

The Innovative Integration of Mianzhu New Year Paintings to Conserve Intangible Cultural Heritage within Vocational Graphical Design Education

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<b>KEYWORDS</b> <i>Innovative Integration; Intangible Cultural Heritage; Mianzhu New Year Paintings; Vocational Graphic Design Education; Sustainable Design</i>	<b>ABSTRACT</b> The increasing demand for innovative design professionals, coupled with sustainable design practices and the appreciation for handcrafted traditions within China's digital economy, necessitates the incorporation of intangible cultural heritage, such as Mianzhu New Year paintings, into vocational graphic design education. This integration is essential for supporting Sustainable Development Goal 4 (Quality Education), SDG 11 (Sustainable Cities and Communities) and achieving a balance between technical training and cultural preservation. This research seeks to investigate successful integration pathways and assess their influence on students' capacity to convert historic materials into contemporary design languages, as well as the practical applicability of their creations under the two hypotheses. An experimental methodology using project-based learning, varied resources, and digital tools was implemented throughout an 8-week intervention, comprising a control group utilizing standard lecture-based instruction and an experimental group consisting of 90 sophomore graphic design students from Sichuan Tianyi University. Data were gathered by structured questionnaires, semi-structured interviews, and design work analysis, and were examined in terms of creative design capability, technique application, digital tool proficiency, inheritance willingness, cultural value cognition, and dissemination behavior. T-tests and correlation analysis were employed in conjunction with descriptive statistics for the analysis. This research presents a replicable model for vocational colleges to incorporate local intangible cultural heritage into their curricula, enhances students' dual competencies in skills and cultural literacy, and supports the living preservation of Mianzhu New Year paintings. A strong positive correlation was found between creative design ability and awareness of intangible cultural heritage, with the experimental approach demonstrating significance at p<0.001... ..
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1. INTRODUCTION

Contemporary design education in Western nations has established a thorough framework, but China's vocational graphic design education, rooted in traditional art instruction since the 1980s, is progressively diverging from industrial demands (Zhang & Burapajetana, 2024). Intangible cultural heritages (ICH), such by Mianzhu New Year paintings (recognized as national ICH in 2006), face obstacles in preservation. The fragmentation of digital media reduces its "deep experiential dissemination" (Liu, 2012), while younger generations demonstrate a disinterest in their vivid color contrasts, expressive "gold lines," and hybrid woodblock artistry. In contrast, vocational design education encounters three major challenges (Sun, 2020): an excessive dependence on Western design paradigms, such as Bauhaus principles, which neglect local heritage; a lecture-centric pedagogical method that fails to amalgamate traditional elements with modern design; and inadequate utilization of digital technologies, including augmented reality and 3D modeling, for cultural innovation. Digital transformation offers solutions. Ke (2009) asserted that technology like augmented reality can "reconstruct traditional



artistic language" to bridge legacy and modernity. Moreover, school-enterprise collaboration. Wang (2018) and Pansuwong et al., (2023) provided realistic contexts for the implementation of conventional features that bring skills from the social interaction, sharing knowledge which affected to social innovation development. This study investigates the incorporation of Mianzhu New Year paintings into vocational graphic design education via project-based learning, digital tools, and local resources, emphasizing heritage preservation and educational practicality.

Initial surveys performed by Zhang and Burapajetana (2024) found three fundamental issues with deficiencies in design education: 1) Inadequate cultural understanding: 76.7% of the surveyed students possessed no prior exposure with traditional art; consequently, most were unable to recognize the fundamental components of Mianzhu New Year paintings (e.g., cinnabar red hue, door-god symbolism), leading to a superficial implementation in design. The gap between theory and practice is apparent, as traditional lectures constituted 60% of the control group's training, prioritizing historical knowledge rather than element deconstruction. As a result, merely 32% of the control group succeeded in digitizing traditional patterns, but 87% of the experimental group accomplished this task. 3) Failure to utilize local resources: Sichuan Tianyi University has failed to create systematic collaboration with Mianzhu New Year painting workshops; 88.3% of students participate exclusively in classroom practice, leading to restricted exposure to genuine craftsmanship and industrial projects. This led researchers to investigate how Mianzhu New Year paintings may be innovatively incorporated into vocational graphic design education to strengthen students' capacity to alter elements and improve the practical applicability of their integrated design results. The research purpose is to evaluate the efficacy of a multi-dimensional integration model (PBL + varied resources + digital technologies) and to clarify the "practice-cognition-inheritance" mechanism that supports successful integration. Based on the two hypotheses:

Hypothesis 1: The innovative integration of project-based learning with varied resources and digital tools is anticipated to augment students' ability to translate elements of Mianzhu New Year paintings into contemporary design languages and enhance the practical applicability of their creations, as opposed to traditional lecture-based instruction. Independent sample t-tests will be utilized to assess post-test differences between the experimental and control groups.

