

# Innovation and Communication Strategy of Tianjin Kite Wei Intangible Cultural Heritage under Digital Media Technology

Li Ren\*, Xiao Guo<sup>1</sup>, Jiahui Li<sup>2</sup>

12409643@qq.com\*, 351559330@qq.com<sup>1</sup>, 1841262789@qq.com<sup>2</sup>

Tianjin University of Technology, Tianjin, China

**Abstract.** With the continuous development of modern technology, digital media technology, with its unique advantages, has provided new paths for the innovation and dissemination of intangible cultural heritage. Taking Tianjin Wei Kite as an example of intangible cultural heritage, this paper analyzes the current situation and problems of Tianjin Wei Kite's intangible cultural heritage, expounds the significance of using digital media communication technology to innovate and disseminate Tianjin Wei Kite, and proposes specific innovation strategies from the aspects of building digital archives, designing data visualization, creating exclusive "cultural IP", and utilizing virtual reality technology. By developing new media platforms for kite-making, creating interactive intangible cultural heritage experience museums, and formulating long-term policy mechanisms, the dissemination of Tianjin Wei Kite's intangible cultural heritage can be promoted, aiming to provide reference for the inheritance and protection of other intangible cultural heritage.

**Keywords:** Digital Media Technology; Tianjin Kite Wei; Intangible Cultural Heritage

## 1 Introduction

Tianjin kite has a long history, as early as the end of the Qing Dynasty and the early Republic of China, there were countless folk kite workshops and kite artists, and the development became stronger in the Republic of China period, and the founder Wei Yuantai opened his own kite workshop in this period, and began the cause of "Wei Ji kite". In 2008, Tianjin Kite Wei was listed as the first batch of national intangible cultural heritage. However, with the rapid development of science and technology, many intangible cultural heritage appears in today's phenomenon that no one can inherit, Kite Wei is also facing such a problem. Kite Wei needs to think and move towards the path of innovation and sustainable development in the current era.

## 2 Digital Media Technology

Digital media technology integrates the processing of multiple forms of information through modern computing and communication means, making abstract information perceptible, manageable and interactive. It is widely used in various forms of media, enriching the way information is expressed and disseminated. Digital media technology has enhanced the audience's experience of music, films, books, and other forms of media, giving rise to new forms such as

virtual reality. It has also made information acquisition and dissemination more convenient, and media experience more diversified and personalized through the promotion of social media, games, and online education. The cultural entrepreneurship industry faces new opportunities and challenges due to changes in traditional media production and dissemination methods<sup>[1]</sup>.

### **3 Analysis of the Current Situation and Problems of Kite Wei Intangible Cultural Heritage in Tianjin**

Tianjin's geographical location has made it one of the first cities to open for business in modern China. Its rich historical background has injected charm and vitality into its culture, preserving many intangible cultural heritages. Among these is the Tianjin "Wei Ji Kites", founded by Wei Yuantai, which has preserved traditional production skills through several generations of inheritors' continuous struggle. The traditional skills of making kites have been preserved through several generations of inheritors. However, the accelerated development of modernization and science and technology has brought many challenges to the development of Tianjin kites<sup>[2]</sup>.

Due to the artistic features of Tianjin Weifeng kite, namely "precision, delicacy, ingenuity, and elegance," its production necessarily involves intricate and meticulous handicraft techniques. In order to preserve the unique craftsmanship of Weifeng kite, the inheritors have chosen not to cater to the market by introducing mechanized mass production, but instead have clung to traditional handicraft methods<sup>[3]</sup>. This persistence has ensured that the authentic characteristics of Weifeng kite are passed down through the generations.

Currently, Tianjin Kite Wei has only one physical store in the country, situated in Gulou North Street, Nankai District, Tianjin. The reputation of this traditional brand is declining in the current entertainment market, and many young people no longer recognize it as an intangible cultural heritage. Therefore, to develop and explore the value of Tianjin kites, it is necessary to address existing problems and make further improvements.

