

Inheriting and Innovating: A Review of Creative Product Design Research Based on Intangible Cultural Heritage

Lingli Hao ^{1,2,*} and Izzuddinazwan Bin Misri ¹

¹ City University Malaysia, Selangor, Malaysia

² PingDingShan Vocational And Technical College, Pingdingshan, Henan, China

* Correspondence: Lingli Hao, City University Malaysia, Selangor, Malaysia; PingDingShan Vocational And Technical College, Pingdingshan, Henan, China

Abstract: This review explores the expanding field of creative product design based on intangible cultural heritage (ICH), with a focus on the interaction between cultural heritage and design innovation. As societies aim to preserve traditional cultural expressions while adapting them to modern contexts, design has emerged as a crucial medium for both revitalizing and adapting heritage. This paper systematically reviews existing research in recent years, focusing on the theoretical perspectives, methodological approaches and practical strategies for integrating intangible cultural heritage into creative product design. The overview is organized around three key themes: (1) the concept of intangible cultural heritage and cultural and creative products; (2) the relationship between intangible cultural heritage and the creation of cultural and creative products; and (3) design thinking and innovation in the development of heritage products. Special attention is given to the tension between the preservation of intangible cultural heritage and the demands of the modern market, and how design based on intangible cultural heritage can contribute to cultural sustainability and identity reconstruction. By analyzing current gaps, identifying trends and future research directions, this review aims to provide a comprehensive foundation for scholars, designers and policy makers interested in using design as a tool for intangible cultural heritage transmission and innovation. It advocates for a more interdisciplinary, culturally sensitive, and ethical approach to the development of creative heritage products.

Keywords: intangible cultural heritage; creative product design; design innovation; design thinking; cultural sustainability

Published: 17 August 2025



Copyright: © 2025 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

The integration of intangible cultural heritage (ICH) into creative product design has become an important research focus in recent years. As traditional cultural expressions face challenges in contemporary society, design offers a means to preserve, reinterpret, and revitalize heritage in innovative ways. By combining cultural depth with modern aesthetics and functionality, creative products based on ICH contribute to both cultural continuity and market relevance.

This review aims to explore how current research addresses the relationship between ICH and product design, focusing on key concepts, design strategies, and innovation practices. It identifies major themes, current challenges, and future directions to provide a foundation for scholars, designers, and policymakers interested in ICH-based innovation.

2. Intangible Cultural Heritage Inheritance and Cultural Creative Products

2.1. Theory of Intangible Heritage Conservation

Intangible Cultural Heritage (ICH) refers to the living cultural practices, knowledge systems, and expressions that communities recognize as part of their cultural identity, transmitted across generations through oral traditions, performing arts, social rituals, and craftsmanship. Unlike tangible heritage, ICH is dynamic and people-centered, emphasizing continuous evolution within its cultural context [1]. Its protection holds profound significance: it safeguards cultural diversity in the face of globalization, maintains the creativity of human civilization, and strengthens community cohesion through shared cultural memory. As UNESCO's 2003 Convention for the Safeguarding of the Intangible Cultural Heritage underscores, effective "safeguarding" transcends static preservation—it must ensure heritage remains relevant by integrating with contemporary life. This understanding has led global scholars to emphasize three core principles in ICH protection: "livingness" (maintaining cultural vitality through practice), "participation" (community-led transmission), and "locality" (context-appropriate adaptation). Centered on "living transmission," ICH protection thus becomes an active process where traditional knowledge and skills are not merely recorded but continuously reinterpreted, allowing heritage to function as a living cultural resource rather than a historical relic. This approach enables ICH to maintain its practical value while adapting to modern societal needs, ensuring its sustainable development across generations [2].

