

## Research on the Strategy of Integrating Intangible Cultural Heritage into University Design Aesthetic Education Courses Empowered by Digital Intelligence Technology

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### ABSTRACT

Intangible cultural heritage (ICH) embodies the aesthetic genes of Chinese culture, and its innovative development serves as a crucial pathway to enhance cultural confidence. Currently, integrating ICH deeply into design aesthetic education in higher education institutions is imperative to achieve dynamic inheritance and elevate the essence of aesthetic education. However, this integration faces multiple challenges: weak awareness and low engagement among young students regarding ICH; limitations in traditional dissemination methods and a scarcity of high-quality teaching resources; the absence of standardized digital resource libraries and interdisciplinary platforms; and inefficient teaching methodologies that struggle to support personalized and innovative learning. This study, based on a digital-intelligence-enabled framework, systematically addresses four dimensions—"what to teach" (curriculum content), "how to teach" (teaching methods), "who teaches" (faculty composition), and "teaching effectiveness" (instructional evaluation)—through literature analysis and case studies. The proposed systemic strategies include: (1) Curriculum restructuring: Introducing an ICH innovation and transformation module to enhance interdisciplinary collaboration; (2) Teaching method innovation: Utilizing VR/AR and AIGC tools to achieve immersive learning and intelligent design assistance; (3) Faculty optimization: Establishing a dual-mentor system combining "ICH inheritors + academic supervisors" to improve digital literacy and transformation capabilities; (4) Evaluation mechanism refinement: Developing a multi-dimensional dynamic assessment system incorporating feedback from industry experts and other stakeholders. This study aims to break through the bottleneck of fragmented ICH teaching resources and superficial technological applications, exploring pathways to transform ICH into "computable and interactive digital genes." It provides theoretical references and practical solutions for cultivating interdisciplinary design talents with both cultural confidence and innovative capabilities, thereby contributing to the construction of a distinctive Chinese aesthetic education system.

*Keywords:* ICH, digital intelligence technology (DIT), design aesthetic education courses in universities, integration strategy.

### INTRODUCTION

ICH embodies the genetic code of Chinese culture, carrying traditional aesthetic values and collective national memory. Its creative transformation and innovative development have become a contemporary imperative for promoting China's outstanding traditional culture, enhancing cultural confidence, and revitalizing the vitality of national culture (Li, 2025). Driven by the urgency of ICH preservation and the need to construct a modern aesthetic education system with Chinese characteristics, the systematic integration of ICH resources into design-based aesthetic education in higher institutions represents not only an active exploration of dynamic heritage transmission (achieving "living heritage through people, objects, and daily life"), but also a crucial pathway for excavating national aesthetic genes, enriching aesthetic education connotation, shaping students' cultural identity, and establishing a distinctive Chinese aesthetic education system. This has emerged as a significant interdisciplinary research field combining art studies, pedagogy, and information technology (Xu & Zou, 2022). ICH embodies profound cultural value and unique aesthetic education potential, reflecting the ecological wisdom of "harmony between man and nature" and "following the laws of nature," as well as the craftsmanship spirit of "pursuing excellence" and "educating through beauty" in Chinese culture (Xie, 2014). Through carefully designed teaching processes, aesthetic perception can be integrated with hands-on practice, guiding students through a progressive learning journey of "craft reproduction (experiencing techniques)—cultural decoding (understanding historical origins, philosophical concepts, and symbolic meanings)—creative transformation (modern design applications)." In this process, students not only master traditional craftsmanship techniques and norms ("skills" and "methods") but also comprehend the philosophical and aesthetic principles of creation, such as "objects as vehicles for the Dao,"

