Analysis of the Integration Path Between University Labor Courses and Pressed Flower Intangible Cultural Heritage

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Abstract: This paper explores the feasibility and practical pathways of integrating university labor practice courses with the intangible cultural heritage (ICH) art of pressed flower painting through the case study of the "Flowers as a Medium" project at Suqian University. By analyzing the achievements of pressed flower art in technological innovation, artistic creation, aesthetic education promotion, and industrial application, the study demonstrates the multifaceted value of incorporating ICH into labor education. The findings reveal that this integration not only enhances students' vocational skills and aesthetic literacy but also facilitates the living transmission of intangible cultural heritage, while providing new perspectives for cultural and creative industry development in the context of rural revitalization. From the dimensions of curriculum design, practice models, and achievement transformation, this paper proposes concrete recommendations, offering both theoretical references and practical exemplars for the synergistic development of higher education labor practices and ICH preservation.

Keywords: Labor Education in Higher Education; Intangible Cultural Heritage (ICH); Pressed Flower Art; Integrated Symbiosis; Cultural and Creative Industries

1. Introduction

With the increasing national emphasis on traditional cultural heritage and labor education, how universities can achieve deep integration of intangible cultural heritage (ICH) with labor practices through curriculum innovation has become a crucial research topic [1]. As an ICH project combining natural aesthetics and manual craftsmanship, pressed flower art, with its interdisciplinary characteristics, provides an enriching medium for labor education. Based on the practical experience of Suqian University's "Flowers as a Medium" project, this paper systematically analyzes the theoretical foundations, implementation pathways, and social values of integrating pressed flower art into university labor courses, aiming to establish a replicable model for peer institutions.

2. Educational Value of Intangible Cultural Heritage Pressed Flower Art

2.1 Deepening and Expanding Cultural Transmission Functions

The cultural transmission function of pressed flower art essentially bridges "natural materials—artisanal techniques—humanistic spirit" into an integrated continuum. Through hands-on practice, it achieves the pedagogical goal of "knowledge transmission through manual practice and mental engagement," thereby providing an effective pathway for intangible cultural heritage to take root among younger generations [2].

2.1.1 Living transmission of traditional floral culture

Pressed flower art employs botanical specimens as mediums to materialize the symbolic meanings traditionally associated with Chinese flora - such as the resilience of plum blossoms, the nobility of orchids, the humility of bamboo, and the reclusive spirit of chrysanthemums (see Figure 1) - through artistic creation. A representative case is the "Four Gentlemen of Flowers" thematic project: Students engage in collecting, desiccating, and assembling plant materials representing these four emblematic species. This hands-on practice facilitates their transition from intellectual understanding to emotional resonance with these cultural symbols, achieving pedagogical sublimation from "cognitive knowledge" to "affective connection."

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Figure 1. "Four Gentlemen in Flowers" Pressed-Flower Artwork

Visualizing Solar Term Culture: Using the 24 solar terms as thematic, seasonal flora (e.g., willow branches for Qingming, maple leaves for Frost's Descent) are transformed into pressed-flower artworks. This process converts abstract phenological knowledge into tangible artistic forms, thereby enhancing cultural memorability. (See Figure 2).

Figure 2. Pressed-Flower Bookmarks of the Twenty-Four Solar Terms

2.1.2 Fusion of poetic imagery and craft aesthetics

Pressed flower art, by employing "flora as brushes," recreates the artistic conceptions of classical poetry, serving as an interdisciplinary vehicle for cultural transmission.

(1) Poetic Scene Construction:

For instance, inspired by Qingming, a heptasyllabic quatrain by Tang Dynasty poet Du Mu, students compose dried floral collages to experientially comprehend the visual aesthetics of poetry (see Figure 3).

