

Innovation in the Ideological and Political Teaching Paradigm of Digital Media Art Major with Dual-line Intersection of "Cultural Tracing + Art Design"

A Case Study of Rural Cultural and Creative Practice

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ABSTRACT

Against the dual background of the rural revitalization strategy and the construction of a culturally powerful country, aiming at the problems of technology-centrism, superficial cultural integration, and ideological and political labeling in the current teaching of digital media art major, this study takes rural cultural and creative practice as the carrier to construct a dual-line spiral ideological and political teaching model of "cultural tracing - art design". Supported by the theory of project-based learning and the concept of ideological and political education in courses, this model relies on the course Cultural Inheritance and Digital Innovation and designs a four-dimensional curriculum system of "theoretical teaching - field practice - creation guidance - competition verification". It innovatively adopts the "three-stage research method", the tutorial system of "professional teachers + rural inheritors + competition organizing committee", and the dual-dimensional evaluation mechanism of "competition standards + rural feedback". This model realizes the trinity educational goal of "knowledge impartment - ability cultivation - value shaping", forms a positive cycle of "promoting teaching through competitions and revitalizing villages through teaching", and provides a replicable practical paradigm for the construction of ideological and political education in similar professional courses.

Keywords: *Ideological and political education in courses, Cultural tracing, Art design; Competition as the driven force, Rural cultural creativity.*

1. INTRODUCTION

Against the dual background of the in-depth implementation of the rural revitalization strategy and the construction of a culturally powerful country, the digital protection and innovative dissemination of rural cultural heritage have become a proposition of the times. As an interdisciplinary subject combining technology and art, digital media art has inherent advantages in the modern transformation of traditional culture. However, there are two prominent problems in current professional teaching: first, the disconnection between cultural inheritance and technological application, resulting in students' superficial understanding of the connotation of

traditional culture and formalized presentation of works; second, the separation of ideological and political education from professional teaching, leading to insufficient value guidance and students' lack of cultural responsibility and social responsibility. This study aims to break through the single teaching model of "technology impartment + skill training" in traditional art design majors, construct a dual-line education mechanism that promotes the mutual development of cultural cognition and technological innovation; organically integrate ideological and political elements into professional practice to achieve the trinity educational goal of "knowledge impartment - ability cultivation - value shaping"; and form replicable teaching reform experience through real

project-driven practice and competition-based teaching verification, so as to provide reference for the construction of ideological and political education in similar professional courses.

2. THEORETICAL FRAMEWORK: CONCEPT DEFINITION AND THEORETICAL BASIS

2.1 Definition of Core Concepts

Cultural tracing refers to an academic practice and teaching process that takes the systematic excavation and value interpretation of culture as the core, and conducts in-depth deconstruction and sorting through multi-dimensional research methods. Taking the tracing of rural culture as an example, methods such as field investigation, literature research, and cultural symbol extraction can be used. First, field investigation needs to break through the limitations of traditional literature retrieval and adopt a composite method of "participatory observation + in-depth interview + practical skill recording". For instance, in the investigation of intangible cultural heritage (ICH) skills in rural areas, it is not only necessary to interview inheritors to record the skill process, but also to perceive the tacit knowledge in the skills through hands-on practice. Second, literature research needs to integrate diverse materials such as local chronicles, ICH archives, folk family genealogies, and oral history classics to construct a complete "history - current situation" context of rural culture. Finally, the extraction of rural cultural symbol systems includes transformable visual and behavioral symbols such as decorative patterns of rural architecture, movement language of folk rituals, traditional handicrafts, shape characteristics of traditional utensils, and rural ecological cultural heritage, forming a trinity cultural cognition system of "material - intangible - ecological" as a whole. The essence of cultural tracing is not merely cultural recording, but to provide a content core with both authenticity and innovation for subsequent artistic creation by exploring the "root" and "soul" of rural culture, so as to avoid the formalization and superficialization of cultural expression.