achieving a progression from skill acquisition to cultural internalization and ultimately to innovative application (Liu, 2020). However, the integration of intangible cultural heritage (ICH) into design aesthetic education in higher education still faces significant challenges: (1) Low student awareness and engagement. Influenced by modern lifestyles and popular culture, young students generally lack understanding of the historical-cultural significance and aesthetic value of ICH, resulting in weak interest and poor interactive foundations in teaching (Yan & Li, 2023). (2) Limited dissemination methods and resource scarcity. Traditional offline exhibitions and master-apprentice transmission models have restricted coverage, making it difficult to reach broader youth audiences across temporal and spatial constraints. Classroom teaching predominantly relies on images, videos, or limited physical artifacts, failing to provide immersive experiences for material properties, craftsmanship processes, or nuanced aesthetic appreciation. Systematic and standardized high-quality ICH teaching resource databases and textbook development remain underdeveloped. (3) Absence of interdisciplinary platforms. There is a lack of comprehensive digital sharing platforms that effectively support cross-disciplinary research and blended online-offline teaching (Fan *et al.*, 2024). (4) Inefficient pedagogical approaches. Traditional methods like craft demonstrations and manual production are time-consuming, while innovative tools—such as design simulation, visual analytics, and interactive evaluation—are insufficiently adopted. These limitations hinder personalized, inquiry-based learning for large student cohorts and fail to sustain long-term motivation or foster deep innovative thinking. Achieving profound, effective, and innovative ICH integration into design aesthetic education has thus become an urgent issue requiring resolution (Zhao,2025). The rapid development of digital intelligence technologies (DIT) centered on artificial intelligence presents significant opportunities to address the aforementioned challenges (Li, 2023). For instance, VR/AR/MR technologies can construct virtual ICH workshops, restore historical scenes, and simulate production processes, offering students a deeply immersive "time-travel" learning experience that greatly expands their perceptual dimensions. Digital intelligence technologies are not merely tools for substitution but serve as a key driver in reconstructing the teaching model of integrating ICH into design aesthetic education. They provide systematic support across multiple dimensions, including creative inspiration, dissemination efficiency, resource integration, and teaching precision, thereby holding promise for resolving the current core dilemmas. This study will focus on the core concept of "digital-intelligent technology empowerment" to thoroughly investigate its mechanisms and implementation strategies across four dimensions—"what to teach, " "how to teach, " "who teaches, " and "teaching effectiveness" (Jiang & Jia, 2017)—in integrating ICH into design aesthetic education in higher education. It aims to explore a sustainable integration pathway driven by intelligent technology, rooted in cultural heritage, and oriented toward design innovation.

## LITERATURE REVIEW

### Current Status of the Integration of ICH and Aesthetic Education in University Design Teaching

Current integration practices primarily face the following issues:

#### *Insufficient integration of the curriculum system*

The integration of ICH often appears fragmented, typically existing in the form of elective or general courses, lacking a structured curriculum with progressive levels. Traditional craft courses predominantly remain at the level of technical imitation, with insufficient advanced course designs that decode ICH cultural symbols and explore their aesthetic connotations. Consequently, students struggle to transition from "skill inheritance" to "cultural innovation".

#### *Lagging integration of teaching methods and resources*

University-local collaborations are often scattered and sporadic, with only a few institutions establishing long-term incubation mechanisms with ICH workshops (e.g., the cooperative development of cultural and creative products between universities and Miao embroidery workshops in western Hunan, which lacks integrated industry-academia-research database support and suffers from low resource utilization). The imbalance in regional resource integration is particularly pronounced (e.g., insufficient teaching and development of southern tie-dyeing and wood carving ICH projects by northern universities), hindering cross-regional cultural fusion (Zhang,2024).

#### *Shortcomings in faculty professionalization*

The lack of interdisciplinary faculty is a major bottleneck. Most aesthetic education teachers in universities lack practical skills in ICH techniques and rely heavily on theoretical instruction. While the introduced ICH inheritors possess hands-on experience, their courses often become fragmented due to insufficient teaching experience. The proportion of teachers who have undergone systematic training remains low, making it difficult to effectively establish the dual-track teaching model of "ICH inheritor + academic mentor" (Zhang & Shu,2025). Additionally, teachers' understanding of ICH often remains superficial, focusing only on technical skills while failing to explore the deeper cultural logic embedded in ecological wisdom and craftsmanship spirit.

#### *Inadequate technological transformation and innovation quality*

The application of digital intelligence technologies exhibits a superficial tendency. Although some universities have adopted VR/AR technologies, they are primarily utilized for scene reconstruction, failing to empower symbolic recreation and interactive design innovation, e.g., the digitization of woodblock New Year paintings mostly remains at scanning and archiving, with rare cases integrating big data analysis for pattern recombination or dynamic narrative design (Yan & Li · 2023). Furthermore, the integration between traditional craftsmanship and modern design remains inadequate, with most projects still confined to simplistic collages of "traditional patterns + modern carriers," while cases achieving technological iteration are scarce.

### Characteristics of digital and intelligent technologies empowering education

In the current digital era, DIT, characterized by integration, intelligence, innovation, personalization, and openness, has emerged as a core engine driving innovation and development across various industries, as shown in the table 1 (Tafari, 2023). For design aesthetic education in higher education institutions, DIT has not only profoundly transformed teaching content and methods but also opened new pathways for the inheritance and innovation of ICH elements. The deep integration of digital intelligence technologies in the educational field is driving the transformation of teaching paradigms toward personalization, intelligence, and precision. Educators can leverage intelligent analytical tools to achieve learning diagnosis, resource adaptation, and dynamic assessment, significantly enhancing teaching efficacy (Zhang *et al.*, 2022). In the realm of ICH education, digital intelligence technologies demonstrate unique value. For instance, through virtual reality (VR) and augmented reality (AR) technologies, students can immerse themselves in experiencing ICH craftsmanship (such as Peking Opera facial makeup painting and traditional embroidery), deepening their understanding of cultural connotations and fostering cultural identity through interactive operations.