#### **3.1 Narrow market demand and restricted clientele**

The form of Tianjin kite Wei, which is made by hand, directly affects the length and quality of this craft. This also means that kite Wei cannot be mass-produced for widespread circulation in the market. Therefore, kite Wei is mainly oriented towards the collector's item market and the high-end gift market. The user profile of the buyers mainly consists of middle-aged and elderly people above 30 or 40 years old, or people who have a fondness for traditional Chinese culture.

#### **3.2 Difficulty in passing on skills and high threshold for learning**

The process of making the "Wei Ji Kite" is complex, which requires high standards for the makers, who must possess a diligent and eager-to-learn attitude, as well as high artistic accomplishment<sup>[4]</sup>. The pure handmade characteristic of the kite is usually passed down from the older generation of craftsmen to the younger generation through oral instruction. However, in the current situation, more young people are willing to pursue modern careers, leading to the phenomenon that many intangible cultural heritages, including the "Wei Ji Kite," are facing difficulties in finding successors.

### **3.3 The design is old-fashioned and outdated.**

Traditional kite design basically follows the traditional patterns, motifs and colors, which lacks characteristics and is highly reproducible, leaving the public with a stereotypical impression of intangible cultural heritages as "dull and old-fashioned"<sup>[5]</sup>. Nowadays, consumers are more inclined to diversified and interesting design works, so kite Wei needs to think about how to innovate the cultural elements while retaining the traditional characteristics in today's era and move towards the way of innovative advancement and sustainable development.

## **4 The significance of digital media technology to the innovation and communication of Tianjin Kite Wei**

Non-material cultural heritage constitutes a vital part of China's outstanding culture and serves as a repository of cultural treasures for all mankind. Given its uniqueness, it is imperative that we preserve and perpetuate this heritage. In recent years, the rapid advancement of modern information technology has rendered traditional methods of protecting non-material cultural heritage inadequate for meeting the needs of the current social environment<sup>[6]</sup>. Consequently, there is a need to leverage digital media technology to integrate relevant resources, ensuring that while respecting the traditional nature of non-material cultural heritage, we also intensify its protection and dissemination efforts. This holds significant importance in promoting and celebrating non-material cultural heritage.

### **4.1 Digital Media Interaction Enhances Immersive Experiences**

In the current Internet era, digital media technology has become an essential means of information dissemination, offering richer and more engaging experiences to users. The use of digital media technology breaks the limitations of traditional media, which are often confined to static, video, and musical presentations. Instead, it incorporates various technologies such as voice interaction and computer vision to engage users in interactive displays. To cater to the personalized needs of today's users, designers can also leverage tools like Virtual Reality (VR) and Augmented Reality(AR) to create more immersive artistic experiences, providing a comprehensive showcase of non-material cultural heritage skills. Therefore, through digital media technology, non-material culture can be presented in a more vivid and engaging manner, offering users an immersive experience and bringing them closer to the non-material cultural heritage.

### **4.2 Digital Media Storage for Lossless Sharing across the Cloud**

The traditional apprenticeship method for inheriting non-material cultural heritage has proven inadequate in meeting modern society's demands, as the process is often vulnerable to loss and damage due to environmental and temporal factors. Therefore, we utilize digital media technology to digitally archive the production processes and techniques of Tianjin Weifeng kite in computers or cloud servers. This involves creating a comprehensive database of existing kite designs, enabling seamless information sharing, anytime, anywhere, for viewing, copying, and transmission. Additionally, digital media technology's compatibility with various digital devices caters to users' needs across diverse scenarios.

### 4.3 Real-time and Efficient Dissemination through Digital Media

The internet and new media platforms, renowned for their speed, widespread coverage, diverse formats, and strong interactivity, have emerged as vital channels for information dissemination. Consequently, non-material cultural heritage creations harnessing digital media technology can be rapidly disseminated through these platforms, ensuring real-time updates and an expanded reach. This empowers a broader audience to discover and appreciate non-material cultural heritage, significantly enhancing its exposure and influence.

