

The International Design Education Cooperation:

Diversity of Social Innovation in Interdisciplinary and Intercultural Context

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Abstract: The paradigm of design education is faced with big challenge. Academy of Arts and Design in Tsinghua University carries out continuous exploration in the teaching practice and curriculum reconstruction, and concludes a set of interdisciplinary and intercultural cooperation mode of international design education with social innovation as the value orientation. “Rural and Urban” Workshop is an international education collaboration project conducted between Royal College of Art and Academy of Arts and Design of Tsinghua University. This project shows a new teaching paradigm to link interdisciplinary and intercultural principles. Based on the field study in the Chinese rural and urban area, students designed product and service targeting inclusive development of China’s urban and rural: reasonable rural and urban education plan, information and logistics network, product and service system, and intangible cultural heritage protection from the viewpoint of social innovation. The workshop emphasizes interdisciplinary and intercultural education approach; and integrates behavior cognition and reflective cognition during the design leaning process. This workshop provides comprehensive experience and methods for students, help them integrate skills and knowledge during design process, and go back to the social function of design education.

Key words: *Social Innovation, Design Education, Cooperation, Interdisciplinary, Intercultural*

1. Introduction

The traditional paradigm of design education and practice is faced with big challenge in China. With the development of Chinese design education, the international design community follow with interest in China, which brings increasingly frequent international education cooperation in China’s design schools. The connotation and denotation of design definition keep expanding, which makes the international design cooperation between different cultures and disciplines to be an important topic. However, it’s still difficult for people to see more curriculum design and teaching method adapt to above changes in the Chinese design schools. Confronted with this challenge, Industrial Design Department of Academy of Arts & Design in Tsinghua University (TAID) carries out continuous exploration in recent years’ teaching practice to design a new curriculum framework. The new curriculum emphasizes interdisciplinary and intercultural education cooperation with social innovation as the value orientation.

2. New Paradigm of Design Education: Social Innovation

With the change of social culture context, the design paradigm transforms from technology and product innovation in industrial age to the service and social innovation in post-industrial age. Confronted with the

alienation in human society caused by product abolishing system in commercial community, design education and practice transform from commerce-oriented value to human and society needs-oriented paradigm. Since 2008, China has kept rapid growth under the global economic depression. However, like the development track of the western developed countries, China will certainly enter the growth limit. This kind of limit comes from not only the material resource exhausted predicted by Club of Rome [1], but also the social and cultural field emphasized by Fred Hirsch in *Social Limits to Growth* [2]. The social problems that appear during economic growth including resource shortage, environmental pollution, unbalanced development of urban and rural areas, larger gap between the rich and the poor groups, random social structure during the urbanization process, loss of cultural belongingness, disorder migrant worker management, inadequate education resources for left-behind children, and problem of elderly health care in the urban and rural areas require new thoughts and approaches to solve. Therefore, the experts such as social scholars, policy makers and designers attempt to employ the social innovation paradigm to solve the limit problems during social growth. According to Mulgan [3], social innovation refers to innovation activities and services that are motivated by the goal of meeting a social need and that are predominantly diffused through organizations whose main purpose are social.

The social innovation principles include: interdisciplinary cooperation, inclusion of social vulnerable group such as disabled and elderly, active participation of citizenship, transparent cooperation network among government-designer-enterprise-university-social welfare organization and so on. As an effective way to realize the social innovation, design is able to define and analyze social problems, and put forward feasible, sustainable and reproducible solution. The governments, organizations, and communities around world are continuously exploring new models of social innovation. The US President Obama establishes Office of Social Innovation in White House to solve the social challenges brought by education, health care, poverty, unemployment and environment pollution with new thoughts. The social innovation system established by the famous magazine *The Big Issue* organizes the homeless vagrants to sell magazines, which not only establishes efficient distribution network, but also provides job opportunity and survival dignity for the homeless. Beijing Deft Women Association funded by Beijing City Council is aimed at training the retired and unemployed female to master the traditional handicraft. This social organization has helped nearly 260,000 females gaining job opportunities who have made various folk artworks including hand knitting, embroidery, paper-cut, lacquerwork, etc. Beijing Deft Women Association not only inherits and protects many folk arts on the verge of being lost and helps the jobless female become self-employed, but also provides new approach for the design innovation of the traditional folk handicrafts through the social collaboration networks involved by Deft Women Association, internet media, university partnership, art market, enterprise, and government (Figure 1). Above social innovation practice explore possible methodologies for the design education paradigm transformation.

