E–B
Environment - Behaviour
Proceedings Journal

KICSS2024
Kedah International Conference on Social Sciences:
https://kicss2024.wixsite.com/kicss2024

e-IPH
e-International
Publishing House Ltd.,
United Kingdom

IC2reDIT: International Conference On Creative Design, Innovation & Technology
Virtual Conference, 23 & 24 October 2024
Organised by: Universiti Teknologi MARA, Kedah, Malaysia

Investigating Opportunities and Challenges of Integrating Chinese Traditional Culture into Product Design Education

Wang Ling[1,2], Siti Zuraida Maaruf[1*]
*Corresponding Author

[1] Faculty of Education, Universiti Teknologi MARA,42300 Puncak Alam, Selangor, Malaysia, [2] Faculty of Industrial Product Design, Chengdu Academy of Fine Arts, Sichuan Conservatory of Music, Chengdu City, Sichuan Province, China

2022576433@student.uitm.edu.my, Sitiz610@uitm.edu.my
Tel: 011-60944925

Abstract
The investigation focused on integrating traditional Chinese culture into modern product design education in China. The study begins with a review of the literature, identifying prevalent issues, followed by semi-structured online interviews to gather in-depth insights from experts and students. The interviews explored the importance of integrating traditional culture into design practice and design education, and the current challenges and barriers. Finally, this study collates and analyses the interview data to explore the need and strategies for Chinese product design education in this direction.
Keywords: Traditional Chinese Culture; Integration; Design Education; Product Design

_____

1.0 Introduction
On the one hand, traditionally influenced by Western design paradigms, the Chinese product design industry has recently begun emphasising cultural elements in its design approach (Yu and Jerrard, 2018). This shift highlights a growing recognition of the importance of cultural identity in distinguishing Chinese products in a competitive global market. Despite this paradigm shift, most product designs on the market still superficially incorporate cultural elements into the product form rather than achieving a deep-rooted integration of cultural values and principles.

On the other hand, while some cultural elements and projects have recently been reflected in Chinese product design education, there remains a significant need for a comprehensive curriculum and teaching approach that fully integrates Chinese culture with modern design theories. Without such a curriculum, students struggle to develop a holistic understanding of how to embed cultural thinking into their design process effectively. Therefore, integrating cultural elements into design education is critical to fostering a competitive edge and ensuring that Chinese design stands out on the global stage (Lin, Chen et al., 2016). While the shift towards a design education model with 'Chinese characteristics' necessitates reflecting on and incorporating traditional Chinese culture into modern design education (Wong, 2010; Klaus Lehmann, 2016; Li, 2022).

This research examines the need to integrate traditional Chinese culture into modern product design education and the current status and challenges. It concludes with conclusions and strategies for educational institutions to cultivate a unique, culturally rich design identity in China.

2.0 Literature Review

2.1 A Brief Introduction to the Integration of Chinese Culture and Product Design Education
There is a big difference between the foundation of design education and the training mode in traditional China and the West. Western design education, influenced by humanism, initially underscored human-centred design, merging elements from fine arts, engineering, and social sciences within design thinking. This form of education, often termed "general education," incorporates a third of its curriculum from disciplines beyond design, as evidenced in leading Western design schools (Buchanan, 2004). Traditional Chinese education for handicraft products is deeply rooted in traditional culture, emphasising material perception, craft techniques, shapes, and patterns as fundamental training components. It promotes the extraction of nature-inspired emotions, which manifest in the functionality and aesthetics of products. Employing a master-apprentice approach, this educational model prioritises students' perceptual cognition and learning by practical imitation in production, which differs significantly from modern design education in China, necessitating a fusion of traditional and contemporary aesthetic concepts, design principles, and teaching methodologies to establish design theories and practices with national traits (Yan, 2007).

In the past century, China has encountered conflict, opposition, and disruptions in its engagement with Eastern and Western influences concerning modern design and design education (Yu & Jerrard, 2018). Following China's reform and opening up, marked by substantial market economy growth, a shift occurred in this dichotomy until the 1980s. Subsequently, modern design education in China embraced the Bauhaus system from the West, with numerous design faculties in colleges and universities adopting and implementing it. While the Bauhaus system notably propelled Chinese modern design education forward, most colleges' design curricula primarily adhere to a Western perspective, overlooking considerations for local culture (Li, 2022). Roughly 20 years ago, the Academy of Fine Arts at Tsinghua University advocated integrating traditional culture and craftsmanship into modern design applications (Wong, 2005), marking the new beginning of local cultural integration into modern design education.