Digital intelligence technologies provide technical support for the contemporary transformation of ICH. Leveraging digital media and generative digital intelligence technologies (AIGC), ICH elements can be disseminated and displayed through new forms such as dynamic imagery, 3D modeling, and interactive installations, thereby infusing traditional art with modern vitality (Wei & Xin, 2024). In design and aesthetic education within higher education, instructors can guide students to integrate ICH symbols, craftsmanship, or aesthetic concepts into course practices, employing modern methodologies such as parametric design and algorithmic generation for deconstruction and re-creation. Digital intelligence technologies catalyze interdisciplinary knowledge integration, injecting multidimensional perspectives into ICH education. By synergizing disciplines such as computer science (technology development), psychology (user experience), sociology (cultural context), and management (project operation), a systematic cognitive framework for ICH phenomena can be constructed (Dong *et al.*, 2025). At the practical level, universities can establish "multi-teacher collaborative" classrooms (e.g., joint teaching by art, engineering, and humanities instructors) or industry-academia collaboration platforms (e.g., involving ICH inheritors and technology enterprise mentors) to promote deep "industry-academia-research" cooperation.

Table 1: Key Characteristics of Digital and Intelligent Technologies Integration

Characteristic	Connotation description
Integration	Organically combining digital technology, information processing with traditional knowledge, cultural resources, etc., to form new ways of production and life.
Intelligent	By utilizing technologies such as artificial intelligence and big data analysis, we can deeply mine and apply data to enhance the scientific and accurate nature of decision-making.
Innovativeness	Encourage cross disciplinary and cross disciplinary cooperation, stimulate new ideas and concepts, and promote industrial transformation and upgrading.
Personalization	By analyzing user data, we provide customized products and services to meet the personalized needs of different users.
Openness	Use Internet platforms and technologies to promote knowledge, skills and experience sharing and enhance social inclusiveness and diversity.

### RESEARCH METHODS

The empowerment of education through digital and intelligent technologies represents a profound systemic transformation, with its core lying in the reshaping and optimization of the entire educational teaching chain. This study is based on an analytical framework encompassing four key dimensions ("what to teach"—curriculum content, "how to teach"—teaching methods, "who teaches"—teaching faculty, and "how well it is taught"—teaching evaluation), as illustrated in Figure 1, aiming to address the following challenges:

The challenge of "what to teach": How can traditional curriculum systems adapt to rapidly evolving knowledge demands and personalized learning pathways?

The challenge of "how to teach": How can existing teaching methods cater to diverse learning styles and enhance higher-order thinking skills?

The challenge of "who teaches": How can the role and professional competencies of teachers be transformed to align with the digital and intelligent educational ecosystem?

The challenge of "how well it is taught": How can a single summative evaluation scientifically quantify the effectiveness of process-oriented learning and the development of ICH literacy? Focusing on the integration of ICH into design aesthetic education courses in higher education, this study is grounded in the characteristics and applications of digital intelligence technologies. Centered around the aforementioned four dimensions, it systematically reviews relevant domestic and international theories and practices through literature analysis, and conducts in-depth case studies of exemplary practices (such as the experience of Nanjing Institute of Technology) for comprehensive discussion. The core objective is to propose targeted and

feasible strategic solutions to promote the sustainable development of ICH integration into design aesthetic education courses empowered by digital intelligence technologies.

