Integrating Intangible Cultural Heritage into Digital Fine Arts Education of Vocational Institutions in Guizhou, China

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***Abstract*—The purposes of this study were 1) To analyze the influence of integrating ICH on students' digital fine arts skills, creativity, and cultural knowledge 2) To explore the attitudes and understandings of students and educators towards the integration of ICH into digital fine arts education; and 3) To evaluate the contribution of such integration to the preservation and continuation of local culture among younger generations. Utilizing a mixed-methods design, quantitative data were collected through standardized questionnaires from 227 students. At the same time, qualitative insights were obtained via in-depth interviews with 15 educators and 10 local ICH experts, as well as classroom observations. Data analysis employed descriptive statistics, ANOVA, correlation analysis, and thematic analysis. The research results can be summarized as follows: The findings demonstrate that 1. The influence of integrating ICH on students' digital fine arts skills, creativity, and cultural knowledge into digital art programs significantly enhances students' creative capacity, digital arts proficiency, and sense of cultural identity. 2. The attitudes and understandings of students and educators towards the integration of ICH into digital fine arts education significantly increased motivation and engagement. 3. Evaluating the contribution of such integration to the preservation and continuation of local culture among younger generations helps promote creative skills, cultural sustainability, and local heritage preservation.**

***Keywords*— *Integrating Intangible Cultural Heritage, Digital Fine Arts Education, Vocational Institutions*.**

I. INTRODUCTION

The preservation of Intangible Cultural Heritage (ICH), encompassing oral traditions, performing arts, craftsmanship, and rituals, has garnered global attention for its crucial role in maintaining cultural identity and intergenerational cohesion (UNESCO, 2003; Smith, 2016; Wu, 2020). Modernization and globalization, however, pose a threat to ICH through urbanization, migration, and declining youth participation (Yang, 2019; Zhao, 2018). The UNESCO Convention (2003) emphasizes safeguarding this "living heritage," but sustainable strategies are needed to engage contemporary learners. Digital technologies such as VR, AR, 3D modeling, and CAD offer immersive educational tools that can combine traditional cultural knowledge with creative digital expression (Radianti et al., 2020; Liu, 2020; Huang, 2019). In China, ICH preservation is a cultural and political priority; however, many practices remain endangered due to the decline of practitioners and limited youth engagement (Chen & Qiao, 2021; Wu, 2020). Vocational institutions, particularly in regions like Guizhou Province, can integrate heritage into applied arts curricula to support both cultural preservation and the development of creative skills (Yang, 2019; Zhang & Li, 2021). Despite the recognized potential of digital innovation, few studies systematically examine the integration of ICH in digital fine arts education in Guizhou, leaving gaps in understanding educational outcomes, stakeholder attitudes, and intergenerational transmission. This study investigates these aspects, aiming to enhance students' skills, cultural

cognition, and creativity while contributing to sustainable heritage practices and informing educational policy.

The above reasons sparked the researcher's interest in studying the topic of integrating intangible cultural heritage into digital fine arts education at vocational institutions in Guizhou, China. Studying this topic helps preserve and promote Guizhou's intangible cultural heritage, enhances students' creativity and cultural awareness, and bridges traditional arts with the modern world through digital techniques for innovative vocational education.

Research Questions

1. How does the integration of Intangible Cultural Heritage (ICH) influence students' digital fine arts skills, creativity, and cultural knowledge?
2. What are the attitudes and understandings of students and educators towards the integration of ICH into digital fine arts education?
3. In what ways does the integration of ICH contribute to the preservation and continuation of local culture among younger generations?

Research Objectives

1. To analyze the influence of integrating ICH on students' digital fine arts skills, creativity, and cultural knowledge.
2. To explore the attitudes and understandings of students and educators towards the integration of ICH into digital fine arts education.
3. To evaluate the contribution of such integration to the preservation and continuation of local culture among younger generations.