Admittedly, modern product design is a discipline that transcends boundaries and requires multifaceted knowledge, including the synthesis of various disciplinary information, technology and cultural aesthetics in the practical application of design (DAI, 2009). Therefore, to realise the fusion of East and West in Chinese design education, it is necessary to be based on the local culture, through a deep understanding of the essence of the 'local spirit' in the tradition, and at the same time, continuously absorbing the foreign knowledge, to form a harmonious situation of the fusion of the East and the West. It is vital to promote the original spirit and cultural heritage and to incorporate the best of both worlds. Such an approach can shape a unique design philosophy and education system that aligns with international trends and establishes a globally recognised 'Chinese design' (Yan, 2007).

2.2 Current state and challenges of Chinese traditional culture integrating into product design education
By focusing on the interaction between traditional Chinese culture and design education matters, the principal issues contributing to the current shortcomings in Chinese design education are categorised into the following three aspects:

Firstly, the prevalent paradigm prioritising imitation of Western design and production has led to the undervaluation of traditional Chinese culture's creativity and heritage. Consequently, Chinese product designs often need more originality and embrace a distinct Chinese identity (Yu, 2018). Simultaneously, the educational approach to Chinese product design draws more from Western teaching concepts than the country's inherited culture, resulting in a trend away from embracing a unique Chinese design ethos (Li, 2022).

Secondly, design education encompasses a comprehensive blend of natural sciences, humanities, and traditional culture. Without the nourishment of conventional culture, designs tend to lack depth and connotation (Hu, 2020). In Chinese design education, more research is needed on modern design theory rooted in Chinese traditional culture. Instead, foundational courses often follow the Bauhaus tradition or incorporate limited courses on Chinese art history and craft aesthetics, which is a partial solution (Huang et al., 2021). The gap impedes the integration of East and West in the design of the education system.

Finally, regarding student background, art and design students in traditional art colleges rely heavily on visual comprehension and creative expression. They need more help in learning cultural and technical knowledge. In addition, more than 100,000 design students are enrolled in Chinese higher education each year. The classroom cannot achieve tailor-made teaching with too many students and different basic levels and learning abilities. They often need more active exposure to traditional Chinese culture to enhance their literacy (Hang, 2023). Therefore, these facts pose challenges in shaping students' diverse design inclinations and deeply personalised traits (Yu & Jerard, 2018).

Overall, the literature underscores the inevitable trend of globalisation and multiculturalism and the necessity of integrating and amalgamating diverse cultures (Meyer & Norman, 2020). On the one hand, acknowledging and learning from Western design strengths enables self-improvement and cultivates a humanistic spirit in design (Li, 2022). On the other hand, design education in China suggests applying traditional historical knowledge to contemporary contexts, forging a design education philosophy that harmonises East and West (Li, 2022).

3.0 Methodology
This research mainly adopts a literature review and semi-structured interview research method. Firstly, the literature is analysed and summarised by studying the history and development of Eastern and Western influences on design education in China, pointing out that it is an inevitable trend for China to infuse local traditional culture into modern design and design education. Then, the researcher used a qualitative approach to collect data by interviewing those integrating traditional culture into modern design, teaching, learning and

research-related people nowadays. It took over three months from 2023 to 2024 and involved semi-structured online interviews with the respondents, as shown in Table 1.