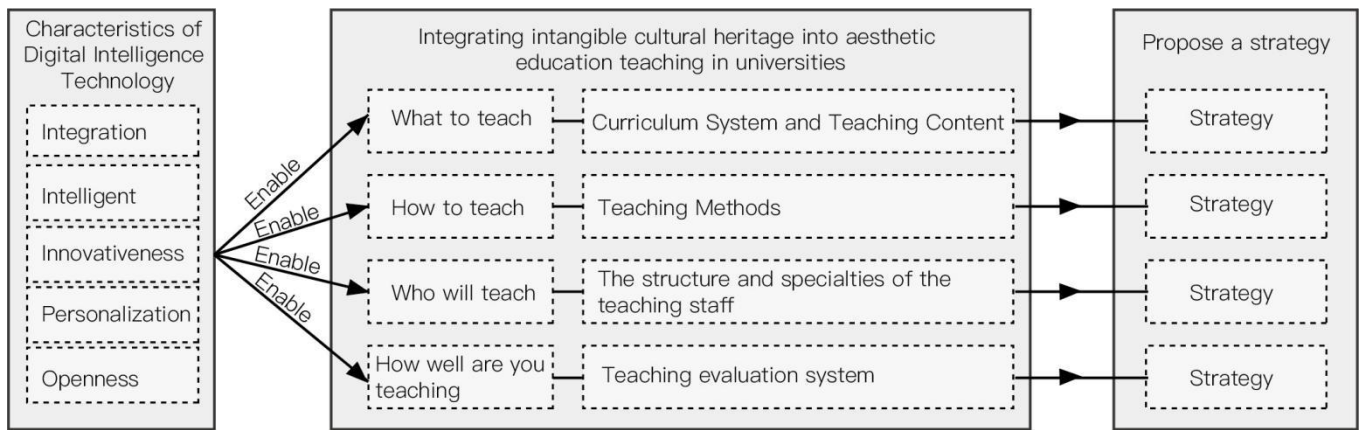


Figure 1: Analytical Framework for Integrating ICH into University Design Aesthetic Education Empowered by DIT

### STRATEGIES FOR INTEGRATING DIGITAL AND INTELLIGENT TECHNOLOGIES TO INCORPORATE ICH INTO DESIGN AND AESTHETIC EDUCATION COURSES IN HIGHER EDUCATION

#### "What to Teach": Integration and Reconstruction of the Curriculum System and Teaching Content

In the era of DIT, the systematic integration of ICH elements into design aesthetic education in higher education institutions primarily involves the deep integration and restructuring of the curriculum system and teaching content. In response to the current state of design aesthetic education, the following dimensions can be explored:

##### Optimizing the curriculum system structure

The design aesthetic education curriculum system in higher education institutions should align with the development of the times and closely integrate the needs of ICH inheritance and innovation. Specialized ICH art appreciation course modules can be introduced to systematically present the artistic characteristics, craftsmanship techniques, and cultural connotations of ICH from different regions, thereby laying a cognitive foundation for students. For instance, the teaching team at Nanjing Institute of Technology reformed the course "Cultural and Creative Design," establishing a digital-intelligence-technology-empowered, ICH-integrated aesthetic education pathway encompassing "preliminary research—field investigation—creative ideation—outcome transformation—multidimensional evaluation" (as illustrated in Figure 2).

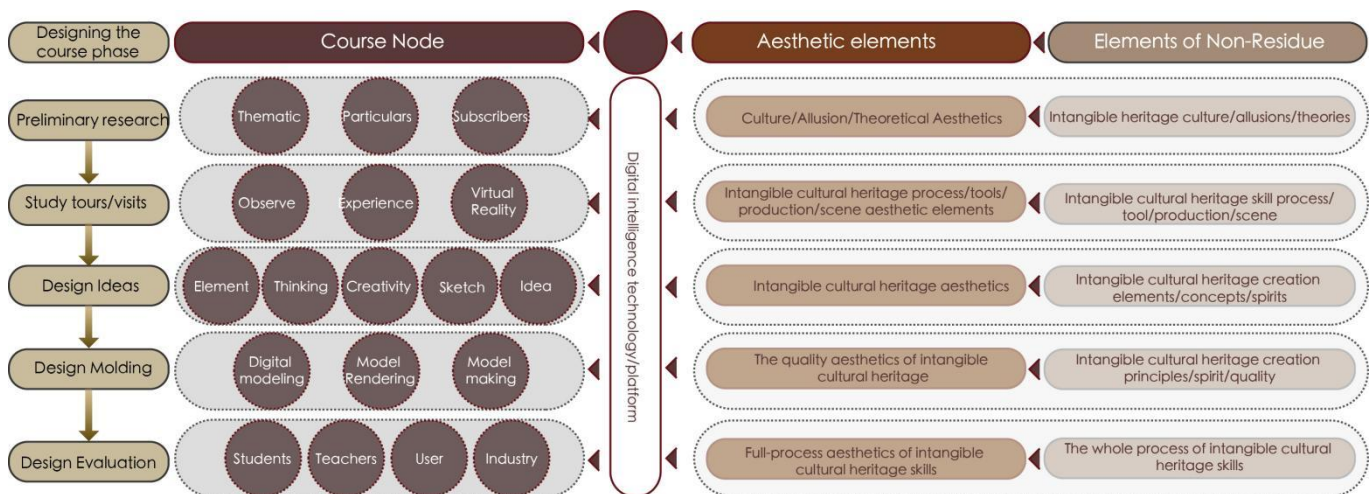


Figure 2: Integration Process of ICH and Aesthetic Education Elements in Design Curriculum Nodes and Methods

##### Deepening the integration of teaching content

The teaching content should transcend the boundaries between tradition and modernity to achieve organic integration. Universities must break through the traditional-modern divide, guiding students to combine the essence of traditional art with contemporary design concepts, with a strong emphasis on cultivating innovative thinking and practical skills. Using specific ICH projects as design practice platforms enables students to experience the charm of ICH and apply modern design language for innovative transformation through project-driven learning. Actively incorporating digital technologies (e.g., CAD, VR/AR) provides innovative tools for understanding, mastering, and recreating the artistic techniques of ICH.