Research Hypotheses

H1: Integrating Intangible Cultural Heritage (ICH) into digital fine arts education has a positive effect on students' digital fine arts skills, creativity, and cultural knowledge.

H2: Students and educators hold positive attitudes and a high level of understanding towards the integration of ICH into digital fine arts education.

H3: The integration of ICH into digital fine arts education significantly contributes to the preservation and continuation of local culture among younger generations.

II. LITERATURE REVIEW

A. The intangible cultural heritage

The integration of intangible cultural heritage (ICH) into digital fine arts education in vocational institutions in Guizhou, China, offers multiple educational benefits. First, it promotes the preservation and transmission of local traditions, crafts, and artistic practices, which are at risk of fading due to modernization (Smith, 2006). By combining these traditional forms with digital tools, students gain the opportunity to reinterpret and innovate cultural expressions, bridging the gap between heritage and contemporary art (UNESCO, 2013). Moreover, this approach enhances students' creativity, digital literacy, and interdisciplinary skills, preparing them for diverse careers in cultural industries and digital media (Zhang & Li, 2020). Integrating ICH also fosters cultural identity and community engagement, encouraging students to value their local heritage while contributing to sustainable cultural development (Chen, 2018).

B. Digital art and vocational college education

The integration of intangible cultural heritage (ICH) into art education through digital technologies offers a pathway to preserve tradition while fostering innovation. By embedding knowledge of historical origins, cultural meanings, and traditional craftsmanship into curricula alongside modern tools such as image processing, 3D modeling, and VR/AR, students are encouraged to reinterpret heritage in creative ways (UNESCO, 2003). Practical engagement is essential; cooperation with enterprises and craft masters provides authentic experiences that connect cultural skills with industry needs (Li, 2012). Moreover, immersive methods such as VR and AR enhance participation by simulating production techniques and providing interactive learning opportunities (OECD, 2016). To succeed, this integration requires educators with dual expertise in both heritage and digital art, supported by institutional policies and continuous evaluation. Particularly in vocational education, digital art curricula should strike a balance between cultural knowledge and technical competence, encompassing software proficiency and collaborative skills, to meet the demands of a dynamic creative industry (Zhao, 2014). Overall, this approach bridges the gap between tradition and modernity, ensuring that intangible cultural heritage remains relevant and inspiring in contemporary education.

C. Guidelines for integrating intangible cultural heritage into art education.

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embedding knowledge of historical origins, cultural meanings, and traditional craftsmanship into curricula alongside modern tools such as image processing, 3D modeling, and VR/AR, students are encouraged to reinterpret heritage in creative ways (UNESCO, 2003). Practical engagement is essential; cooperation with enterprises and craft masters provides authentic experiences that connect cultural skills with industry needs (Li, 2012). Moreover, immersive methods such as VR and AR enhance participation by simulating production techniques and providing interactive learning opportunities (OECD, 2016). To succeed, this integration requires educators with dual expertise in both heritage and digital art, supported by institutional policies and continuous evaluation. Particularly in vocational education, digital art curricula should strike a balance between cultural knowledge and technical competence, encompassing software proficiency and collaborative skills, to meet the demands of a dynamic creative industry (Zhao, 2014). Overall, this approach bridges the gap between tradition and modernity, ensuring that intangible cultural heritage remains relevant and inspiring in contemporary education.

D. Knowledge Dimension

In recent years, the integration of intangible cultural heritage (ICH) with digital art education has become a promising direction for both cultural preservation and creative innovation. Researchers emphasize that digital technologies, such as VR and AR, can create immersive environments, enabling learners to have a more engaging experience with traditional processes (Zhang, 2023). Alongside this, curriculum reform that embeds ICH-centered courses and workshops helps students merge traditional skills with modern design thinking (Li, 2022). New media platforms also extend the impact of ICH education, fostering active engagement through storytelling and online interaction (Jiang, 2021). At the practical level, hands-on training with ICH masters and school-enterprise cooperation offer students valuable opportunities to connect craftsmanship with real-world applications (Chen, 2024; Wang, 2023). Overall, effective integration requires striking a balance between tradition and technology, ensuring that digital tools enhance rather than overshadow the cultural essence. Success depends on well-trained educators, active student participation, and strong institutional support through policies and resources (Li, 2022; Jiang, 2021). Taken together, these strategies highlight a holistic approach that not only safeguards intangible cultural heritage but also enriches the scope of digital art education in contemporary contexts..