"Art design is a purposeful aesthetic creation activity" [1]. In the field of education, art design is an educational activity that integrates art and craftsmanship to cultivate students' artistic thinking, social reflection, and the integration of practical and emotional expression. It mainly includes visual

communication design, environmental design, product design, costume design, and digital media art developed in the digital era. The "art design" in this study specifically refers to the art design practice in the teaching of digital media art major. This study takes digital media technology as the core medium to carry out professional practice of creative transformation and innovative dissemination of rural cultural elements, and its core lies in realizing the in-depth coupling of "technical instrumentality" and "cultural expressiveness". The application of digital media technology needs to be accurately adapted to the characteristics of cultural content: AI technology is not only used for visual generation (e.g., constructing rural ICH images using Midjourney), but also needs to realize the modern translation of traditional art forms through style transfer algorithms (e.g., Stable Diffusion); documentary creation needs to break through the traditional documentary paradigm, adopt a dual-line structure of "micro-narrative + macro-culture", reflect the overall value of rural culture through the stories of individual inheritors, and capture the aesthetic tension of skill details with technologies such as video recording and time-lapse photography; cultural and creative design needs to balance cultural nature and practicality, consider the needs of rural industries in carrier selection, and explore interactive means such as AR/VR in technology integration (e.g., embedding AR trigger points in packaging, which can display scenes of traditional rural agricultural work when scanned). The key of art design is to avoid the tendency of technology-centrism, and always take the core connotation of rural culture as the guide rather than simply pursuing technical effects; its ultimate goal is to enable rural culture to break through regional and temporal limitations through the communication advantages of digital media, not only meeting the cognitive needs of urban audiences for rural culture, but also enhancing the cultural identity of rural residents, and realizing the multiple effects of "cultural communication - industrial empowerment - value identity".

2.2 Theoretical Basis

The theory of project-based learning originates from the educational philosophy of "learning by doing" proposed by American educator John Dewey. He advocated regarding the teaching process as a process of "doing" and implementing it in five steps: "First, arrange a real situation in line with students' real life to create a scenario; second,

set a topic that can stimulate students' thinking in the scenario to clarify the problem; third, provide applicable and sufficient materials to put forward hypotheses; fourth, verify the hypotheses in activities to infer the hypotheses; fifth, test the hypotheses and draw conclusions" [2]. American progressive educator William Heard Kilpatrick proposed the "project method", which can be summarized as: "It must be a practical problem to be solved; it must be a purposeful and meaningful unit activity; it must be designed and implemented by students themselves; it includes an activity that can continuously accumulate experience, enabling students to obtain major development and sound growth through design" [3]. It can be seen that the "project method" is a further deepening of Dewey's educational thought of "learning by doing", and in this study, it is further combined with the disciplinary characteristics of "symbiosis of technical operation and cultural expression" in digital media art major to provide theoretical support. Specifically, through rural cultural and creative projects (such as digital video creation of ICH and development of rural cultural and creative products), a learning closed loop of "problem-driven - research and analysis - design transformation - competition verification" is constructed, which not only responds to the requirements of cultivating high-order thinking abilities in the "cognitive process" dimension of Bloom's Taxonomy of Educational Objectives (2001 edition), i.e., "remembering/recalling - understanding - applying - analyzing - evaluating - creating" [4], but also enables students to achieve in-depth integration of digital technology and rural cultural knowledge in real scenarios (such as the recording of ICH skills in field investigations and the on-site trial application of design results in rural areas).

Ideological and political education in courses is the organic integration of ideological and political education and course teaching, which requires "transforming ideological and political theory education and professional education into a coordinated and complementary process" [5]. In 2022, the Ministry of Education clearly pointed out in the Notice on Issuing the Guidelines for the Construction of Ideological and Political Education in Higher Education Courses that "for professional courses in art disciplines, it is necessary to educate and guide students to base themselves on the times, take root in the people, go deep into life, and establish a correct view of art and creation in the course teaching. It is necessary to adhere to

educating people with aesthetics and cultivating people with beauty, actively promote the spirit of Chinese aesthetic education, guide students to consciously inherit and carry forward the excellent traditional Chinese culture, comprehensively improve students' aesthetic and humanistic literacy, and enhance cultural confidence" [6]. Therefore, in professional teaching, abstract values such as cultural confidence, craftsmanship spirit, and social responsibility can be transformed into quantifiable and perceptible goals in digital media art practice, so as to avoid the "labeling" of ideological and political education.

To sum up, project-based learning provides a concrete implementation carrier for ideological and political education in courses, integrating "implicit ideological and political education" into the entire process of research, design, and feedback; ideological and political education in courses endows project-based learning with a value guidance direction, preventing technological application from falling into the instrumental rationality misunderstanding of "valuing skills over connotation". The two present a collaborative support relationship, jointly providing theoretical support for the dual-line intersection paradigm of "cultural tracing laying the foundation for value cognition and art design realizing innovative transformation".

