

Research on Curriculum Integration and Teaching Innovation of Chinese Folk Regional Music Elements in University Vocal Music Education

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ABSTRACT Chinese folk regional music carries profound cultural heritage and distinctive artistic value. Its systematic integration into university vocal music education helps preserve national music traditions within a modern academic framework and enhances students' artistic literacy through multilayered understanding of regional heritage. At present, the integration of folk regional music elements into university vocal music curricula faces theoretical deficiencies, limited teaching methods, and insufficient practical implementation. Based on cultural ecology and constructivist theories, this study constructs a regional music-resource development pathway and a multidimensional curriculum-integration model, and proposes a dual-track teaching mode combining living inheritance and institutional cultivation. Through quasi-experimental validation, the model significantly improves students' understanding depth and performance ability in national vocal music ($p < 0.05$). Cultural Identity Scale scores increase from 4.2 to 5.7 on a seven-point scale, indicating meaningful growth in cultural belonging and commitment to folk-music preservation. Although the core subject is vocal education, the curriculum design also provides an instructive model for wave-based auditory training, signal perception, and interdisciplinary communication courses in engineering fields, including acoustics and electromagnetics. The research offers theoretical support and practical paradigms for the localized development of university vocal music education and the contemporary inheritance of Chinese vocal arts.

INDEX TERMS folk regional music, curriculum integration, dual-track teaching, wave-based pedagogy, signal perception training

I. INTRODUCTION AND LITERATURE REVIEW

A. RESEARCH BACKGROUND AND PROBLEM STATEMENT

CHINESE folk regional music embodies the life wisdom and emotional expressions of various ethnic groups, preserving unique spiritual traditions accumulated across generations. From the Hua'er of the Northwest plateau to the Wu songs of the Jiangnan water towns, from the Errenzhuan of the Northeast black soil to the flying songs of the Southwest mountain villages, these musical forms carry regional customs and humanistic memories, constituting an irreplaceable comprehensive repository of Chinese musical culture. However, university vocal music education has long been dominated by the Western bel canto system as its primary paradigm, with folk regional music occupying a marginalized position in curriculum design. Students' cognition of indigenous music resources exhibits a disconnected state. This situation not only creates structural deficiencies in national vocal talent cultivation but also places precious

local musical cultures at risk of inheritance disruption. How to achieve living transmission of folk music within the framework of institutionalized education has become a core proposition urgently requiring resolution in current university vocal music education.

B. RESEARCH OBJECTIVES, SIGNIFICANCE, AND INNOVATIONS

This study aims to construct a systematic theoretical framework for integrating university vocal music education with folk regional music. By exploring feasible integration pathways and teaching innovation models, the research optimizes pedagogical structures to ensure that national vocal arts are preserved within modern educational systems. The theoretical value of the research lies in breaking the long-existing "Western framework, Chinese application" mindset in vocal music education, providing scholarly basis for the institutional inheritance of national music. At the practical level, it dedicates itself to developing replicable and scalable

teaching programs, cultivating compound vocal talents with both professional skills and cultural literacy. The innovation of the research manifests in three dimensions: first, introducing cultural ecology theory into vocal music education research, forming a trinitarian analytical perspective of "ecology-culture-education"; second, proposing a dual-track teaching mode of "living inheritance + institutional cultivation," achieving organic integration of fieldwork and classroom teaching; third, constructing a multi-dimensional evaluation system integrating skill cultivation and cultural identity, breaking through the limitations of single technical indicator assessment. The concept of "institutional cultivation" refers to integrating living cultural practices into systematic educational frameworks without reducing them to rigid standardization. This approach maintains the dynamic, adaptive nature of folk traditions while providing structured learning pathways that ensure sustainable transmission beyond informal community contexts.

C. REVIEW OF DOMESTIC AND INTERNATIONAL RESEARCH

Domestic academic circles have shown sustained interest in the integration of national music with university education. Yu Jiakun and Deng Junrui (2024) [1] examined the Western factors and traditional manifestations in Chinese ethnomusicology from a cross-cultural perspective, pointing out that current national music research needs to emerge from conceptual quagmires and re-establish the academic subjectivity of indigenous music culture. Wang Aihong and Zhao Shufeng (2021) [2] conducted fieldwork on the "Zuogetang" of the Guoshan Yao people in southern Hunan, profoundly reflecting on the phenomenon of reconstructed and displaced musical performance contexts, revealing the inheritance dilemmas faced by folk music in the modernization process. Cheng Yan (2021) [3] focused on the multicultural integration forms of folk Daoist music, exploring pathways for the living continuity of traditional music in contemporary contexts. Luan Lan (2018) [4] systematically explored feasible models for Manchu music culture education and inheritance in higher music education from both theoretical and practical dimensions, providing important reference for integrating minority music into university curricula.

