

Collaborative Design Intervention in the Traditional Chinese Handicraft Sector for Enhancing Cultural Sustainability: New Channel Social Innovation Project

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Abstract

Background Rapid industrialization brought new challenges to the handicraft sector. Recently, it has been a significant concern for designers to preserve the traditional handicraft industry and to develop cultural sustainability. A culturally sustainable future is faced on how to blend traditional handicraft and contemporary social needs. This paper aims to study the status of collaborative design intervention in the traditional handicraft domain in order to investigate characteristics and potentials of the design processes, as well as to suggest the developmental tendency of Chinese handicraft on improving cultural sustainability.

Methods First, to identify existing problems, literature related to the traditional Chinese handicraft was reviewed and outlined. Second, to improve cultural sustainability, three representative projects of the “New Channel Social Innovation Project” that play a prominent role in the collaborative design intervention model in the Chinese handicraft sector, were selected for comparative analysis by investigating official websites and formal documents. The characteristics of the design model were based on the results. Third, to verify the consequences, the research of the features specific to the collaborative design and the future direction were followed through a comprehensive comparison with relevant expert theory.

Results The results of this study indicate the advantages of the collaborative design intervention method. Three commonalities were uncovered: strategically promote intangible cultural heritage protection; actively adopt the “rethinking and making” procedure before adjusting the design; and follow diverse “interdisciplinary methods” to find a creative solution. The findings reveal the crucial knowledge that the function, by design, in social and cultural issues is not to offer a solution unilaterally but to engage in the environment for drawing bidirectional communication with group members. By employing the comprehensive comparison with a “transition design” concept, a relevant expert theory suggests the significant ways for the transition to the culturally sustainable future. The results show that the future goal of Chinese handicraft is to achieve cultural sustainability based on locality knowledge through collaborative design.

Conclusions This research allows us to have a deep understanding of the current situation of collaborative design intervention in the Chinese handicraft sector and the enthusiasm of a collaborative design intervention method for enhancing cultural sustainability. Furthermore, the study presents a critical argument of the design ways, which is the formulated strategies in interdisciplinary collaborations to enhance cultural sustainability. This study demonstrates that for improving cultural sustainability of the handicraft domain, the design processes and characteristics of collaborative design intervention in traditional handicrafts are of great significance.

Keywords Cultural Sustainability, Collaborative Design Intervention, Interdisciplinary, Chinese Traditional Handicraft

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1. Introduction

Modernization was commonly perceived into the twentieth century as a distinctly western process that non-western civilizations could only pursue if they abandoned their old traditions and embraced technologically and ethically "superior" western methods (Inglehart & Baker, 2000). In China, traditional cultures have been threatened by rapid industrialization and urbanization. Numerous traditional art forms have disappeared continuously from people's lives, China faces difficulties in sustaining its cultural traditions. Mechanization and mass manufacturing shifted the manufacturing system away from individualized artisanship and toward large-scale generic output (Tung, 2012). Demand for traditional craftsmanship fell drastically when equivalent items manufactured with alternative or novel materials were offered to the market. Fortunately, since the 1990s, traditional culture has been identified as an essential component of sustainable social and economic development. Cultural sustainability is based on intergenerational constancy of traditions (Throsby, 1995). This type of cultural sustainability stressed "cosmopolitan localism," which aims to keep local cultural forms and items alive throughout generations (Irwin, 2015a).

Furthermore, organizations such as the World Crafts Council (WCC), and Aid to Artisans (ATA), the United Nations Educational, Scientific and Cultural Organization (UNESCO) have also sought to make traditional handicraft more accessible to the general public. Local traditional handicrafts with a strong cultural connection are in a particularly good position to respond to this trend. Handicraft and craftsmanship have been highly regarded and have expanded their bounds to encompass venues such as conserving the world's Intangible Cultural Heritage (UNESCO 2015); and becoming a component of the creative industries (Fillis, 2007). As such, design researchers have shown an increased interest in handicraft practices. The value of handicraft has been discussed from different perspectives, such as social design (Mamidipudi, 2018) (Kang, 2016), design for sustainability (Väänänen & Pöllänen, 2020) (Walker et al., 2019) (Zhan & Walker, 2019), practice-led design research (Nimkulrat, 2012) (Suib et al., 2020), and co-design (Wang et al., 2016).