3. PARADIGM CONSTRUCTION: DUAL-LINE INTERSECTION IDEOLOGICAL AND POLITICAL TEACHING MODEL

The core of constructing the dual-line spiral model of "cultural tracing - art design" lies in breaking the one-way disconnected relationship between cultural cognition and technical practice, and forming an in-depth coupling system where the two penetrate each other and are dynamically calibrated. Among them, the cultural tracing line does not merely provide static content materials for art design, but runs through the entire process of artistic creation as a value guide. In the early stage, it clarifies the boundary of the cultural core for design (e.g., defining the core spiritual connotation of rural ICH skills to avoid the abuse and misinterpretation of cultural symbols in design); in the middle stage, through the continuous interpretation of cultural connotation, it provides direction calibration for technological application (e.g., when art design tends to over-pursue technical effects and weaken the essence of culture,

it re-anchors the creative direction by supplementing cultural detail research); in the later stage, through the verification of cultural authenticity, it provides a basis for the value judgment of design results.

The art design line is not merely a technical implementation link, but feeds back to cultural tracing as an innovative transformer. The creative needs generated in its technical practice (e.g., the need for visualizable and interactive cultural elements) can promote cultural tracing to focus more on the excavation of cultural symbols with communication potential; the cultural expression effects achieved through digital technology (e.g., the differences in audience acceptance of rural culture under different technical presentation methods) can provide references for adjusting the key directions of subsequent cultural tracing.

The two lines form a closed-loop spiral upward through three key nodes: "research - transformation - feedback". First, the research node emphasizes "simultaneous initiation of dual lines". Cultural tracing carries out systematic sorting of rural culture (including hierarchical excavation of historical context, skill system, and spiritual connotation), while art design simultaneously conducts technical adaptability analysis (screening suitable types of digital media technology based on the characteristics of cultural content and predicting technical application difficulties). At this stage, the two complete the initial matching of cultural needs and technical capabilities. Second, the transformation node focuses on "in-depth integration of dual lines". The cultural symbols and spiritual core extracted by cultural tracing directly guide the creative direction and technical selection of art design, while the technical limitations encountered in art design will drive cultural tracing to further refine element decomposition and connotation interpretation, forming an interaction of "problem-solving - cognitive deepening". Third, the feedback node realizes "dual-line value symbiosis". It not only tests the depth and accuracy of cultural tracing through cultural dimension evaluation (e.g., the degree of recognition of the cultural authenticity of design results by rural cultural inheritors), but also verifies the innovation and practicality of art design through technical dimension evaluation (e.g., the communication efficiency of digital works and the effect of interactive experience). The feedback results of the two jointly contribute to the iterative optimization of the next round of "cultural tracing - art design",

promoting the model to show a spiral upward development trend as a whole.

In addition, ideological and political elements are deeply embedded in all links of the dual-line spiral in the form of "implicit context". In the cultural tracing stage, students' cultural identity and cultural confidence are strengthened by guiding them to understand the historical value and contemporary significance of rural cultural heritage; in the art design stage, students' innovative spirit and sense of responsibility are shaped through discussions on technical ethics and cultivation of innovative thinking; in the feedback stage, students' sense of social responsibility is further enhanced by guiding them to analyze the practical value of design results for rural cultural inheritance and rural development, and finally realizing the trinity educational goal of "cultural inheritance - technological innovation - value shaping".

4. PRACTICAL PATH: TEACHING IMPLEMENTATION DRIVEN BY COMPETITIONS

4.1 Curriculum System Design

The teaching team explores the practical path of constructing the dual-line intersection model by designing, practicing, and evaluating the overall effect of the course Cultural Inheritance and Digital Innovation offered to sophomore undergraduates majoring in digital media art. The curriculum design takes the four-dimensional teaching system of "theoretical teaching - field practice - creation guidance - competition verification" as the core, and constructs a progressive education system around the dual-line logic of "cultural tracing as the foundation and art design as the application". Among them, the cultural cognition module breaks through the traditional theoretical indoctrination model and adopts composite teaching content of "cultural anthropology + digital technology". In the teaching of ICH theory, the "cultural gene extraction method" is introduced to guide students to decompose the three-layer structure of "material carrier - skill process - spiritual connotation" from rural ICH skills (such as weaving and brewing). In the teaching of rural cultural research methods, literature research and digital tools are integrated, such as using GIS (Geographic Information System) to sort out the spatial distribution of rural culture and establishing a "rural cultural resource database" through digital archive management technology, so

as to provide a standardized research framework for the cultural tracing line.

