

An Analysis of Educational Pathways for Innovative Design Thinking in Traditional Culture: Integrating Tradition with Innovation

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ABSTRACT

Against the dual backdrop of global cultural integration and the awakening of local consciousness, the innovative development of traditional culture has become a pressing issue of our times. Consequently, modern art and design face heightened demands. Design thinking, as a human-centered, iteratively optimized belief system, constitutes a methodology for innovative exploration. This paper, grounded in the perspective of traditional cultural innovation, delves into how to integrate design thinking into the curriculum system. It aims to cultivate the original creative capabilities—in both formal expression and creative thinking—of practitioners and inheritors of intangible cultural heritage who possess foundational technical skills. By reforming teaching methods and evaluation mechanisms across multiple dimensions, it provides key pathways for breathing new life into traditional culture, empowering its sustainable inheritance and contemporary transformation through modern design thinking.

Key Words: Design Thinking; Traditional Culture; Intangible Cultural Heritage (ICH); Educational Pathways

Introduction

Chinese traditional culture constitutes a rich and multifaceted cultural system, encompassing profound core elements such as ideological systems, philosophical schools, literary traditions, artistic expressions, folklore, and festivals. The living inheritance and preservation of intangible cultural heritage (ICH) involves neither its static conservation within museums nor the mere replication of traditional crafts by older generations. Rather, it requires a principle centered on "application," ensuring its enduring vitality within contemporary society. Design thinking, with its human-centered, iterative problem-solving ethos, provides a systematic methodology to address the challenges of innovating traditional culture. Its core drivers - strong empathy, problem orientation, interdisciplinary collaboration, rapid

prototyping, and iterative validation- empower us to: Reinterpret & Revitalize: Transform culturally valuable core concepts and outdated expressions, endowing them with contemporary relevance and modern forms to reactivate their inherent vitality. Enrich & Enhance: Supplement, expand, and refine the essence of China's excellent traditional culture, thereby augmenting its influence and appeal. This approach directly aligns with the contemporary imperative for "innovative development and creative transformation".

1. Design Thinking: The Core Driver for Traditional Cultural Innovation

Design thinking is not merely an aesthetic technique, but rather a user-centered innovation process, primarily comprising five stages: Empathize, Define, Ideate,

Prototype, and Test. Within the context of traditional cultural innovation, its value manifests distinctly in the following four aspects:

(1) Deepening Cultural Understanding (Empathize)

Daniel H. Pink observes that the world has shifted from a past era of high rationality into an age emphasizing high sensibility and high concept, marking humanity's entry into an innovative society—a society of creators and empathizers, pattern recognizers and meaning makers. Empathy, essentially synonymous with "perspective-taking," refers to the designer's need for psychological transposition during the observation and synthesis phases. This involves effectively grasping users' emotions and feelings cognitively to achieve a deeper understanding of the user. Information gathered during user interviews is categorized into four types: what users say, what users do, what users feel, and what users think. The "empathy" discussed here, however, signifies a profound comprehension of culture, a deep integration with culture, or even a state of "cultural embodiment." For instance, in a course on innovating traditional pattern design, beyond collecting and extracting raw data, instructors should guide students to transcend superficial appearances. They must delve into the historical context, emotional value, social function, and spiritual core embedded within cultural symbols, grasping the essence of "living inheritance."

(2) Precise Problem Definition (Define)

Within design thinking, the "Define" stage involves synthesizing and refining user information gathered during understanding and observation to identify valuable innovation goals. Its purpose is focus, reinforcing the "user-centered" innovation logic, making user definition paramount. Although a research team may select a "target audience" beforehand, field interviews, observations, and understanding often reveal diverse needs and feelings within this group, leading to re-conceptualization of the user. Innovation design for traditional culture necessitates thorough audience research during the preparation phase, addressing issues such as disengagement among younger generations, shrinking application scenarios, and outdated dissemination methods. Through this research, students

identify the core pain points faced by traditional culture in contemporary dissemination, application, and experience, thereby clarifying the direction for innovation. For example, Liu Zhongping, an inheritor of Foshan woodblock New Year prints, initially persevered solely on the path of traditional inheritance, even facing financial struggles that caused doubt. After attending advanced training at the Academy of Arts & Design, Tsinghua University, she clearly recognized that "ICH must be put to use by people." Consequently, her "Worry-Dispelling New Year Prints" emerged. By resonating with daily life and aligning with the spiritual aspirations of the younger generation, she infused traditional woodblock prints with new contemporary meanings, achieving significant popularity.