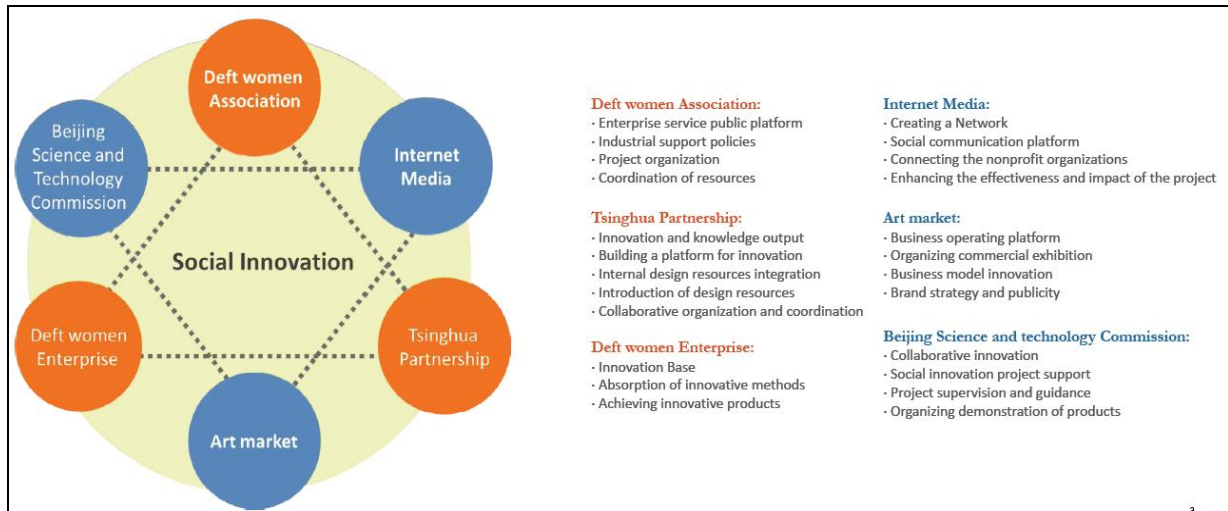


Figure 1. Social innovation network based on the Deft Deft Women Association practice

The value of social innovation lies in releasing social vitality, compensating market and government failure, promoting the organization cooperation, encouraging the social growth of citizenship. Design plays an important role to realize the social innovation. Designing for the social innovation requires multiple measures including designer guidance, promotion via education, government support, citizen and society participation, and interdisciplinary integration. In the whole chain of social innovation, design teaching plays a role of catalyst. Its transformation from commerce-oriented to social-oriented stimulates the research and practice on social innovation from marginal understanding to mainstream value. There are four stages in the design education process to promote social innovation. At first, social innovation originates from definition of social requirements; then it requires generation of creativity and testing by prototype or other means in practice; the third phase is to use strategic and integrated viewpoint to foster, reproduce, adjust, conduct and diffuse the solution; the fourth phase is to evaluate and improve the social solution in practice. The above social innovation process requires further verification and modification in the design education practice.