### 4.4 Digital Media Promotion Drives Cultural and Tourism Development

Leveraging digital media technology for promotional activities on internet platforms has invisibly opened up opportunities for the development of non-material cultural heritage and other traditional cultural elements. This not only expands the influence of non-material cultural heritage but also broadens its sales channels, creating economic value. Through promotion on internet platforms, Tianjin Weifeng kite can integrate local cultural and tourism resources into its creations, not only disseminating the skills of kite-making but also driving the development of Tianjin and promoting local economic growth.

## 5 Innovative Strategies of Tianjin Kite Wei under Digital Media Technology

The combination of intangible cultural heritage and digital media technology offers new opportunities for innovative development. By using digital media technology, innovation can be achieved while retaining the traditional cultural essence. This includes creating more modern and artistic works, expanding the influence, and attracting more people to participate in the protection and inheritance of intangible cultural heritage.

### 5.1 Building a digital archive

Using digital media technology, we can make comprehensive digital recording and preservation of intangible cultural heritage and establish digital archive libraries. We can collect, organize, classify and store information of various forms of intangible cultural heritage for long-term preservation and inquiry<sup>[7]</sup>, for an example see **Figure 1**.

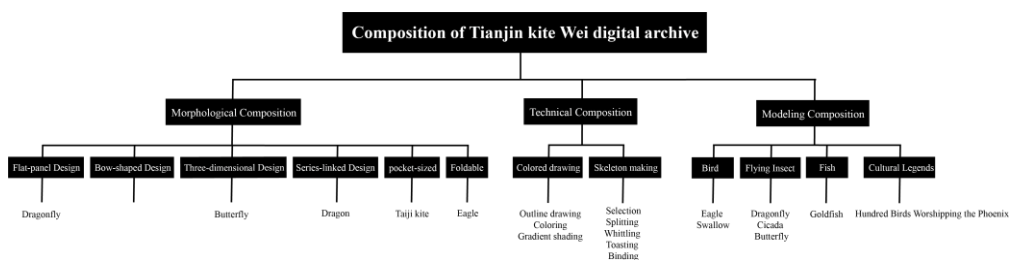


Fig. 1. Building the digital archive of Tianjin Dragon Wei

## **5.2 Designing data visualization**

In the era of big data, data visualization is a common method of presenting information in digital media. It can provide more intuitive and vivid data to the public through various forms. As digital media technology continues to develop, the application of data visualization is also constantly innovating and expanding.

The innovation of Tianjin Kite Wei intangible cultural heritage requires a comprehensive collation of Kite Wei related information. This includes designing exclusive data visualization infographics, combing the Kite Wei production process, existing Kite diagrams, and images from other art forms. The resulting artwork should be more intuitive and picture-rich, making it convenient for the public to observe and analyze, and enhancing the visual experience.

## **5.3 Creating an exclusive "cultural IP"**

Intellectual Property (IP) refers to the ownership of creative works and inventions, and it represents the inherent vitality and commercial value of content in modern society<sup>[8]</sup>. The intangible cultural heritage, with its long history and enduring vitality, can be regarded as a high-quality cultural IP. Tianjin, as a well-known tourist city in China, boasts unique tourist attractions, traditional cuisine, and cultural characteristics. By integrating Wei Kite with the tourism industry, it can create cultural synergies such as "intangible cultural heritage + IP," "intangible cultural heritage + cultural and creative industries," and "intangible cultural heritage + cultural tourism," thus activating the intangible cultural heritage while also driving the development of other local industries.

IP image is a realistic version of the transformation of non-heritage cultural achievements, and the creation of the IP image of Tianjin Kite Wei can also be linked with other non-heritage projects to provide tourists with an all-round cultural experience. Therefore, combining digital media technology to design and promote IP, Tianjin Kite Wei is expected to attract more people's attention, promote the protection and inheritance, and realize the commercial development of non-heritage culture.

## **5.4 Utilizing Virtual Reality Technology**

Virtual Reality (VR) technology allows audiences to enter digital virtual spaces and experience immersive feelings. For example, in the production process of Tianjin Kite Wei, designers can extract and organize the production into a VR space. Through interactive displays, audiences can participate in the production and performance of intangible cultural heritage, enhancing their sense of participation and experience<sup>[9]</sup>.