Although there are some problems in the development of Chinese traditional handicraft, the Chinese government has realized the necessity to enhance cultural conservation and to rejuvenate traditional handicraft in the face of growing international competition which is critical to a construction of a sustainable system of Chinese traditional culture. In 2017, the Chinese government published an official document "Chinese Traditional Handicraft Revitalization Plan" to guide how traditional handicrafts can be integrated into modern society. This study analyzed three cases of the Chinese "New Channel Social Innovation Project" that have made some progress in collaboration design intervention in Chinese handicraft. This paper attempts to conclude with exploration of the collaborative design process and potentials of Chinese traditional handicraft in achieving cultural sustainability. The purpose of this study is to understand the collaboration design intervention mode characteristics and future development trends of the handicraft sector in China with the research on the situation of collaborative design intervention in Chinese handicraft.

2. Traditional Handicraft and Cultural Sustainability

For centuries, handicraft has matched the rhythms of daily life by virtue of its wealthy materiality, deep rooted cultural characteristics, and the intrinsic values of high-quality works and cultural expressions. The existence of Chinese traditional handicraft can be traced to primitive society. People process and transform materials obtained from outdoor by imitating certain shapes or functions of the natural world. This kind of awareness is developed in specific contexts with locally relevant materials and resources to meet local human needs (Brown, 2014). Craftsmen root their practices in particular places, building on local traditions. This sense of regional culture is typically a profound personal or symbolic connection with a locality is as distinctive to every locality as to each individual (Williams et al., 1992) (Racz, 2009). Handicraft is not only a practical object but also a carrier of cultural inheritance that played an important role in culture sustainable development.

Over the last three decades, the terms "sustainability" and "sustainable development" have become frequently employed. Handicraft is an expression of culture, custom, and belief, its skill and knowledge customarily passed down from generation to generation. Thus, there is continuity and accumulation of meanings associated with material culture through both objects and practices. In 1997, The Chinese State Council issued the "Regulations for the Protection of Traditional Arts and Crafts", which set specific regulations on the production techniques and material management of traditional handicrafts to encourage and promote the contemporary development of traditional crafts. In November 2003, the General Assembly of UNESCO passed the "Convention for the Protection of Intangible Cultural Heritage", specifying the criteria for the identification of intangible cultural heritage. Since then, in April 2014, China launched the Chinese folk culture protection project. In the past ten years, with the advancement of intangible cultural heritage protection, from the country to the local, from school to designer, the protection and sustainability, development and utilization of traditional handicraft has become a current hot topic. Therefore, with the advancement of industrialization and socialization, the problems and challenges it faces become more apparent.

3. The Collaborative Design Intervention as an Approach to the Development of Traditional Handicraft

Ratnam emphasizes the acknowledgment of diverse techniques of production, as well as the blurring of lines between handicraft and design (Ratnam, 2011). Modern technologies may provide opportunities for handicraft to achieve sustainable models of practice. Designers can encourage local craftspeople to a collaborative work, in order to leverage craftsmanship techniques, allowing them to cope with the repercussions of industrialization. Integrating craftsmanship with modern production techniques may imbue products with the sensory characteristics of handcrafted things, giving them a distinct character and marketability.

The availability of flexible manufacturing processes, as well as shifts in post-industrial society's consumption patterns, indicates that handcraft and design are becoming increasingly intertwined (Shiner, 2012). This transformation was supported by experiments and the accomplishments of such collaborative initiatives (Lees-Maffei & Sandino, 2004). The commitment of designers to cooperate with craftsmen not only helps regenerate traditional handicraft but allows designers to get new knowledge in design.

The existing knowledge of a craft is considered as tacit, where specific abilities are entrenched in a person or within a local community. Tacit knowledge is defined as "knowing more than we can tell." The tacit knowledge possessed by the local craftsman is obtained through considerable experience working with materials and procedures, and it is mostly obtained through practical and personal interaction between master and apprentice. Collaborative design by craftsmen and designers leverage communal creativity as a strategy for the promotion of local traditional handicraft. The collaborative creation approach presented by Sanders and Stappers (Sanders & Stappers, 2008), which also works as a learning mechanism, may be adapted to collaborative design in the handicraft industry, enabling craftsmen and designers to develop the knowledge and skills based on this common experience.

