, and 61 county-level intangible cultural heritage items. Qinzhou is one of the three centers of the Beibu Gulf culture together with Beihai and Fangchenggang ^[2]. The total volume of intangible cultural heritage items in Qinzhou is in the middle-high range of 14 prefecture-level cities of Guangxi, which indicates that it has abundant intangible cultural heritage resources.

1.2. The scope of intangible cultural heritage connected to the canal area

Pinglu Canal river sections have a well-defined “linear” pattern of *Broussonetia papyrifera* distribution, and most intangible cultural heritage (ICH) elements are found in the Lingshan hub section, Luwu hub section, and tributary section of Tanxu. According to their distance to the canal, these ICH elements can be divided into three concentric areas:

- (1) Within 3–5 km of the canal: The work songs of the Lingshan boatmen, the red pottery methods of Lingshan, the technique of forging bronze drums in Lingshan, and the Lingshan Shigong dance.
- (2) Within 5–15 km of the canal: The opera of picking the tea of *Camellia sinensis* in Lingshan, the Nuo opera of Tiaolingtou, the methods of making the Lingshan giant zongzi, the Lingshan Hakka wedding traditions, the art of Lingshan lantern-making, the traditional method of extracting oil in Lingshan, and sour snack making in Lingshan.
- (3) Beyond 15 km from the canal: The tea-making methods of Lingshan red *Camellia sinensis*, the old paper-making of Lingshan, the traditional brewing processes and Lingshan puppet theatre.

1.3. Data on the inheritance of intangible cultural heritage among the three parties

The present state of heritage preservation in relation to the Tiaolingtou dance of Ling Mountain, the manufacture of Ling Mountain large zongzi, and the process of making Ling Mountain black tea were surveyed through a data survey ^[3]. The Tiaolingtou tradition is an indicator of great government involvement, and the integration of culture and tourism is promising; nevertheless, the low involvement of youth and a limited number of heirs continue to be the major challenges. Even though the production technique of Ling Mountain large zongzi became an intangible cultural heritage at the level of autonomous region in 2008, it is indicated in the statistics that 80 percent of the inheritors are 50 years old or older, 15 percent are between 30 and 50, and 5 percent are less than 30. Concerning the production of Ling Mountain black tea, there are two major categories of outputs and export volumes: the traditional charcoal-roasted black tea and the industrially produced black tea. Industrial black tea has much more domestic sales compared to traditional charcoal-roasted varieties, and its demand due to industrial production is higher than that of traditional methods.

2. Current status of Qinzhou Lingshan’s intangible cultural heritage

We also investigated the present condition of intangible cultural heritage through field research together

with Zou Hai (the inheritor of the Lingshan Tiaolingtou intangible cultural heritage), Zhang Longfen (the inheritor of Lingshan Da Zong production techniques), and Teng Lingshan (the inheritor of Lingshan black tea production techniques).

2.1. Current status of Ling Mountain's "Tiaolingtou" intangible cultural heritage

Tiaolingtou, alternatively known as the Lingtou Festival, Kan Lingtou, or Nu Dance, is a ritual of sacrifice that entails mask-wearing to chase away evil spirits and epidemics. The Deqing Hall of the Qinzhou Tiaolingtou Ling Mountain Training Base is situated in Lingshan County, where the 31st generation members Zou Hai and Zou Fuwei are the main heirs. As per the statement made by Zou Hai, he has engaged in the practice of Tiaolingtou since he was 16 years old, which is currently 45 years long. At present, there are only 36 Nu masks in Deqing Hall — exactly the amount inherited from ancestors. Due to the fact that experienced artisans who make masks have stopped making them, this tradition will soon disappear, and only these 36 masks will be left intact.

The Tiaolingtou festival usually falls between August and September during the lunar calendar. Because of the dispersed settlement pattern of villages and different dates of festivals, there are still scores of Tiaolingtou troupes performing throughout the city of Qinzhou. There are 19 of these troupes just in Pubei County, where their dances and rhythms vary depending on the occasion: weddings or funerals, producing almost 100 various and lively performances of Tiaolingtou in different styles.

