

Countermeasure Suggestions for Enabling Traditional Culture to Be Alive and Popular in Liaoning's Classrooms

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Abstract

At the critical phase of Liaoning's 14th-Five-Year cultural reform, traditional-culture teaching in university design majors faces bottlenecks in cases, tools, market access and teachers. Using 32 domestic-overseas cases and a five-column deconstruction template, this paper presents a four-in-one "case library-real-topic pool-teaching staff-data" framework. The replicable "Liaoning Path" turns classrooms into business incubators, offering practical templates for provincial first-class courses and cultivating culture-technology designers for rural revitalization and digital cultural tourism.

Keywords

Traditional culture, design education, case library, digital empowerment, real-world industrial topics, dual-appointment teachers.

1. Introduction

The Project for Inheriting and Developing Excellent Traditional Chinese Culture sets "bringing traditional culture into classrooms, textbooks and learners' minds" as its core task. As the main position for cultural inheritance and innovation, universities' art-design majors undertake the important mission of creative transformation and innovative development of traditional culture. Endowed with rich traditional cultural resources such as Liao porcelain, intangible heritage skills and regional folk customs, Liaoning, an old industrial base in Northeast China, has regarded driving regional industrial upgrading via cultural innovation as a vital direction of higher-education reform in the new era.

The revised Liaoning Provincial 14th-Five-Year Plan for Cultural Development and Reform (2024) explicitly proposes that each university shall build at least one provincial-level first-class curriculum themed "Traditional Culture + Digital Technology". The provincial government allocates special funds of 30 million RMB annually for teaching-method reform, delivering policy guarantee and financial support for teaching reform of traditional culture in design majors.

Nevertheless, against continuously released policy dividends, a mismatch of "enthusiastic policy yet cold practice" appears in classroom implementation, leading to the awkward situation that "policies exist in documents rather than classrooms". In 2024, the research team conducted a questionnaire survey among 12 local universities in Liaoning, covering 236 teachers and 1842 design-major undergraduates. Statistical results reveal that 68 % of teachers lack toolkits for digital translation of traditional cultural elements; 54 % cannot find interdisciplinary partners; 49 % have no access to real-world industrial topics. From students' perspective, 62 % simply equate traditional-culture learning with handicraft skill training; 55 % are confused about market-transformation paths for their design outputs; 48 % hold the view that curriculum evaluation only focuses on visual aesthetics while ignoring comprehensive

criteria for industrial application and cultural communication. The gap between policy orientation and classroom reality demonstrates that policy advocacy alone cannot realize in-depth integration of traditional culture into design courses. It is necessary to tackle broken links in cases, tools, market and teaching staff and establish a complete closed-loop implementation scheme for teaching reform.

Current domestic researches on integrating traditional culture into university design education mostly focus on curriculum concepts or experience summary of individual courses. Systematic countermeasure studies on resource platform construction, introduction of industrial projects, faculty system reform and digitalized teaching-quality supervision are relatively scarce, lacking implementable and replicable holistic solutions. Though some universities have launched optional courses related to traditional culture, they generally suffer scattered teaching cases, shortage of matched digital-technology toolkits, disconnection between teaching and local cultural-tourism industry, and poor participation mechanism for intangible-cultural-heritage inheritors. Accordingly, combining 32 typical domestic-overseas cases of cultural-design teaching and adopting the five-column deconstruction template for teaching-element decomposition, this paper establishes a four-in-one reform framework from four dimensions: teaching-resource construction, introduction of industrial real-world topics, faculty upgrading and digital quality supervision. Supporting three-phased implementation plans are formulated to transform traditional-culture classrooms into business incubators and open the full chain of “classroom teaching-project practice-industrial landing-talent output”. It can provide references for teaching reform of similar universities in Northeast China.