The technical training module adheres to the principle of "technology adapting to culture" to avoid the isolation of technical teaching. The teaching of AI generation technology focuses on "cultural style transfer". Taking the symbols extracted by cultural tracing (such as the scale patterns of Kaihua grass dragon) as training samples, students are guided to adjust the Prompt instructions of Midjourney to ensure that the AI-generated content does not deviate from the essence of culture. The teaching of digital documentary creation emphasizes the balance between cultural documentation and artistic expression, combining rural realistic recording methods with follow-up interview shooting. It not only requires students to completely record the core processes of ICH skills (results of cultural tracing), but also guides them to design lens language through "micro-narrative + emotional resonance" (art design innovation). The teaching of cultural and creative design adopts a "dual orientation of cultural value and industrial demand", combining rural folk customs obtained from cultural tracing with market research data to construct a three-dimensional design standard of "cultural symbol - technical carrier - practical function".

As a key link of dual-line integration, the comprehensive practice module strictly aligns with the dual-line nodes of "research - transformation - feedback". In the "research stage", students are required to submit the Rural Cultural Research Report (results of cultural tracing) and the Technical Adaptation Plan (art design planning) simultaneously, which need to be jointly reviewed by professional teachers, rural cultural inheritors, and village committees to ensure the initial matching of cultural direction and technical path. In the "transformation stage", a "dual-line mid-term review" is set up to focus on checking the accuracy of the translation of the cultural core by art design (e.g., whether the AI video restores the "auspicious meaning" of the grass dragon, and whether the packaging design reflects the "fishing and farming culture"). In the "feedback stage", the competition evaluation standards (e.g., the dimensions of cultural innovation and technical application in the Milan Design Week and China Good Idea Competition) and the actual needs of rural areas are incorporated into the result evaluation, promoting the transformation of dual-line results towards the dual goals of "winning competitions - rural application".

4.2 Innovation in Teaching Methods

Through the dual-line collaborative upgrading of the three-stage research method, the interactive process of "cultural tracing guiding art design and art design feeding back to cultural tracing" is implemented throughout. In the first stage, after the theoretical explanation in the early part of the course, multiple rural cultural and creative themes are assigned based on the real propositions of competitions, allowing students to freely choose one to complete a research assignment — this enriches students' interest options. In the literature research of the cultural tracing line, technical pre-research tasks for art design are embedded simultaneously. For example, when students sort out the local chronicles of the Kaihua Grass Dragon, they need to concurrently analyze "AI generation technologies suitable for the dynamic form of the grass dragon" and "image presentation methods for festival ritual scenes", thus forming an analysis plan for cultural material and technical adaptation.

In the second stage, field investigation — a core link of cultural tracing — is designated as a practical training assignment. Prior to this, the course provides theoretical explanation and guidance on the "dual-line parallel recording method": each student team is divided into a "cultural recording group" and a "technical collection group." The former explores the tacit knowledge of inheritors through in-depth interviews (e.g., "control of bamboo strip flexibility" in grass dragon weaving), while the latter collects skill details (e.g., hand movement trajectories during winemaking) using equipment such as video cameras and cameras. This avoids the omission of cultural information or deviations in technical collection.

In the third stage, cultural decoding — the output link of cultural tracing — is taken as the final course assignment, with an additional step of digital testing for cultural symbols. The art design line needs to transform the extracted symbols (e.g., the visual element of "dragon dance for auspiciousness" and the temporal symbol of "winemaking according to solar terms") into preliminary digital prototypes (e.g., AI sketches, short video clips). Rural cultural inheritors are invited to evaluate the accuracy of the symbols; if there is "cultural expression deviation" (e.g., the grass dragon generated by AI loses its handcrafted texture), the team returns to the field investigation stage to supplement research, forming a micro-closed loop of "tracing — design — calibration."

In the course, a tutorial system featuring "professional teachers + rural cultural inheritors/village cadres + competition organizing committee mentors" is adopted to build a three-dimensional guidance system covering "cultural tracing — art design — competition adaptation." First, rural cultural inheritors/village cadres ensure the authenticity of the cultural tracing line. For instance, in reviewing the script of a glutinous rice wine documentary, they not only verify the accuracy of the winemaking process but also guide students to explore the stories and spirits of rural craftsmen behind winemaking, ensuring that cultural connotations are not oversimplified. Second, professional teachers focus on guiding the integration of technology and culture in the art design line. For example, in AI video creation, they not only teach parameter adjustment for style transfer in tools such as Stable Diffusion and Jimeng (a Chinese AI tool for creative content) but also guide students to think about how to reflect the traditional aesthetics of the grass dragon through ink-wash textures, avoiding excessive emphasis on technical gimmicks. Third, the competition organizing committee connects "dual-line achievements with competition standards." For example, based on the "industrial empowerment" evaluation dimension of the "Rural Tourism Design Special Competition" under the China Good Idea Competition, they guide students to incorporate requirements for product innovation and artistry into the packaging design of Dazong Lake hairy crabs, ensuring that art design achievements meet both cultural communication and competition evaluation requirements.