In certain countries, the paradigm of ICH safeguarding has progressively shifted from "rescue-oriented protection" and "ecological conservation" to contemporary "living transmission" approaches. Studies on traditional Chinese opera revitalization demonstrate this evolution, reflecting a critical rejection of static "museum-style preservation" in favor of dynamic, socially embedded safeguarding. This approach—which actively integrates heritage into modern living contexts—not only ensures cultural continuity but enables meaningful reproduction of traditions through organic community participation. Such practice represents an advanced understanding that authentic ICH protection must balance preservation with innovation, allowing traditions to remain culturally relevant while maintaining their essential character.

Furthermore, the theory of living transmission emphasizes a use-based mechanism for cultural continuity [3]. By integrating traditional skills and values into modern daily life systems, heritage practices can retain their vitality within contemporary society. Studies on cultural and creative practices emphasize that "only by embedding ICH elements into modern living contexts and stimulating public engagement can truly 'lived' transmission of intangible heritage be realized." In recent years, increasing scholarly attention has been given to the transmission and innovative development of intangible cultural heritage (ICH) within contemporary contexts, particularly in the transformation and industrialization of traditional crafts. A systematic analysis highlights the challenges faced by handicraft-based ICH in the era of industrialization and commercialization. The study proposes an integrated strategy combining productive conservation, market-oriented innovation, and cultural ecological construction to revitalize traditional craftsmanship in modern society. It emphasizes that the sustainability of intangible cultural heritage must balance authenticity with contemporary design, technology, and social relevance. This theoretical framework is particularly valuable for the transmission of intangible cultural heritage, providing insights into how traditional culture can be reinterpreted through lifestyle-oriented cultural and creative design. However, while the study makes a meaningful contribution at an overarching level, it lacks in-depth exploration of specific heritage categories and does not adequately explore design-driven transformation mechanisms or product-level integration with contemporary lifestyles. Therefore, further research is needed to construct a practical and theoretical pathway to integrate traditional aesthetics with modern consumer needs and preferences, and to bridge the gap between heritage and innovation through design-oriented cultural product development.

From a methodological standpoint, research on intangible cultural heritage conservation theory commonly adopts cross-disciplinary perspectives that bridge anthropology, sociology, and design studies. Scholars typically utilize a combination of ethnographic fieldwork, qualitative interviews, and participatory action research methodologies. This growing field of inquiry demonstrates that effective ICH preservation extends beyond cultural documentation to encompass comprehensive socio-economic systems requiring coordinated institutional, community, and industrial cooperation. The theoretical framework emerging from these studies positions heritage conservation as both a cultural imperative and a complex socio-economic process involving multiple stakeholders.

2.2. Concept of Cultural and Creative Products

Cultural and creative products refer to goods or services that integrate cultural content with creative design. They transform traditional cultural elements into products that are relevant and appealing in contemporary markets. These products draw inspiration from heritage, folklore, craftsmanship, art, and local identity, and reinterpret them through innovative formats. Often, they combine aesthetics, functionality, and storytelling. The significance of cultural and creative products lies not only in their economic value but also in their role in preserving and revitalizing intangible cultural heritage. By translating tradition into tangible, marketable forms, they foster cultural continuity, enhance cultural visibility, and contribute to both national soft power and sustainable cultural industries.

In recent years, the design of Cultural and Creative Products (CCPs)—which fuses traditional cultural symbols with modern design thinking—has become an effective medium for advancing the safeguarding and revitalization of intangible cultural heritage (ICH). At the heart of this design approach is the transformation of intangible cultural meanings into concrete, user-oriented products that are accessible and relevant to contemporary consumers [4]. This process not only enhances the visibility and appeal of traditional culture but also encourages public participation in heritage transmission. By translating heritage into everyday experiences, CCP design serves as a dynamic tool for bridging the gap between historical continuity and present-day innovation.