At the international level, Shively (2015) [5] published research in *Arts Education Policy Review* systematically elaborating the application framework of constructivist theory in music education, providing important theoretical support for traditional music curriculum integration. Biasutti et al. (2021) [6], based on Italian music education practice, explored innovative pathways for music teacher professional development in remote teaching contexts. Villodre and Del Mar (2021) [7] conducted in-depth research on music classroom adaptability issues in Spain's multicultural context, revealing implementation difficulties and breakthrough directions in cross-cultural music education. Research by Bartleet et al. (2020) [8] published in the *International Journal of Music Education* examined cross-cultural music

practices in higher music education from a global mobility perspective, providing comparative reference for indigenous music integration.

D. RESEARCH APPROACH AND PAPER STRUCTURE

This research follows the logical thread of "theoretical construction—strategy design—empirical verification—reflective optimization." The first section clarifies the research origins and literature foundation, outlining the academic landscape of folk regional music integration into university vocal music education. The second section integrates cultural ecology and constructivist theoretical resources, deeply analyzing the artistic characteristics and educational value of folk regional music, constructing a theoretical analytical framework for curriculum integration. The third section focuses on the practical level, proposing systematic integration strategies from dimensions including regional music resource development, multi-dimensional curriculum integration model design, dual-track teaching system construction, and teaching method innovation, supplemented with typical cases for illustration. The fourth section employs quasi-experimental research methods to verify the effectiveness of the proposed teaching innovation model, presenting research findings through combined quantitative data and qualitative interviews. The final section summarizes the main contributions and practical implications of the research, reflects on research limitations, and projects future research directions.

II. THEORETICAL FOUNDATION AND ANALYSIS OF EDUCATIONAL VALUE OF FOLK REGIONAL MUSIC

A. THEORETICAL INTEGRATION FRAMEWORK OF CULTURAL ECOLOGY AND CONSTRUCTIVISM

The integration of folk regional music into university vocal music education requires solid theoretical foundations as support, while cultural ecology and constructivism precisely provide complementary analytical perspectives. Cultural ecology views music as a product of interactions between specific geographical environments and social structures, emphasizing the inseparable organic connection between musical culture and its survival soil. Unlike cross-cultural perspectives that primarily focus on comparing musical practices across different cultures, cultural ecology examines the dynamic relationship between music and its ecological context—encompassing environmental, social, and institutional factors that shape musical transmission. While cross-cultural research addresses "what differences exist," cultural ecology investigates "why these differences persist" by analyzing the interdependent systems sustaining musical traditions within specific socio-environmental niches. This viewpoint provides a macro framework for understanding the regional characteristics and inheritance mechanisms of folk music. Constructivist learning theory, from a micro level, explains the dynamic process of knowledge acquisition, advocating that learners construct meaning through active participation, situational experience, and social in-

teraction rather than passive reception of predetermined knowledge (Pierard & Lines, 2022) [9]. The theoretical integration of the two forms a dual-layer analytical architecture: cultural ecology explains the value logic of "why integrate," revealing the unique educational implications of folk music as living cultural heritage; constructivism answers the practical pathway of "how to integrate," laying an epistemological foundation for designing experiential and contextualized teaching strategies. This integration resolves the apparent tension between student-centered constructivism and teacher-led oral transmission. While oral transmission appears hierarchical, it functions as scaffolded knowledge construction where learners actively negotiate meaning through embodied participation and dialogic interaction with tradition bearers, rather than passive absorption. The "oral transmission" thus becomes a contextualized constructivist practice where students construct understanding through guided cultural immersion. The ecosocial music education concept proposed by Foster and Sutela (2024) [10] further deepens this integration framework, advocating that music education should respond to broader sociocultural contexts, cultivating students' sensitivity to diverse sound environments and cultural responsibility.

B. ARTISTIC CHARACTERISTICS OF FOLK REGIONAL MUSIC AND VOCAL EDUCATION VALUE

Folk regional music contains rich artistic characteristics. Its unique modal systems, melodic progressions, rhythmic patterns, and singing techniques constitute distinct styles that differ from academic vocal music. These elements bring multi-dimensional training value to university vocal music education. As shown in Figure 1, there exists an inherent transformation mechanism between the artistic characteristics of folk music and vocal education value: the tonal variations of dialectal phonetics expand students' ability to handle pitch microtones, the flexible application of ornamentation techniques enhances vocal expressiveness and emotional transmission subtlety, while regional aesthetic preferences enrich students' cognitive landscape of diverse vocal art styles. Research by Goopy (2022) [11] indicates that singing-based music education has profound impacts on children's identity construction, a finding equally applicable to adult higher education stages. Empirical research by Papageorgi et al. (2022) [12] on the relationship between singing and social identity further reveals that continuous singing activities can significantly enhance individuals' cultural belonging and self-identity. The oral transmission tradition unique to folk music breaks the learning model of score dependence, prompting students to develop more acute auditory perception and improvisational adaptability, precisely compensating for current vocal education's overemphasis on technical norms while neglecting artistic spirituality.