Hypothesis 2: A positive link exists between students' professional competencies in element transformation and digital tool use and their awareness of intangible cultural heritage preservation. Validation will be performed utilizing Pearson correlation analysis (r).

## 2. LITERATURE REVIEW

### Mianzhu New Year Painting

Mianzhu New Year artwork is a prominent example of the "Four Representative Creations," distinguished by its distinctive styles and influences. Data from Yunqin Tang Gallery, 2020 (Qian, 2023) reveals that the four principal phases in the fabrication of New Year paintings are: 1) the artisan outlines the pattern's contour on thin paper; 2) the paper is adhered to wooden boards and carved into images, including patterns. The design is segmented into several sections according to the color scheme, comprising no more than six divisions. The wooden panels have been gradually colored and printed on paper. The most esteemed locations for the creation of New Year photographs are Yangliuqing in Tianjin, Taohuawu in Suzhou, Wuqiang in Hebei, and Mianzhu in Sichuan, China. Mianzhu New Year paintings originated in Mianzhu City, Sichuan Province, boasting a history over 400 years, dating back to the late Ming and early Qing dynasties. Recognized as a national intangible cultural heritage in 2006, they function not only as folk artworks but also as carriers of regional culture, embodying Sichuan's folk customs, moral values, and aesthetic traditions during seasonal festivals, life cycle rituals, and popular religious practices (Liu, 2012).

Zhang (2018) delineated four key characteristics of New Year artworks as follows: 1) Vivid color contrast: Bold, saturated hues, specifically cinnabar red, bright yellow, and indigo are employed using the peculiar "water-filling foot" technique. This technique utilizes color layering to create a vibrant, luminous look, yielding visually attractive paintings that are impactful from afar. 2) Symbolic composition: Symmetrical arrangements are common, especially in door-god paintings, where figures are strategically placed to create a balance between dynamism and stability (e.g., two door gods flanking a doorway). This symmetry enhances their ritual significance, symbolizing harmony and safeguarding. 3) Expressive "golden lines": Fluid and rhythmic contour lines, known as "gold 勾勒" in Chinese, delineate forms and patterns. The meticulous brushwork utilized in these lines amplifies depth and vibrancy, making subjects appear realistic and animated. Hybrid handicraft amalgamates woodblock printing with hand-painting to augment details such as facial expressions and hues. This method maintains the integrity of conventional procedures while allowing for artistic diversity, guaranteeing the distinctiveness of each work.

The theme of Mianzhu New Year paintings categorized by subject matter into Character-based, Animal-based, Plant-based, and Folk custom scenes, illustrates its creative value through three dimensions: uniqueness, character, and environment.

### Teaching and Learning in Vocational Graphic Design Education

Vocational graphic design education encounters challenges related to curriculum limitations, disjointed teaching methods, and insufficient technical integration of traditional culture into the instructional process. Many programs continue to adhere to Western design frameworks, lacking adequate content on Chinese folk art. Textbooks and case studies focus predominantly on designs from first-tier cities, overlooking regional heritage such as Mianzhu New Year paintings. Lecture-



based methods prevail, emphasizing theoretic knowledge rather than practical application. Project-based learning (PBL) and collaboration between schools and enterprises are insufficiently employed, resulting in students' difficulties in applying traditional concepts to contemporary design (Bangbon et al., 2023; Li, 2024; Channuwong et al., 2018). Although digital tools such as Adobe software are included in the curriculum, there is a lack of courses that instruct students on how to utilize these tools to analyze or reinterpret elements of Mianzhu New Year painting, thereby constraining their capacity for innovation with traditional symbols.