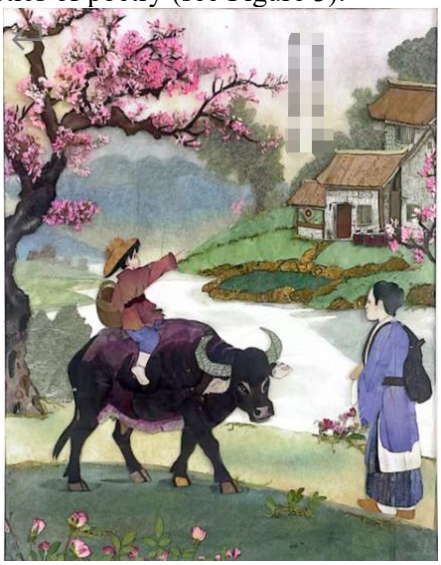

Figure 3. Poetic Pressed-Flower Artwork

(2) Extension of Traditional Craft Techniques:

Incorporating Chinese painting principles like "negative space" and "dynamic balance between void and substance," learners employ pressed floral materials to emulate classical art styles (e.g., Yongzheng Emperor's Twelve Months Pleasure Album), achieving contemporary interpretations of traditional artistic language (see Figure 4).

Figure 4. Pressed-Flower Artwork in Classical Painting Style

2.1.3 Productive preservation of intangible cultural heritage

The ICH attributes of pressed flower art manifest not only through technical transmission, but more significantly through

revitalizing its contemporary vitality via labor practices.

(1) ICH Value in Technical Processes:

From harvesting and shade-drying to mounting, students fully replicate traditional craft procedures. This hands-on engagement with "artisanal workflows" reveals the scientific wisdom embedded in ICH (e.g., ancient plant color-preservation formulas).

(2) Innovative Interpretation of Regional Culture:

By incorporating local characteristics (e.g., Suqian's "Xiang Yu Culture" and "Liquor Culture") into thematic creations, the practice facilitates ICH's transition from "museum conservation" to "living applications" (see Figure 3).

2.1.4 Mechanisms of cultural identity formation

Through pressed flower art practice, students develop cultural identity across three dimensions:

(1) Cognitive Dimension:

Acquiring knowledge of plant symbolism systems (e.g., pine/cypress representing fortitude, red beans conveying longing)

(2) Affective Dimension:

Experiencing the connection between natural materials and humanistic values during creation (e.g., using lotus flowers to express Zen concepts of "untainted purity" and "flowering reveals Buddha-nature") (Figure 5)

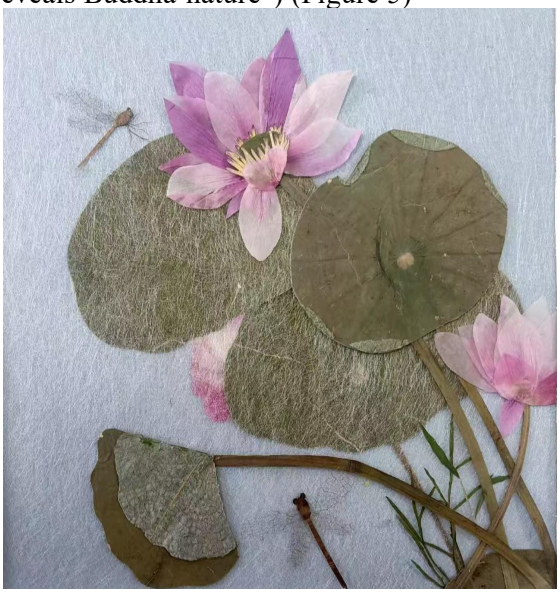

Figure 5. Lotus-Themed Pressed Flower Artwork

(3) Behavioral Dimension:

Becoming active ICH transmitters through exhibitions and community engagement (Figure 6)

Figure 6. Community Pressed-Flower Art Activity

2.2 Pressed Flower Art as a Vehicle for Labor Education

Pressed flower art serves as an innovative pedagogical medium that synergizes natural aesthetic education with hands-on labor training, systematically developing students' technical competencies, aesthetic sensibilities, and creative cognition [3]. Encompassing the complete pedagogical chain from botanical foraging and material preparation to artistic composition, this practice fully embodies the "hand-brain coordination" principle mandated in China's Guidelines for Strengthening Labor Education in Primary, Secondary and Tertiary Institutions for the New Era.