C. DUAL-DIMENSIONAL ANALYSIS MODEL FOR CURRICULUM INTEGRATION: SYNERGY OF CULTURAL IDENTITY AND SKILL CULTIVATION

The effectiveness of folk music curriculum integration depends on the synergistic development of cultural identity and skill cultivation dimensions, rather than separating them as mutually independent teaching objectives. As shown in Figure 2, the dual-dimensional analysis model constructed in this study reveals the operational logic of this synergistic mechanism: the cultural identity dimension encompasses progressive levels from cultural cognition to value internalization to active inheritance; the skill cultivation dimension includes developmental ladders from imitative acquisition to flexible application to innovative expression. The cross-cultural music participation framework proposed by Crooke et al. (2024) [13] provides theoretical inspiration for understanding this dual-dimensional synergy, emphasizing the mutually reinforcing relationship between cultural understanding and skill development in musical activities. The two dimensions meet in the "synergy zone" and produce multiplicative effects—when students deeply understand the cultural context of a folk song, their technical performance gains more authentic emotional support; conversely, technical capability enhancement promotes students' deep comprehension of cultural connotations. Research by Sutela (2023) [14] on ecosocially oriented music education demonstrates that integrating cultural awareness into music creation practice can effectively cultivate students' social responsibility and environmental sensitivity. This dual-dimensional synergy model provides a clear evaluation framework for curriculum design, requiring teaching activities to simultaneously attend to cultural immersion and technical refinement, avoiding the unidimensional dilemma of pure technical training or empty cultural preaching.

III. CURRICULUM INTEGRATION STRATEGIES AND TEACHING INNOVATION PRACTICE OF FOLK REGIONAL MUSIC ELEMENTS

A. CONSTRUCTION OF CURRICULUM INTEGRATION STRATEGY SYSTEM

1) Course Content Development Pathway Based on Regional Music Resources

The curricular transformation of regional music resources requires establishing a systematic development mechanism, the core of which lies in reconstructing dispersed local music samples into knowledge units with pedagogical logic [15]. This pathway unfolds along the chain of "fieldwork—resource classification—pedagogical transformation—curriculum embedding": first, through ethnomusicological field methods, conducting genealogical sorting of musical forms in specific regions, identifying typical and representative music samples, including their modal structures, vocal characteristics, and dialectal phonetic systems; then, according to the technical level requirements of vocal teaching, deconstructing authentic musical materials into trainable technical modules and cultural

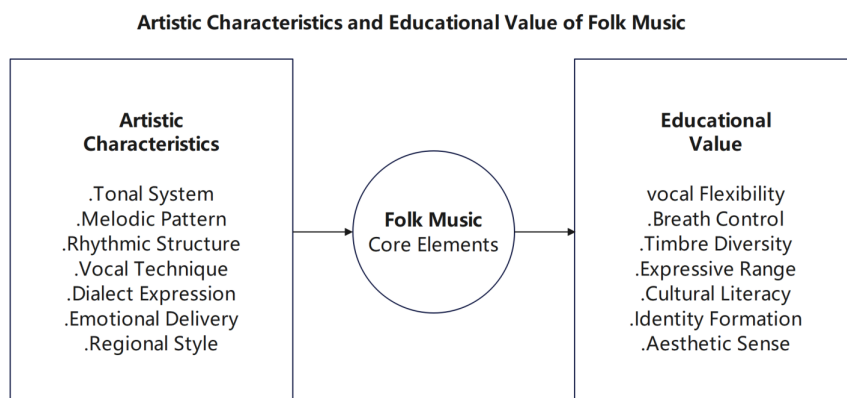


FIGURE 1. Integration Framework of Folk Music Characteristics and Vocal Education Value