3. International Design Education Collaboration: Interdisciplinary and Intercultural

Social innovation involves a large number of fields such as cultural study, education, healthcare, disaster rescue, infrastructure construction, poverty alleviation, environmental protection, community service, rights protection of vulnerable group, etc. It requires cooperation between different disciplines and coordination of interdisciplinary team made up of government, enterprise and university, in the whole process. According to Cross [4] and Margolin [5], design science plays the role to integrate different disciplines such as sociology, anthropology, psychology, culture research and archaeology, and to absorb essence from these subjects to develop its own discipline system. Therefore, design schools around world attempt to develop interdisciplinary education framework and design new curriculum to meet such challenge. For example, Royal College of Art and Imperial College developed a double degree course through building multidisciplinary knowledge and multicultural learning-experience. After Centre Academy of Art and Design was merged to Tsinghua University, this significant Chinese design school carries out collaboration teaching, research and practice with the experts from the School of Business, School of Medicine and School of Aerospace to cultivate future design leadership.

Social innovation requires design practitioner network, political alliance, nongovernmental organization, and support from charity foundation to come into being. Global cooperation can help with the smooth implementation of social innovation, and present diversified development direction by exchanging ideas in the early stage of social innovation [3]. According to social anthropology, defining social requirements and exploring social innovation opportunity requires research on socio-cultural context. Better understanding “domestic culture” gained through research on “foreign culture”, studying China’s social behavior with cross-culture critical viewpoint will gain a relatively complete cultural region and cultural behavior cognition. International cooperation can help China’s design education expanding its international network, getting its unique cultural identity, and exploring the teaching methods to meet the local requirements. The curriculum design needs to establish the cross cultural professor teams and student groups. The teaching team requires to practice following principles: (1) make frequent node control; (2) establish cooperative, competitive and coordinative relationship; (3) clarify fair partnership; communicate with multiple languages; (4) establish reasonable curriculum structure and encourage team work both in and out of class; (5) keep flexible work duration[6]. Exploring the method of intercultural and interdisciplinary design teaching cooperation can help with the transformation of social innovation paradigm in the educational context.

4. Case Study: Rural-Urban Workshop

4.1 Workshop process and teaching approach

Rural-Urban Workshop is a typical international education collaboration project conducted between Innovation Design Engineering Department (IDE) in Royal College of Art and Department of Industrial Design in Academy of Arts & Design of Tsinghua University (TAID). This international cooperation project shows a good example to transform the design education paradigm to the social innovation within interdisciplinary and intercultural context. Ashley Hall from IDE and I took responsibility to organize the Rural-Urban Workshop from two cultural backgrounds. Through face-to-face and internet communications, the teacher team from both departments narrowed down the topic of this workshop as “solving the social problems caused by China’s urban and rural differences from the design perspective”. China is undergoing the fastest and largest migration in human history from the rural countryside to the urban city, estimated at over 40 million people migrating every year. The aim of this project is to take the country and city migration, communication and society as a meta-theme project.

Ashley and I went to Yangquan and its surrounding village in Shanxi province to make field investigation and pilot study before the workshop start. With the support from the local government, the teaching team studied the possibility and details for the workshop students to conduct field study in Yangquan. Yangquan was an emerging industrial city with energy as the major raw material in the north of China. Under the guidance of long-term planned economy, it formed a single industrial structure mainly on mineral resource excavating and processing. In recent years, Yangquan wanted to adjust industrial structure and combine traditional industry transformation with new industry fostering. However, with labor migration from rural to urban area, the unbalanced development problems including job opportunity, social security, public service and environmental protection between urban and rural areas became apparent. Considering such local problems faced by Yangquan area, the topic of this workshop was defined as “Rural - Urban”.