The combination of digital media technology and VR technology provides users with access to virtual space. The combination of cultural experiences offers users a unique experience that differs from the real world. Non-heritage enthusiasts can now access the digital non-heritage museum without having to visit a specific location or make a reservation. All they need is a computer and VR equipment to enjoy real-time interaction in the virtual world.

## **6 Strategies of Communication Methods for Tianjin Kite Wei under Digital Media Technology**

Intangible cultural heritage refers to unique cultural expressions that have been formed by a nation during its long-term historical development, with rich and diverse cultural connotations. The dissemination of intangible cultural heritage can be enhanced through digital media technology, increasing awareness of its value and promoting its protection, development, and inheritance.

### **6.1 Development of Kite Wei new media platform**

The new media platform is not limited by time and space and has the advantages of wide coverage and fast dissemination speed, so Tianjin kite Wei should actively develop and build a new media platform, and widely publish it on WeChat public number, Jitterbug, microblogging and other internet platforms. In the production of the platform content, we can consider inviting intangible cultural heritage inheritors, experts and scholars, artists, etc. to participate in the production of the content, presenting high-quality intangible cultural heritage introductions, demonstrations, interactions and other content. At the same time, the data on the new media platform should be analyzed in a timely manner to understand the users' preferences, optimize the content and functions of the platform, and improve the user experience and satisfaction.

### **6.2 Creating an interactive non-heritage experience hall**

The Intangible Cultural Heritage Experience Hall is a stage for exhibiting China's intangible cultural heritage, which tells the audience about the historical origins and cultural connotations of the intangible cultural heritage through various display methods<sup>[10]</sup>. It can attract tourists from all over the world with different geographical and cultural backgrounds, who can recognize the value of intangible culture through visiting, experiencing, and interacting in the hall, and promote cultural exchange with the outside world while enhancing cultural confidence.

The construction of the Tianjin Weifeng Intangible Cultural Heritage Experience Hall includes two parts: "display" and "experience". The "display" includes the content, historical origins, craftsmanship, and cultural connotations of Weifeng kite, which should highlight the unique craftsmanship and design of Weifeng kite. The audience can understand the diversity of Weifeng kite by displaying different styles and sizes of Weifeng kite works. The "experience" is a difficult part to create and an important link that distinguishes it from existing intangible cultural heritage museums. It can provide more opportunities for audience interaction and experience. For example, interactive experience projects related to Weifeng kite making and flying can be designed, and workshops for making kites can be set up so that the audience can make kites by themselves. VR virtual technology can also be used to create a flying experience area, where the audience can try flying Weifeng kite in a virtual world by wearing VR glasses and enjoy the fun of flying.

### **6.3 Developing a long-term policy mechanism**

The innovation and dissemination of Tianjin kite Wei is a systematic project. Therefore, the formulation of a long-term policy mechanism can provide legal protection, guide resource

allocation, promote industry development<sup>[1]</sup>. This will create a favorable environment and conditions for the inheritance and development of Tianjin kite Wei.

Government departments can provide policy guidance and formulate relevant policies to encourage participation in the protection and inheritance of Tianjin Kite Wei. This can be achieved through financial support, tax incentives, and other measures to guide social capital towards investing in the kite Wei industry, promoting the development and innovation of related industries. By establishing research and development funds and creating relevant competitions, designers and artists can be encouraged to explore new creative ideas related to intangible cultural heritage. This will enhance their competitiveness through the research and development of modern digital media technology, thereby expanding the dissemination of intangible culture while promoting technological progress.

## 7 Conclusions

Tianjin Kite Wei is a form of intangible cultural heritage with a unique charm. However, with the changing times and evolving lifestyles, the inheritance and development face significant challenges. The use of digital media technology offers new opportunities for preserving, disseminating, and presenting the intangible cultural heritage of Tianjin Kite Wei. It also explores innovative ways to promote and disseminate Tianjin Kite Wei, thereby enhancing its recognition and influence in modern society.

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