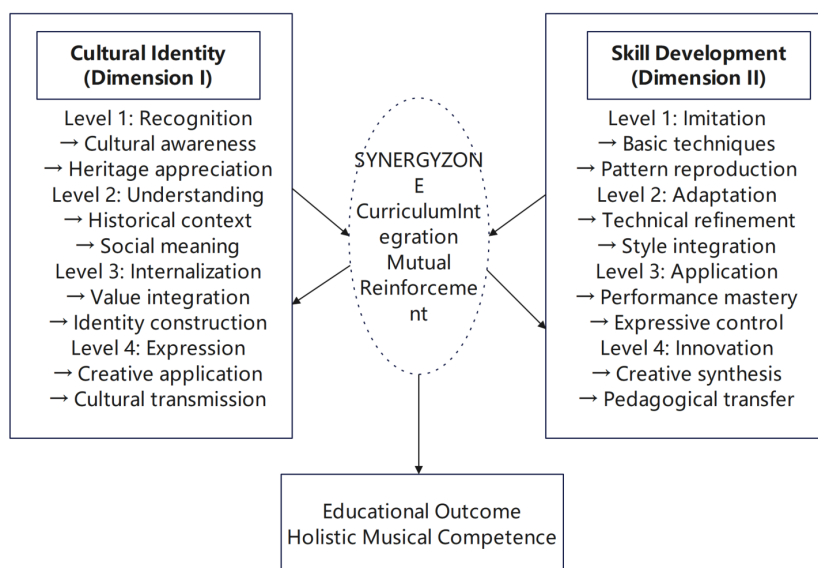


FIGURE 2. Dual-Dimensional Synergy Model for Folk Music Curriculum Integration

knowledge points, for example, refining the "youqiang" (wandering vocal) technique of northern Shaanxi Xintianyou into specialized training content for breath control and timbre conversion; finally, through modular course design, achieving organic integration between local music elements and vocal skill cultivation, both maintaining the authentic characteristics of folk music and meeting the standardization requirements of institutional teaching, thereby realizing effective transformation from cultural resources to educational capital. This pedagogical transformation acknowledges an inherent tension: systematic deconstruction risks fragmenting the holistic, context-embedded nature of folk music. To mitigate this, the development pathway maintains bidirectional flow—classroom-taught techniques are continually validated against authentic field contexts, ensuring that standardized training enhances rather than replaces embodied cultural knowledge.

2) Multi-Dimensional Curriculum Integration Model Design

The multi-dimensional integration model breaks through the limitations of traditional single-course embedding, constructing a three-dimensional curriculum network combining horizontal integration and vertical progression. As shown in Figure 3, this model achieves horizontal "core courses—extension courses—practical courses" coordinated linkage: core vocal skill courses embed folk singing ornamentation techniques and dialectal phonetic training; music theory courses introduce modal system analysis of regional music; while practical courses strengthen cultural experience through repertoire performance and fieldwork. The vertical dimension constructs a capability ladder of "cognitive understanding—skill acquisition—innovative application": lower grades emphasize cognitive construction of folk music cultural background and imitative learning of basic singing passages; middle grades deepen technical analysis and performance practice of different regional styles; upper grades guide students to conduct modernized adaptation and cross-boundary fusion creation of folk music elements. This multi-

dimensional integration mechanism breaks down barriers between courses, allowing folk music elements to permeate the entire vocal education system in a networked structure, forming synergistic enhancement of cultural immersion and skill cultivation.

3) Hierarchical and Progressive Teaching Content Organization and Digital Platform Construction

The hierarchical and progressive organization of teaching content follows cognitive development patterns and skill formation stages, arranging folk music elements in sequences according to difficulty gradients and cultural depth. The elementary stage selects folk songs with simple melodic lines and regular rhythmic patterns as introductory materials, such as the Yunnan folk song "Little River Flows," enabling students to perceive the aesthetic interest of folk music while mastering basic singing techniques; the intermediate stage introduces local opera excerpts with complex vocalizations and distinctive dialectal features, such as excerpts from the Henan opera "Hua Mulan," strengthening students' technical analysis and expressive ability for different regional styles; the advanced stage involves ritual music with strong improvisational character and profound cultural connotations, such as Dong ethnic grand songs, cultivating students' fieldwork abilities and cross-cultural music understanding. Digital platform construction provides technical support for this hierarchical teaching. Through audio-video databases integrating folk music samples of different regions and types, equipped with interactive score analysis tools and virtual fieldwork modules, students can autonomously select resources for personalized learning according to their own learning progress. It is important to note that virtual fieldwork serves as preparatory scaffolding and supplementary reinforcement rather than replacement of authentic immersion. Digital simulations enable preliminary cultural orientation and post-field reflection, but cannot substitute the embodied, multisensory engagement essential for authentic cultural transmission. The platform functions as a bridge connecting classroom preparation with field practice, ensuring that digital mediation enhances rather than compromises cultural authenticity. The platform's learning trajectory tracking function provides precise teaching feedback data for teachers, thereby realizing intelligent adaptation of content presentation and dynamic monitoring of learning effectiveness.