Recently, people in other areas have also traveled to Ling Mountain to observe the old Tiaolingtou show, which makes the time around the Mid-Autumn Festival especially lively. Hai Zou noted that such a custom should be conveyed to the next generation directly; nonetheless, because of the limits on inheritance systems and the economic restrictions of the performing troupes, there are only a few groups that do it on a regular basis, most of them interacting through village ties.

2.2. Current status of the intangible cultural heritage of Ling Mountain Zongzi

Lingshan Grand Zongzi was entered into the list of regional intangible cultural heritage in 2008. An on-site survey was carried out at the factory where the old-style craftsmanship of this famous "Tai Xiang Zongzi King" item is maintained.

As per inheritor Zhang Longfen, Ling Shan Da Zong is famous because it boasts big bamboo leaves, huge volume, and a variety of ingredients like pork trotters, chicken, and seafood. The large Taixiang Zongwang single zongzi can weigh up to 3 jin to 30 jin, and the biggest weighs up to 138 jin. Initially a cooking custom that was an essential aspect of family reunions, in the form of the phrase "no zongzi, no celebration," Ling Shan Da Zong has been commercialized with the increasing number of migrants. With an increase in its distribution, the nostalgic dish turned into a traditional present to use when hosting visitors and creating amicable relationships.

Being a keeper of the Intangible Cultural Heritage of the Ling Mountain Grand Zongzi, Zhang Longfen said that she is now promoting this tradition not just for preservation but also for cultural tourism and the creative industries in order to create an innovative tourist site with immersive experiences. She also encourages travel across the country to Ling Mountain to participate in interactive zongzi-making.

It is a big zongzi that has strong links to rivers. Rivers are the source of all the main ingredients, namely zongzi leaves, rice, and soybeans, which is why zongzi has become a part of the Dragon Boat Festival intangible cultural heritage. It has created an active interaction between Chinese cuisine, traditional festivals,

and intangible cultural practices on the banks of the river, a link maintained through widespread access to the waterway. Finally, as of late 2023, Taixiang Zongwang had already made 64 kilograms of large zongzi to thank the workers who had built the Pinglu Canal. Zhang Longfen pointed out that, with the approaching official opening of the canal, the merging of Ling Mountain zongzi cultural tourism programs into the canal economy belt can be seen as a way of preserving culture and enhancing the cultural affinity between the two terms of rivers and zongzi, spreading its influence across the banks of the river and further - one of the aims of modern cultural conservation ^[4].

In addition, with the commercialization of Taixiang Zongwang, there has been an increase in the use of ingredients like bamboo leaves, rice, and mung beans, thus enhancing the growth of related agricultural industries and generating employment among elderly people working in production.

2.3. Current status of the intangible cultural heritage of Lingshan black tea

The name Lingshan has been associated with the famous tea of China since prehistoric times. In 1960, Tao Zhu, the Secretary of the Guangdong Provincial Committee, came to Lingshan and said: A mountain does not have to be high; the most remarkable thing about a mountain is its tea. Since this time, Lingshan tea production has started to increase gradually.

Lingshan has an excellent geographical position, a high selenium level, and a climate favorable to growing tea, which makes it famous as the best spring tea in China. Manual processing methods were used in the production of black tea in the region initially; however, they are currently combined with semi-manual and semi-machine methods to improve the durability of the tea after several infusions.

The inheritor of the intangible cultural heritage of Lingshan Black Tea, Teng Lingshan, observed that although the tea is fairly well-known in Guangxi, to extend its popularity to the neighboring four provinces or even further, the manufacturers, consumers, and government need to join their forces.

As far as it has been reported, the Lingshan Tea Cooperative has 101 households, and the overall area of tea cultivation exceeds 80,000 mu, and the Lingshan Tea House alone occupies more than 2,000 mu. Effective establishment of a rural revitalization model based in the tea industry and involving farmers in the developmental process is being made by Lingshan Black Tea. The building of the Pinglu Canal will see an increase in the number of tea gardens growing cash crops on the bank sides, leading to job creation among the local farmers, but also utilizing the cultural tourism value of the canal to promote tea culture and grow the sale of tea products.