4. The Problematic Issues in Traditional Handicraft and Current Situation of Collaborative Design Intervention in Traditional Handicraft in China

4. 1. Problematic issues in the Chinese Traditional Handicraft Sector

As the crystallization and inheritance carrier of Chinese traditional culture, Chinese traditional handicrafts have been passed down from generation to generation. However, with changes in the social, economic, and cultural environment, the living environment of handicrafts has undergone great changes. The development of traditional handicraft faces many problems which can be summarized as follows.

4. 1. 1. Weakness in Protection and Inheritance

The inheritance of traditional handicraft becomes an issue to be addressed due to changes in the social structure, when people's living requirements and economic sources no longer rely on the handicraft sector. There is a significant and implicit knowledge structure in handicraft. In addition to what can be seen, a lot of tacit knowledge can be perceived and experienced only by the operation and practice of tools. Handicraft, according to Sennett, provides "a domain of skill and knowledge maybe beyond our language powers to convey" (Sennett, 2008). Although the development of intangible cultural heritage work, there is still a lack of pertinence and personal perception in the process. The problem of handicraft inheritance in contemporary society has not been solved in a real sense.

4. 1. 2. Problems in the Development of Industrialization

Industrial development is an attempt to revitalize traditional handicraft. As a traditional industrial form, handicraft has its own production and sales model in the age of agricultural civilization. However, with the great industrialization of traditional handicraft under the

market economy system, quick consumption leads in a scarcity of resources and the intrinsic value of handicraft was disregarded.

4. 1. 3. Lack of Innovation

Most craftsmanship skills are lacking in innovation and creativity. Handicraft innovations, in particular digital, are poorly linked to contemporary technology. Collaborations between traditional handicraft, design, science, and technology are restricted and underutilized. The handicraft market prioritizes scarcity of materials and skills while undervaluing innovation and design.

Considering the issues facing the Chinese traditional handicraft sector, two entry points for the development of Chinese handicraft design can be identified. Firstly, a change of manufacturing mode of handicraft from the perspective of cultural sustainability is needed; Secondly, synchronize handicraft with contemporary social development. Scholars and designers in China have deeply acknowledged that the development goals and handicraftsman process must be promptly adjusted to meet the changing requirements of social transformation.

4. 2. Collaborative Design intervention in Traditional Handicraft in China

In China, handicrafts are positioned within cultural fields, primarily in the field of Intangible Cultural Heritage. By December 2018, 40 Chinese folk arts and handicrafts had been inscribed on UNESCO Lists of Intangible Cultural Heritage, and 3152 examples with 10 categories are inscribed at the national level. Today, the handicraft resurgence is supported by Chinese government which leads to an increasing interest in craft revitalization at a practical level. In order to fully understand the current handicraft practices in China, a preliminary investigation was conducted. However, being listed as Intangible Cultural Heritage does not always imply that these handicrafts are viable and well-protected. In contrast, some of them, today, often seen as being out of step with modern society and disconnected from people's daily life.

As one of the ten most typical projects promoted by the Chinese government, the New Channel Social Innovation Project (<http://newchannel.design-engine.org/>), launched by Hunan University in Central China, aims to unearth new opportunities based on local culture and traditions. A collaborative approach is adopted to facilitate the knowledge exchange between the outside designers and local craftspeople (Duoduo & Tie, 2016). Many design outcomes with unique local culture have been developed in this collaborative way.

4. 3. Case Analysis: Chinese New Channel Social Innovation Project

4. 3. 1. Case Introduction

Although China has promulgated policies to revitalize handicrafts, there are still very few formal organizations that are revitalized by design. This study selected three cases of the New Channel Social Innovation Project from three different regions with leading positions in collaborative design intervention in Chinese handicraft, conducting a case analysis on the development of Chinese handicraft. They are “New Channel-Huayaohua”, “New Channel-Dongxin Musical Workshop, and “New Channel- Shangri-la” (Table 1). These three projects

represent the three handicrafts of Cross-stitch, Dong Nationality Brocade, and Nixi Pottery. As China national intangible cultural heritage with a long history, these three types of handicrafts are also represented in the Chinese handicraft collaborative design domain.