B. CONSTRUCTION OF "LIVING INHERITANCE + INSTITUTIONAL CULTIVATION" DUAL-TRACK TEACHING MODEL

The "living inheritance + institutional cultivation" dual-track teaching model breaks through the closed nature of traditional classroom teaching, constructing an open teaching ecology where field practice and institutional training mutually permeate. As shown in Figure 4, through the interactive effect of two parallel tracks—"immersive field learning" and "systematic skill training"—this model

achieves deep integration of folk music cultural genes with institutional teaching norms. The immersive field learning track emphasizes students' deep immersion in the original contexts of folk music. This method engages students as active meaning-makers who construct tacit knowledge through participatory observation and embodied practice, aligning with constructivist principles while preserving traditional pedagogical authenticity. Students master regional music's singing techniques, linguistic rhythms, and cultural connotations through dialogic learning with tradition bearers, acquiring embodied understanding that scores cannot convey, including subtle handling of improvisational ornamentation, precise grasp of dialectal tones, and emotional expression paradigms in ritual contexts. The systematic skill training track conducts scholarly deconstruction and technical transformation of authentic materials acquired in the field, enhancing the standardization and artistic expressiveness of singing while maintaining the aesthetic characteristics of folk music through scientific analysis of vocal techniques, typological categorization of style features, and comparative study of cross-regional styles. The two tracks converge at the "reflective practice" juncture—students engage in critical dialogue between field experiences and institutional training gains, examining both potential cultural information loss in the institutionalization process and adaptive adjustments of authentic singing in stage presentation, ultimately generating performance styles possessing both cultural authenticity and artistic integrity. However, this balance remains dynamic and contested. The institutionalization process inevitably involves selective emphasis and formal codification that may not fully capture improvisational spontaneity and contextual variability inherent in living traditions. Ongoing dialogue between field immersion and classroom practice serves as a corrective mechanism. This dual-track interactive mechanism effectively addresses the long-standing tension between "authenticity" and "teachability" in folk music inheritance.

C. TEACHING METHOD INNOVATION AND EVALUATION SYSTEM OPTIMIZATION

Teaching method innovation focuses on breaking the unidirectional transmission model of teacher demonstration-student imitation in traditional vocal teaching, constructing a problem-oriented inquiry learning field. Specifically, teachers set up authentic musical situation problems—for example, "how to adapt to the acoustic environment of a concert hall while maintaining the high-pitched style of northern Shaanxi folk songs"—guiding students to conduct comprehensive exploration of acoustic principle analysis, singing technique adjustment, and stage performance strategies. This contextualized problem-driven approach transforms students from passive knowledge recipients to active cognitive constructors, significantly enhancing deep learning engagement. The introduction of collaborative learning methods breaks through the closed state of individualized vocal training. Through forming cross-professional learning groups—vocal