Over 50 students and 4 professors from Royal College of Art, Imperial College and Academy of Arts & Design of Tsinghua University carried out the 3-week workshop in the campus of Tsinghua University. The students were from over 20 countries whose education background involved engineering, sociology, material science, economics and design science among others, which showed distinct cultural diversity and discipline variety. The students divided themselves into 11 groups with each group consisting of 2 Chinese students from TAID and 3 international students from IDE. The students and teachers from the two colleges traveled deep into the countryside of Yangquan to spend a few days of research to record real experiences. They divided themselves into 3 groups to visit 3 different villages, ate and lived in the local farmers' homes, interviewed the local farmers, miners and students, and employed ethnology methods to study the local social problems. Back to the campus of Tsinghua University, each group of students conducted brain storming, defined the design problems, developed solutions, discussed with the Chinese and English teacher team, and evaluated and improved the design schemes. Students employed any possible resources to make rapid prototype within limited time. Another workshop on cultural transformation was concurrently carried out. Folk craftsmen were invited to provide skill performance. Through observing and learning the craft-making skill, the students explored series design solution to transfer traditional Chinese cultural elements and values into modern product design. When the 3-week workshop was finished, design achievements exhibition was held and experts from various media, Beijing Industrial Design Association, and Microsoft Research Centre were invited to visit and provide suggestions and comments to the students' works.

4.2 Workshop outcomes

This workshop built a platform to encourage the international design education collaboration exploring the products/services solutions for the social needs and requirements. From different culture background, students provided constructive opinions and conceptual solutions to build the inclusive growth for the Chinese society. For example, "*Bon Bon Carts*" made professional training for street vendors, which provided job opportunity for new city migrants and vulnerable group by creating new social enterprise. Meanwhile, such new model of social enterprise helped to reconstruct the order of Chinese communities. According to this project, the enterprise will provide education for skill development to two main groups of street vendors who rely on tricycle carts; material reclaimers and food vendors. "*Bon Bon Carts*" will hire and educate material reclaimers to build newly designed carts using their help this group to further develop their technical skills through training courses. The carts will then be hired to Food Vendors who will be educated in areas such as food design, diversification and innovation as well as business management. The Food vendors will have a unique presence on the road due to the unique brand identity of "*Bon Bon Carts*". The enterprise will also hire designated street space by working alongside government authorities, thus providing the street vendors with maximum convenience, security and confidence. As part of the company's future goals, the enterprise will strive to extend its operations to the rural areas where the ingredients for the food vendors will come directly from the farms (figure 2).