Vocational graphic design education faces issues pertaining to curriculum constraints, fragmented pedagogical approaches, and inadequate technological incorporation of traditional culture into the educational process. Numerous programs persist in following Western design paradigms, insufficiently addressing Chinese traditional art material. Textbooks and case studies primarily emphasize designs from first-tier cities, neglecting regional history like Mianzhu New Year paintings. Lecture-centric approaches dominate, prioritizing theoretical understanding over practical implementation. Project-based learning and collaboration between educational institutions and businesses are inadequately utilized, leading to students' challenges in applying conventional notions to modern design (Li, 2024; Channuwong et al., 2025). Despite the inclusion of modern resources like Adobe software in the curriculum, there is an absence of classes that teach students how to employ these technologies to examine or reinterpret aspects of Mianzhu New Year art, thereby limiting their potential for innovation with traditional symbols.

The incorporation of Mianzhu New Year paintings into vocational graphic design education requires a multifaceted strategy, consistent with the primary aims of this study: to augment students' ability to creatively reinterpret aspects of New Year paintings into modern designs and to enhance the practical relevance of their integrated design results. As Huang (et al., 2024) proposed that the modern advancement provides both opportunities and challenges in balancing innovation with cultural conservation. Therefore, the principal ways to improve element transformation accuracy and innovation encompass PBL-driven project practice, digital technology facilitation, and school-enterprise collaboration.

### 3. METHOD

The methodology is segmented into three components pertinent to the research, as outlined below:

- 1) Instructional approaches: Conventional lecture-based teaching (control group, focusing on theoretical elucidations of Mianzhu New Year paintings and fundamental skill development) contrasted with project-based learning (experimental group, emphasizing the practical implementation of Mianzhu New Year painting components through design initiatives).
- 2) Curriculum resources: The control group employed a singular textbook, predominantly concentrating on Mianzhu New Year paintings as presented in the textbook material. The experimental group utilized a variety of tools, including textbooks, digital databases, field trips to the Mianzhu Workshop, and expert lectures to deepen the comprehension of Mianzhu New Year paintings.
- 3) Technical support: The Technical support entails a juxtaposition of traditional tools, such as hand-drawing and physical media, used by a control group to underscore the conventional representation of Mianzhu New Year painting elements, against digital media tools, including Adobe Photoshop, 3D modeling, and augmented reality, utilized by an experimental group to accentuate the digital representation and innovation of these elements.

The three independent factors affect the occurrence of the dependent variables, which are: The ability to proficiently incorporate and adapt elements of New Year paintings into modern designs, assessed by the precision of element extraction, pertains to the degree to which students accurately identify and extract representative components (colors, patterns, craftsmanship) from Mianzhu New Year paintings. The current design adaptation entails the inventive reinterpretation of extracted aspects within modern contexts, such as converting traditional door-god motifs into digital stickers or brand visuals. The practical applicability of integrated design results can be evaluated by analyzing the significance of New Year painting aspects in connection with practical design contexts, including cultural and creative product packaging and local tourism poster design. The industry applicability must be assessed from the viewpoints of Mianzhu New Year painting inheritors or cultural enterprise professionals concerning their capacity for actual production or promotion. Data were gathered from 298 sophomore graphic design students in the 2024 cohort at Sichuan Tianyi University. A cohort of 90 students (15 from each class) was chosen via stratified random sampling to maintain equilibrium in gender, academic achievement, and previous traditional art experience. The participants were categorized into two groups: a control group (n=45) that underwent conventional lecture-based instruction, and an experimental group (n=45) that engaged in project-based learning (PBL) enhanced with varied resources and digital tools. The data gathering instruments comprise a questionnaire, a semi-structured interview technique, and a design work evaluation scale. The aim is to evaluate the excellence of students' design projects that incorporate aspects of Mianzhu New Year painting.

### 4. RESULTS AND DISCUSSION

#### Results



**Quantitative analysis:** The method will utilize descriptive statistics to calculate the mean, standard deviation, and frequency of questionnaire items, thereby illustrating the overall performance of the 90 sampled students in the two dependent variables: the pre-test and post-test scores pertaining to element transformation ability and practical adaptability. Inferential statistics will be employed to analyze group disparities and correlations among variables, including: The independent sample t-test will be employed to examine differences in key dimensions of creative design ability, technique application, digital tool operation, and ICH inheritance awareness between the experimental and control groups, at both pretest (to verify baseline homogeneity) and posttest (to assess the effects of teaching interventions). This test will calculate p-values, degrees of freedom ( $df=88$ , based on 90 total samples), and Cohen's  $d$  (to evaluate effect size), thus establishing the statistical significance of the observed differences as illustrated in Table 1 and Table 2.

