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Integration of Intangible Cultural Heritage in the Graphic Design Curriculum of Secondary Vocational Schools: A Case Study of Zhanjiang Mechanical and Electrical School

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Abstract: As modern education increasingly emphasizes the inheritance of Intangible Cultural Heritage (ICH), it is crucial to investigate whether teachers in the Computer Graphic Design program at secondary vocational schools fulfill their responsibilities in this regard. This study explores this issue using Zhanjiang Mechanical and Electrical School as a case study, aiming to comprehensively assess the current status of ICH awareness among these teachers and provide references for integrating intangible cultural heritage into vocational education. The purpose of this research is to offer valuable recommendations for enhancing teachers' awareness of ICH and promoting its implementation in secondary vocational schools.

Keywords: Secondary Vocational Schools; Computer Graphic Design; Intangible Cultural Heritage; Teaching Consciousness.

1. Introduction

Amid globalization and modernization, Intangible Cultural Heritage (ICH) carries a nation's historical memory and cultural identity, making its inheritance and protection a global concern. In response, China's Ministry of Education has recognized education's role in ICH inheritance and issued policies to integrate ICH into the national education system, aiming to foster public respect for ICH and sustain cultural continuity (Ministry of Education, 2021a).

Secondary vocational schools, a cornerstone of China's vocational education, are tasked with fostering application-oriented talents who possess professional skills and cultural literacy. Against the national call for cultural inheritance, these schools must balance professional teaching with nurturing students' cultural confidence. The Computer Graphic Design major—popular in secondary vocational schools—closely connects to cultural and creative industries, offering great potential to combine modern design with local ICH elements (e.g., Zhanjiang's Leizhou stone dogs, Guangdong Lion Dance). Integrating ICH can enrich teaching content, enhance students' aesthetics and innovation, and revitalize ICH development (Zi, 2024).

However, research on ICH integration in vocational graphic design teaching remains limited. While some studies focus on ICH in general education, few explore vocational contexts—especially graphic design (Gao Xiaolan, 2022). Critical questions persist: Do graphic design teachers in secondary vocational schools have ICH inheritance awareness? How to effectively integrate ICH into their teaching?

To address these gaps, this study takes Zhanjiang Mechanical and Electrical School as a case, adopting qualitative methods (interviews, classroom observations) to explore graphic design teachers' ICH awareness, analyze ICH integration in teaching, and examine the school's curriculum—ultimately providing references for ICH integration into vocational education.

2. Research Objectives

2.1. National Policy Support

The study aims to examine how teachers in a Chinese public secondary vocational school integrate intangible cultural heritage (ICH) into the graphic design curriculum.

2.2. Specific Objectives

1.To describe the participants in terms of age, sex, educational attainment, years of teaching experience, and knowledge of intangible cultural heritage;

2.To describe teachers' knowledge of ICH;

3.To describe how teachers integrate intangible cultural heritage knowledge into their respective subjects;

4.To propose a professional development program to enhance the integration of intangible cultural heritage knowledge among secondary vocational school teachers.

3. Review of Related Literature

3.1. National Policy on the Promotion of ICH

China has issued three core policies to drive ICH integration into education:

1.Opinions on Further Strengthening the Protection of Intangible Cultural Heritage (Ministry of Education, 2021a): Mandates ICH integration across all education levels, including vocational schools developing ICH-related programs and supporting faculty training.

2.Guidelines for Integrating Outstanding Chinese Traditional Culture into Primary and Secondary School Curricula and Textbooks (Ministry of Education, 2021b): Proposes an age-appropriate "3+2+N" model, embedding heritage into core subjects (Chinese, history, ethics) and arts/sports.

3.Opinion on Promoting the Inheritance and Innovation of National Culture in Vocational Colleges (Ministry of Education, 2013): Requires vocational schools to merge cultural heritage with teaching, collaborate with cultural

enterprises, and optimize ICH majors.