2. Four Broken-chain Issues in Local Traditional-Culture Design Teaching

2.1. Broken Case Chain: Insufficient Supply of Systematic Teaching-case Resources

Teaching cases serve as fundamental support for traditional-culture design teaching. CNKI retrieval shows that qualified textbooks and complete case sets for traditional-culture teaching targeting design classrooms are highly insufficient. The number of relevant textbook entries accounts for less than 5 % of foundational design textbooks such as Three Major Constitutions. Existing teaching materials are mostly limited to superficial display of cultural relic pictures plus textual descriptions, without four-level progressive templates covering “cultural-gene extraction-digital-tool application-scenario construction-revenue-sharing mechanism” [1].

In lesson preparation, front-line teachers spend massive time collecting scattered materials from websites, museum archives and intangible-heritage literatures. Diverse sources and inconsistent screening criteria result in uneven case quality, which prevents teachers from developing coherent and systematic teaching schemes. Most available cases merely introduce traditional patterns and crafts, without illustrating how secondary innovation of local cultural elements can be realized with AI, parametric design and blockchain [2]. Demonstrations of closed-loop processes including student-project implementation, market feedback and benefit distribution are absent. High-quality teaching cases fail to be shared province-wide, leading to duplicated work across universities, waste of teaching-research manpower and obstacles for first-class curriculum construction.

2.2. Page Numbers Broken Tool Chain: Absence of Integrated Digital-technology Toolkits

Innovative digital design for traditional culture requires support from multi-disciplinary technical tool sets. However, current classrooms generally lack integrated toolkits combining AI generation, parametric modeling and blockchain copyright confirmation. Although students master conventional software such as PS and Rhino, they are often at a loss when conducting

digital translation for Liaoning local traditional-cultural elements. Taking innovative design of Liao porcelain patterns as an example, converting traditional patterns into parametric 3D models and further generating NFT digital collectibles demands multiple interdisciplinary capabilities including Python programming, Grasshopper parametric modeling and blockchain smart-contract programming.

Such contents are mostly classified into computer-specialty curricula. Restricted by class hours, design majors can hardly cover above-mentioned technologies. Teachers lack lightweight teaching-oriented integrated toolkits and matching practical tutorials. Students can only produce hand-drawn drafts and renderings instead of conducting in-depth digital reconstruction for traditional-cultural elements [3]. Teaching outputs stay on paper and cannot satisfy real technical demands from digital cultural-tourism and cultural-creative industries [4].

2.3. Broken Market Chain: Teaching-Industry Disconnection

Normalized docking channels between university design classrooms and local cultural-tourism enterprises, regional brands and rural cultural-tourism projects have not been established. Course assignments are mostly submitted in the form of models or renderings without opportunities for real-market validation. Upon course completion, most student-created cultural-design projects are archived and shelved without iteration. Students cannot obtain real-world sales data and user feedback from the market.

The lack of market feedback brings dual negative impacts. On one hand, students cannot perceive social and economic value of their works, which weakens their cultural identity and practical innovation motivation. On the other hand, local cultural-tourism industries and rural-revitalization undertakings fail to access intellectual resources from universities. Universities' advantages in talents and creativity cannot be transformed into driving forces for regional development. Universities, enterprises and rural sectors remain isolated. Curriculum evaluation focuses merely on visual beauty rather than diversified values such as commercial implementation and cultural communication.

2.4. Broken Teacher Chain: Dual-competency Faculty Institutional Barriers

Teaching staff guarantee the implementation of teaching reform. Two types of faculty deficiencies exist in traditional-culture teaching for Liaoning university design majors. First, obstacles block intangible-cultural-heritage inheritors' participation in campus teaching. Possessing local traditional craftsmanship, inheritors constitute precious teaching resources. Nevertheless, under current institutional arrangements, they have no accessible promotion pathways for professional titles [5]. They can only deliver sporadic short-term lectures as external experts and cannot deeply participate in curriculum-syllabus compilation, teaching delivery, project supervision and textbook writing. Thus craftsmanship inheritance can hardly be systematically integrated into university curricula.