3. The dual-chain dilemma in the preservation and dissemination of Lingshan's intangible cultural heritage

3.1. The dual crisis of intergenerational disconnection and technological closed loops

Due to the advanced age of the old craftspeople, many counties experience a common tendency of youths moving outwards to pursue education or job opportunities. Long-term populations of Generation Z are also very few, and they have little interaction with traditional culture and poor comprehension of it. This, together with complicated and dynamic social environments, has resulted in an endless outflow of young people, which has been critical to creating a small pool of practitioners able to transmit such skills.

The technological closed-loop crisis can be found among three conventional crafts. The Tiaolingtou act will depend on the conservation of Nuo mask-making and costume-producing practices; nevertheless,

the disappearance of such skills and the traditional art has contributed to the reduction in Tiaolingtou performances, which were further exacerbated by the lack of cultural preservation when transitioning between generations, eventually leading to the decay of this cultural heritage. Likewise, Lingshan rice dumplings and Lingshan black tea are also mostly food-related practices, and it is consumer demand that supports their existence, but the secrecy of traditional methods and the addition of new technologies have interfered with the process of their development. The key to breaking this closed-loop cycle is still in achieving well-balanced progress that incorporates both tradition and modernity through sustained technological innovation. There are also some subjectively skewed gender tendencies in transmitting intangible cultural heritage. An example would be that Ling Shan Tiaolingtou is mainly transmitted by male inheritors, and most followers are males; the manufacture of Ling Shan zongzi uses the skills of young and middle-aged women, whereas crop growing is mostly performed by young and middle-aged men; Ling Shan black tea is mainly transmitted by female practitioners.

3.2. There is some inconsistency in the process of implementing policies on some types of intangible cultural heritage

Of the three intangible cultural heritages studied, the method of transmission is very relevant to the integrity of the culture. A traditional form of art, Lingtoun dance is an art and cultural tradition that has been maintained in a traditional form by the local people. The cost of hiring Lingtoun performance troupes to perform sacrificial ceremonies and blessings is financed by villagers, who contribute to the cost, or the township government, which offers the performers their respective lodging, food, and allowances. Such a wholly self-financing process, whereby the villagers arrange feasts and performers transfer their duties in this cyclical manner, indicates that there is a fairly low economic basis for heritage conservation.

In contrast with the production methods of Lingshan black tea and Lingshan large zongzi, the skills of making black tea, which are mainly associated with Teng Lingshan as a master inheritor, have been spread to nearby provinces to learn tea production and promote tea culture. One of the most important representatives of Lingshan's large zongzi industry is Zhang Longfen, who has visited such cities as Beijing and Shanghai on international exchange programs. Nevertheless, neither of the two industries is well-known outside of Guangxi, and further studies show that it is likely that most of the local cities in Guangxi know even less about black tea and large zongzi.

3.3. Lack of systematic decoding efforts for intangible cultural heritage

Lingshan Tiaolingtou is also a provincial-level intangible cultural heritage of the Guangxi Autonomous Region and the main part of the national intangible cultural heritage "Qin Zhou Tiaolingtou." It is very common and numerous in Qin Zhou, and it has deep roots in history. Nonetheless, being a cultural symbol since the beginning of millennia, its meaning has been increasingly lost. As Zou Haikou states, young inheritors cannot explain the role of the mask as the means of expelling evil and attracting good, and the significance of the mask is not clear either. The few available masks mean that each individual mask can only have a limited meaning. In addition, the fact of interpreting the sacrificial culture and agricultural beliefs underlying Tiaolingtou is still a major issue: Although the apprentices can execute the dance at an extremely high level of perfection, there is a gap between perfect execution and excellent performance; the practitioners can easily sense that the dancers are not filled with life. Finally, they are unable to completely understand the message that the ancient ancestors tried to impart.

Lingshan Grand Zongzi, a representation of rice cultivation culture, will also help in creating an economic crop belt around the canal and hence facilitate employment growth in the area. Besides improving the work of ecological protection, it will enhance the process of combining the concepts of rice cultivation culture and canal into the waterway. It is known that Lingshan Grand Zongzi, similar to Lingshan black tea, is well-known in Guangxi but has not spread as an intangible cultural heritage throughout four provinces. As observed by Zhang Longfen, despite the commercialization and industrialization of Lingshan Grand Zongzi, consumers are not aware of the associated rice cultivation culture or the spirit of unity and collective determination of the people of Lingshan.