### ***Expanding the practical teaching platform***

Practical teaching serves as the core component of design aesthetic education. Universities should actively seek collaborations with ICH preservation institutions, traditional craft workshops, and cultural creative enterprises to jointly establish practical teaching bases. By engaging students in hands-on participation in authentic ICH preservation, revitalization, or product development projects, they can apply theoretical knowledge to practice, thereby deepening their understanding and mastery of intangible cultural heritage elements.

### ***Promoting interdisciplinary curriculum collaboration***

Promoting interdisciplinary curriculum development is crucial for enhancing teaching quality and fostering comprehensive student competencies. Universities can explore the creation of cross-disciplinary courses such as "ICH Arts and Digital Technology," "Traditional Craftsmanship and Materials Engineering," and "Cultural Heritage and Brand Communication." By integrating knowledge, methodologies, and perspectives from diverse disciplines, these courses cultivate students' ability to synthesize cross-boundary design skills, thereby expanding innovative applications of ICH elements in contemporary design.

## **"How to Teach": Digital and Intelligent Innovation in Teaching Methods and Approaches**

### ***Innovative instructional content design***

Universities should deeply explore the cultural genes, historical contexts, craftsmanship essence, and symbolic meanings of ICH projects, transforming them into structured teaching resources. Course content can utilize multimedia technologies such as high-definition imagery, 3D models, and animated demonstrations to vividly present the production processes, artistic characteristics, and cultural values of ICH. By incorporating typical case studies, students can be guided to explore strategies for deconstructing, translating, and reconstructing ICH elements in modern design. For instance, the team at Nanjing Institute of Technology has developed a four-in-one approach for the digital preservation and teaching resource development of ICH, comprising "digital acquisition (high-precision scanning/multispectral imaging) — 3D modeling (parametric restoration) — pattern analysis (knowledge graph technology)—resource integration (structured data)" (as shown in Figure 3). This approach establishes a foundational database encompassing elements, such as patterns, colors, and forms, along with an interactive virtual craftsmanship system.