Second, young on-campus teachers need improvement in cutting-edge technical capabilities. Many young teachers are enthusiastic about traditional-culture teaching research, yet they lack training on overseas open-educational-resources construction. Their proficiency in emerging technologies such as AIGC generative design and blockchain-based copyright confirmation remains insufficient. Though many universities advocate building dual-competency teaching teams in official documents, supporting training channels, workload recognition and incentive-assessment mechanisms are missing. As a result, dual-competency faculty construction exists mostly on paper.

3. Four-in-one Reform: “Case Library-Real-topic Pool-Staff-Data” System

Targeting broken chains of cases, tools, market and teaching staff, this paper proposes a holistic four-in-one reform system covering resource platform, industrial projects, faculty cultivation and digital quality control to tackle teaching pain points systematically.

3.1. Constructing Provincial-level Liaoning Traditional-culture Teaching Case Library

Led by Liaoning Provincial Department of Education, a provincial one-stop open-source online platform for Liaoning Traditional-culture Teaching Case Library shall be built. Embedded with adaptive heatmap functions, the platform can intelligently recommend two categories of resources: “directly adoptable cases” and “secondary-development-required cases” after teachers input curriculum type, educational stage and specialty domain. Supporting materials including matched codes, STL 3D models and AI training datasets are available for one-click download. Adopting dual backup via GitHub and Notion, the platform ensures permanent open-source access for free use by teachers across provincial universities.

Dynamic updating incentive mechanisms shall be established: contribution of high-quality teaching cases is linked with professional-title assessment. “Annual Top-ten Teaching Case” awards are set up. A yearly Liaoning Traditional-culture Teaching Case Competition is held, with winning works directly incorporated into the provincial case library to continuously enrich platform resources. Clear construction milestones are formulated: by 2025, the case library shall cover 15 provincial universities with 200 stored cases and over 100 000 total downloads; by 2027, platform coverage shall expand to three Northeast-China provinces to build one of China’s leading open-source platforms for traditional-culture design teaching. Co-construction and resource sharing reduce duplicated material-collection workload for teachers and provide ready-made resources for provincial-level first-class curriculum development.

3.2. Industrial Real-topic Pool and Revolving Fund for Culture-Digital Integration

The Department of Culture and Tourism together with the Department of Commerce of Liaoning Province shall annually release 20 industrial real-topic packages. Derived from local governments, cultural-tourism enterprises and e-commerce platforms, these topics include quantifiable indicators such as sales volume, carbon-reduction targets and overseas view counts. Universities bid for project approval to carry out practical curriculum work oriented toward real-world market demands.

A tripartite 1:1:1 co-investment revolving fund operated by government, enterprises and universities is adopted. The principal is returned after crowdfunding success or sales targets are met to realize self-sustaining operation. The “Youth-oriented Red-crowned-crane IP” project in Panjin proves the feasibility of this model, achieving sales of 300 000 RMB plus a government bonus of 30 000 RMB and forming a virtuous teaching-market cycle.

Phased performance objectives are set: by 2026, real-topic projects shall reach cumulative sales of no less than 5 million RMB with community revenue sharing over 500 000 RMB to increase rural income. By 2027, ten high-profit cultural-IP projects with annual sales exceeding one-million RMB will be developed to construct Liaoning local cultural-IP matrix.

3.3. Faculty Upgrading: Dual-appointed Master Craftsmen and Overseas Intensive Bootcamp

Firstly, enforce the dual-appointed master-craftsman system. Outstanding intangible-cultural-heritage inheritors shall be granted the technical title of “Campus-resident Master Craftsman” with remuneration equivalent to associate professors. Campus-resident

craftsmen are required to fulfill compulsory tasks: completing 12-week on-campus or rural teaching practice annually, supervising at least one student crowdfunding cultural-creative project and compiling one textbook chapter. They can jointly apply for provincial-level teaching-research projects with on-campus teachers and enjoy equal project treatment, which institutionalizes inheritors' in-depth participation in curriculum construction.