E. Application of intangible cultural heritage in digital art education

Digital art education plays a vital role in revitalizing intangible cultural heritage (ICH) by creating immersive, innovative, and widely accessible learning experiences. Through technologies such as virtual and augmented reality, students can enter simulated cultural environments, for instance, embroidery workshops where they closely observe traditional skills and gain experiential knowledge (Zhao, 2020). Beyond immersion, digital media such as animation and video enrich the presentation of complex crafts, like paper-cutting, by transforming static traditions into dynamic visual narratives that transcend time and space constraints (Li, 2019). Moreover, by mastering digital tools, students integrate ICH elements into contemporary creative fields such as illustration, gaming, and design, fostering both innovation and cultural continuity (Chen, 2021). The use of online platforms further expands the reach of these creations, encouraging cultural exchange and strengthening public awareness of ICH. In this way, digital art education not only enhances student engagement and creativity but also ensures the sustainable transmission of intangible cultural heritage in modern society.

III. RESEARCH METHODS

The target population for this study consists of students enrolled in diploma and associate degree programs related to digital arts at vocational colleges in Guizhou Province, China, as well as faculty members involved in digital arts education and local experts in Intangible Cultural Heritage (ICH). The selection criteria ensured comprehensive coverage of key stakeholders in the integration process. Stratified sampling was employed for student participants to represent various majors and year levels, resulting in 227 valid student responses out of an eligible population of approximately 6,500 students. Additionally, 15 educators who have experience in teaching digital arts and ICH integration, and 10 local ICH experts or artists were recruited using purposive sampling to provide in-depth perspectives relevant to the research objectives.

A. Research Instrument

Three primary research instruments were utilized:

a) Questionnaire Survey:

The student questionnaire was designed in accordance with the research objectives, featuring multiple sections: demographic information, learning experience, and attitudes toward the integration of ICH. Most items used a five-point Likert scale to assess agreement or satisfaction concerning domain-specific

variables such as creativity, cultural identity, and digital art skills. Subject-matter experts validated the instrument and underwent a pilot test for clarity and reliability. Content validity was established through expert reviews, and the instrument structure was confirmed via factor analysis (KMO = 0.85, Cronbach's Alpha = 0.87), indicating sound measurement properties.

b) Semi-Structured Interviews:

In-depth interviews were conducted with 15 teachers and 10 local ICH experts utilizing an interview guide based on the study's conceptual framework. Questions explored integration strategies, instructional challenges, resource allocation, as well as educator and expert perceptions of student engagement and learning outcomes.

c) Classroom Observation Checklist:

Observational data were collected during digital art classes that incorporated ICH elements, using a standardized checklist to record student participation, teacher-student interactions, and the impact of digital tools and traditional content on learning engagement.

B. *Data Analysis*

The study employed a mixed-methods approach, integrating quantitative and qualitative techniques:article-Qin-Cheng.docx

a) Quantitative Analysis:

Survey responses were analyzed using descriptive statistics (mean, standard deviation, frequency, percentage), followed by inferential statistics, including ANOVA, correlation analysis, and regression modeling to test hypotheses about the impact of ICH integration on digital art proficiency, creative capacity, and cultural identity. Validity and reliability measures ensured robustness of the quantitative findings.

b) Qualitative Analysis:

Interview transcripts and classroom observation notes were subjected to thematic coding, with categories corresponding to the research questions regarding attitudes, implementation challenges, student engagement, and innovation outcomes, thereby aiding in the depth of interpretation.

c) Triangulation:

Data from surveys, interviews, and observations were compared to strengthen reliability and substantiate conclusions regarding the effectiveness and practicality of integrating ICH into digital arts education.