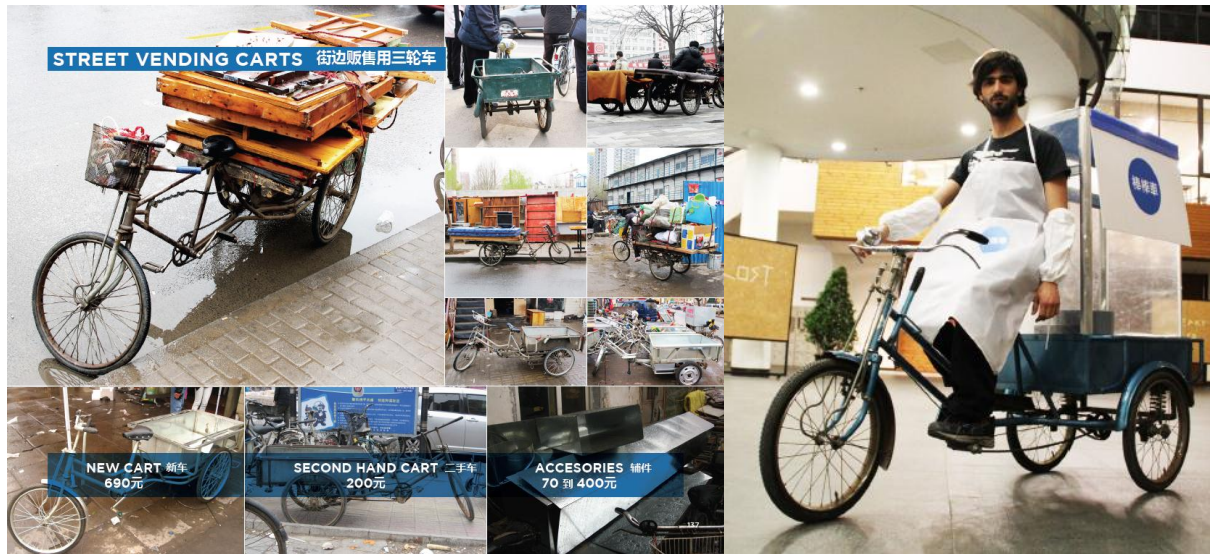


Figure 2. Bon Bon Carts

“*Storyware*” (figure 3) is functional tableware that also communicates a narrative about a family’s history by recording personal stories and embedding them into ceramic so that the tales can be re-told and treasured. This project was to design an object or experience that helps one feel a deeper connection to one’s family history, and to create something of great personal value. “*Storyware*” communicates a story through a functional set of objects. According to Chinese culture, drinking tea is traditionally a communal activity, and a time for families to discuss and share. Stories are harvested from family members, recorded, and then embedded into ceramic using technology similar to vinyl records or wax cylinders. Throwing clay is a traditional craft, and the fragility of the material acts as a reminder of the fragility of family heritage as migration disperses close-knit families and communities. The tea-cups and their integral narratives are to be protected, enjoyed and cherished.



Figure 3. Storyware

“*GoSchool*” project (figure 4) paid attention to the education of migrant workers’ children, and provided systematic education solution for China’s hope-primary-schools through design of new teaching and entertainment methods and tools. “*GoSchool*” is an easy educational instruction which enables young volunteer teachers from universities to access the current curriculum of primary schools. It encourages university students to participate in voluntary works. This project aims to fulfill the needs of qualified teachers in non-government schools whilst motivates disadvantaged left-behind children to plan a better future. It utilizes educational cards which have been prepared based on a curriculum of subject. For this reason, various cards will be used depending on educational

needs. The cards allow voluntary teachers interacting with students easily in a friendly classroom environment. Also, it offers a certain degree of flexibility for volunteer teachers in preparation of teaching materials for classes.



Figure 4. GoSchool

The creativity of “*e-red-packet*” combined digital technology with China’s cultural traditions to create new social products and services. This concept helped young migrant workers in city making emotional communication with their parents in village. It provides economic support and offer financial tools between younger and older generations within the rural-urban context. The “*e-red-packet*” is an emotional product to help young generation to recall the culture belongingness which used to lost in the contemporary Chinese society. This project seeks to address one of the difficulties faced by a migrant population living and working in the city and sending money home to their family in the village. Often low income workers do not possess a bank account and resort to personally delivering money to their dependents who live quite far away. In addition, some banks do not have the inclination to cater for a large base of customers with small amounts of cash. Red-packet is a culturally recognizable way of gifting money during festivals and special occasions. The digital “*e-red-packet*” would broaden the traditional concept of the red letter to that of transferring monies in a personal and secure way. It also seeks to enforce the bond between the giver and the receiver in a culturally acceptable way. With the introduction of digital “*e-red-packet*” a beautiful tradition of the Chinese people could be incorporated into the fast changing scenario of modern life.



Figure 5. e red-packet

In summary, students explored the large subject area and choose smaller focused problem areas to tackle for diverse final outcomes that include: communication systems, products, services and technologies. Issues centered around communications between migrant family members, balancing education between countryside and city, movement of goods, retaining cultural connections and living systems in cities. The workshop generated some excellent insights and formed the basis for many of projects within the social innovation theme.