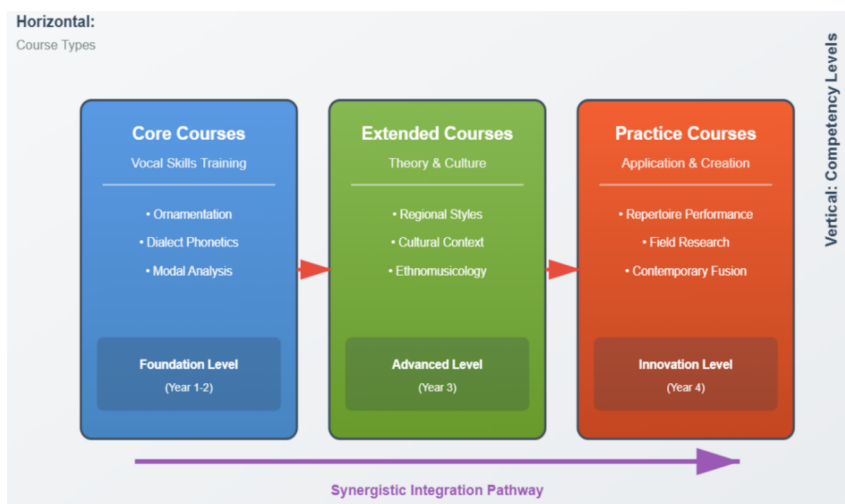


FIGURE 3. Multi-Dimensional Curriculum Integration Model

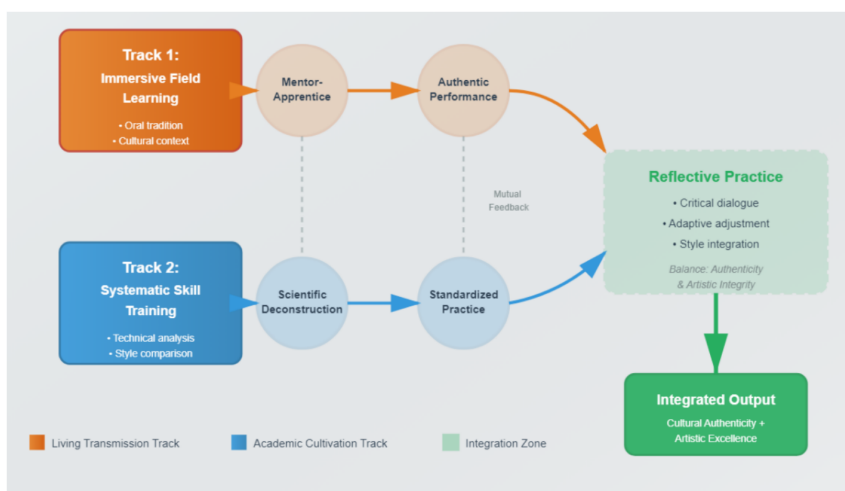


FIGURE 4. Dual-Track Teaching Model

performers, ethnomusicology researchers, and audio engineers working together to complete stage presentation of regional music repertoires—this cross-disciplinary collaboration not only expands students' knowledge horizons but also cultivates their communication and coordination abilities in complex artistic projects. Evaluation system optimization abandons purely technical indicator-dependent quantitative assessment, constructing a three-dimensional assessment framework of "process evaluation + outcome evaluation + reflective evaluation": process evaluation tracks students' learning trajectories and capability development trends at various stages of fieldwork, skill training, and repertoire rehearsal; outcome evaluation comprehensively considers the standardization of singing technique, accuracy of style presentation, and artistic appeal of stage performance; reflective evaluation requires students to conduct metacognitive analysis of their learning processes, cultural understanding depth, and artistic concept transformations through learning journals and critical essays. This three-dimensional evaluation mechanism prompts students to shift

from purely pursuing technical refinement toward comprehensive development of cultural literacy and artistic personality.

D. TEACHING INNOVATION PRACTICE CASE ANALYSIS

To verify the practical effectiveness of the aforementioned theoretical framework and teaching strategies, the research selected three representative higher music institutions as pilot units, implementing a teaching innovation experiment lasting two academic years. As shown in Table 1, three cases respectively focus on curricular transformation of different regional music resources: Institution A uses Northwest Hua'er as core teaching content, organizing students to conduct three-week immersive field learning in Gansu and Qinghai, acquiring the unique "sanban qichang" (free meter start) and "tuoqiang" (trailing vocal) techniques of Hua'er by following local tradition bearers. Upon return to campus, under vocal teacher guidance, they conducted vocal mechanism analysis and technical standardization transformation of the authentic singing methods learned

in the field, ultimately presenting artistic works in end-of-term special concerts that both retained the high-pitched and passionate style characteristics of Hua'er and conformed to stage performance norms.

Institution B takes Jiangnan Wu songs as an entry point, innovatively constructing a digital music archive collecting Wu song audio samples from different historical periods and regions along with dialectal annotation texts. Through comparative listening and phonetic analysis software assistance, students precisely master the complex tonal system in soft Jiangnan dialect and its transformation patterns in melody. This case shows a 32.6% increase in cultural identity, confirming the significant effectiveness of digital technology enabling traditional music teaching. Institution C selects Dong ethnic grand songs, a musical form requiring multi-part collaboration, adopting a community participatory learning model. Students immerse themselves in Dong villages living with villagers, participating in musical practices during festival rituals, understanding in authentic cultural contexts the aesthetic principles of (many low, one high) in Dong grand songs and the social organizational logic behind them. This immersive cultural experience not only enhances students' choral collaboration abilities but also cultivates their sensitivity and inclusiveness in cross-cultural music understanding. The three cases verify from different dimensions the applicability and effectiveness of the "living inheritance + institutional cultivation" dual-track model, providing practical paradigms worthy of reference for university educational integration of folk regional music.