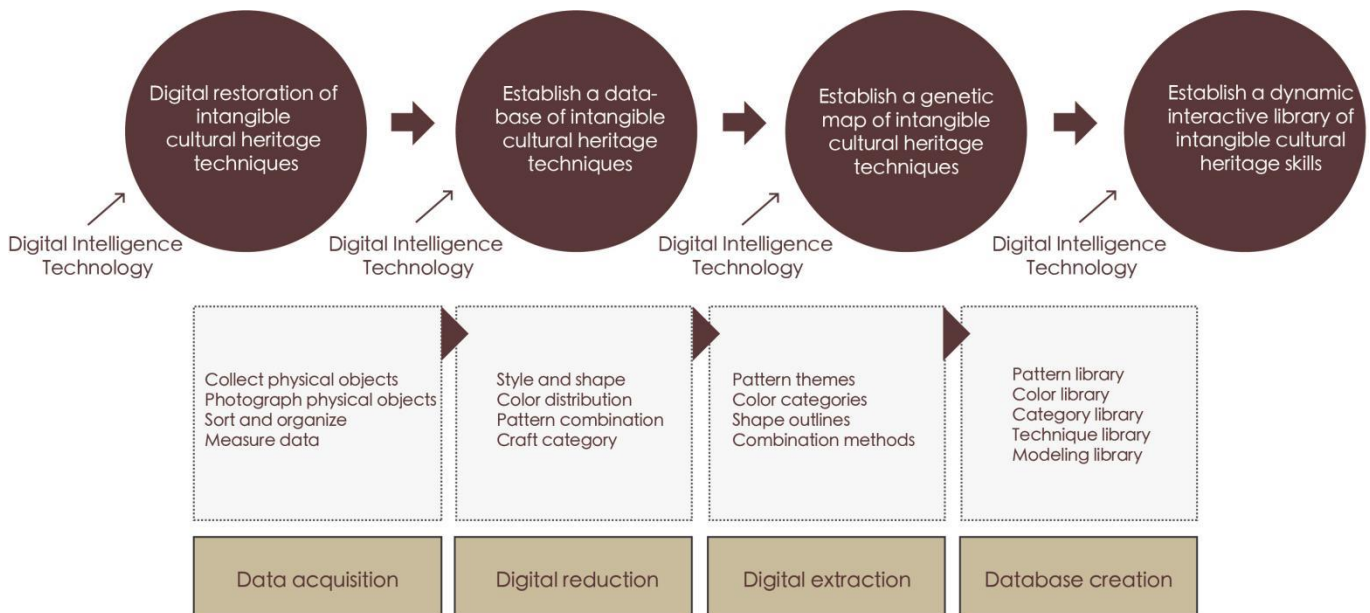


Figure 3: Process of Digital Protection and Resource Library Construction for ICH

### ***Upgrading teaching methods and approaches***

Universities are actively adopting student-centered approaches such as project-based learning, flipped classrooms, and workshops on the basis of traditional teaching. Group research and practice are organized around specific ICH themes, completing full-process projects from cultural research to artwork creation. Cutting-edge technologies like VR/AR, digital twins, and AIGC are fully utilized to construct immersive virtual ICH experience scenarios (e.g., virtual workshops, digital museums), simulating digital practices of traditional craftsmanship to stimulate creative inspiration.

### ***development of shared digital resources***

Leveraging online platforms and digital libraries, we systematically integrate and develop high-quality digital teaching resource repositories for ICH, including high-definition image libraries, craft documentaries, and digital archives. Students are encouraged to participate in the digital documentation, organization, and research of ICH (e.g., field investigations, oral history collection, 3D scanning) to deepen their understanding, enhance information literacy, and contribute to resource development. For instance, the Nanjing Institute of Technology team has developed a hierarchical digital teaching platform integrating ICH craftsmanship and design aesthetic education (as shown in Figure 4). This platform adopts a closed-loop architecture of "demand-driven (user profiling) – resource transformation (knowledge graph/parametric genetic units) – tool empowerment (generative design/VR creation/intelligent assistance) – evaluation feedback." It integrates intelligent toolkits (e.g., StyleGAN adversarial generation, VR immersive creation, adaptive learning recommendations, AI teaching evaluation) to form a digital solution covering 12 core teaching scenarios.

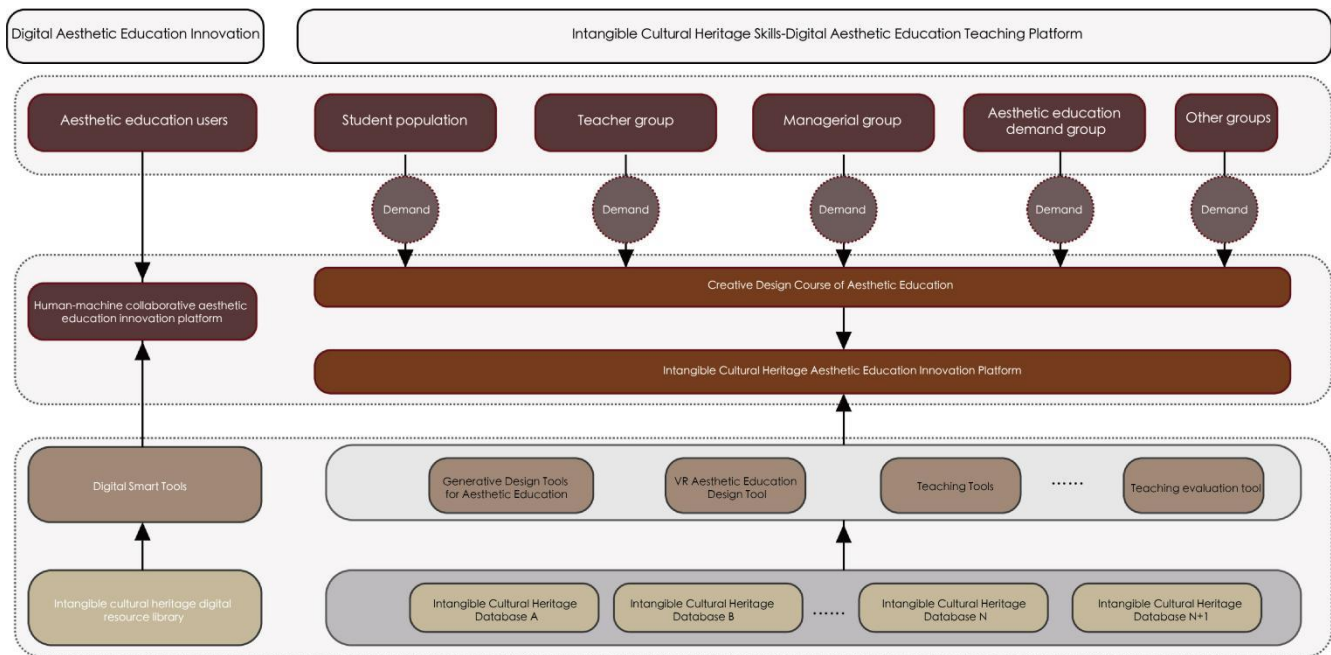


Figure 4: Architecture of the Integrated ICH Skills and Design Aesthetic Education Teaching Platform