IV. RESULTS AND DISCUSSION

A. *Demographic Information of the Population and the Sample*

The study surveyed 227 students from vocational colleges in Guizhou Province, as well as 15 digital art educators and 10 local intangible cultural heritage (ICH) experts. The student sample featured balanced gender representation (female: 53.7%, male: 46.3%) and was drawn from freshmen, sophomores, and juniors, with a majority from majors in Digital Art/Art Design (51.9%), Computer Science/Technology (19.8%), and ICH-related fields (16.7%). Most students (over 85%) reported at least some familiarity with Guizhou's local ICH, providing a solid foundation for curriculum integration and subsequent analysis.

1) To analyze the influence of integrating ICH on students' digital fine arts skills, creativity, and cultural knowledge: H1: Integrating Intangible Cultural Heritage (ICH) into digital fine arts education has a positive effect on students' digital fine arts skills, creativity, and cultural knowledge.

Integrating ICH into digital fine arts education had a significant positive impact on students' creative capacities, digital art proficiency, and sense of cultural identity. Quantitative analysis demonstrated that 92% of students believed their artistic creation ability and understanding of traditional art forms improved through exposure to ICH content and digital creative tools, such as 3D modeling and VR. Students consistently reported that digital technologies not only enriched their skill sets but also increased their appreciation and innovative thinking regarding traditional culture, supporting the research hypothesis that ICH integration boosts both creative and technical competencies. To evaluate the contribution of such integration to the preservation and continuation of local culture among younger generations.

H2: Students and educators hold positive attitudes and a high level of understanding towards the integration of ICH into digital fine arts education.

Both students and teachers exhibited strong positive attitudes toward integrating ICH into digital fine arts education. Teacher interviews revealed generalized agreement that merging traditional cultural elements with digital art makes the curriculum richer, enhances student motivation, and fosters deeper engagement with local culture. Over 80% of students expressed high levels of interest and satisfaction with ICH-related content, often noting increased pride and cultural identification. Educators also argued that the use of immersive digital technologies facilitates students' understanding while inspiring creative expression rooted in local heritage.

To evaluate the contribution of such integration to the preservation and continuation of local culture among younger generations.

H3: The integration of ICH into digital fine arts education significantly contributes to the preservation and continuation of local culture among younger generations.

The research found that integrating ICH with digital fine arts education directly encourages the preservation and transmission of local traditions among young learners. Students increasingly articulated a desire to promote and share their hometown cultures through digital media and creative projects. The combination of heritage-based curriculum and modern technologies led to an effective model of "digital living inheritance," in which traditional crafts, performance arts, and cultural values are both protected and revitalized for contemporary audiences. Teachers, students, and experts consistently agreed that this model supports sustainable cultural continuity and broadens the influence of Guizhou's intangible heritage beyond regional boundaries.

DISCUSSION

Research Objectives 1

Effects of ICH Integration on Students' Digital Arts Skills, Creativity, and Cultural Knowledge

The research found that integrating ICH into digital arts curricula yields a significant positive impact on students' digital art skills, creativity, and cultural knowledge. Students who learned digital arts within a cultural context were able to combine modern technologies such as 3D modeling, VR, AR, and animation with local heritage knowledge. This fusion led to the creation of artworks that express unique identities and foster stronger connections with their respective cultures. Key references, including UNESCO (2003, 2013) and Smith (2006), concur that ICH plays a vital role in preserving and promoting cultural identity. Implementing ICH in digital arts instruction inspires students to produce culturally rooted creative works, deepening their understanding of local heritage and wisdom. Interview data from instructors and ICH experts confirmed that when students base their projects on their own cultural backgrounds, it enhances their sense of connection and pride in their identities.