The “New Channel” initiative was launched by Hunan University and partners in rural areas in 2009 as member of the DESIS China network, drawing on Manzini's (Manzini, 2011) vision of a new social design model—“small, local, open, and interconnected.” It evolved into a series of open-ended social innovation activities involving hundreds of diverse participants from universities, industrial research institutes, design firms, non-governmental organizations, and social entrepreneurs.

Table 1 List of selected projects

Project Name	Type of Handicraft	Location	Project Start Time
“New Channel–Huayaohua”	Cross-stitch	Huilong, Hu’nan Province	2015
“New Channel– Dong Musical Workshop”	Dong Brocade	Tongdao, Hu’nan Province	2016
“New Channel– Shangri-la”	Nixi Pottery	Shangri-la, Tibet	2017

The methods and models to collaborative design intervention in handicrafts of selected projects were compared and analyzed based on data from the New Channel official website and literatures. The collaborative design intervention in handicraft sector methods of these three subjects has been widely promoted and recognized in the design and scholar field. As a result, it is possible to think that by analyzing their models, it would be possible to determine the future development trend of the Chinese handicraft industry.

4.3.2. “New Channel– Huayaohua” Project: Cross-stitch

Cross-stitch is an embroidery technique with extremely decorative. Huayao Cross-stitch originated in the Han Dynasty and matured in the Ming and Qing Dynasties. The Cross-stitch contains thousand kinds of patterns. With the gradual changes in the depth of society and living environment, the Cross-stitch is facing the conflict of disappearance. In view of the current situation in Huayao area, in 2015, the New Channel Social Innovation Project team cooperated with design teams to launch the "New Channel-Huayaohua" social innovation summer camp project in the Huayao area(Xiao, 2017) (Figure 1). A sustainable traditional manual mode was constructed to promote the inheritance of national culture.



Figure 1 Images of collaborative design intervention in Cross-stitch with local people. Images from the video on <http://newchannel.design-engine.org/huayaohua/>

The design team constructed a five-stage collaborative design model of "knowledge acquisition-concept generation-preliminary prototype-graphic design-prototype confirmation" (Figure 2). In the knowledge acquisition stage, designers conduct interviews

with artisans through literature research and learn about techniques, patterns and uses. In addition, the knowledge of the designers and the knowledge of the craftsman interact and influence each other. The primary tasks for the concept generation process were to develop new manufacturing lines and to investigate appropriate design approaches. With the improvement of the preliminary prototype, the graphic design is further developed. In the graphic design stage, the craftsman provides technical guidance to the designers in the form of communication. The graphic design stage is the most important stage in the entire design process which is the interaction of skills and prototypes. The confirmation collaborative designing prototype process enabled craftsmen grasp design processes and design materials, while designers gained a deeper understanding of the craft and how to blend modernity with tradition. Moreover, the experiences and feedback of the initial iteration were incorporated into the following iteration for gradual development toward a full and viable prototype. With the above collaborative design, a solid foundation has been laid for promoting the sustainability of handicraft and culture.

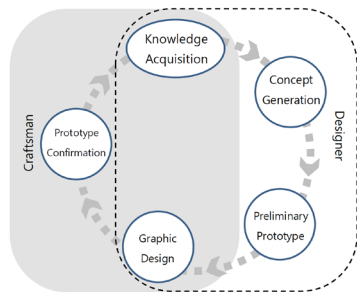


Figure 2 Collaborative design intervention framework of Cross-stitch from(Xiao 2017)

4. 3. 3. “New Channel- Dong Musical Workshop” Project: Dong Brocade

The history of Dong brocade weaving techniques can be dated back to the Spring and Autumn and Warring States Periods. Dong brocade has unique cultural and artistic value, social-historical value, and scientific and technological value. Since the beginning of the 21st century, having been impacted by industrial civilization, the transmission of the traditional handicraft of Dong brocade has been affected.

The "New Channel-Dong Musical Workshop" interdisciplinary design and innovation work camp is an innovative work summer camp led by Nick Bryan-Kinns from Queen Mary University of London and others (Figure 3). In July 2016, through the cooperation with local craftsmen and the development of interdisciplinary electronic circuits, the project team finally output a new interactive music player product based on Dong culture called Zouzhai music lamp(Yating, 2018).