**Table 1 Pre-test and t-test Results (Experimental vs. Control)**

Dimension	t-value	df	p-value	Interpretation
Creative Design Ability	1.02	88	0.31	No significant difference ( $p > 0.05$ )
Technique Application	0.98	88	0.33	No significant difference ( $p > 0.05$ )
Digital Tool Operation	0.87	88	0.39	No significant difference ( $p > 0.05$ )
Cultural Value Cognition	1.15	88	0.25	No significant difference ( $p > 0.05$ )
Inheritance Willingness	1.09	88	0.28	No significant difference ( $p > 0.05$ )
Dissemination Behavior	0.93	88	0.35	No significant difference ( $p > 0.05$ )

**Table 2 Post-test and t-test Results (Experimental vs. Control)**

Dimension	t-value	df	p-value	Cohen's $d$	Interpretation
Creative Design Ability	6.92	88	$<0.001$	1.45	Highly significant, large effect
Technique Application	6.31	88	$<0.001$	1.32	Highly significant, large effect
Digital Tool Operation	5.27	88	$<0.001$	1.10	Highly significant, large effect
Cultural Value Cognition	6.58	88	$<0.001$	1.38	Highly significant, large effect
Inheritance Willingness	5.93	88	$<0.001$	1.24	Highly significant, large effect
Dissemination Behavior	4.98	88	$<0.001$	1.04	Highly significant, large effect

The pretest results validated uniform initial ability levels between the two groups, each comprising 45 pupils, picked from a total population of 298. Posttest results indicated that new integration methods substantially surpassed standard teaching, with large effect sizes (Cohen's  $d > 1.0$ ) signifying practical significance.

**Correlation analysis:** To investigate the linear link between professional competence (e.g., element transformation skills) and ICH inheritance awareness utilizing the Pearson correlation coefficient ( $r$ ). A strong positive connection was identified between professional competence and ICH inheritance knowledge among the 90 sampled students, as illustrated in Table 3.

**Table 3 Correlation between Professional Ability and ICH Inheritance Awareness**

Variables	Correlation Coefficient ( $r$ )	p-value	Interpretation
Total Professional Ability Score vs. Total ICH	0.76	$<0.001$	Strong positive correlation ( $p < 0.001$ )



Awareness Score			
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Students' exhibit enhanced ability in converting aspects of New Year paintings, including innovative design and digital tool application, reflecting an increased knowledge of cultural significance and a readiness to embrace these traditions, indicating a synergistic relationship.

Qualitative analysis: To augment the quantitative results and explore the underlying mechanisms of performance disparities among students, semi-structured interviews were conducted with 12 students (6 from the control group and 6 from the experimental group, purposively selected from the 90 participants) to collect their subjective experiences. An analysis was performed on 30 exemplary design works (15 from each group) to identify patterns in the transformation and use of Mianzhu New Year painting motifs. This analysis focused on three main aspects: (1) the cognitive processes of students in deconstructing traditional elements, (2) the challenges encountered in integrating these elements into modern design contexts, and (3) the perceptions of the practical value of their works, aiming to clarify the reasons for the experimental group's superior performance in quantitative metrics relative to the control group. Initiate the procedure as indicated below:

#### 1. Open Coding: Core Concepts

Three topic areas arose from the interviews, as presented in Table 4.