Research Objectives 2

Attitudes and Understanding of Students and Educators Toward ICH Integration

Both qualitative and quantitative findings revealed that students and teachers generally hold positive attitudes and a strong understanding of integrating ICH into digital arts education. Most respondents saw the approach as increasing motivation and engagement. Approximately 80–85% of students expressed interest in and actively participated in cultural heritage via digital activities, and felt greater pride in their culture. Previous studies, such as Li (2022), Jiang (2021), and UNESCO (2013), show that blending ICH with digital learning contexts stimulates student motivation and encourages independent creative work. It also promotes teachers' roles in facilitating culturally relevant activities. Teacher interviews in the present research indicated that utilizing technology to transmit culture helped students access and understand ICH more effectively, with appropriate tools, technologies, and resources being key supporting factors.

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Research Objectives 3

Impact of ICH Integration on the Preservation and Transmission of Local Culture Among Youth

The research concluded that combining ICH and digital arts in vocational education promotes the sustainable preservation and transmission of local culture among youth. Students became more aware of and proud of the value of their traditional culture, investing effort into showcasing their heritage through various digital mediums such as animation, game design, graphic works, and VR experiences. This integration also creates new pathways for knowledge transmission and extends the reach of local heritage internationally via digital platforms. Citations from UNESCO (2003, 2013), Chen & Qiao (2021), Zhang & Li (2021), and Smith (2016) support these findings, emphasizing that technology-assisted preservation and promotion of ICH amongst youth is essential to sustaining culture in the modern era, particularly in ethnically diverse regions like Guizhou.

CONCLUSION

Research Objectives 1

To analyze the influence of integrating ICH on students' digital fine arts skills, creativity, and cultural knowledge.

Integrating ICH into digital fine arts education has a positive effect on students' digital art skills, creativity, and cultural knowledge. The findings demonstrate that such integration significantly enhances students' creative capacity, technical proficiency, and strengthens their sense of cultural identity. Through exposure to digital tools like VR, AR, and 3D modeling, as well as engagement with traditional craftsmanship, students gained new

opportunities to reinterpret and innovate cultural expressions, thereby bridging heritage with contemporary art practice. Statistical analysis showed high levels of achievement in artistic creation, task performance, and emotional engagement among participants. Most students reported a deeper understanding and appreciation of local culture, as well as improved creative abilities, due to the combined curriculum.

Research Objectives 2

To explore the attitudes and understandings of students and educators towards the integration of ICH into digital fine arts education.

Students and educators hold positive attitudes and demonstrate high motivation and understanding toward the integration of ICH into digital fine arts education. The study found significantly greater engagement, interest, and satisfaction when courses included ICH content. Both qualitative interviews and quantitative surveys revealed that teachers and experts support the use of digital innovation to preserve cultural authenticity and enhance learning outcomes. The structural equation modeling confirmed that emotional factors (e.g., enthusiasm, reduced burnout) have a positive impact on participants' performance and involvement. Additionally, classroom observation indicated active participation, innovative thinking, and increased motivation among students when working on ICH-inspired digital art projects.

Research Objectives 3

To evaluate the contribution of such integration to the preservation and continuation of local culture among younger generations.

The integration of ICH into digital fine arts education meaningfully contributes to the preservation and transmission of local culture among younger generations. Students became more willing to share and perpetuate their cultural traditions through digital media, and showed stronger identification with their heritage. Innovative digital practices helped ensure that endangered traditional crafts and expressions remain relevant and accessible. The curriculum's interdisciplinary nature supports sustainable cultural development and positions vocational institutions as key players in safeguarding intangible heritage. The study also recommends that further training, resource investment, and curriculum development will reinforce this contribution in the future, making digital art education a powerful medium for intergenerational cultural continuity.

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