However, policy implementation details (e.g., whether ICH is a standalone or integrated course) remain unclear, requiring further exploration (Ma, 2025). International and domestic studies (e.g., Cui, 2024) note that such policies provide a favorable framework for ICH education but need localized execution plans.

3.2. Current Status of ICH Education in China

ICH education has been adopted across all school levels (kindergartens to universities) via dedicated courses, extracurricular activities (museum trips, ICH inheritor workshops), and clubs (He Yi, 2024; Gao Xiaolan, 2022). Vocational schools have seen growing popularity of ICH handicraft courses, but disparities persist: well-resourced schools in developed areas have diverse curricula, while remote schools face teacher and resource shortages (Wu, 2024; Wu Yonghui, 2024).

In vocational graphic design specifically, ICH integration remains underdeveloped due to unstructured curricula and insufficient teacher training (Lu & Xu, 2024). Related research shows promising practices—e.g., higher vocational colleges developed Su-style ICH specialized courses (Wang et al., 2021), and Guilin's Yongfu County Vocational Education Center integrated ICH into tourism courses (Xie, 2024)—but few focus on secondary vocational graphic design. Studies also highlight that embedding ICH into art/design education enhances student innovation and heritage preservation (Geng, 2024; Zi, 2024).

3.3. Challenges and Opportunities

•Challenges: Teacher Shortage: Few teachers have in-depth ICH expertise, limiting instruction quality (Wu, 2024).

Resource Gaps: Unstructured textbooks, scarce materials, and insufficient training facilities hinder integration (Yang, 2018).

Uneven Student Interest: Variable student motivation reduces ICH education effectiveness (Wu, 2024).

•Opportunities: Policy Support: Strengthened national/ local policies create a favorable environment (Cui, 2024).

Social Attention: Enterprises and NGOs provide funding and technical support (He, 2024).

Technological Advancements: Digital tools (e.g., new media) revitalize ICH (e.g., Chaozhou embroidery) (Chen, Mo, & Cai, 2024).

Pedagogical Innovation: Situational teaching (Cui, 2024) and "curriculum ideology and politics" (Xu, 2024) align ICH with vocational education.

3.4. Related Research

Existing studies on ICH education integration primarily focus on two interrelated dimensions, both providing foundational insights for this study while revealing gaps in secondary vocational graphic design contexts.

On one hand, research on ICH integration into general school education emphasizes cross-referencing international and domestic practices to optimize China's educational framework (Ma, 2025). Practical cases (e.g., Guilin's Yongfu County Vocational Education Center embedding ICH into tourism courses) offer actionable curriculum design lessons (Xie, 2024), and scholars propose innovative pedagogical models (e.g., situational teaching) to enhance engagement (Cui, 2024). However, these studies rarely target vocational design majors.

On the other hand, studies on ICH in art and design education highlight its role in fostering cultural preservation and innovation. At the college level, integrating traditional art into fine arts curricula strengthens students' ICH responsibility (Geng, 2024); in vocational education, aligning ICH with technical skills (e.g., design software) improves education quality and heritage sustainability (Lu & Xu, 2024). Notable practices include higher vocational colleges developing Su-style ICH specialized courses (Wang et al., 2021), and "curriculum ideology and politics" frameworks embedding ICH into art design (Xu, 2024).

Modern technologies further enrich this field: new media revitalizes traditional crafts (e.g., Chaozhou embroidery) (Chen, Mo, & Cai, 2024), and digital frameworks optimize heritage archives (Wang, 2025; Zhang, 2021). However, such research remains concentrated on higher education or general art disciplines.

Crucially, few studies address ICH integration in secondary vocational graphic design specifically—leaving gaps in curriculum development, teacher training, and context-specific cases. This underscores the necessity of the current research.

4. Research Methods

4.1. Study Design

A descriptive qualitative design will be used to examine ICH integration in vocational graphic design teaching. Data will be collected via classroom observations and semi-structured interviews, with findings integrated to develop a professional development program for teachers (Braun & Clarke, 2006).