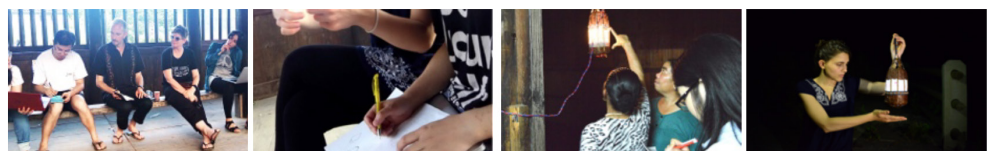


Figure 3 Images of collaborative design intervention in Dong brocade with local people. Images from <http://newchannel.design-engine.org/tongdao/>

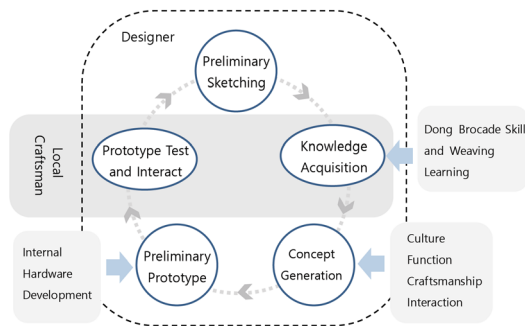


Figure 4 Collaborative design intervention framework of Cross-stitch(Zouzhai Music lamp), summarized from (Yating 2018)

This project is a cross-media product design combining traditional handicraft Dong brocade and Dong traditional music (Figure 4). The project team constructed local craftsmen, industrial designers and UX designers to complete the project together. In the Preliminary Sketching stage, designers and researchers first prepared the corresponding hardware devices in advance according to the preliminary design direction, such as Arduino development boards and sensors. During the knowledge acquisition stage, designers thoroughly communicated with local craftsmen and learned the techniques and weaving of Dong brocade. Records and preparations were made for the subsequent design process. They chose four viewpoints of culture, function, craftsmanship, and interaction for creative selection and optimization throughout the concept creation stage in order to achieve the practicability and interactivity of the design outcomes. The designers convert the idea into a practical and interactive prototype, which is the preliminary prototype stage, through model creation and internal hardware development, after defining the matching plan. Prototype tests were carried out with craftsman and local residents with the method of observation interview under the situation, with the direction of culture, crafting, function and interaction. The creation of electrical circuits was accomplished in an interdisciplinary way through on-site collaboration between designers and local craftsman. The project finally developed a new product of Dong culture and Dong music based interactive Portable device which called Zouzhai music lamp.

4. 3. 4. “New Channel– Shangri-la” Project: Nixi Pottery

Nixi is a Tibetan village in Shangri-La, the Nissi black pottery craftsmanship has been passed down continuously for more than two thousand years. The characteristics of its raw materials and unique firing process make it unique and inherited value in Chinese black pottery art. However, there are very few people who really know black pottery craftsmanship except for the local craftsmen who make a living by this handicraft.



Figure 5 Images of collaborative design intervention in Nixi Pottery with local people. Images from the video on <http://newchannel.design-engine.org/xianggelila/>

From August 20 to August 31, 2017, the project team went to Shangri-La, Yunnan Province and other regions to collaborate with local governments, enterprises, and craftsmen(Xinyang, 2018) (Figure 5). The project team built the framework of ‘Knowledge Acquisition’-‘Cultural Fusion’-‘Sketching’-‘Prototype and Test’-‘Product Presenting’ (Figure 6). Designers conduct on-site inspections and conversations with craftspeople to learn local knowledge, which includes local folk production and life, handicraft art and culture, and other regional local cultures during the knowledge acquisition stage. The designers extracted and summarized the accessible cultural symbols at the cultural fusion stage in order to change traditional ceramic workmanship and carry out design transformation and integration. Then, designers completed the sketch design and began the preparatory work for the next step using the information gathered and recorded in the previous stage. The prototype testing was carried out in collaboration with designer and local craftsman. The design was further refined after research and feedback to make the Nissi black pottery development more reasonable. With the collaboration of craftsmen in the Nissi region, designers completed the production by the approach of greenware throwing after several experiments. Ultimately, it was fired by the carburizing reduction method of traditional Nisi black pottery. For the promotion of traditional handicrafts this initiative is of considerable relevance.