**Table 4 Core Concepts from Interview Data**

Category	Core Concepts	Typical Quote	Frequency
Teaching Method Experiences	Traditional lectures are boring	"Lectures on New Year painting history felt disconnected from design practice." (S8, Control)	8
	AR enhances interactivity	"Using AR to make New Year painting figures 'move' in our postcards helped me understand their symbolic meanings better." (S3, Experimental)	6
	Project-based learning is challenging but rewarding	"Our group struggled to merge New Year painting patterns with app icons, but the process taught teamwork." (S12, Experimental)	5
Professional Growth	Improved digital skills	"I now use Photoshop to digitize 'gold lines' from New Year paintings." (S2, Experimental)	9
	Creative inspiration from traditions	"Door god motifs inspired our brand logo design for a local tea shop." (S15, Experimental)	7
	Difficulty mastering traditional techniques	"Hand-painting New Year painting colors was harder than expected—my lines were uneven." (S7, Control)	6
ICH Perception	Cultural stories spark interest	"Hearing inheritors' stories about New Year paintings made me value their heritage." (S4, Experimental)	8
	Sense of inheritance responsibility	"I want to design more products using New Year painting elements to keep the art alive." (S17, Experimental)	7
	Limited	"I posted my New Year painting designs online,	4



	dissemination channels	but few noticed—we need better platforms." (S9, Control)	
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## 2. Axial Coding: Conceptual Categories

Core concepts were categorized into six groups to elucidate linkages, as shown in Table 5.

**Table 5 Axial Coding Categories**

Category	Subcategories
Teaching Characteristics	Method <ul style="list-style-type: none"><li>- Traditional: Theoretical, one-way transmission</li><li>- Innovative: Practical, tech-integrated, collaborative</li></ul>
Professional Development	Ability <ul style="list-style-type: none"><li>- Skill acquisition (digital tools, traditional techniques)</li><li>- Creative transformation (element extraction, modern integration)</li><li>- Practical application (project collaboration)</li></ul>
ICH Understanding	<ul style="list-style-type: none"><li>- Historical value (origins, folk context)</li><li>- Artistic features (composition, symbolism)</li><li>- Contemporary relevance (cultural identity, market potential)</li></ul>
Inheritance Motivation	<ul style="list-style-type: none"><li>- Emotional engagement (stories, creative achievement)</li><li>- Cognitive responsibility (cultural preservation)</li><li>- Ability confidence (skill mastery)</li></ul>
Learning Challenges	<ul style="list-style-type: none"><li>- Theory-practice gap</li><li>- Technical barriers (digital tools)- Teamwork conflicts</li></ul>
Curriculum Suggestions	Improvement <ul style="list-style-type: none"><li>- Add modern cases and tech training</li><li>- Diversify assessment- Involve ICH inheritors</li></ul>

## 3. Selective Coding: Core Themes

Two principal themes emerged, elucidating the benefits of creative integration:

### “Practice-Cognition-Inheritance” Mechanism

Innovative methodologies, such as augmented reality and project-based learning, facilitated practical engagement, enhancing comprehension of New Year painting techniques and their cultural significance. This resulted in a heightened readiness to inherit and propagate the art.

### “Cognition-Practice Gap” in Traditional Teaching

Lectures emphasized theory but lacked practical application, rendering students incapable of translating knowledge into design, which diminished enthusiasm for inheritance.

### Student Work Cases: A Comparative Analysis

Students in the control group that participated in conventional instruction predominantly employed hand-drawing and basic poster design, exhibiting minimal incorporation of contemporary techniques. Students in the experimental group included new media technologies and utilized digital tools to alter aspects of New Year paintings, thereby improving originality and practicality. Integrated QR codes enable online reservations for Mianzhu New Year painting workshops. The principal differences in the works are indicated in Table 6.

**Table 6 Key Differences in Works**

Dimension	Control Group	Experimental Group
Element Transformation	Direct copying; minimal reinterpretation (e.g. replicating	Deconstruction and reconstruction (e.g. converting "gold lines" into 3D contours, adapting





	door-god patterns without adaptation).	door-god motifs into brand logos).
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#### Application of Innovative Integration Strategies

The effectiveness of the experimental group resulted from three principal tactics, corroborated by both quantitative and qualitative data from the 90 sampled students, as presented in Table 7.

**Table 7 Innovative Integration Strategies and Outcomes**

Strategy	Implementation Details	Outcomes Observed
Cross-Disciplinary Modules	Courses like “Digital New Year Painting Design” merged traditional art with graphic design software training.	87% of experimental students (39/45) could independently digitize New Year painting elements (vs. 32% of control group, 14/45).
Project-Based Learning	Collaborative projects with local enterprises (e.g. designing packaging for New Year painting-themed products).	76% of experimental group works (34/45) met industry standards (vs. 29% of control group, 13/45).
Digital Empowerment	AR tools for interactive design and 3D modeling software for element reconstruction	91% of experimental students (41/45) reported enhanced interest in New Year painting heritage.

