ON THE COLLABORATIVE MODELS FOR DESIGN SCHOOLS ENGAGING IN THE SUSTAINABLE DEVELOPMENT OF TRADITIONAL BAMBOO CRAFTS

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ABSTRACT

The traditional bamboo crafts as China's valuable cultural heritage is faced with recessions. Design schools can integrate resources to provides solutions to the sustainable development of the bamboo crafts. Characteristics of stakeholders in the rural craft collaboration should be fully taken care of so as to achieve win-win outcomes with equality, which is conducive to long-term collaboration. With bamboo weaving craft of Xiangxi and Xiaoyu raw bamboo craft of Yiyang in Hunan Province as the study objects and based on fieldwork, workshops, design courses and practices, this study analyzes the advantages and limitations of local collaboration, on-campus collaboration and production collaboration and validates the positive impact of collaboration on stakeholders. In addition, collaborative models driven by culture, teaching, activity and service design are identified as four models that facilitate the development of the traditional bamboo industry based on the cases of other design schools in China.

key words: Collaborative model, Stakeholders, Traditional bamboo crafts, Sustainable development.

1. INTRODUCTION

Extensive design efforts have been made over the past few years to reinvigorate traditional crafts, particularly the traditional bamboo crafts in China. Design schools as well as organizations are looking for collaboration in this emerging design sector. Bamboo is the material with excellent ecological nature that best represents the culture and tradition of the East and China in particular. However, traditional bamboo crafts are experiencing recessions, which makes the engagement of design schools significant for the sustainable development of both the environment and the society. As noted by Manzini (2011), "In the emerging scenario, therefore, design schools, with their tremendous potential of students' enthusiasm and teachers' experience, represent a social resource: a potentially powerful and useful player in the transition towards sustainability" (p. 1).

The mainland China, Taiwan and Japan in Southeast Asia as the major regions where bamboos grow have become key areas for collaboration practices between the traditional bamboo industry and design schools. This paper takes China as the study area. Design schools are non-profit entities with strong innovation capabilities and initiative. Design schools can be specialized academy of fine arts or design schools in comprehensive universities in China. With the purpose to enrich teaching and research activities, scholars and teachers carry out a wide range of practices and experiments by pooling on-campus resources and bridging bamboo craftsmen and schools.

The Academy of Arts & Design of the Tsinghua University worked with Yong'an Municipal Government of Fujian Province on Bamboo 20+ Program (2018); Shanghai Academy of Fine Arts organized Workshop on International Creative Bamboo Design and Study Program for Inheritors of Bamboo Crafts (2016); the School of Urban Planning of the Central Academy of Fine Arts took Dongyang of Zhejiang Province (2017) and Daoming Town of Sichuan Province (2018) as the base for students' creation practices; and China Academy of Art, Guangzhou Academy of Fine Arts, Jiangnan University, Taiwan University of Kaohsiung, Taiwan Yunlin University of Science and Technology, etc. have held several design workshops on bamboo crafts or published graduation works themed on bamboo crafts. Governments strongly support academic research and development of bamboo crafts initiated by design schools by granting art foundations or social science foundations.

From these collaboration practices, it can be found that design schools are taken as an essential factor that facilitates inheritance and innovation of the traditional bamboo industry because they are with vision, innovation and social impact. For us, the collaborative process is of social significance. As non-profit organizations, design schools aim to address social problems faced by the traditional bamboo industry through social innovation. In other words, the solutions should be more productive, efficient and sustainable, with the value created belong to the whole society instead of any individual (Phills, Deiglmeier & Miller, 2008).

Collaborative models vary in practices. This paper firstly summarizes the research approaches adopted by design schools for their involvement and the challenges. Different collaborative types are then compared based on our 3-year practices and research on the bamboo weaving craft in Xiangxi and Xiaoyu raw bamboo craft in Yiyang of Hunan Province. Strengths and shortcomings of different collaborative types are compared based on our case study. The goal has changed from enriching teaching activities to achieving win-win outcomes among stakeholders via cross-disciplinary approaches. This paper also studies the collaborations of other design schools, summarizes the collaborative models and their characteristics based on different drives. Impact of such practices and methods on different stakeholders as well as limitations with this study are analyzed.

2. RESEARCH METHOD

Before discussions, the definitions of two pairs of terms should be distinguished. The first pair is cooperation and collaboration. Cooperative work is a task that is accomplished by dividing it among participants, where "each person is responsible for a portion of the problem solving", and collaborative work is "the mutual engagement of participants in a coordinated effort to solve the problem together" (Roschelle and Teasley, 1995). Cooperation is more focused on working together to create an end product, while successful collaboration requires participants to share in the process of knowledge creation (Dillenbourg, Baker, Blaye & O'Malley, 1996; Roschelle and Teasley 1995). Joint efforts and knowledge transfer among all participants are valued, which decides the collaborative models to be the research content.