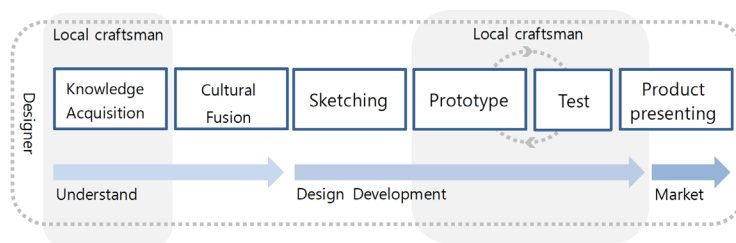


Figure 6 Collaborative design model of Nixi Pottery, summarized from (Xinyang 2018)

5. Analysis and Result

These three projects of the New Channel Social Innovation Project represent the collaborative design intervention in traditional handicraft revives in China. Each is committed to breaking through the culture inheritance limitations of the traditional craftsmanship system and pushing Chinese handicraft and cultural sustainability to a new level with a more open and inclusive platform, a cultural sustainability perspective, innovative collaborative design ideas, and cross-boundary cooperation. The New Channel Social Innovation Project demonstrated a new approach of traditional handicraft development to solving real challenges in nowadays society. The analysis of the three projects reveals that the focus of their reform of traditional craftsmanship process is on how to redesign through collaborative design model to meet the requirements of cultural sustainability and a new era (Table 2).

Table 2 Comparison of the Collaborative Design of Three projects

Project	Type of craft	Collaborative Design intervention Model	Characteristic
"New Channel-Huayaohua"	Cross-stitch work	<ul style="list-style-type: none"> Practice-led "local traditional culture based" craftsmanship with a modern design collaboration" model 	<ul style="list-style-type: none"> Traditional local intangible cultural heritage protection and sustainable Interdisciplinary cooperation
"New Channel- Dong Musical Workshop"	Dong Brocade	<ul style="list-style-type: none"> Practice-led "traditional craftsmanship with intelligent hardware technology-based collaboration" model Establish "Stakeholders-materials- Development aspect-output" system 	<ul style="list-style-type: none"> strategically promote intangible cultural heritage protection Cross-media cooperation
"New Channel-Shangri-la"	Nixi Pottery	<ul style="list-style-type: none"> Multi-element crossover design. The two-way drive design concept of "prototype-output" Practice-led "Combine traditional craftsmanship with a modern design based" model 	<ul style="list-style-type: none"> Interdisciplinary cooperation strategically promote intangible cultural heritage protection

Thus far, it appears that the collaborative design interventions in traditional handicraft sector reforms of the three projects have been relatively successful. As indicated in Table 3, it is the comparison between collaborative design intervention in the handicraft development process and traditional craft manufacturing method. The advantages are as follows: First, this collaborative design model not only to benefiting the local craft industry, but also efficiently integrates traditional handicrafts and local materials into the design process. Second, the collaborative design model aimed to enable craftspeople to advance their own innovations and skills, resulting in culturally sustainable creative products.

Table 3 Comparison of "Traditional Craftsmanship process" and "Collaborative Design Intervention Process"

Aspect	Traditional Craftsmanship Process	Collaborative Design intervention Process
Product	Unique object In line with local aesthetics and living habits	Adapt to the needs of contemporary life and promote local intangible cultural heritage protection
Material	traditional and local	The combination of traditional craftsmanship and modern design
Process	Doing while thinking done by craftsmen alone	Rethinking and making Interdisciplinary cooperation
Prototype	Craftsmanship process ends with a finished handicraft called prototype	A "prototype" can be created to test design and production possibilities

The analysis of these projects shows that new forms of modern Chinese traditional handicraft design focus on practice-led strategies in the design process, such as transforming of "craftsmanship process" and "utilization of traditional cultural knowledge." Furthermore, certain commonalities can be observed in the collaborative design intervention in the Chinese handicraft sector:

First, strategically promote intangible cultural heritage protection from the whole process of the project. Shifting to "culture knowledge creation and transfer" will cultivate local traditional handicraft sector and unearth new design possibility.

Second, actively adopt “rethinking and making” procedure before adjusting the design structure to break the conventional craftsmanship process in which was “doing while thinking”. The traditional craftsmanship mode is single and limited in development. The new model sets up different stages so as to make the design process more targeted to solve complex problems.