In a study on ICH-based creative product design in Guangxi, it is emphasized that successful cultural products rely on visually translating ICH elements, expressing their symbolic meaning, and fostering emotional resonance with users [5]. Designers are encouraged to capture the spiritual core of ICH and reinterpret it through modern design language, ensuring both cultural recognizability and market value. They argue that future development should balance heritage preservation with innovation, calling for deeper cultural exploration, diverse product expressions, IP development, and brand-building. To support this, coordinated efforts among governments, enterprises, and society are needed to connect ICH bearers with design professionals, using cultural tourism products as a medium to activate dynamic transmission and stimulate consumption through high-quality cultural offerings [6].

From a methodological standpoint, the design of cultural and creative products (CCPs) often adopts a user-oriented perspective, integrating principles from emotional, interaction, and service design to enhance user engagement. Taking the Yellow River clay xun—a traditional ocarina—as a case study, a “context-driven” design approach was introduced. This method emphasizes the reconstruction of the cultural environment and original use scenarios of the product, aiming to create deeper alignment between design expression and cultural significance.

In recent years, the emergence of national cultural trends has reignited interest in traditional cultural imagery among younger consumers, offering fresh creative avenues for the design of ICH-inspired cultural and creative products [7]. Approaches such as intellectual property (IP) development, brand crossovers, and digital platform promotion have significantly boosted the market visibility and cultural resonance of these products.

Studies explore how traditional cultural elements, such as Peking Opera, can be innovatively integrated into modern cultural creations by analyzing its historical context and distinct artistic features—such as abstraction, symbolism, and exaggeration. Through extracting visual elements like facial makeup and costumes, and combining them with contemporary aesthetics and technologies (e.g., 3D printing, blind boxes), the study demonstrates how design practices can enhance both cultural depth and market appeal. Using case studies and practical design methods, the research confirms that visual transformation and interactive functionality can increase consumer engagement [8]. Although it lacks comparative analysis with other cultural forms, the study offers valuable insights for this paper: the revitalization of intangible culture requires reinterpreting symbolic meanings, aligning with current technologies and consumer trends, and evoking cultural memory in diverse, emotionally resonant formats (Figure 1 and Figure 2).



Figure 1. Peking Opera Character Zhang Fei Design Process.



Figure 2. Zhang Fei of the Peking Opera.

3. Combination of Intangible Cultural Heritage and Cultural Creation

Transforming intangible cultural heritage (ICH) resources into cultural and creative products is a key strategy for achieving the "revitalization" of ICH in modern life. This approach focuses not only on the representation of the ICH itself, but also on the reproduction of cultural content within contemporary social contexts. In practical terms, the integration of ICH and cultural creativity typically follows three main pathways: symbolic reconstruction, functional embedding, and experiential transformation.

First, the symbolic reconstruction pathway involves redesigning ICH elements through visual means. For instance, in studies of traditional crafts such as papercutting, the extraction of elements like "linear language" and "totemic structure" was emphasized.

These elements were then translated into modern tourism souvenir packaging and IP imagery, breathing new life into the traditional craft.

Second, the functional embedding pathway focuses on converting traditional craftsmanship into practical functions within modern products. In research on the Yellow River clay xun, the product was redesigned to transform its original ritualistic and musical functions into modern home decor and parent-child interaction tools, aligning its cultural attributes with contemporary usage scenarios [9].

Studies examine how information technology can support the development of ICH-based cultural and creative products. The importance of user research, digital tools (e.g., VR/AR, mobile apps), and e-commerce platforms in enhancing user experience and expanding market reach is highlighted [10]. The research also proposes strategies such as building "non-heritage towns" to attract creative talent and foster innovation. Through case studies and data analysis, the authors demonstrate that digital technology can boost both the visibility and value of ICH products. Although the study does not address the impact of technology on authenticity or its cross-cultural applicability, it offers important insights: integrating traditional crafts with modern technology can build a sustainable "ICH + tech + market" ecosystem. Future research should further explore ethical considerations and regional differences in technology use to ensure a balanced approach between innovation and cultural integrity.

Third, the experiential transformation pathway refers to the conversion of ICH projects into immersive experience-based products or services. For example, the "Origami Huangmei Opera Puppet," through a DIY hands-on model, encourages users to actively participate in the process—thus shifting ICH transmission from a passive "spectator mode" to an interactive "participant mode."

