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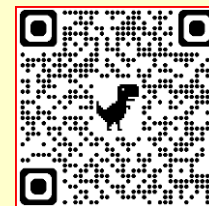
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The Digitalization of Chaozhou Embroidery Techniques

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ABSTRACT

Chaozhou embroidery (Chao Embroidery), as the core branch of Cantonese embroidery among China's Four Famous Embroideries, is facing challenges of generational discontinuity, industrial stagnation, and declining social recognition. This study explores the digitalization of Chao Embroidery techniques through literature review, field investigation, and empirical analysis. The findings suggest that digital technologies enable accurate documentation and permanent preservation of embroidery techniques, lower barriers to learning, broaden dissemination, and support industrial innovation. Key pathways include multi-dimensional data collection, the construction of intelligent digital archives, the integration of online and offline transmission, and the development of a digital industrial ecosystem. While digital interventions have promoted a younger practitioner base and expanded market potential, challenges such as insufficient data standardization, talent shortages, and limited investment remain. Future progress requires the establishment of technical norms, interdisciplinary talent cultivation, and diversified funding mechanisms to ensure the sustainable digitalization of Chao Embroidery and to provide a paradigm for the modernization of traditional intangible cultural heritage.

KEY WORDS: Chao Embroidery; Intangible Cultural Heritage; Digital Inheritance; Technique Preservation

Introduction

Chaozhou embroidery (hereinafter "Chao Embroidery"), a core branch of Cantonese embroidery among the four major Chinese embroidery schools, is renowned for techniques such as gold couching and padded embroidery, and embodies distinct regional features and rich cultural value. With a long history dating back to the Tang dynasty and flourishing in the Ming and Qing periods, Chao Embroidery has been transmitted for over a millennium. Its artistic features include vibrant colors, intricate compositions, diverse stitches, and a unique emphasis on three-dimensional effects, which confer a strong sense of decoration and visual impact. Chao

Embroidery not only serves as an essential cultural symbol of the Chaoshan region but also exemplifies Chinese craft aesthetics, encapsulating the religious beliefs, life ideals, and aesthetic sensibilities of local communities.

However, under the impact of globalization and industrialization, the inheritance and development of Chao Embroidery face unprecedented challenges. On one hand, the traditional master-apprentice model requires high skills and long training cycles, which discourages younger generations, leading to severe disruptions in transmission. On the other hand, shifts in market structures and

consumer habits have transformed Chao Embroidery from a household necessity into costly artworks, thereby losing its widespread social foundation. Meanwhile, a single industrial structure, lack of innovation, and limited promotion have further restricted its contemporary development.

In this context, digital technologies offer new opportunities for the preservation and innovation of Chao Embroidery. Digitalization enables long-term preservation of techniques through imaging, modeling, and database construction. Furthermore, visualization, virtual reality (VR), and augmented reality (AR) technologies allow complex skills to be disseminated in intuitive ways, lowering learning barriers and enhancing interactivity, thus revitalizing cultural transmission on a larger scale. Digital transformation also provides new platforms for cross-sectoral innovation and international communication, broadening Chao Embroidery's application in cultural and creative products, digital art, and immersive exhibitions.

Therefore, exploring the digitalization of Chao Embroidery techniques is not only a response to the protection of intangible cultural heritage but also a vital pathway for revitalizing traditional craftsmanship within contemporary cultural and market contexts. This paper examines the current state of Chao Embroidery, analyzes the advantages of digitalization, and discusses feasible methods and pathways, aiming to provide systematic academic insights and practical strategies for its preservation, inheritance, and innovation.

I. Current Situation of Chao Embroidery Techniques

As a significant branch of Cantonese embroidery, Chao Embroidery has long maintained an important position in the realm of Chinese embroidery due to its exquisite craftsmanship and strong decorative qualities. Yet in modern society, its developmental trajectory presents a complex and paradoxical picture: while maintaining artistic distinctiveness and cultural symbolism, Chao Embroidery simultaneously faces challenges in inheritance, industrial development, and social recognition.

From the perspective of inheritance, Chao Embroidery presents high barriers to learning. Its renowned gold couching and padded techniques require years of dedicated practice to master. Traditionally transmitted through familial teaching or master-apprentice systems, the practice has been undermined by contemporary educational and employment trends, as younger generations prefer urban occupations rather than investing time in embroidery. The high costs and low returns associated with embroidery learning further accelerate the aging of practitioners, leading to a severe shortage of successors.

In terms of industrial development, Chao Embroidery's application has become increasingly limited. Although still used in weddings, religious rituals, and folk festivities, overall demand has sharply declined. Products are often large in scale and highly intricate, resulting in long production cycles and high prices, making them incompatible with modern consumption patterns. Moreover, the industry lacks systematic branding and marketing strategies, and its international presence remains weak, limiting its competitiveness in the global handicraft market.

From a social recognition perspective, Chao Embroidery is increasingly marginalized. As lifestyles evolve, embroidery has shifted from being a daily necessity to an art object, reducing its visibility among the general public. Current dissemination channels rely heavily on exhibitions and demonstrations, which lack

interactivity and immersion, thereby failing to capture the attention of younger audiences. This diminished social recognition further undermines its cultural status.

Finally, academic research on Chao Embroidery remains limited compared with Suzhou or Sichuan embroidery. While some scholars have recently addressed its craft features, cultural values, and market potential in the context of intangible heritage protection, systematic studies on the digital inheritance of Chao Embroidery are still in their infancy.

In summary, the current situation of Chao Embroidery demonstrates a paradox between its high cultural value and its precarious practical condition. Under the digital era, the question of how to overcome these constraints and achieve effective preservation and dissemination is an urgent issue.