Third, follow diverse interdisciplinary methods to find a creative solution is a significant trend in collaborative design intervention in the handicraft sector. As this study has found, through the development of the project, the cooperation of different stakeholders and multidisciplinary personnel, the interdisciplinary knowledge has given the project team the ability to systematically intervene in the development of the handicraft industry. In this way, the collaborative design has a more inclusive structure and social identity.

This study also reveals that the current collaborative design intervention in handicraft development in China not only concentrates on achieving cultural sustainability through intervention in handicrafts, but also aims to promote local economic benefits through collaborative design and lay a foundation for the cooperation of local handicraft industries. Although the outcome of the collaboration between the designer and the craftsman may be regarded as a kind of design beyond the handicraft sector, this does not mean that it is separated from the core cultural content of traditional handicrafts. When collaborative design intervention in handicraft, it not only preserves cultural sustainability, but also adapts to the demands of modern development which is the meaningful development paradigm for the handicraft sector. The output of collaborative design is not only a specific handicraft project but also a new production organization relationship framework. This may be the direction and goal of the future development of Chinese handicraft regions. This is not only conducive to inheriting the characteristics of Chinese handicraft but also the best way to break the barriers between traditional handicraft and contemporary society.

6. Collaborative Design Intervention in Chinese Handicraft as an Intermediary towards a Cultural Sustainable Future—the Developmental Tendency

Many sustainable development models now represent culture as the "fourth pillar," alongside social, economic, and environmental issues, which many originally saw as a component of social sustainability. The common thread of the instances presented in this paper is that contributes to the development of cultural sustainability, however, these contributions occur at different levels. To understand the contribution levels of these projects on a more meaningful basis, cultural sustainable literature should be investigated particularly in the literature of transition toward a more sustainable future. By defining these levels within the sustainable literature, the contribution of the collaboration of designer and craftsman will become more understandable.

All of the cases presented in this study is consulted with the knowledge of current collaborative design intervention in handicraft development in China concentrates on

achieving cultural sustainability through intervention in handicrafts. Drawing on the concept of transition to more sustainable future proposed by Terry Irwin, Cameron Tonkinwise, and Gideon Kossoff, four key principles of Transition Design is a proposal for a new field of design practice, research, and study that promotes a design-led social transition toward a more sustainable future (Figure 7). This transition framework involves four key areas. These are: (1) Vision for transition- A transition vision calls for the re-conception of entire lifestyles in which are places-based yet global in their exchange of technology, information and culture. (2) Theories of Change- New design and problem-solving methodologies must be built on a profound grasp of the processes of change within complex social and natural systems to enable designers to serve as agents of change. (3) Mindset and Posture- Self-reflection and a new way of “being” of transitional times must be founded on a new attitude, worldview, and posture. (4) New ways of Design- The transition to sustainable society would need new design approaches that are informed by a vision, a deep understanding of the dynamics of change and a new mindset and posture (Irwin, 2015b).

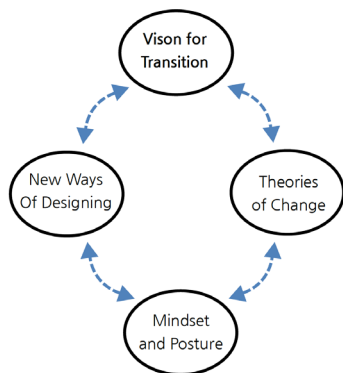


Figure 7 Transition Design Framework from Terry Irwin, Cameron Tonkinwise, and Gideon Kossoff.
<https://www.aiga.org/inspiration/talks/terry-irwin-gideon-kossoff-cameron-tonkinwise-transition->

Transition visions, as indicated in the transition design framework above, encourage new thinking and motivate designers to seek design expertise in new areas, resulting in adjustments in their mindset and posture. One of the most important elements in the transition toward more sustainable development is highly interdisciplinary, collaborative, and anchored in an understanding of how change emerges within complex systems. In table 4, projects presented in this paper are outlined under the title of features for contribution for collaborative design intervention process: “promote intangible cultural heritage protection”, “rethinking and making”, “interdisciplinary design”.