Table 1. Samples of the Semi-structured Interview

Respondents	Sampling Technique	Instruments	Data analysis
2 Designers	Purposive	Semi-structured interview	Qualitative
2 Craftsmen	Purposive	Semi-structured interview	Qualitative
2 Teachers	Purposive	Semi-structured interview	Qualitative
2 Scholars	Purposive	Semi-structured interview	Qualitative
8 Students	Purposive	Semi-structured interview	Qualitative

The expert group consisted of two designers (coded as DH-M, DW-F), two craftsmen (coded as CP-F, CC-M), two teachers (coded as TY-F, TW-F) and two scholars (coded as SX-F, SY-F), with six themes discussed in one-on-one online semi-structured interviews. The student group consisted of eight undergraduate students (coded as SY1-M, SY1-F, SY2-M… SY4-F) majoring in product design from the Department of Industrial Design at the Chengdu Academy of Fine Arts in China, Sichuan province, grouped according to the same grade level, with two students in each group conducting the online semi-structured interviews with the same themes, as described in the topics below:

Themes & Topics	
A	Does product design nowadays have Chinese traditional and local culture?
B	Is there a necessity to integrate Chinese traditional and local culture into modern product design education?
C	To share your experiences in creating traditional culture-related designs.
D	The challenges for the new generation of design students or beginners in traditional culture-related design.
E	Suggestions and opinions on integrating traditional culture into modern design teaching and learning.
F	Suggestions and opinions on effective stimulation, teaching quality and effect enhancement.

The researcher translated and archived 12 video interviews word by word and analysed them by extracting the core words mentioned by the interviewees for the six themes, as summarised in Table 2.

Table 2. Summary of the Semi-structured Interview

Topic	Key Words of Responded	DH-M	DW-F	CP-F	CC-M	SX-F	SY-F	TY-F	TW-F	SY1-M	SY1-F	SY2-M	SY2-F	SY3-M	SY3-F	SY4-M	SY4-F	Percentage
A	Cultural participation as a trend	X	X	X	X	X	X	X		X				X	X	X	X	12/16
	Poor level of transformation from cultural elements	X				X		X										3/16
	Daily products have some cultural expression, but modern technological products are not obvious			X		X		X				X						4/16
	Uncommon											X	X					2/16
B	Necessary	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	16/16
C	An aesthetic point of view in shape, colour and line	X	X	X		X	X	X	X	X		X						9/16
	Studying and innovating traditional materials, handicraft and structure		X		X	X	X											4/16
	Combined with commercial promotional value	X	X	X			X											4/16
	More design inspiration														X	X	X	3/16
D	Cognition and understanding of culture	X	X			X	X			X	X			X				7/16
	Research and analysis of information		X		X			X										3/16
	To extract the essence and representative elements of culture		X		X	X	X	X	X						X			7/16
	To transform and apply cultural elements	X	X			X	X	X	X	X	X	X	X		X	X	X	13/16
	Lack of craftsmanship spirit			X														1/16
	Product design production process, cost control and commercialisation	X				X	X										X	4/16
E	To improve the curriculum system of relevant Chinese cultural literacy	X	X	X		X			X			X				X	X	8/16
	To strengthen the design fundamental courses with the study of traditional and local cultures.									X	X							2/16
	Full range of practical experiences		X		X	X				X	X			X	X	X	X	9/16
	Combination with practical projects and commercial design	X		X	X		X								X	X		6/16
	To rich the instructional design									X								1/16
F	Visiting museums, exhibitions, performances		X		X	X								X	X			5/16
	Participation in design competitions						X								X			2/16
	Interest groups, workshop and studios		X			X	X	X						X				5/16
	Design research and field study		X		X	X	X				X				X	X	X	8/16
	Case studies	X					X						X		X	X		5/16
	Classroom activities					X		X	X						X	X		5/16

Online social platform and fashion resources		X		X	X X	4/16
Participation in crafts and modelling	X				X	2/16
Reading Books		X				1/16
Guest speakers are invited to give lectures				X	X	2/16
Related to my hometown local cultural design project				X	X X	3/16

In summary, the literature review and the interviews identified the integration of traditional Chinese culture into product design and education as a trend and opportunity in China today. The expert and student groups provided their own insights into the specific challenges and ways to address them.

4.0 Findings

Integrating traditional Chinese culture and product design simultaneously shows favourable development trends and challenges. Most respondents (12/16) in the expert and student communities believe that cultural engagement is a prominent trend in contemporary product design, indicating a growing awareness and appreciation of cultural heritage. However, some experts (DH-M, SX-F, TY-F) felt that transforming cultural elements into modern design is still not sophisticated and qualitative. In addition, 25% of the students mentioned cultural elements in everyday objects, but there is an apparent lack of such features in modern technological products. Only the second-year students noted incorporating cultural elements in products around them, which shows that awareness among students varies according to experience and exposure.