II. Advantages of Digitalization of Techniques

Within the broader framework of intangible cultural heritage protection, digitalization provides irreplaceable advantages. For Chao Embroidery, digitalization signifies not only technical innovation but also a transformation in modes of cultural inheritance.

First, digitalization ensures the long-term preservation of techniques. Due to the fragility of materials, physical Chao Embroidery artifacts are prone to fading and damage. By employing high-definition imaging, 3D modeling, and digital archives, the detailed stitches, patterns, and colors can be permanently documented, forming reproducible and shareable digital records that prevent cultural discontinuity.

Second, digitalization lowers learning barriers and expands the group of inheritors. Traditionally requiring prolonged apprenticeships, embroidery techniques can now be broken down into dynamic demonstrations on digital platforms. With VR/AR technologies, learners can acquire skills interactively and intuitively, thereby attracting younger participants and enabling cross-regional training.

Third, digitalization broadens dissemination channels. Unlike traditional exhibitions limited by geography, digital works can be globally accessed via the internet and even integrated into virtual spaces such as the metaverse, greatly enhancing international influence.

Fourth, digitalization fosters innovation and industrial development. By incorporating embroidery elements into modern design, digital art, fashion, and gaming, Chao Embroidery can engage in cross-sectoral applications. This not only revitalizes cultural relevance but also generates new economic opportunities along the creative industry chain.

Lastly, digitalization enhances cultural identity and public participation. Through visualization, interactive exhibitions, and digital storytelling, embroidery becomes more comprehensible and engaging, particularly for younger generations. Such renewed recognition is vital for the sustainable development of Chao Embroidery.

In sum, the advantages of digitalization lie not only in preservation and dissemination but also in reinvigorating Chao Embroidery within contemporary society, enabling innovation through preservation and vitality through inheritance.

III. Methods and Pathways for Digitalizing Chao Embroidery Techniques

The digitalization of Chao Embroidery requires interdisciplinary integration and systematic planning. Effective strategies include data acquisition, visualization, interactive teaching, creative application, and the development of standardized platforms.

1. Data Acquisition and Digital Archives

Comprehensive collection of embroidery information is the foundation of digitalization. High-definition photography, microscopic imaging, and 3D scanning can record stitch details, pattern features, and color schemes. Establishing a standardized digital archive classifying stitches, motifs, and materials ensures resources for academic research, education, and industrial development.

2. Information Visualization and Symbolic Translation

Embroidery motifs carry rich symbolism, such as dragons and phoenixes representing prosperity and peonies symbolizing wealth. Visualization technologies can translate these symbolic meanings into intuitive graphics and interactive systems. For instance, dynamic animations may demonstrate the layered meanings of "Dragon and Phoenix Bringing Prosperity" or the three-dimensional effects of gold couching, enhancing cultural understanding and facilitating cross-cultural communication.

3. Virtual and Augmented Reality Teaching

VR and AR technologies provide immersive pedagogical experiences. Learners using VR headsets can virtually enter embroidery studios and simulate stitch operations, while AR applications overlay embroidery steps onto real objects, integrating virtual guidance with physical practice. Such methods reduce learning complexity and stimulate interest.

4. Digital Creative Design and Cross-Sector Applications

Digital design enables Chao Embroidery elements to be reinterpreted within contemporary contexts. Motifs can be adapted into digital wallpapers, game skins, or virtual fashion collections. These cross-industry applications extend dissemination channels and contribute to the creative economy.

5. Standardization and Shared Platforms

To ensure sustainable digitalization, unified technical standards and shared platforms are necessary. Guidelines for stitch recording, pattern digitization, and database construction can prevent redundancy and resource fragmentation. Shared platforms further connect scholars, designers, and practitioners, fostering collaborative innovation.

Thus, the pathways of digitalization represent a holistic process requiring technological support, academic research, and social participation.

Conclusion

As a significant component of China's intangible cultural heritage, Chao Embroidery embodies profound historical and cultural values while simultaneously confronting severe transmission crises. Digitalization offers new prospects for its preservation and development. From long-term documentation and skill training to global dissemination and industrial innovation, digitalization demonstrates multifaceted advantages. Nevertheless, challenges persist. Technically, the lack of standardized data and resource

integration hinders progress. Institutionally, insufficient funding and policy support limit large-scale promotion. Culturally, balancing authenticity and artistic integrity during digitalization remains a long-term concern.

Looking ahead, the digitalization of Chao Embroidery must embrace interdisciplinary collaboration and international communication. By integrating computer science, design, and anthropology, future efforts should strengthen digital archives, interactive teaching, and cultural-creative transformations. In the digital age, Chao Embroidery has the potential to achieve sustainable vitality and become a cultural emblem of China's engagement with the world.

References

1. Gao, B. (2019). An analysis of the development trends of China's digital cultural industry. *Chinese and Foreign Entrepreneurs*, 2(2), 139-140.
2. Huang, X. Q., Li, G. R., She, Y. C., Yu, L. N., & Liu, X. Y. (2019). Research on the inheritance and development of Chaozhou embroidery in Chaozhou City. *File*, 2(2), 257-258.
3. Chen, X. L. (2014). Protection and development of Han embroidery in the new media era. *New Curriculum (Midterm)*, 14(1), 4-5.
4. Yu, M. S., Lin, B. J., & Wu, S. Z. (2017). Research on the inheritance and development of Chaozhou embroidery. *Cooperative Economy & Science*, 17(4), 40-42. <https://doi.org/10.13665/j.cnki.hzjyjkj.2017.04.017>.