(3) Stimulating Cross-Disciplinary Creativity (Ideate)

If the previous two points concern "problem discovery," "problem analysis," and proposing the "direction for solutions," then "Ideate" can be understood as developing the concepts and methods for "solving the problem." It is both a process and a solution set. In design thinking, ideation emphasizes a process—specifically, the formation of concepts through reframing the design challenge based on user definition and key insights. During traditional cultural innovation, we must cultivate students' ability to break free from conventional thinking, drawing inspiration from cultural elements, craft techniques, ritual customs, and philosophical ideas, and boldly integrating these with modern design languages, technologies, materials, and business models.

(4) Rapid Value Validation (Prototype & Test)

A prototype in design thinking refers to the physical manifestation of conceptual ideas using appropriate mediums. Thus, the prototyping process can be viewed as the externalization of a research team's collective intelligence. For creativity, prototypes provide sharper focus and tangible objectives, representing the practical embodiment and experiential testing of ideas. Internally, prototypes serve as a foundation for deeper discussion, significantly enhancing work efficiency. Externally, they allow end-users to grasp creative concepts more

intuitively, greatly reducing communication costs. One of the greatest pitfalls in design is concepts that "remain theoretical abstractions." A key purpose of prototyping is to explore various possibilities for realizing ideas through tangible representations, facilitating rapid iteration. The innovative development of traditional culture fundamentally emphasizes the "principle of application." Therefore, innovative design proposals must seek to create perceivable physical or digital models in a low-cost, high-efficiency manner. These prototypes enable the rapid collection of feedback from real user groups, validating the cultural resonance, market viability, and social value of the ideas, thereby avoiding insular development.

2. Curriculum Design: Constructing an Integrated Knowledge and Competency Framework of "Culture-Thinking-Innovation"

The teaching pathway for design thinking-driven traditional cultural innovation effectively overcomes the previous overemphasis on skill training or stylistic imitation within design curricula. It prioritizes the infusion of cultural depth, reconstructing the course system around three interconnected tiers: Cultural Cognition - Thinking Methodology - Innovation Practice.

Tier 1: Foundational Cultural Literacy

The theoretical curriculum supporting traditional cultural innovation includes, but is not limited to: *Introduction to Chinese Traditional Culture*, *Introduction to Intangible Cultural Heritage (ICH)*, *Cultural Anthropology*, *Traditional Philosophy of Making and Regional Cultural Studies*. These courses systematically build a comprehensive cultural knowledge map. Crucially, fieldwork and practical immersion cannot be neglected at this foundational level. Practical components such as "ICH Workshop Apprenticeships," "Traditional Village/Museum Field Studies," and "Master Artisan Workshops" should be integrated, emphasizing immersive experiences and primary source data collection.

Tier 2: Thinking Methodology

This tier forms the core mediating layer of the curriculum. Key courses include:

Design Thinking Methodology or Design Thinking & Cultural Innovation, *User Research & Experience Design*, *Service Design*, *Sustainable Design*, *Cross-Cultural Design*. These courses systematically impart design thinking tools, processes, and interdisciplinary perspectives. The ultimate outcome of this tier is tool integration, where specific methodologies like cultural symbol analysis, narrative design, and cultural translation are seamlessly woven into the design thinking workflow.