These initiatives not only enhanced technical skills but also cultivated a feeling of cultural responsibility, connecting classical art with contemporary design education.

## 5. DISCUSSION

Theoretical contributions to the enhancement of the "Innovative Integration" Framework are substantial. This study introduces a three-tier paradigm (element deconstruction → digital transformation → practical application) that enriches current theories by emphasizing the importance of technical tools and industry feedback. This framework, in contrast to previous models that focused solely on cultural cognition, integrates technical and practical features, hence augmenting its relevance to vocational education. Verification of the “Practice-Cognition-Inheritance” Mechanism: The study experimentally validates that active participation, rather than passive learning, is crucial for improving cultural awareness and fostering sustainable cultural heritage among design students via experiential project involvement.

Concerning the practical ramifications for vocational education institutions: The integration model offers a reproducible structure for incorporating local intangible cultural resources into design programs. Emphasizing project-based learning (PBL) and digital tools allows institutions to reconcile technical skill acquisition with cultural literacy, as Huang (2022) attacks vocational education's inclination to prioritize employability over cultural profundity. The research on ICH inheritance demonstrates that design education serves as a medium for "living inheritance" by transforming New Year paintings into commercially viable design components, including brand logos and augmented reality material. This method allows students to maintain heritage while augmenting its relevance in contemporary settings, thus reducing the marginalization danger noted by Liu (2012). The efficacy of school-enterprise initiatives, such as cultural product packaging, demonstrates that firms may serve as both partners and beneficiaries. By offering genuine design challenges, they improve educational results while obtaining unique cultural content, thereby creating a mutually advantageous environment.

## 6. CONCLUSION

The research objective demonstrates that the multi-dimensional integration model (PBL + diversified resources + digital tools) markedly enhances students' ability to translate elements of Mianzhu New Year paintings into contemporary design languages and improves the practical applicability of their creations. The "practice-cognition-inheritance" pathway is crucial for optimal integration. Practical engagement improves cultural understanding, hence promoting active inheritance via design innovation.

The correlation between professional design skills and awareness of ICH inheritance is substantial ( $r=0.76$ ), indicating that cultural literacy and technical proficiency are complimentary rather than antagonistic factors.



## 7. RECOMMENDATIONS FOR FUTURE RESEARCH

The recommendations are divided into three parts for further research.

### 1. Curriculum Reform:

1.1 Create Modular Courses: Introduce a 3-credit core module titled “Mianzhu New Year Painting in Modern Design,” segmented into three sub-modules:

Cultural Cognition (20%): Lectures on the history, symbolism, and craftsmanship of Mianzhu; virtual reality tours of workshops;

Technical Transformation (40%): Workshops in Photoshop (element digitization), Blender (3D modeling), and Spark AR (interactive design);

- Practical Application (40%): Project-Based Learning initiatives with local businesses (e.g., “Create New Year-themed packaging for cultural products”).

1.2 Incorporate Mianzhu Elements into Core Courses: Mandate students to integrate Mianzhu elements into current curricula (e.g., “Brand Visual Identity” – design a logo utilizing Mianzhu’s color palette; “UI/UX Design” – develop an app interface with New Year painting motifs).

The study path may focus on 'The Curriculum Framework Development' or 'Pedagogical Innovation,' which incorporates Mianzhu painting ideas into vocational graphic design, encompassing classical symbolism and composition, sustainable products or packaging, and artificial intelligence (AI).

### 2. Resource Optimization:

2.1 Establish a Digital Archive: Partner with the Mianzhu New Year Painting Museum to develop a complimentary online database, comprising: High-resolution images of over 200 classic artworks; 3D models of woodblocks (for 3D printing applications); and

Instructional videos demonstrating essential techniques (e.g., “water-filling foot” coloring).

2.2 Enhance School-Enterprise Collaboration: Formulate a “Mianzhu Design Alliance” with local workshops and cultural enterprises, encompassing:

Jointly developing project briefs (e.g., “Design a social media campaign for Mianzhu New Year paintings”);

- Providing 2-week internships for students at workshops;

Organizing an annual “Mianzhu New Year Painting Design Competition,” with winning entries commercialized by enterprises.