4.2. Study Participants

This study will use purposive sampling to select 5 Graphic Design teachers from Zhanjiang Mechanical and Electrical School, with sample size adjusted based on data saturation—a criterion widely used in qualitative research (Constantinou et al., 2017). The research locale, Zhanjiang Mechanical and Electrical School, was established in 1975 as a national key secondary vocational school; it houses a well-developed Graphic Design program under its Department of Information and Business (which offers 8 majors total, with 53 faculty and 10 Graphic Design teachers) and provides advanced facilities to support professional teaching. Inclusion criteria for participants include being full-time Graphic Design teachers with prior ICH training and demonstrated ICH knowledge; exclusion criteria cover part-time teachers, affiliates of ICH promotion organizations, and those with health constraints that limit participation. If a participant withdraws (e.g., due to schedule conflicts or health issues), a replacement will be selected using the same criteria to maintain sample representativeness, with withdrawal reasons and replacement processes documented (Constantinou et al., 2017).

4.3. Research Instruments

This study will use three core instruments, supplemented by validation procedures to ensure data credibility. Field notes will document classroom observations, capture details of ICH integration practices while also informing the development of interview questions—Schwandt (2015) notes that field notes serve as primary data and help contextualize other findings. Semi-structured interviews will be conducted post-observation to verify observed practices and explore teachers'

perspectives on ICH integration strengths and challenges; interviews will be audio-recorded (with participant consent), transcribed verbatim, and transcripts shared with participants for member checking to reduce researcher bias (Braun & Clarke, 2006). A survey questionnaire, adapted from UNESCO's Teaching and Learning with and About Intangible Cultural Heritage in Asia and the Pacific (2021), will assess teachers' baseline ICH knowledge; the questionnaire will be revised and validated by three experts (with backgrounds in Education [Ph.D.], Graphic Design teaching, and ICH research) to ensure contextual appropriateness and alignment with research objectives. For results validation, an audit trail will document all data collection, analysis, and decision-making processes to enhance transparency (Schwandt, 2015), while member checking of field notes and transcripts will further confirm data accuracy.

4.4. Specific Procedures

Obtain School Permission: A letter of intent will be submitted to Zhanjiang Electrical and Mechanical School's administration; upon approval, the Personnel Department will provide a list of potential participants, and the approval letter will be stored in research files.

Seek Participant Consent: Potential participants will be contacted via email with study details; those meeting criteria and expressing interest will receive and sign an Informed Consent Form (ICF) to confirm voluntary participation.

Classroom Observation: Participants will be observed three times (to ensure consistency) on undisclosed dates (to capture natural teaching), with observations audio-recorded (to protect student identity while focusing on ICH integration) and stored on encrypted servers; transcripts will be cross-checked with field notes for accuracy (Braun & Clarke, 2006).

Interview & Debriefing: Post-observation interviews will explore teachers' ICH integration experiences, and a debriefing session will allow participants to share concerns or reflections.

4.5. Ethical Considerations

The study will undergo review by the university's Ethics Review Committee. Researchers declare no conflicts of interest; participants will be assigned codenames for anonymity, and data will be stored on encrypted devices (with permanent deletion after 1 year, per China's Data Privacy Law). Risks are minimal (e.g., potential discomfort from questionnaire items, mitigated by support from a trained research assistant), and inconveniences are limited to 10–15 minutes of participants' time; benefits include contributing to ICH education reform, and a small WeChat raffle (30–50 RMB e-certificates) will be offered as appreciation. Participants may withdraw at any time via email, with their data excluded and deleted if withdrawn.

5. Data Analysis

This study will adopt thematic analysis—a widely used qualitative method (Braun & Clarke, 2006)—following core steps: transcribing interviews verbatim, coding content related to teachers' ICH awareness, grouping codes into potential themes, refining themes to ensure alignment with data, defining theme connotations, and drafting an analytical report to present teachers' ICH teaching attitudes and behaviors.

To enhance result validity, data triangulation will be applied: classroom observation data and semi-structured interview data will be cross-verified to mutually support findings.

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