Botanical Foraging: Labor Cognition and Ecological Observation

Technical Skills Development:

(1) Acquiring specimen identification and selection techniques for optimal pressing results, mastering sustainable harvesting methods (including plant trauma minimization and phenological timing optimization)

Ecological Ethos Cultivation:

Fostering biophilic consciousness through understanding conservation imperatives and developing sustainable wildcrafting protocols (See Figure 7)

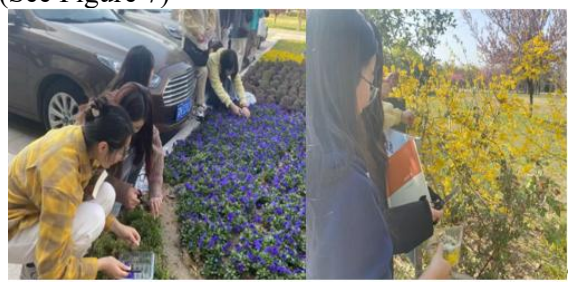

Figure 7. Field Study and Plant Collection

(2) Material Processing: Precision Labor and Scientific Thinking

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Drying Techniques:
Students learn to process botanical materials using various methods (flower presses, desiccants, or natural air-drying), cultivating patience and meticulous operational skills.
Scientific Inquiry:
Through observing morphological changes during plant dehydration, students investigate how moisture content, temperature and other factors affect pressing outcomes, thereby developing systematic experimental thinking (See Figure 8).

Figure 8. Plant Material Processing

(3) Artistic Creation: Integration of Creative Labor and Aesthetic Education
Design Composition:
Students create collages based on color theory and morphological principles, enhancing spatial arrangement skills and aesthetic expression capabilities (Figure 9).

Figure 9. Composition Design for Pressed Flower Art

Handcrafting:
Utilizing tools like adhesives and tweezers to complete artworks, this process refines fine motor skills and instrument proficiency.
Interdisciplinary Application:
By integrating language arts (composing pressed-flower themed poetry), biology (plant structure analysis), and visual arts (color harmony), the practice achieves comprehensive "Labor+" educational outcomes (Figure 10).

Figure 10. Interdisciplinary Applications of Pressed Flower Art

(4) Achievement Exhibition & Reflection: Perception of Labor Value
Through exhibitions, charity sales, and gift production activities, students experience the social value of their labor outcomes, thereby enhancing their sense of accomplishment.
Guided reflection on the production process—identifying both successful techniques and areas for improvement—cultivates critical thinking and a continuous improvement-oriented work ethic.

2.3 Interdisciplinary Educational Advantages

Pressed flower art transcends traditional craftsmanship to serve as a STEAM (Science, Technology, Engineering, Arts, Mathematics) pedagogical medium. Through creative practice, students integrate multidisciplinary knowledge in authentic contexts, cultivating holistic competencies and innovative capacities [4].
(1) Science – Botanical and Materials Science Exploration
Botanical Knowledge:
Studying morphological characteristics, cellular structures, and dehydration responses of various flora to understand plant color preservation and drying principles.
Materials Experimentation:
Investigating how drying methods (natural pressing, silica gel desiccation, microwave dehydration) affect plant morphology and pigmentation, developing variable control and data analysis skills.
(2) Technology – Instrumentation and Innovative Methods
Traditional Techniques:
Mastering tools like flower presses and desiccants to refine fine motor skills.
Digital Integration:
Incorporating laser cutting and 3D printing to create pressed flower frames/decorations, bridging traditional craft with digital fabrication.
(3) Engineering – Systems Thinking and Problem-Solving
Drying System Design:
Optimizing environmental controls (temperature/humidity) to engineer efficient pressing devices, fostering engineering mindset.
Preservation Solutions:
Developing UV-resistant sealing and mounting methods to extend artwork longevity, enhancing systemic problem-solving abilities.
(4) Arts – Aesthetic Expression and Creative Design

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Color and Composition:
Applying artistic principles (contrast, symmetry, negative space) in floral collages to elevate visual communication skills.
Cultural Synthesis:
Creating culturally rich artworks by blending Chinese ink painting aesthetics with Western collage techniques, advancing dual development of aesthetic and humanistic literacy.