In design education, respondents unanimously (16/16) supported integrating traditional Chinese culture into the curriculum, highlighting a shared belief in the foundational role of cultural literacy in developing design competencies. Respondents combined their own design experiences, with more than half emphasising aesthetic elements such as shape, colour and line. In addition, mainly from the expert group, they emphasised the relevance of traditional materials, crafts and structures, and the commercial and promotional value. In contrast, more students linked cultural integration to increased design inspiration.

The challenges regarding the integration of culture into product design are manifold. Most respondents (13/16) felt that the most pressing issue was the difficulty in effectively translating and applying cultural elements. Nearly half of the respondents cited challenges in understanding the cultural context and extracting representative features. Other barriers included the commercialisation process (DH-M, SX-F, TY-F, SY4-F), research and analysis (DW-F, CC-M, TW-F) and lack of craftsmanship (CP-F).

Suggestions for teaching and learning were mainly focused on practical experience and curriculum improvement. More than half of the respondents suggested providing a full range of hands-on experiences and advocating for strengthening Chinese cultural literacy in the curriculum. Other strategies included integrating hands-on projects with business design (6/16) and incorporating cultural studies into the basic curriculum (TY-F, TW-F, SY2-M).

To stimulate effective learning, respondents highlighted several active and immersive methods. Half of the respondents most emphasised design research and field studies, followed by visits to museums and performances, case studies, workshops, classroom activities (5/16), and digital platforms (4/16). Locally relevant projects (3/16), design competitions (3/16), guest lectures (3/16), hands-on crafting (CP-F, SY4-M), and reading (SX-F) were also considered valuable. These findings suggest a need for strategic educational reform and practical engagement to foster meaningful integration of traditional Chinese culture in product design.

5.0 Discussion

1）The integrated curriculum model aims to provide a balanced blend of traditional Chinese cultural thought, elemental transformation and modern design theory, which is continually penetrated and deepened in specific basic and specialised professional courses (SY1-M, SY1-F, SY2-M, SY3-M, SY4-F, SY2-M, SY4-F, SY4-M). It is worth encouraging more scholars and teachers to discuss and practice innovation to build teaching theories, teaching contents, methods, and principles with Chinese thinking in design foundation courses (Ling, 2024).

2）Practical and Project-based Learning: Incorporating practical projects that require students to research and apply traditional cultural elements in their designs can bridge the gap between theory and practice (SY1-M, SY2-M, SY2-F, SY4-M, SY3-F, SY4-M). Working involves full-dimensional interaction and multi-channel communication with local enterprises, artisans, and cultural experts, allowing students to gain practical experience and a deeper understanding of traditional techniques and materials and collaborate to develop and innovate traditional cultures (Fuad, Musa et al., 2022).

3）Developing cultural literacy: Efforts should be made to improve students' cultural literacy from the beginning of their education (SY1-M, SY1-F, SY2-M, SY3-M, SY4-F, SY2-M, SY4-F, SY4-M). This may include introductory courses in Chinese culture and its historical context, encouraging students to draw on holistic understandings throughout their design education.

4）Interdisciplinary Collaboration: Encouraging collaboration between the design sector and other disciplines (Ahmed, Fattani et al., 2022), such as History and cultural studies, Environment and Biology, and cutting-edge disciplines in digital technology, can provide a richer, more diverse educational experience. This interdisciplinary approach can help students see the broader cultural implications of their designs and foster creative thinking (Hepburn,2022).

5）Global Perspective with a Local Footing: Educators and students should be encouraged to look at examples of relevant fields of enquiry in an international context (SY1-F, SY2-F, SY3-M, SY4-M, SY2-F, SY3-M), whether in design projects or innovative modes of teaching and learning. We draw on examples of excellence in the field that are constantly being researched, practised, and developed

while at the same time being rooted in our cultural traditions and heritage. This balance will help establish a unique Chinese design identity recognised and respected globally (Li, 2022).

6.0 Conclusion& Recommendations

This study highlights the opportunities and challenges of integrating traditional Chinese culture into product design education.

First, the Chinese design education community is unanimous about establishing a practical and theoretical system for such integration. The challenge, however, lies in the need for sustained investment in theoretical research and continuous exploration from multidisciplinary fields and perspectives.