Table 4 Comparison of ‘Collaborative Design Intervention’ and ‘Transition Design’, and features towards the sustainable future

Features for Contribution for Collaborative Design intervention Process	Transition Design concept
• Strategically promote intangible cultural heritage protection from the whole process of the project	• Vision for Transition
• Actively adopt “rethinking and making” procedure before adjusting the design	• New ways of Design
• Follow diverse interdisciplinary methods to find a creative solution	• Theory of Change • Mindset and Posture

With these cases, collaborative design intervention in Chinese handicraft contribute to cultural sustainability with the “Strategically promote intangible cultural heritage protection from the whole process of the project”, “Actively adopt ‘rethinking and making’ procedure before adjusting the design” and “Follow divers interdisciplinary methods to find a creative solution” features. In the table, we state a matching between the concept of transition design and the collaborative design intervention process contribution level through sustainable knowledge transfer with the assistance of the structure of Transition Design Framework from Terry Irwin, Cameron Tonkinwise, and Gideon Kossoff (2013). Collaborative design intervention approach which is created or transferred through these project cases corresponds to different stages in the transition design framework.

7. Conclusion and Suggestion

Studying collaborative design intervention in the handicraft sector of different regions is helpful to understand trends in the future development of handicraft and cultural sustainability. Traditional Chinese handicraft is a particularly illuminating case study. In light of the exceptional economic progress and industrialization in recent years in China, it is urgent to preserve handicrafts and develop cultural sustainability. This study illustrated the general difficulties faced by the Chinese handicraft sector at present based on the literature review of related filed in China. Focused on the analysis of the New Channel Social Innovation Projects, the forerunner and the experimenters in handicraft innovation, to develop cultural sustainability. Through the analysis of the projects, this research identified three commonalities in collaborative design interventions in Chinese handicraft as follow:

First, they strategically promoted intangible cultural heritage protection from the whole process of the project. As the practice-led mode, the development of handicrafts can be considered as a craftsmanship-centered integrated system that places value cultural sustainability and innovation at its core. Second, they actively adopted the “rethinking and making” procedure before adjusting the design. It struck down the development restriction caused by the single and limited traditional process mode. Besides, by separating the design process into stages, made it more pertinent to solving complex issues. Third, they followed diverse interdisciplinary methods to find a creative solution. It is a significant trend in the handicraft sector which is not just a handicraft technical collaboration between craftsman and designers but also dedicated to the penetration and conversion of knowledge from different systems. Furthermore, since the cultural sustainability in the handicraft sector is not only a matter on traditional intangible cultural heritage, but also an issue of contemporary ways of living. This study examines the specific characteristics of collaborative design, which was the aim to verify the results of improving cultural sustainability to adapt to contemporary ways of living and transition to a sustainable future through a comprehensive comparison with related expert theories "transition design". “Strategically promote intangible cultural heritage protection” corresponds to “Transition Vision”, “Rethinking and making” corresponds to “New ways of Design”, incorporation and promotion of the “interdisciplinary method” which can contribute to the completion of the collaborative process corresponds to

the “Theory of change” and “Mindset and Posture” stage. The result suggests that the design methods and characteristics of collaborative design intervention are of great significance to the future development and cultural sustainability of traditional handicrafts that are difficult to adapt to contemporary living and needs.

In this study, the main focus of collaborative design intervention in Chinese handicraft sector is on specific interdisciplinary design strategies of cultural sustainability. It has promoted the construction of the future development model of traditional handicrafts in a cross-filed innovative approach and is committed to transforming the revitalization of handicrafts into cultural sustainability to contribute to the development of the regional economy and culture. The outcomes of the aforementioned instances might demonstrate their feasibility and challenge designers or planners to anticipate cooperation initiatives. Due to the constraints of the case samples, this study fails to conduct more thorough research of the collaborative design intervention model of Chinese handicrafts. Further research is needed to explore how designers are collectively responding to the uncertain cultural sustainable challenges in terms of their design strategies to avoid eroding the intrinsic virtues of traditional handicraft, which would have a detrimental impact on cultural sustainability. These concerns need to be critically debated in greater depth and examined in light of specific instances in further. This study provided the direction of collaborative design interventions in handicraft sector, and an informative overview of current discourse on the development of handicraft and cultural sustainability in China. Even though collaborative design has been carried out in the fields of artisanal art in Europe and Asia including Japan and South Korea through many projects, designers and academics might also acquire a new perspective by knowing trends of Chinese handicraft sector, as they are similarly committed to aligning handicraft development with contemporary challenges and cultural needs in the design area.

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