Tier 3: Innovation Practice

This tier focuses on thematic project-based courses, featuring long-term projects centered on specific cultural themes that traverse the entire design thinking process. Examples include: "Regional Cultural Revitalization for New Generations", "Digital Reinterpretation of Traditional Wedding Customs". Furthermore, "interdisciplinary workshops" should be established, collaborating with fields such as History, Literature, Anthropology, Materials Science, Computer Science, and Business Studies. These workshops co-create innovation experiences integrating culture, technology, and business. Finally, project-driven learning is implemented through social innovation initiatives, partnering with entities like community cultural centers, ICH safeguarding institutions, and cultural tourism enterprises to undertake design practices addressing authentic, real-world problems.

3. Teaching Methodology: A Paradigm Shift from Knowledge Transmission to Competency Development

The pedagogical model for integrating design thinking with traditional cultural innovation is inherently complex, primarily oriented towards student-centered, practice-intensive, and collaborative approaches. This manifests in the following five specific teaching modes:

(1) Project-Driven Learning

This mode requires instructors to possess active research or educational reform projects, or to connect with social innovation initiatives. Centered around authentic cultural innovation projects, students engage in the entire design thinking process—from research and

problem definition, through ideation and prototyping, to user testing and iteration—learning and applying design thinking principles through practical experience.

(2) Workshops & Design Sprints

Focusing on specific cultural themes or challenges, this mode involves the intensive, time-constrained application of the design thinking process to rapidly generate prototypes and validate concepts, fostering quick response and collaborative skills. For example, an innovation workshop for the traditional cloth tiger (Bù Lǎohǔ) might proceed as follows:

1. **Mastery:** Students first learn the traditional cloth tiger craft techniques.

2. **Research:** Through fieldwork, they collect cultural characteristics from different regions, summarizing the stylistic variations of the tiger under diverse cultural backgrounds.

3. **Deep Dive:** Students then conduct in-depth research into local cultural identity, extracting distinct visual symbols.

4. **Design:** Equipped with technical knowledge, students develop concrete designs, often aided by computer-aided design (CAD) software.

5. **Prototyping:** Designs are printed as patterns using digital printing technology, then sewn together to create physical prototypes for testing.

6. **Refinement:** Prototypes are refined based on feedback.

7. **Detailing:** Final design specifications are determined, including choices like couching stitch for specific patterns, appliqué embroidery for motifs, and seam allowance placement.

8. **Production:** Finished products are manufactured.

9. **Extension:** Based on the core design, derivative innovations are developed, such as bibs, belly bands, tissue box covers, dolls, and bags.

(3) Case Studies & Design Thinking Facilitation

Deeply analyzing successful global and domestic cases of traditional cultural innovation design effectively teaches the application strategies of design thinking. Works like *Design Thinking Research* (edited by German author Hasso Plattner) and *Design Thinking* (edited by

Chinese scholar Liu Jingwei) offer rich insights into thinking facilitation and the practical application of methodologies. Case-based teaching allows for absorbing advanced international design thinking concepts and the latest domestic research findings. Course and material design should focus on the synergy between innovative/creative thinking and traditional cultural essence, using artistic language to visualize the design thinking process. Analyzing well-known international and domestic cases enhances the course's practical relevance. Additionally, tiered instruction can be implemented based on actual teaching progress and student comprehension levels.

(4) Mentorship & Cross-Disciplinary Collaboration

Adopting a "1+N model," this approach establishes mentor studios led by university faculty, inviting ICH inheritors, cultural scholars, and industry designers to serve as guest mentors or project consultants. Universities define research directions and projects. For instance, folklore research could extend to projects on traditional wedding rituals and systems, further subdivided by dynasty, region, associated artifacts, ceremonies, and taboos. For talent development, semester-long project-driven teaching is structured in four phases: **Initial Transition:** Bridging theory and practice, **Integration:** Merging research and practice, **Mutual Promotion:** Fostering innovation and practice, **Exhibition & Implementation:** Showcasing and translating outcomes into practical applications. This "practice-plus" teaching model facilitates bidirectional learning in ICH theory and practice, achieving seamless integration of the classroom and real-world projects. Students are encouraged to form cross-functional teams combining design, technology, and business expertise. Cross-disciplinary collaboration can also leverage digital empowerment: Partnering with animation students to use VR/AR technology for recreating cultural scenes and enabling immersive research. Utilizing digital modeling and 3D printing for rapid prototyping. Collaborating with computer science students to employ online collaboration platforms for remote communication and resource sharing, or utilizing AIGC (AI-Generated Content) for image generation.