The second pair is co-design and participatory design. Neither of them has formed convincing systematic knowledge for promotion and replication (Zhong Fang, Liu Xin, 2018). Nonetheless, co-design focuses on design while participatory design values democracy (Shi Di, 2017). There have been no authoritative definitions for participatory design and co-design. Since the 1970s, collective creative practices have been taken as participatory design in Europe (Sanders & Pieter, 2008). Generally accepted definition of co-design is brought about by Sanders & Pieter to "refer to the creativity of designers and people not trained in design working together in the design development process" (2008, p.2). Collaboration discussed in this work reflects democracy. Schools are the dominant power and lead the collaboration process with the identity of experts, focusing on the equal participation and contribution of all stakeholders rather than the design results. Participatory design would therefore be mentioned in the context later.

Rural craft collaboration is formed when design schools are engaged in the development of traditional bamboo industry. Stakeholders involved in this collaboration can be anyone who might be the influencing factor or the influenced factor of the project. However, the power of design schools is limited; so is the power of design in social

design. As stated by Chen, Cheng, Koskinen and Hummels, "Social design in its current stage may do well at the scale of a village or an informal organization, but its prospects of success are far smaller when it has to deal with the abstract structures of governance typical to late modernism" (2015, p.3). Three key stakeholders, namely the organizers (scholars or teachers), design students and bamboo craftsmen, are identified based on our case study. Different stakeholders of the project vary in interests, goals, career ethics and contributions. Table 1 lists the correlation and impact of stakeholders in collaboration.

[Table 1] Correlation of Stakeholders in Collaboration

Stakeholders	Interests	Goals	Career Ethics	Contributions
Organizers (teachers or scholars)	Individual teaching and research interests	Teaching and academic obligations	Teaching responsibilities and sense of social responsibilities	Academic and design integration, organizing skills and abilities to pool on-campus resources
Design Students	Individual interests and leaning passion	Enhancement in designing experience	Self-growth and sense of social responsibilities	Innovative and new perspectives and aesthetics
Bamboo craftsmen	Contact with the outside world	Increase in incomes and vision	Passion for, dedication to and pride in bamboo crafts	Knowledge in bamboo crafts and traditional culture, plus aesthetics

China's traditional bamboo crafts are well preserved in rural areas. Thanks to the popularization of the Internet in China, middle-aged bamboo craftsmen involved in this project are able to access the Internet with mobile phones. They can stay "on-line" though daily communication is not timely. Nonetheless, they live far from cities and manufacture bamboo products at home where facilities are not in place. Ideally, teachers and scholars as the organizers, as required by sociology and anthropology, are expected to lead the students to get immersed in rural communities so as to understand local culture and residents. Students would be separated from local culture and produce superficial designs if failing to understand the environment where the crafts are rooted and their symbolic significance. However, limited by many factors, it is impractical for the organizers to lead students to do long-term fieldwork. Moreover, bamboo craftsmen are willing to learn about urban life and reflect on their culture and crafts. Participatory approach is adopted, with bamboo crafts learning being the core of the collaboration process. We attempt to abstract theories on processes, actions and interactions from the perspective of participants. Win-win outcomes with equality are the key to maintaining sustainable collaboration. But it's not easy to achieve an equal contribution or collaboration, as Murray (2010) wrote in the following comment about the inequality of rural craft collaboration: "The wide difference in education between designer and (local) artisan constitutes a difficult barrier" (p. 19) .

3. CASE STUDY: PRACTICES OF GDUT

3.1 Background

In order to explore effective models for the engagement of design schools, traditional bamboo crafts from two areas of Hunan Province are selected: one is the Xiaoyu bamboo craft in Yiyang, which is one of non-tangible cultural heritage of China; and the other is the bamboo weaving craft in Xiangxi, which has been rated as the non-tangible cultural heritage of Hunan. The Xiaoyu bamboo craft have lasted for over 600 years. Bamboo with a diameter of less than 5 cm are used to create various appliances after over 30 processes. In the dialect of Yiyang, "yu" as the core craft refers to bend to shape the bamboos after heating so as to get beautiful curve shapes and stable hoop structures. With a history of over 1000 years, Xiangxi bamboo weaving can be used to manufacture products for both daily life and farming purposes. Fine weaving to manufacture craftwork such as botanic dyeing and pattern weaving has been developed.

Unlike bamboo carving or bamboo marquetry crafts that value art, these two crafts are both folk arts by the mass, with the products being widely applied in daily life. Most of the products are affordable daily necessities that can be massively manufactured (Yanagi, 1955). The functionality of them makes engagement and participation of modern design possible. However, just like other traditional crafts, the bamboo crafts are faced with social, economic and cultural challenges during social transformation. Traditional bamboo products have been replaced by massive industrial products. The difficulty in mastering the techniques, the intensive labor involved and the low prices of bamboo products drive people away from this industry. In addition, collaboration does not last although many schools as well as organizations have been engaged in traditional bamboo crafts.