### Structural Optimization and Professional Development of Faculty Teams

Under the backdrop of DIT, the key to deeply integrating ICH elements into design aesthetic education in higher education lies in building a professional faculty team that possesses a profound understanding of ICH, modern design literacy, and digital technology application capabilities. To this end, it is essential to focus on optimizing the faculty structure and promoting the continuous development of teachers' professional competencies.

#### *Establishing a diversified and complementary faculty structure*

Universities should actively expand talent recruitment channels, with a focus on attracting interdisciplinary experts, master artisans, and representative inheritors who possess both ICH skills and modern design experience into the faculty. It is essential to establish a "dual-qualification" teaching team composed of academic professionals and industry practitioners in ICH. This approach fosters complementary advantages in theoretical instruction, skill transmission, and innovation guidance, providing students with an integrated learning experience that bridges traditional wisdom and modern perspectives.

#### *Strengthening professional competence training for teachers*

For in-service teachers, universities should establish and improve a regular and systematic mechanism for enhancing ICH literacy and digital skills. Specialized training workshops, seminars, and academic lectures should be organized periodically, inviting ICH researchers, experienced inheritors, and digital technology experts to deliver lectures, thereby deepening teachers' understanding of the cultural connotations, core techniques, and contemporary value of ICH. Teachers should be encouraged and supported to engage in practical training and field research in ICH heritage sites or preservation institutions to accumulate firsthand experience and enrich teaching cases and materials. Additionally, training in digital design tools (e.g., CAD, 3D modeling), new media technologies (VR/AR), and AIGC applications should be strengthened to enhance their ability to utilize digital and intelligent means for ICH teaching and creative endeavors.

#### *Promoting deep integration of teaching and research*

Establish a virtuous interaction mechanism of "research feeding teaching and teaching driving research." Universities should actively set up special research projects in areas such as ICH protection, revitalization and innovation, and digital inheritance, encouraging faculty to conduct interdisciplinary research. Through in-depth academic exploration, faculty members' theoretical expertise and cutting-edge insights in the field of ICH can be enhanced. Research outcomes (such as new theories, methods, case

studies, and technological applications) should be promptly translated into high-quality teaching resources and innovative instructional content, infusing continuous vitality and academic depth into curriculum design.

### ***Collaborative optimization of majors and curriculum construction***

Leveraging the professional expertise and research foundation of the faculty, we dynamically optimize the training directions and curriculum design for the art and design program. Targeted specialized course directions or modules can be established, such as "Traditional Craftsmanship and Innovative Design," "Digital Protection and Dissemination of ICH," and "Regional Culture and Brand Design." Faculty members are encouraged to develop design practice projects and graduation design topics centered on ICH projects, based on their research and practical experience. This approach guides students in applying their acquired knowledge to address real-world challenges in ICH preservation and innovation, effectively enhancing their practical skills, innovative awareness, and cultural responsibility.

### **Scientific Construction and Dynamic Improvement of the Teaching Evaluation System**

Establishing and continuously improving such a scientific, diversified, and dynamic teaching evaluation system can provide effective quality monitoring and continuous improvement mechanisms for integrating ICH elements into design aesthetic education. This ensures the achievement of teaching objectives and ultimately cultivates outstanding design talents with comprehensive development in knowledge, skills, and competencies.

### ***Digital intelligence technologies empower the evaluation process***

Leverage digital platforms (e.g., LMS learning management systems, portfolio platforms) and data analysis tools to facilitate the convenient collection, storage, analysis, and visualization of evaluation data. For instance, employ online evaluation systems for multi-rater scoring and feedback aggregation; utilize data analytics to track student learning trajectories and competency development; and adopt digital portfolio systems to comprehensively showcase processes and outcomes, thereby enhancing the efficiency and objectivity of assessments.