4. Teaching Evaluation System: A Multi-Dimensional Framework Focusing on Process, Competency, and Innovation Value

The evaluation of traditional cultural innovation design thinking must move beyond singular outcome-oriented evaluation. It requires establishing a multi-dimensional, dynamic evaluation system aligned with both the design thinking process and the goals of traditional cultural innovation. Key aspects include:

(1)Diversification of Evaluators

Traditional evaluation models often rely solely on instructors or a designated committee. Design thinking necessitates evaluator diversity, potentially incorporating peers, users, industry experts, and cultural inheritors.

Instructor Evaluation: Focuses on mastery of professional knowledge, logical thinking, methodological application, and solution depth.

Peer Evaluation: Promotes mutual learning, collaborative awareness, and critical thinking.

User/Expert/Inheritor Evaluation: Introduces external perspectives to assess cultural understanding, innovation, practicality, and social value of solutions.

Self-Evaluation: Guides students to reflect on their learning journey, competency development, and areas for improvement.

(2)Multi-Dimensional Evaluation Criteria

Evaluation criteria should encompass diverse dimensions:

Process Depth (Formative Evaluation - 60-70% Weight Recommended):

Research Rigor: Assess depth of cultural background research, user insights, and problem definition accuracy. Evidence: Interview transcripts, research reports, user personas.

Thinking Process: Evaluate divergence and logic in ideation. Evidence: Brainstorming records, mind maps, iterative sketch development.

Collaboration & Communication: Monitor team efficiency and individual communication skills. Evidence: Meeting minutes, role contribution statements, process presentations.

Iteration & Optimization: Track responsiveness to feedback through documented revisions. Evidence: Prototype versions, testing reports, refinement logs.

Outcome Quality (Summative Evaluation - 30-40% Weight Recommended):

Solution Innovation: Assess originality and breakthroughs grounded in cultural understanding.

Cultural Translation Efficacy: Evaluate the effective expression and transformation of traditional elements and spiritual essence within a modern context (Core to TCIDT).

Technical Implementation & Aesthetics: Judge feasibility, appropriateness of craft/technology application, and visual impact.

Value & Impact (Often by Industry Experts/Managers): Estimate potential benefits for cultural dissemination, society, economy, or environment.

Final Deliverable Quality: Model/prototype quality, design report/thesis standardization, final defense/presentation performance.

(3)Diversification of Evaluation Formats

Evaluation should utilize a variety of formats corresponding to diverse student outputs, including but not limited to: Research Reports, Design Sketchbooks, Process Journals, Prototypes / Models, User Testing Reports, Design Documentation, Oral Presentations / Defenses, Exhibition Displays.

Conclusion

Systematically integrating design thinking into higher education professional programs is an imperative choice for responding to national cultural strategies and cultivating design talent for the new era. Only through constructing a curriculum that synthesizes cultural foundations, thinking methodologies, and innovation practices, adopting diversified teaching methods such as project-driven learning, cross-disciplinary collaboration, and digital empowerment, and implementing a dynamic, multi-dimensional evaluation system focused on process, competency, and value, can we effectively guide students in transforming from "passive observers" of culture into "proactive agents" of innovation. This approach

not only enhances the core competitiveness of design professionals, fostering pioneers in cultural innovation, but also injects a continuous stream of wisdom and vitality into the enduring transmission and revitalization of traditional culture. It enables traditional culture to genuinely integrate into modern life and gain recognition on the global stage. The mission of innovative design for traditional culture extends beyond the transmission of techniques and skills. Crucially, it involves cultivating cultural confidence and nurturing an innovative spirit, ultimately empowering the building of a culturally strong nation.

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