5. Discussion: Return to Social Function of Design Education

Social innovation is effective means to realize inclusive growth in China. In 2010, Chinese president put forward the new concept of inclusive growth, which indicated that the Chinese government was seeking a fair, coordinative and sustainable development direction of social and economic culture in the future. Let more people enjoy global achievements; have the vulnerable group protected; strengthen the construction of small and medium enterprise and personal ability; keep balance during economic growth; attach importance to social stability. The national strategy of inclusive growth provides theory basis and government support for the social innovation. However, the current design education system in China pays more attention to the practical requirements of commercial enterprise, and the student employment-oriented education objective. Therefore, curriculum design in the most Chinese design schools serves for cultivating designers who might create business value and economic profit for the enterprise. Although some design schools begin to pay attention to sustainable design research in

recent years, few has carried out comprehensive teaching, research and curriculum provision in a perspective of micro-level of the social innovation. In fact, social innovation not only involves the sustainable use of natural resources, but also includes the treatment of a lot of social challenges including social poverty, unemployment, aging, disabled and vulnerable group, education equality, healthcare and social security by developing new products, services and organizations to satisfy the inclusive social requirements. The design teaching of social innovation should not only pay attention to the above topics, but also develop a set of design theories and teaching methodologies that promotes social inclusive growth.

Rural-Urban workshop establishes an educational platform to encourage designers from different majors and cultural backgrounds make cooperation and coordination, and try to integrate advantages of different majors and disciplines. Through research and practice, Rural-Urban workshop considers how the design agenda fits into a global context and how it can influence and inform social issues. Bridging the micro-level positions of technology, material and form with the macro-levels of governmental policy, urbanization, globalization and social factors is complex and demanding. During the workshop, designers develop product/service concept targeting inclusive development of China's urban and rural: reasonable education plan, information and logistics network construction, product and service system integration, intangible cultural heritage protection, and promote consciousness of culture independence and industry innovation of local residents from the viewpoint of social innovation. This type of interdisciplinary and intercultural workshop integrates behavior cognition and reflective cognition during the design leaning process. It links the cognitive learning and social learning together through research and design practice. Rural-Urban workshop provides comprehensive experience, tools and methods for students, help them better integrate skills and knowledge during design process, and go back to the social function of design education [7].

Rural-Urban education project works at the boundaries of contemporary design, architectures and urbanism, and engages with the world's influencers and drivers to make a proactive social contribution through creative ideas and practice [8]. Confronted with the emerging trend of globalization and social innovation, an interdisciplinary and intercultural design-education team is good for education paradigm transformation. Social innovation requires methodology to explore the users' needs in different cultural contexts. Multicultural and multidisciplinary design team can integrate the local resources and make the possible design implication. In such design process, intercultural design team will gain richer cultural experience during the adaptation to local market need. Therefore, encouraging the students to build intercultural team in the design school can help them obtaining international experience and global resources during cognitive design learning and social design learning [9]. Design educators should help the students fully understanding the social cultural difference and actively explore the diversified solution brought by social cultural difference. Culture difference is an important catalyst that drives social needs [10] and conduct the design education collaboration.

6. Conclusions

Rural-Urban workshop is an international research and education collaboration with the purpose of providing resources and expertise for a number of design themes that have social innovation significance. The theory behind Rural-Urban workshop is that, design creativity is rarely fully mobilized or utilized at government and policy level to address the many social problems where academic and practice creativity can contribute significantly solutions.

In addition, the expertise for many complex issues is typically distributed around the world's top academic institutions and this draws those people together synthetically. The design teaching cooperation on the social innovation theme between the two famous design schools (IDE and TAID) has achieved abundant accomplishment. The results of this project contribute new solutions, methodologies, and knowledge for the design education collaboration globally. Rural-Urban workshop integrated multiple social recourses such as support of local government, skill of folk craftsman, intelligent of high degree education, network of rural-urban research, and global vision of international designers within the design education program. This international cooperation project explores the diversified social innovation opportunity; put forwards the new social-oriented product and service solution; and provides new means for the transformation of design education paradigm. The future research will focus on the following aspects: further strengthen the teaching cooperation with international design colleges and put the interdisciplinary and intercultural teaching method into practice and verification; develop social-innovation-oriented curriculum framework; explore efficient way to cultivate new interdisciplinary teaching approach in comprehensive university system. In conclusion, the future design education might go back to social innovation itself, integrate multidisciplinary resources and respect culture diversity.

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