Secondly, launch the overseas intensive bootcamp program. Every year, 10 outstanding young teachers are selected for two-week special training at MIT and RCA, focusing on open-educational-resource construction, AI generative design and blockchain copyright confirmation [6]. Upon returning home, participants organize bilingual teaching workshops and produce English textbook chapters to improve teachers' international teaching competency. Assessment and incentive mechanisms are optimized: teachers whose supervised student projects gain over 100 000 RMB sales on Modian or TikTok platforms can obtain 48 provincial continuing-education credit hours and receive priority in national-level first-class curriculum application. It is planned to cultivate 20 first-batch bilingual dual-competency teachers by 2025 and build a 50-member international compound-competency teaching team by 2027.

3.4. Data Dashboard and Failure Credit: Quality Supervision and Resilience Cultivation

Innovative digital supervision modes shall be adopted for teaching-quality management. All reform-participating courses connect with Discord Bot, which automatically captures four categories of indicators every six hours: crowdfunding statistics, online view counts, NFT transaction data and community revenue sharing. Visualized early-warning functions are realized via Power BI. Teachers can monitor real-time progress of student groups through mobile APP and intervene timely once learning burnout or project stagnation occurs, replacing traditional manual inspection modes.

A creative "Failure Credit" system is formulated. In the 12th teaching week, an online live-stream review themed "Works I Most Want to Abandon" is held for reviewing lessons learned from failed projects. The audience votes for the most instructive failure case, which is awarded 500 RMB from textbook special funds. Participants must submit formal failure-analysis reports archived in teaching-research files as references for subsequent curriculum iteration. Instead of punishment, the Failure Credit system aims to foster students' resilience and break the single evaluation orientation that only celebrates successful outputs.

Quantified quality assessment indicators are defined: by 2027, students' CPCS-CV cultural-identity score shall improve by no less than 20 %; the FID value of AI-generated contents shall be below 10; curriculum-driven sales or total online exposure shall surpass one-million-RMB. The annual Liaoning Traditional-culture Teaching Quality White Paper shall be published publicly to disclose reform outcomes and accept social supervision.

3.5. Three-phased Implementation and Outreach Plan

The whole reform scheme shall be carried out step-by-step in three phases and gradually expanded outward.

2025 (Foundation-building Phase): The provincial case library covers 15 provincial universities; total sales of curriculum practical projects exceed 1 million RMB. Liaoning Traditional-culture Teaching Case Collection is published as designated teaching material for provincial teacher training to consolidate foundations for local teaching reform.

2026 (Quality-improvement and Expansion Phase): National-planned textbooks and bilingual MOOC resources are produced; reform outcomes cover three Northeast-China provinces. The Northeast-Asia Traditional-culture Education Forum is hosted with university delegates from

Japan, Republic of Korea and Russia invited, so as to enhance international influence of Liaoning's teaching-reform solutions.

2027 (Output and Replication Phase): Local Liaoning reform experience is promoted overseas to build a talent-export highland for "culture-technology designers". Ten cultural IPs with annual sales above one-million-RMB are cultivated. Traditional-culture classrooms are truly transformed into business incubators, drivers for rural prosperity and amplifiers for Chinese-story communication.

4. Conclusion

Transforming classroom teaching methodologies into industrially viable operational strategies delivers a localized solution from Liaoning universities for nationwide traditional-culture innovative education. When course assignments can directly launch crowdfunding campaigns, when digital dashboards detect students' learning burnout in advance, and when failed projects can obtain recognition and rewards, iteratively evolving teaching resources, commercially viable practical courses and locally rooted stable teaching teams can be achieved.

More than the cradle of China's industry, Liaoning has potential to grow into a digital engine for the rejuvenation of excellent traditional Chinese culture. The four-in-one "case library-real-topic pool-staff-data" model proposed in this research tackles broken-chain dilemmas in traditional-culture teaching for university design majors. Leveraging policy dividends and local Liaoning cultural resources, it links teaching, technology, market and talent sectors and realizes quantifiable, profitable and replicable traditional-culture teaching. It promotes traditional culture to take root in university classrooms and achieve real vitalization.

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