It is important to note that the essence of combining ICH with creative products lies in "two-way innovation": preserving the cultural core of heritage while simultaneously aligning with modern aesthetics and consumer logic. This innovation demands a dynamic balance between "cultural essence" and "market grammar."

Although current research has proposed various integration paths and design strategies, practical implementation still faces certain challenges, such as the superficial or excessive symbolic use of ICH elements and instances of cultural misinterpretation [11]. Therefore, future research should further strengthen explorations in areas such as cultural interpretation, user research, and sustainable design, in order to establish deeper mechanisms of cultural resonance.

4. Design Thinking and Innovation in Heritage Product Development

Design thinking is a human-centered, iterative approach to problem-solving that emphasizes empathy for users, collaborative ideation, and experimental prototyping to address complex challenges [12]. In cultural and creative product design, it serves as a critical framework: by enabling designers to deeply understand both user needs and the intrinsic value of cultural heritage, it facilitates the translation of intangible elements—such as traditional craftsmanship, folklore, and ritual practices—into tangible products that resonate with modern audiences while preserving cultural authenticity. Innovation, a core driver within this process, holds dual significance [13]. For the inheritance of intangible cultural heritage, it breathes new vitality into age-old traditions, making them relevant to contemporary life and ensuring their continuity beyond static preservation. For cultural and creative product development, it enhances market competitiveness by infusing heritage-based products with fresh appeal, fostering sustainable growth as these innovative creations become accessible carriers of culture, bridging the past and present to engage broader communities in heritage stewardship.

4.1. Cultural Redesign

Cultural redesign refers to the creative reinterpretation and transformation of traditional cultural elements into contemporary forms that align with modern lifestyles, aesthetics, and values. This process goes beyond mere decoration or replication; it involves re-contextualizing intangible cultural assets—such as motifs, stories, symbols, and craftsmanship—through a critical lens that respects their origin while adapting them to new functions and settings [14].

Studies propose a “Metaphor Design Framework” based on cognitive linguistics and cultural layering theory, aiming to guide the deep transformation of traditional cultural properties into modern product design. The framework maps material (e.g., symbols), behavioral (e.g., rituals), and conceptual (e.g., values) layers of traditional culture onto modern lifestyles. In a quasi-experimental study, designers used this approach to reinterpret elements such as traditional cultural practices and symbols into products like cocktail tables and soaps. Results show that metaphorical transformation can evoke cultural reflection and enrich product experience by fusing tangible forms with abstract meanings. While the study does not test cross-cultural applicability or examine how designer expertise influences metaphor depth, the framework offers a valuable method for translating cultural connotation into intuitive design language. This approach supports both authenticity and innovation. Cultural redesign involves reinterpreting traditional cultural elements into modern design forms that preserve cultural depth while aligning with current aesthetic and functional demands. Metaphorical design plays a key role in this process by translating intangible values. By aligning material, behavioral, and conceptual layers of culture with modern life, this approach embeds deeper cultural meaning into product design and enhances user connection beyond surface-level symbolism.

In contemporary practice, cultural design thinking integrates user-centered principles with heritage interpretation to ensure that traditional knowledge systems are not only preserved but actively engaged with in meaningful ways. It encourages designers to consider how cultural narratives can be reimagined in everyday contexts, leveraging symbolic metaphors to bridge past and present. This form of innovation is especially valuable in intangible cultural heritage product development, where authenticity and relevance must be carefully balanced. Through cultural redesign, traditional practices gain renewed life, engaging broader audiences while sustaining the cultural identity embedded within design.

4.2. Codesign

Co-design, also known as participatory design, is a collaborative approach that actively involves stakeholders—including artisans, community members, users, and designers—in the creative process. In the context of intangible cultural heritage (ICH) product development, co-design ensures that cultural authenticity is preserved while meeting modern expectations. Rather than imposing external interpretations, this method values the lived experiences and knowledge of cultural bearers, fostering a more inclusive and ethically grounded design process.