Second, bridging the gap between traditional culture and modern design education requires a profound reconfiguration of educational paradigms. By fostering programmes that are deeply rooted in elements of Chinese culture and by working with educators who are passionate about passing on traditional culture, it is hoped that a new generation of designers can be trained to combine tradition, innovation, and a global perspective.

Finally, this study provides insights into integrating traditional Chinese culture into product design, and it should be recognised that there are some limitations in the data collection process. One is that the relatively small sample size of 16 respondents may limit the generalisability of the findings to a broader population. The other one, cultural elements and integration strategies, may be interpreted differently in different regions of China, but this study did not explicitly consider regional diversity. Therefore, this study will continue to explore the next phase in the design and development of teaching modules, which will involve wider samples and mixed methods to contribute to the theory and practice of effectively integrating traditional and local Chinese cultural elements into modern design education.

Acknowledgement

Paper Contribution to Related Field of Study

This paper contributes to the related field of product design education by analysing the current opportunities and challenges, clarifying the necessity of integrating traditional culture into modern product design and proposing feasible strategies for integrating traditional Chinese culture into modern design education.

References

Ahmed, F., Fattani, M. T., Ali, S. R., & Enam, R. N. (2022). Strengthening the bridge between academic and the industry through the academia-industry collaboration plan design model. Frontiers in Psychology, 13, 875940.

Buchanan, R. (2004). Human-centered design: Changing perspectives on design education in the East and West. Design issues, 20(1), 30-39.

Fuad, D. R. S. M., Musa, K., & Hashim, Z. (2022). Innovation culture in education: A systematic review of the literature. Management in Education, 36(3), 135-149.

Hang, J. (2011). Chinese design and Bauhaus—Misreading and conscious misreading. Art & Design Research, 48(2), 76–80. (in Chinese).

Hepburn, L. A. (2022). Transdisciplinary learning in a design collaboration. The Design Journal, 25(3), 299-316.

Hsu, C.-H., & Lin, R. (2011). A study on cultural product design process. Journal of Design, 16(4), 1-18.

Hu, B. (2020). Exploring contemporary visualisations of traditional Chinese symbols: A case of tea branding design Queensland University of Technology].

Huang, T. (2023). The Fusion and Collision of Ethnic Cultural Language and Font Graphic Design. International Journal of Education and Humanities, 11(1), 205-211.

Huang, X., Ball, R., & Wang, W. (2021). Comparative study of industrial design undergraduate education in China and USA. International Journal of Technology and Design Education, 31, 565-586.

Li, Y. (2022). Inheritance and development of traditional culture: a new path for design education reform in China.

Lin, C.-L., Chen, S.-J., Hsiao, W.-H., & Lin, R. (2016). Cultural ergonomics in interactional and experiential design: Conceptual framework and case study of the Taiwanese twin cup. Applied ergonomics, 52, 242-252.

Ling, W., Maaruf, S. Z., & Xuemin, Y. (2024). Exploration of Design Teaching Model for Chinese Local Food Cultural Transforming to Relevant Product. International Journal of Research and Innovation in Social Science, 8(8), 2449-2459.

Meyer, M. W., & Norman, D. (2020). Changing design education for the 21st century. She Ji: The Journal of Design, Economics, and Innovation, 6(1), 13-49.
Sun, Y., Wu, I.-W., & Lin, R. (2022). Transforming "ritual cultural features" into "modern product forms": A case study of ancient Chinese ritual vessels. Religions, 13(6), 517.

Wong, W. S. (2005). Torn between Tradition and Modernity: the future of design education directions of China. International Conference on Design Education: Tradition and Modernity Conference Proceedings.

Wu, Z., & Han, C. (2010). 15 Cultural Transformation of Educational Discourse in China. Intercultural and multicultural education: Enhancing global interconnectedness, 225.

Yan, H.-S. (2007). Reconstruction designs of lost ancient Chinese machinery (Vol. 3). Springer Science & Business Media.

Yu, P. (2018). Seeking Cultural Originality: A Critical Study on Contemporary Product Design in China Birmingham City University].

Yu, P., & Jerrard, B. (2018). The challenges and transformation of design education in contemporary China. MATEC Web of Conferences,