3. Practice Pathways for Symbiotic Integration

3.1 Curriculum System Design

The "Flowers as a Medium" project establishes a tiered and progressive pressed flower art curriculum following the "Cognition-Skills-Creation" pedagogical logic, balancing universal training with individualized development to form a complete Closed loop from knowledge acquisition to innovative application.
(1) Foundational Stage (Cognition): Natural Observation & Aesthetic Initiation
This phase cultivates students' perceptual abilities toward natural materials. Through systematic plant identification training, students master classification features of campus flora while deeply understanding structural characteristics of plant organs and their suitability for pressed flower art. Color perception training employs seasonal comparison methods to build a systematic color cognition framework, integrated with color psychology theory to comprehend emotional expression principles. This stage uniquely merges natural science observation with artistic aesthetic initiation, developing students' material sensitivity and appreciation.
(2) Intermediate Stage (Skills): Technical Mastery & Craft Practice
Focusing on professional skill development, this stage employs comparative experiments in drying techniques, allowing students to evaluate process variations through hands-on practice while documenting environmental impacts (temperature/humidity) on outcomes. Color preservation training emphasizes safety protocols while encouraging innovative solutions. Composition design introduces formal art principles through case studies to cultivate aesthetic judgment. The pedagogical innovation lies in integrating craft practice with scientific inquiry, fostering empirical rigor and problem-solving abilities during technical training.
(3) Advanced Stage (Creation): Cultural Integration & Innovative Application
This phase emphasizes comprehensive innovation capabilities. Cultural-themed creations require deep understanding of traditional connotations expressed through contemporary pressed flower forms (e.g., merging classical painting compositions with modern materials). Cultural product development adopts market-oriented approaches, considering practicality and commercial viability. Digital derivatives expand traditional boundaries, developing cross-media adaptation skills. The stage's distinction lies in synthesizing cultural heritage with modern innovation while nurturing entrepreneurial thinking and interdisciplinary integration for career readiness.

3.2 Industry-Academia-Research Collaborative Model

3.2.1 On-campus practice initiatives
The program has established a multi-level teaching system through structured labor education courses:
Fundamental Courses: Teach basic skills including plant collection and drying techniques
Creative Practice Courses: Focus on artistic creation, with professional designers providing instruction on composition techniques and color coordination
The campus cultural festival features:
Pressed Flower Art Exhibition Zone
Interactive Experience Area
Competition and Evaluation Events
These initiatives actively engage faculty and students across the university.

Figure 11. Pressed Flower Art Exhibition at Campus Culture Festival

A specially curated intangible cultural heritage (ICH) exhibition section - "Traditional Crafts Meet Contemporary Pressed Flowers" - showcases innovative integrations with ICH

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techniques such as round silk fan making and ceramic art (Figure 11).

3.2.2 Social service initiatives

The program has established long-term collaborative mechanisms with neighborhood communities, implementing regular monthly "Pressed Flower Bookmark DIY" volunteer activities at community cultural centers where student volunteers serve as instructional assistants. A dedicated "Community Pressed Flower Art Corner" has been created to periodically exhibit collaborative works by residents and students, forming a sustainable platform for ongoing cultural dissemination (Figure 12).

Figure 12. Community Pressed Flower Art Service Program

3.3 Outcome Transformation and Evaluation

3.3.1 Commercialization outcomes

The project has established a comprehensive multi-dimensional evaluation and promotion system. Regarding competitions and patents, students have participated in prestigious events such as the "Internet Plus" Innovation and Entrepreneurship Competition for College Students and National Art Performances, winning a total of 8 provincial-level or higher awards over the past three years, including 1 gold medal. Under the guidance of professional instructors, students have successfully obtained 2 utility model patents for their independently innovated pressed flower mounting techniques and drying equipment, realizing the transformation of technological innovations into intellectual property.

3.3.2 Academic outputs

The project emphasizes the integration of theoretical and practical research. Leveraging university research platforms, an innovation team comprising faculty members, ICH inheritors, and students has been established to conduct studies on the preservation and innovation of pressed flower art. The team has guided students in publishing six research papers, including "The Application of Traditional Pressed Flower Art in Modern Aesthetic Education", providing valuable teaching references for peer institutions.

3.3.3 Media dissemination

A multidimensional promotion network has been developed:

Operation of the "Floral Research" WeChat official account, regularly featuring student works, event documentation, and technical tutorials, with followers exceeding 12,000 and top-performing posts reaching 35,000 views

Four feature reports by local television stations and other media outlets, significantly enhancing the project's social influence

Over 100,000 cumulative video views on new media platforms (Douyin, Bilibili) for creative works, attracting broader public engagement with innovative traditional craft preservation

4. Analysis of Practical Outcomes

4.1 Educational Effectiveness

The integration of pressed flower art into labor education courses has significantly enhanced students' hands-on skills, aesthetic literacy, and innovative capacities. Through the program, students have not only mastered fundamental techniques including plant collection, drying, and color preservation, but have also developed artistic expression and creativity through composition design and cultural-themed creations. For instance, in a university's "ICH Pressed Flower Workshop," student works themed on the "24 Solar Terms" became highlights of campus cultural festivals, with several pieces selected as provincial-level exemplary cases in labor education and showcased at teacher training conferences. Furthermore, students have gained deeper understanding of the scientific principles and cultural significance behind traditional crafts, achieving synergistic development of vocational skills and humanistic [5].