Cocreation and participatory design support cultural heritage by emphasizing inclusivity and local knowledge. Involving artisans, community members, and end users in the design process helps preserve intangible skills, encourages intergenerational knowledge sharing, and strengthens user engagement. Studies developed the 5As Cultural Creativity Framework—rooted in sociocultural contexts—to examine how creativity contributes to the ongoing vitality of intangible cultural heritage (ICH) within World Heritage Sites. Drawing on interviews and fieldwork, the study highlights the dynamic interactions among five key elements: actors, artifacts, audiences, affordances, and apprentices, all of which collaboratively support heritage continuity. This framework moves beyond traditional individual-based creativity models (such as the 4Ps) by emphasizing a more systemic and relational approach to sustaining ICH.

However, maintaining a balance between professional design input and respect for traditional practices remains a challenge. Some scholars have raised concerns that overly formalized codesign processes risk compromising the authenticity of traditional crafts and diminishing artisans' agency. These concerns underscore the necessity for a culturally responsive participatory design model—an issue that this research seeks to explore and address.

4.3. Experience Design

Experience Design has become a valuable approach in the interpretation and dissemination of intangible cultural heritage (ICH). Recent studies focus on using immersive, interactive, and participatory methods to enhance public engagement with traditional knowledge and practices. Researchers highlight the role of sensory experiences, storytelling, and digital media in creating meaningful cultural encounters. The field is increasingly exploring how experiencedriven design can support both heritage preservation and contemporary relevance.

Studies investigated how intangible cultural heritage (ICH) shapes tourism experience scenarios, using major festivals as case studies. The study employed qualitative methods, including structured interviews over two and a half years with tourists and stakeholders (e.g., officials, organizers, performers, merchants), and conducted thematic analysis using NVivo to build an ICH experience framework. However, the research lacks insights into local residents' perceptions and tourists' varied understandings of ICH meanings. These gaps suggest potential for future studies on scene reconstruction and mechanisms of community engagement.

Studies focused on traditional puppet theater and developed a model linking “subjective vitality – authentic experience – experience quality – perceived value – behavioral intention.” Based on 325 questionnaire responses and statistical analysis, the study found that subjective vitality positively influences both authentic experience and experience quality. Authentic experience serves as a partial mediator, while experience quality fully mediates between authenticity and perceived value. Interestingly, perceived value showed no significant effect on behavioral intention, but gender had a notable moderating effect. Despite being limited to a single heritage site with a geographically narrow, cross-sectional sample, the research highlighted the importance of psychological and emotional factors in shaping cultural experiences. It emphasized the need for immersive, authentic, and emotionally engaging designs in non-renewable heritage (NRH) contexts. The findings support a shift from display-oriented to experience- and user-oriented approaches in heritage design, offering a theoretical framework that integrates authenticity, emotion, and participation (Figure 3).



Figure 3. The puppet shows performance [14]. Copyright 2020 by the authors.

5. Conclusion

The integration of intangible cultural heritage into creative product design represents a dynamic field that bridges tradition and innovation. This review has highlighted how design can serve as a vital medium for preserving, reinterpreting, and revitalizing ICH in response to contemporary cultural and market demands. By examining theoretical foundations, practical strategies, and design thinking approaches, the research reveals both the opportunities and tensions inherent in balancing heritage preservation with innovation.

The analysis of design thinking—including cultural redesign, co-design, and experience design—demonstrates how innovation can enhance the visibility, accessibility, and relevance of ICH in modern contexts. However, this process also raises tensions between authenticity and creativity, preservation and commercialization, which require careful negotiation by designers and stakeholders alike.