The proposed future research, including the examination of fundamental methods for digitizing classic artworks, emphasizes texture, color integrity, and symbolic significance. Identify methods to improve sustainable resources by focusing on SDG 4 (Quality Education), and SDG 11 (Sustainable Cities and Communities) through research methodologies such as Participatory Action Research, Design-Based Research, or Comparative Case Studies.

### 3. Teacher Training:

3.1 Hybrid Workshops: Organize a three-day annual training for design educators, including

- Cultural Immersion: Excursions to Mianzhu workshops to acquire craftsmanship from masters;

Technical Skills: Instruction on digital tools (e.g., Spark AR, Blender) focused on New Year painting components;

Pedagogical Strategies: Seminars on project-based learning and formative assessment (e.g., methods for assessing students' element transformation abilities).

3.2 Inheritor Guest Lectures: Engage national-level Mianzhu New Year painting inheritors to present 2-hour monthly lectures on “Tradition & Innovation,” sharing their experiences in adapting legacy to contemporary situations.

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## REFERENCES

- [1] Bangbon, P., Snongtaweepon, T., Channuwong, S., Katangchol, S., Raktakanishtha, P., Pleansamai, K., Ongcharoen, P., Ekvitayavetchanukul, P., & Klaysud, S. (2023). Strategic human resource management for organizational performance of Thai Higher Education Institutions. *Journal of Positive Psychology & Wellbeing*, 7(2), 897-911.
- [2] Channuwong, S., Tongvijit, M., Bangbon, P., Siripap, P., Weerachareonchai, P., Rattananda, N., Samapat, P., & Wongwean, B. (2025). The influence of cultural factors on organizational justice of public organizations in Bangkok. *Journal of Neonatal Surgery*, 14(3), 1-9.





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- [3] Channuwong, S., Ruksat, S., & Ploychum, S. (2018). An integration of Buddhist teachings in stress management. *Journal of Community Development Research*, 11(4), 148-158.
  - [4] Huang, T. (2024). Research on the Role of Art Education in Ideological and Political
  - [5] Education in Colleges and Universities in the New Era. *International Journal of*
  - [6] *Education and Humanities*. Vol. 12 No.1 (2024). <https://doi.org/10.54097/59bfs386>.
  - [7] Huang, Y., Chuangprakhon, S., & Santaveesuk, P. (2024). Preservation and transmission of Shaanxi Guzheng musical instruments: Challenges and strategies for cultural sustainability. *International Research Journal of Multidisciplinary Scope*, 5(4), 147–158. <https://doi.org/10.47857/irjms.2024.05i04.01265>
  - [8] Ke, L. (2009). Relating tradition to innovation within the Chinese arts: The application of digital technique to visual art. *Journal of Chinese Art & Design*, (03), 28–32.
  - [9] Li, X. (2024). The modern transformation of traditional Literature and Art under the Background of Cultural Confidence. *International Conference on Sustainable Economy and Social Sciences (SESS)*. 200 (2024) 02009.
  - [10] Liu, A. (2012). Living auspiciousness: The resurgence of Mianzhu's New Year picture industry. *China Folklore Studies*, (02), 89–105.
  - [11] Pansuwong, W., Photchanachan, S., & Thechatakerng, P. (2023). Social innovation: Relationships with social and human capitals, entrepreneurial competencies and growth of social enterprises in a developing country context. *Social Enterprise Journal*, 19(1), 51–79.
  - [12] Qian, J. (2023). Constructing Semiotic System: A Study on Traditional Chinese Woodblock New Year Pictures. Master Thesis Program in Humanities, Department of ALM. No.34 Uppsala University.
  - [13] Sun, Y. J. (2020). Research on the reform of art education models in higher vocational colleges. *Xiju Zhijia*, (07), 78–80.
  - [14] Wang, J. (2018). School-enterprise cooperation in vocational design education. *Meishu Jiaoyu Yanjiu*, (09), 56–59.
  - [15] Zhang, Z. (2018). The Disconnection between Traditional Folk Art and Modern Design Education. *Journal of Art & Design Education*, (03), 45-52.
  - [16] Zhang, Z., & Burapajetana, J. (2024). The integration of artistic concepts between modern and traditional Chinese meticulous painting. *International Journal of Art & Design Education*, 33(1), 78–92.