### ***Designing diversified evaluation dimensions***

The evaluation system should transcend a singular outcome-oriented approach and establish a comprehensive assessment framework encompassing multiple dimensions and levels, as shown in the table 2:

Table 2: Dimensions of the Teaching Evaluation System

Teaching evaluation dimensions	Evaluation connotation
Knowledge mastery	The level of understanding of theoretical knowledge such as the cultural background, artistic features, and core skills of ICH.
Skill application level	The ability to extract, transform, design, express, and produce ICH elements using traditional techniques or digital methods.
Design thinking	The ability to extract, transform, design, express, and produce ICH elements using traditional techniques or digital methods.
Cultural Understanding and Inheritance Awareness	The depth of understanding of the cultural connotations and values of ICH, as well as the sense of cultural respect and inheritance responsibility reflected in design.
Teamwork and communication skills	Performance in project practice and interdisciplinary collaboration.

### ***Introducing multiple evaluation entities***

Breaking the single-teacher evaluation model, a multi-agent evaluation network is constructed, incorporating student self-assessment (to promote reflection), peer evaluation (to cultivate critical thinking), teacher evaluation (for professional guidance), and assessments by industry experts/ICH inheritors (to provide authoritative opinions on technical and cultural accuracy), as shown in the table 3.

Table 3: Multiple Evaluation Subjects and Their Roles

Evaluation subject	Evaluation value
Student self-assessment	Promote students' self reflection and metacognitive development
Peer review	Cultivate critical thinking and collaborative learning atmosphere
Teacher evaluation	Provide professional perspectives and academic guidance
Evaluation by industry experts/inheritors of ICH	Provide authoritative opinions from dimensions such as industry standards, skill proficiency, and cultural accuracy

## **RESEARCH CONCLUSIONS**

This study focuses on strategies for leveraging digital and intelligent technologies to deeply integrate ICH into university design and aesthetic education courses, aiming to address the core challenges in the integration process. Research indicates that although the incorporation of ICH into design and aesthetic education holds significant value for preserving cultural genes, enhancing

aesthetic connotations, and fostering cultural identity, its progress has long been constrained by structural challenges such as insufficient cognitive engagement among young students, limitations of traditional dissemination methods and teaching resources, the absence of standardized digital resource libraries and interdisciplinary platforms, and the inadequacy of conventional teaching methods in meeting personalized and innovative learning needs.

Digital intelligence technologies offer a critical pathway to address the aforementioned challenges. Their core value lies not merely in tool substitution but in the systematic reconstruction and empowerment of four key dimensions: "what to teach" (curriculum content), "how to teach" (teaching methods), "who teaches" (faculty structure), and "teaching effectiveness" (evaluation mechanisms). The strategic framework proposed in this study—restructuring the curriculum system, innovating teaching methodologies, optimizing faculty composition, and refining evaluation mechanisms—effectively resolves current integration dilemmas by transforming ICH resources into computable, interactive, and innovative digital teaching elements. This approach pioneers a new pathway for cultivating interdisciplinary design talents equipped with cultural confidence, aesthetic literacy, and innovative capabilities.

This study provides an actionable strategic framework for systematically integrating ICH into design aesthetic education in higher education institutions. It helps overcome resource and technological bottlenecks, promotes the dynamic inheritance and innovative development of ICH, and ultimately contributes to the construction of a Chinese aesthetic education system with distinctive characteristics and the enhancement of cultural confidence.

### RESEARCH LIMITATIONS AND FUTURE PERSPECTIVES

This study is primarily based on literature review and case analysis. Future research should validate the effectiveness and generalizability of the strategies through more extensive empirical studies, such as multi-school pilot programs, questionnaire surveys, and teaching experiments.

The rapid iteration of digital and intelligent technologies necessitates continuous attention to the application potential and challenges of emerging technologies (such as the metaverse and more advanced AIGC tools) in ICH education.

Further exploration and refinement are needed for the operationalization and quantitative assessment of qualitative evaluation indicators such as "cultural understanding and heritage awareness."

The specific implementation pathways for cross-regional and inter-institutional resource sharing mechanisms and platform construction require further in-depth research.

### ACKNOWLEDGMENT

This work is partially supported by the Nanjing Institute of Technology Talent Introduction and Research Start up Fund (Grant No.: YKJ202457), the Humanities and Social Sciences Research Special Project of the Central Financial Support for Local University Reform and Development Fund, Research Project on Artificial Intelligence General Education Teaching Reform in Jiangsu Province Universities (Grant No.: 2024AIEGE70), Graduate Teaching Resource Construction Project of Nanjing University of Engineering (Grant No.: 2024JC11), Key Project of Higher Education Research at Nanjing Institute of Technology in 2022 (Grant No.: 2022ZD04) and the Art Education Curriculum Construction Project of Nanjing Institute of Technology (Grant No. JXJS2025MY11).

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