3.4. The widening digital divide

The research has shown that because of the age limitations and restricted access to the time available to the users, the involvement of the users in the new media is quite low.

The information available on the Lingtoun dance is quite limited. The most popular online videos and photos are presented as official news pieces and offer some elementary information concerning this form of intangible cultural heritage. Only a small number of records are available of the actual sacrificial and blessing rites performed by Lingtoun troupes, at both villages and towns, on such days. Even on newer popular platforms such as TikTok or Bilibili, there are new short videos that contain Nuo maskings and Lingtoun performances, mostly focusing on changes of costumes, but these videos (being brief, superficial, and shallow) are simply superficial attempts of cultural dissemination on new media platforms.

The development and utilization of new media platforms is still lacking in Lingshan Black Tea. Unlike the traditional rice dumplings of Lingshan, Zhang Longfen is the first to use WeChat Video Accounts as a means of reaching the low-end market.

3.5. Obstacles to the industrialization of goods

The commercialization and industrialization of Lingshan Black Tea and Lingshan Zongzi have already started. Lingshan Black Tea uses both semi-manual and semi-industrial approaches to extend its value chain and seeks out novel mixtures of “tea + traditional Chinese medicine” in order to fuel the development of the industry as part of the modern dietary culture. Yet, finding ways to produce high-quality, stable tea leaves is still one of the issues that are actively explored.

The issue of sales distribution and quality control also affects the Lingshan large zongzi, as it can be difficult to standardize production schedules according to consumer demand. Zhang Longfen said that, although orders of large zongzi tend to peak in advance of the Dragon Boat Festival — mostly fueled by a high volume of bulk orders made by local Qinzhou residents and orders shipped between provinces — the next big wave of orders is normally not received until close to New Year’s Eve. This has led to the setting up of online sales channels. Also, the study found that the packaging design of Taixiang Zongzi looks old-fashioned and does not meet the taste of Generation Z.

3.6. Barriers to cross-cultural communication

The comparative analysis of the three models shows that their communication styles are quite rigid and uniform, with considerable flaws in intercultural communication.

Lingtoun performance art is very traditional, and it has linguistic constraints on its international spread; it can be misunderstood as a feudal superstition. Besides that, a certain form of instruction and transmission

of this art has already been established. It needs more careful consideration and thorough research of the regional Lintou companies and their culture to innovate and preserve it in this context.

The main form of cultural transmission of Ling Shan black tea is the regional distribution. Teng Lingshan has been to tea companies and tea farms in Sichuan, Guizhou, Yunnan, and elsewhere to participate in exchange and learning.

The Lingshan Grand Zongzi is a candidate for global promotion. According to its inheritor, Zhang Longfen, she often goes to Peking University to learn about cultural tourism marketing and global communication strategies, and travels to more developed cities, such as Guangzhou and Shanghai, to acquire knowledge of the international logistics industry. Her goal is to use the experience of history and the push of the Pinglu Canal Economic Belt to popularize the Lingshan Grand Zongzi across Southeast Asia.

4. Three-dimensional promotion through digitalization, dynamic implementation, and local adaptation

4.1. Digital empowerment

Develop a Digital Twin Database of Intangible Cultural Heritage as an extensive internet library. To serve both purposes: preservation of traditional craftsmanship methods and offering visual evidence and product snapshots to the next generation to learn; and also because of the cultural value of the canal, it allows global scholars and craftsmen to use and access such resources, and thereby, they can communicate and exchange with each other on a cultural level.

Restoration of endangered cultural artifacts through 3D printing. In order to overcome the problem of losing Nuo masks, interdisciplinary specialists and competent craftsmen must be involved in the restoration of these masks, the extension of the range of masks according to the historical documents, and mass production of them. Building on existing patterns in cultural tourism and the creative industries, the development of merchandise including intangible cultural heritage-related Nuo mask figurines and fridge magnets could also be promoted to allow consumers to form a long-term relationship with that intangible cultural heritage.