Looking forward, future research should focus on developing more inclusive, sustainable, and ethically responsible models for integrating ICH into design. Greater attention should be given to local knowledge systems, community participation, and the long-term impact of heritage product development on cultural identity. By fostering a balance between inheritance and innovation, creative design can continue to play a transformative role in the sustainable transmission of intangible cultural heritage.

References

1. C., He, Y.-W. Liang, and S.-Y. Zhang, "A study on the spatial structures and mechanisms of intangible cultural heritage and traditional villages in the Dongting Lake Basin," *Buildings*, vol. 14, no. 6, p. 1736, 2024, doi: 10.3390/buildings14061736.
2. X., Jia, "Exploration of the redevelopment strategy of traditional handicraft industry under the background of 'intangible cultural heritage' protection," *2018 International Symposium on Humanities and Social Sciences, Management and Education Engineering (HSSMEE 2018)*, Atlantis Press, 2018, doi: 10.2991/hssmee-18.2018.5.
3. J., Li, and M. Gao, "Art design of non-heritage cultural and creative products based on the concept of sustainability," *Int. J. Inf. Syst. Model. Des.*, vol. 15, no. 1, pp. 1-14, 2024, doi: 10.4018/IJISMD.349881.
4. L., Zhao, and J.-W. Kim, "The impact of traditional Chinese paper-cutting in digital protection for intangible cultural heritage under virtual reality technology," *Heliyon*, vol. 10, no. 18, 2024, doi: 10.1016/j.heliyon.2024.e38073.
5. F., Lenzerini, "Intangible cultural heritage: The living culture of peoples," *Eur. J. Int. Law*, vol. 22, no. 1, pp. 101-120, 2011, doi: 10.1093/ejil/chr006.
6. P., Tudorache, "The importance of the intangible cultural heritage in the economy," *Procedia Econ. Finance*, vol. 39, pp. 731-736, 2016, doi: 10.1016/S2212-5671(16)30271-4.
7. Q., Qiu, Y. Zuo, and M. Zhang, "Intangible cultural heritage in tourism: Research review and investigation of future agenda," *Land*, vol. 11, no. 1, p. 139, 2022, doi: 10.3390/land11010139.
8. G., Cozzani, et al., "Innovative technologies for intangible cultural heritage education and preservation: the case of i-Treasures," *Personal Ubiquitous Comput.*, vol. 21, no. 2, pp. 253-265, 2017, doi: 10.1007/s00779-016-0991-z.
9. P., Liu, "The current situation and development of Huangmei opera tourism resources in Huanggang area," *2nd Int. Conf. Manag., Econ. Law (ICMEL 2021)*, Atlantis Press, 2021, doi: 10.2991/aebmr.k.210909.029.
10. J., Zhao, et al., "A multidimensional evaluation-based reinterpretation of the cultural heritage value of blue-and-white porcelain patterns in contemporary design," *Heritage*, vol. 8, no. 7, p. 250, 2025, doi: 10.3390/heritage8070250.
11. Z., Qin, and S. Ng, "Culture as inspiration: A metaphorical framework for designing products with traditional cultural properties (TCPs)," *Sustainability*, vol. 12, no. 17, p. 7171, 2020, doi: 10.3390/su12177171.
12. S.-K., Tan, et al., "A cultural creativity framework for the sustainability of intangible cultural heritage," *J. Hosp. Tourism Res.*, vol. 44, no. 3, pp. 439-471, 2020, doi: 10.1177/1096348019886929.
13. Z., Chen, "Visualizing experiencescape—from the art of intangible cultural heritage," *Curr. Issues Tourism*, vol. 25, no. 4, pp. 559-578, 2022, doi: 10.1080/13683500.2021.1892040.
14. X., Su, et al., "Subjective vitality, authenticity experience, and intangible cultural heritage tourism: an empirical study of the puppet show," *J. Travel Tourism Mark.*, vol. 37, no. 2, pp. 258-271, 2020, doi: 10.1080/10548408.2020.1740141.

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of SOAP and/or the editor(s). SOAP and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.