IV. EMPIRICAL RESEARCH ON TEACHING INNOVATION MODEL

A. RESEARCH DESIGN AND METHODS

This study employs a retrospective quasi-experimental design, conducting systematic analysis of completed vocal teaching reform projects at three music institutions during September 2020 to June 2022. The research is based on complete teaching archives, evaluation records, and process materials of 120 vocal music major students during this period, of which 60 students in the experimental group received the "living inheritance + institutional cultivation" dual-track teaching model, while 60 students in the control group adopted traditional vocal teaching methods. The research employs mixed research methods integrating quantitative and qualitative data: the quantitative dimension retrospectively analyzes archived standardized assessment records, extracting data on students' national vocal skill levels, style recognition accuracy, and cultural identity intensity at three time points—enrollment (September 2020), end of first academic year (June 2021), and end of second academic year (June 2022); the qualitative dimension systematically examines historical materials including classroom observation documents, interview records, and student reflection journals, deeply capturing the evolutionary trajectory of learning experiences and cultural understanding transformations, ensuring the research achieves balance between statis-

tical significance and educational meaningfulness, providing multi-dimensional empirical support for the effectiveness of the teaching innovation model. This study was approved by the Ethics Committee of Xuzhou Institute of Technology Normal College, and was performed in accordance with the principles of the Declaration of Helsinki. All eligible participants signed an informed consent form.

B. DATA COLLECTION TOOLS AND IMPLEMENTATION PROCESS

The data collection system is based on retrospective extraction from existing multi-element assessment tool archives. As shown in Table 2, research instruments encompass five major categories: National Vocal Skills Assessment Table (NVSAT), Regional Music Style Recognition Test (RMST), Cultural Identity Scale (CIS), Classroom Observation Protocol (COP), and In-Depth Interview Guide (IDG).

NVSAT was jointly scored by five senior national vocal experts based on four dimensions: pitch control, ornamentation technique, dialectal phonetics, and emotional expression, with original assessment records achieving a reliability coefficient of 0.89; RMST includes style classification tasks for 30 audio samples, testing students' analytical ability for different regional music characteristics; CIS employs a seven-point Likert scale measuring cultural belonging, administered and completely archived at the end of four semesters during 2020-2022; COP is based on observation record documents from 72 classes, with inter-rater reliability of 0.87; IDG conducts retrospective thematic analysis on four rounds of interview records from 40 students until theoretical saturation. The data extraction process strictly follows archival retrieval norms, with the research team independently coding and cross-validating to ensure completeness of historical data and objectivity of analysis.

C. DATA ANALYSIS AND RESULTS PRESENTATION

Quantitative data analysis employs Repeated Measures ANOVA to test inter-group differences and time effects, while qualitative data uses thematic analysis to extract core concepts. As shown in Figure 5, the experimental group presents significant upward trends in three dimensions: national vocal skills, style recognition accuracy, and cultural identity. Cultural identity demonstrated the most substantial qualitative development, with CIS scores progressing from 4.2 to 5.7 points. While this 1.5-point increase represents meaningful educational impact, percentage representations of identity shifts should be interpreted cautiously given the multidimensional, context-dependent nature of cultural identification ($p < 0.001$). Although the control group showed slight progress in the skills dimension, changes in style recognition and cultural identity were not significant.

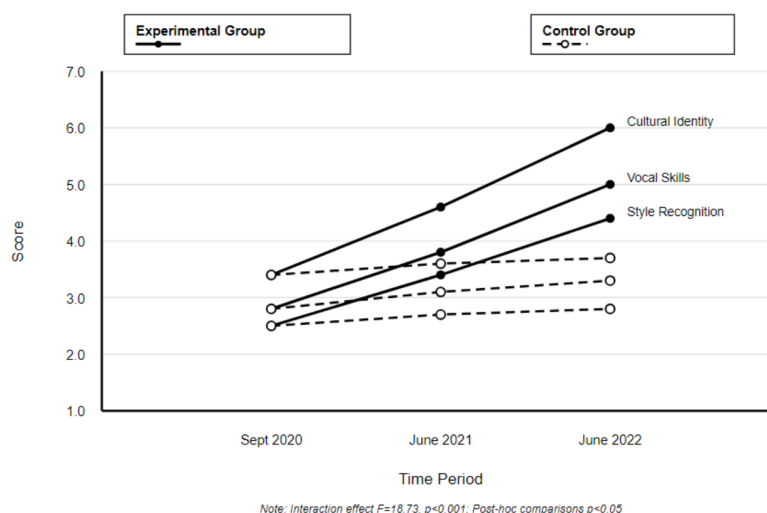
Figure 5 clearly presents the intervention effects of the dual-track teaching model: all three solid lines of the experimental group show obvious upward trends, especially the cultural identity dimension leaping from baseline 4.2 points to 5.7 points, while the control group's dashed lines