4.2 Cultural Impact

The practice outcomes of pressed flower art have generated extensive influence through exhibitions, competitions, and media coverage. Campus events like cultural festivals, ICH exhibitions, and craft fairs have attracted substantial participation, with select works featured in provincial cultural exchange activities as vehicles for traditional culture dissemination. A representative case is the "Hometown of Xiang Yu" pressed flower artwork created by Suqian students, which

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blends local history with ICH techniques. This work not only sparked campus discussions but was also adopted by local tourism authorities for promotional use. Additionally, student-run social media accounts documenting creative processes and cultural interpretations have expanded ICH's reach, transforming preservation from static conservation to dynamic transmission.

4.3 Economic Value

The industrialization of pressed flower art has created new income streams for farmers and artisans, realizing the "art-empowered rural revitalization" model. By developing cultural products (bookmarks, home décor, accessories), the project collaborates with agricultural cooperatives to transform surplus flowers/foliage into value-added goods, increasing local participation. In one "ICH + Poverty Alleviation" initiative, trained homemakers and elderly residents became pressed flower artisans, achieving nearly ¥10,000 annual income growth per capita through online/offline sales. This "aesthetic education + industry" approach has not only stimulated rural economies but also provided student entrepreneurship platforms, establishing a sustainable ecosystem benefiting education, culture, and economic development [6].

5. Development Recommendations

5.1 Technology Development Pathways

We recommend establishing an interdisciplinary R&D team to focus on three key technological breakthroughs:

developing bio-based eco-friendly color-preservation materials through collaboration with agricultural universities to create novel preservatives using natural components like plant polyphenols;

building intelligent drying systems that integrate temperature/humidity sensors and IoT technology for automated process control;

(3) creating digital design platforms utilizing AI algorithms to assist with composition design and establish pressed flower pattern databases [7].

5.2 Industrial Integration Strategies

The implementation of a "Pressed Flower+" industrial integration plan is proposed, including: developing themed study tours like "ICH Pressed Flower Experience Day-Trips" with AR guide systems in cultural tourism; designing five-senses therapeutic course packages combining aromatherapy for the wellness industry; producing STEM education kits incorporating botany and materials science knowledge for education; and creating regional IP products such as pressed flower souvenirs featuring local agricultural specialties for rural revitalization. We suggest piloting 3-5 focus areas to establish replicable business models, while forming an industrial alliance and hosting regular supply-demand matchmaking events to facilitate project commercialization [8].

5.3 Sustainable Development Mechanisms

To ensure sustainable development, we recommend: establishing market-oriented operation mechanisms to create a "research-through-production" virtuous cycle; exploring social enterprise models to reinvest partial profits into R&D and talent development; building digital management platforms for resource integration and achievement sharing; engaging third-party evaluators for regular assessments of educational, economic and social impacts; and establishing regional collaboration networks for experience exchange and technical sharing to expand project influence [9,10].

6. Conclusion

The organic integration of university labor education with intangible cultural heritage (ICH) pressed flower art represents both an innovative approach to the living transmission of traditional culture and an enrichment of labor education's conceptual dimensions. By establishing a progressive "cognition-skills-creation" curriculum framework, developing university-local-enterprise collaborative education mechanisms, and creating diversified outcome transformation pathways, this project has achieved three-dimensional value enhancement: educationally by cultivating students' vocational literacy and innovative capacities, culturally by facilitating the creative transformation of ICH techniques, and economically by exploring new models for cultural creative industries.

This integrated practice not only provides a replicable new paradigm for labor education in the new era, but more significantly demonstrates the boundless possibilities of

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merging traditional culture with modern pedagogy, offering valuable insights for constructing a labor education system with Chinese characteristics. Future development through digital empowerment and cross-regional collaboration can further deepen the project's substance, positioning it as a vital vehicle for both transmitting China's outstanding traditional culture and nurturing a new generation of talent.

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