A closed-loop design of the competition-driven mechanism is integrated throughout the course, forming a systematic assignment system. While completing regular assignments and final assessment tasks, students develop a systematic knowledge framework of "theoretical cognition — research — plan formulation — design practice — evaluation and feedback." Breaking away from the traditional model that treats competitions as the ultimate goal, a dual-line closed loop is constructed where competition standards are embedded in the entire teaching process. In the initial stage of the course, the evaluation criteria for "rural-themed tracks" in competitions such as Milan Design Week and China Good Idea Competition (e.g., "degree of cultural inheritance," "technological innovation," "social value") are decomposed into cultural tracing indicators (e.g., depth of cultural research, accuracy of symbol extraction) and art design indicators (e.g.,

proficiency in technical application, completeness of creative expression), which are then integrated into the course teaching objectives.

During the creation process, task benchmarks aligned with competition timelines are set. For example, one month before the submission deadline for Milan Design Week entries, the "evaluation of cultural tracing achievements" (jointly assessed by inheritors and teachers) is completed; half a month before the deadline, the "review of art design prototypes" (jointly guided by the competition organizing committee and teachers) is conducted — this ensures that dual-line achievements meet standards simultaneously. After the competition, a "competition feedback — dual-line optimization" mechanism is established. If a work fails to receive a high evaluation due to superficial cultural expression (e.g., an AI video only presents the form of the grass dragon without reflecting the significance of the festival), the "spiritual connotation decoding" link in cultural tracing is strengthened in the next round of teaching; if a work fails due to "insufficient technical application," the "practical technical training" in the art design module is optimized. This makes competition feedback a core driver for the spiral improvement of the "cultural tracing — art design" dual line.

Meanwhile, the competition participation process is incorporated into course evaluation. Students are required to submit a Competition Creation Log, which records three aspects: "adjustments to cultural tracing," "iterations of art design," and "improvement of ideological and political cognition" (e.g., deepened understanding of the craftsman spirit and ecological concepts). This achieves the dual-line educational goal of "promoting learning through competitions and fostering ideological awareness through competitions."

5. CONCLUSION

Based on the needs of rural revitalization and the construction of a culturally powerful country, and addressing the pain points in the teaching of digital media art majors, this study constructs and practices a dual-line intersecting ideological and political teaching paradigm of "cultural tracing — art design." First, it breaks through traditional models to build a dual-line spiral education model, with cultural tracing as the value core and art design as the technical carrier. Through the "research — transformation — feedback" closed

loop, it solves the problem of disconnection between culture and technology. Second, it forms a replicable competition-driven path: relying on core courses to build progressive modules, innovating research methods and the three-dimensional tutorial system, and embedding competition standards to form a teaching closed loop — students have won multiple national and provincial awards. Third, it realizes the in-depth integration of ideological and political education with professional teaching: ideological and political elements are implicitly embedded in dual-line links to avoid "labeling," achieving the trinity educational goal of "knowledge impartment — ability cultivation — value shaping." At the same time, it forms a collaborative ecosystem of "universities — rural areas — competitions," promotes the implementation of achievements, and fulfills the mission of supporting rural revitalization through teaching practice.

Although the study has achieved phased results, it needs to be further deepened in three aspects in the future. First, it is necessary to improve the long-term university-local government collaboration mechanism: join hands with enterprises and governments to build rural practice bases for digital media art, incorporate the cultural digital gene database into local planning, and realize the dynamic update of materials and the regular implementation of achievements. Second, it is essential to optimize ideological and political evaluation and technical application: construct a three-dimensional ideological and political evaluation system of "process — result — feedback", use teaching logs to record process data, and deepen the exploration of immersive technologies such as VR/AR. Third, efforts should be made to promote the industrialization and dissemination of achievements: cooperate with enterprises to mass-produce award-winning designs and establish a profit feedback mechanism; organize teaching resources into case collections to provide references for ideological and political construction in similar professional courses across the country, and support the digital inheritance of rural culture.

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