The concept of AI virtual inheritors is presented and educated on the art. Such virtual characters may be used in special intangible cultural heritage museums or in the canal paths to communicate with tourists and give information about the local intangible cultural heritage and methods of production. In the black tea factories and the zongzi workshops, there may be accompanying large visual screens that can take advantage of AI virtual inheritors in guiding the production process, quality control, and real-time feedback.

Blockchain technology does not allow the loss of old-style craftsmanship. When the elderly inheritors are getting older and their memory deteriorates, the majority of manufacturing methods and artistic representation will no longer be precise. With the help of blockchain technology to integrate such techniques and artistic aspects and store them in a decentralized way, privacy is improved, and the reliability of knowledge transmission is guaranteed.

4.2. Living inheritance

Make an inventory of “Endangered Level 1” traditional crafts. Add to this list relatively rare existing auxiliary tools to protect them strictly, promote awareness about such craft tools, and introduce a societal responsibility regime to preserve them.

Improve the pension security and minimum subsidies of artisans. The aging process is an unstoppable phenomenon, and using only random villagers to perpetuate the old traditions is associated with some disadvantages. Development of a policy-based pension system does not just help solve the financial problems of the elderly skill inheritors, but it also gives them preferential benefits which help in promoting long-term interest of young and middle-aged individuals to conserve these art forms.

The local clans implement the plans of cultural heritage preservation and transmission, creating a partnership structure of communities, inheritors, and government that incorporates the intangible cultural heritage in the day-to-day festivals to enhance cultural identity. Apprentices are given a monthly stipend by their mentors and can acquire a 5,000 yuan entrepreneurship fund upon passing assessments. Together with Lingshan Vocational School, an intangible cultural heritage course has been established, as a result of which graduates gain a certificate of a “Traditional Craft Master,” and they are provided with tax benefits.

4.3. Localized dissemination

Improve the special features of Ling Mountain and enhance the interplay of intangible cultural heritage. It is important that the historical importance of local intangible cultural heritage is explored in more detail; many such customs are present in the canal, and using these heritage networks can promote cross-cultural interactions, enhance mutual influence, and strengthen the cultural identity of Ling Mountain.

The combination of intangible cultural heritage and the canal helps further examine the culture of Lingshan along the course. The new model of “intangible cultural heritage + canal” will revive the discovery of the local culture; however, since the canal starts in the city of Nanning, Heng County, it is important to acknowledge both the cultural continuity and the cultural impact that runs upstream. The strategy intends to create a good cycle of interaction between the urban intangible cultural heritage and the enhancement of the heritage value of the canal.

The segmented market requires a product that is based on intangible cultural heritage. Considering the existing audience segmentation, it is extremely important to meet the cultural and creative requirements of Generation Z and the post-90s generation, and emphasize the ethnic traits and be up to date with the trends, i.e., making traditional intangible cultural heritage snacks or tea bag souvenirs on a small scale ^[5].

Combining cultural and tourism experiences within the corridor of the intangible cultural heritage of the canal, a One-Day Heritage Route has been developed within the Pinglu Canal area: beginning with the Bao Da Zong rice dumplings in Xinwei Town and then moving on to watching Nuo opera in Fozhi Town, tea picking and pottery making in Wenli Town, and ending with an overnight stay at a heritage-themed homestay. There are special courses offered, known as the One-Day Craftsmanship course (such as bamboo weaving and black tea charcoal roasting), which allows tourists to bring home handmade crafts at a price of 150–300 yuan per person.

The cultural and creative IP development program has produced successful co-branded products. To wit, the Lingshan rice dumplings brand worked with a snail noodle restaurant to introduce the product called the Snail Noodle Rice Dumplings which they are aiming to sell 500,000 units a year; Black Tea came up with the Canal Tea Boat gift box that contains Nixing pottery tea ware; and merchandise based on the metaverse comprised Tiaolingtou Nuo mask NFTs and the revenue was rechanneled to the preservation of the village intangible cultural heritage.

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