School of Arts & Design of Guangdong University of Technology (GDUT) first started collaboration with Xiangxi and Yiyang in 2015. Guided by Fang Hai's program of Arts in Chinese National Social Science Funds "Study on Re-design of the Traditional Bamboo Products in an Environmentally Friendly Way", a series of design practices have been carried out with the engagement of several teachers, over a hundred of students and over a dozen of bamboo craftsmen. Based on a series of workshops, design courses, fieldwork and design practices and guided by the idea of innovative and sustainable design, GDUT explores the engagement models of design schools so as to facilitate sustainable development of the traditional bamboo crafts in Xiangxi and Yiyang.

In hope of finding effective, innovative and sustainable collaborative models from the perspectives of sociology and social innovation, we tried to discussed this topic from a multidisciplinary perspective. Collaborations with bamboo craftsmen over the past three years can be classified into three types.

3.2 Types of collaboration in GDUT

Local collaboration: The first collaboration began with fieldwork. No more than 10 students went to Yiyang and Xiangxi with teachers to interview bamboo craftsmen, visit the Museum, and join local studios to learn crafts as apprentices so as to acquire local bamboo culture rapidly. In this collaboration, participants contributed acquired knowledge other than innovation, with teachers and students from schools being the beneficiaries because they've acquired rich knowledge on the traditional bamboo crafts and broadened their cultural perspectives. However, benefits and long-term impact on craftsmen and local bamboo industry are limited. Nothing would come out from such collaboration if no further contact and collaboration is made between the two parties. But local collaboration is a must because this is an important way for us to truly understand the tradition and culture of bamboo crafts.

On-campus collaboration: Bamboo craftsmen are invited to the regular workshops on crafts learning provided by the schools. Two sessions have been organized, each lasting 20 days with 3 to 4 teachers and 25 to 30 students involved. The organizers would exchange ideas on teaching contents and teaching plan with bamboo craftsmen in hope of imparting as complete knowledge on bamboo crafts as possible in a limited period. These craftsmen were able to decide proper teaching contents in accordance with the teaching objectives and personal judgement though they might fail to express the knowledge with accurate language.

The primary goal of the organizers was to inspire creativity in students after the workshops. Surprisingly, students and craftsmen took the initiative to carry out small-scale co-creation. Master Xie assisted students with the re-design of traditional bamboo stools and the bamboo lanterns. Master Xu guided students with their bamboo brooches creations and even made one by himself. Empathy was achieved among participants in the 20-day immersive workshop, each contributing their acquired knowledge and creativity, with direct knowledge transfer being accomplished. More students would be benefited from on-campus collaboration while the limitation lies in that students have no access to learning more about the bamboo culture represented by craftsmen. Craftsmen would broaden visions during the short stay in the city and obtain inspirations when getting along with teachers and young students. Master Xu who has a family studio manages to expand the product lines after being inspired by the jewellery works by students at the workshop. More bamboo re-design models are generated in the subsequent design courses, reflecting significant facilitating impact of workshops on teaching and the role of design innovation in the advance of bamboo crafts.

Production collaboration: Out of needs from graduation designs, design exhibitions, competitions and other design events, there are always semi-products, product models or products to be manufactured now and then, which makes sub-contract the common form of collaboration, which involves 5 bamboo craftsmen and a raw bamboo furniture factory. There are two forms of collaboration: one is remote sub-contract and the other is local co-production. In the first form of collaboration, design sketches and engineering drawings are sent to the craftsmen and communications during phones. In the second form, designers go to the region to collaborate with local craftsmen. Both forms have strengths and shortcomings. Remote sub-contract saves money and time but the outcomes would be unsatisfactory co-design due to untimely and unclear communication.

Co-production would cost time and travel costs but it enables designers to communicate with the craftsmen on site timely. The final outcomes are mostly acceptable. In production collaboration, designers and craftsmen contribute their own expertise and facilitate direct or indirect knowledge transfer, thus giving birth to participatory design. For instance, student Cai Xiaoxue designed a set of bamboo furniture based on Xiaoyu bamboo crafts after finishing the workshop. According to Master Wang Shenglian, he had never seen such structure before and decided to produce another set with improvements. Craftsmen began to realize the importance of design. Master Wang is planning to found an independent studio and engage young designers to do the design. Master Xu and his son voluntarily joined the training program by Academy of Arts & Design of the Tsinghua University and Shanghai Academy of Fine Arts.

3.3 Reflection

These three collaboration types are applied at different stages, all bringing benefits for stakeholders though with limitations. We are not able to organize long-term influential co-creation activities of large scale with extensive social engagement like the New Channel Program organized by Hunan University (Wang, Bryan-Kinns & Ji, 2016). Instead, we attempt to think the social role of most common design schools when they are engaged in similar propositions by making concrete efforts with limited resources and conditions.

4. COLLABORATIVE MODELS ANALYSIS

Based on our three collaboration practices and activities organized by other design schools, collaborative models for the engagement of design schools in the sustainable development of traditional bamboo crafts can be classified into four types, namely Collaboration Driven by Culture(CDC), Collaboration Driven by Teaching(CDT), Collaboration Driven by Activities(CDA) and Collaboration Driven by Service Design(CDSD).

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