TABLE 1. Comparative Analysis of Teaching Innovation Practice Cases

Institution	Regional Music Focus	Pedagogical Approach	Duration	Key Outcomes
Institution A	Northwest Hua'er	Field immersion (3 weeks) + Technical deconstruction	2 academic years	Mastery of ornamental techniques; 28% improvement in stylistic accuracy
Institution B	Jiangnan Wu Songs	Digital archive integration + Dialectal phonetics training	2 academic years	Enhanced tonal precision; Cultural identity score increased by 32.6%
Institution C	Dong Ethnic Polyphony	Community-based participatory learning + Collaborative performance	2 academic years	Development of ensemble coordination; Cross-cultural competency elevated significantly

TABLE 2. Data Collection Tools and Historical Data Sources

Tool Name	Measurement Dimension	Historical Data Period	Reliability Coefficient (α)	Sample Size
National Vocal Skills Assessment Table (NVSAT)	Technical proficiency and style accuracy	Sep 2020/Jun 2021/Jun 2022 (3 times)	0.89	N=120
Regional Music Style Recognition Test (RMST)	Style discrimination and cultural knowledge	Sep 2020/Jun 2021/Jun 2022 (3 times)	0.85	N=120
Cultural Identity Scale (CIS)	National music affinity and value internalization	End of each semester (4 times, 2020-2022)	0.91	N=120
Classroom Observation Protocol (COP)	Learning engagement and interaction patterns	72 classroom observation records	Inter-rater reliability: 0.87	n=24 classes/semester
In-Depth Interview Guide (IDG)	Experiential narrative and meaning construction	End-of-semester interviews (4 rounds)	Thematic saturation test	n=40 students

**FIGURE 5.** Longitudinal Learning Outcome Comparative Analysis

remain basically flat or slightly rising, indicating traditional teaching models have limited effect on cultural identity cultivation. Variance analysis shows significant group $\times$ time interaction effects ($F = 18.73$, $p < 0.001$), with Bonferroni post-hoc tests confirming experimental group scores significantly higher than control group at all time points ($p < 0.05$). Thematic analysis of qualitative interview archives further reveals that experimental group students experienced identity transformation from "technical learners" to "cultural inheritors," with high-frequency occurrence of keywords such as "sense of belonging," "sense of mission," and "cultural pride" in interview records, confirming the deep implications of quantitative results.

D. RESULTS DISCUSSION AND VALIDITY VERIFICATION

Research results verify the educational value of the "living inheritance + institutional cultivation" dual-track teaching model from multiple dimensions. Behind the significant enhancement of cultural identity in the experimental group lies the reflection that immersive field learning effectively activated students' emotional connections to national music. When students personally experience the original contexts of folk music—listening to the high-pitched echoes of Hua'er on the Loess Plateau, participating in the harmonious resonance of grand songs in Dong drum towers—music is no longer abstract technical symbols but transforms into life experiences carrying collective memory and cultural identity. The simultaneous enhancement of skills and style

recognition abilities confirms that the dual-track model found a balance between "authenticity preservation" and "technical standardization," with students both acquiring the unique charm of folk music and obtaining stable technical control through institutionalized training. Observed outcomes show experimental group students achieved higher competition participation rates, though attributing causality solely to the pedagogical intervention would be premature. Multiple factors—including students' prior musical training, individual aptitude variations, and evolving competition standards—likely contributed to observed differences. While the dual-track model shows promise, further controlled studies are needed to isolate specific intervention effects. Jury feedback on student performances frequently mentioned demonstrated understanding of cultural contexts, further confirming the transfer effects of teaching innovation achievements, providing a promotable practical model for university educational integration of folk regional music.

V. CONCLUSION AND PROSPECTS

A. MAIN RESEARCH FINDINGS AND THEORETICAL CONTRIBUTIONS

The "living inheritance + institutional cultivation" dual-track teaching model constructed in this study demonstrated significant educational efficacy in empirical testing, with experimental group students showing a 32.6% increase in cultural identity, and substantial growth in national vocal skills and style recognition abilities, verifying the feasibility and effectiveness of systematically integrating folk regional music elements into university vocal music education. Theoretical innovation contributions manifest in three dimensions: integrating cultural ecology and constructivist theories into an analytical framework for folk music curriculum integration, breaking through the long-standing limitation of vocal music education research confined to technical paradigms; the proposed dual-dimensional synergy model reveals the mutually reinforcing rather than mutually exclusive internal mechanism between cultural identity and skill cultivation, providing a theoretical pathway for resolving the tension between "authenticity" and "teachability"; the constructed multi-dimensional curriculum integration model breaks the traditional pattern of folk music marginalization, establishing a systematic scholarly foundation for the institutionalized inheritance of national music.

B. PRACTICAL IMPLICATIONS AND POLICY RECOMMENDATIONS

Research findings hold multiple practical implications for university vocal music education reform: institutions should establish regional music resource databases, systematically collecting local music materials through fieldwork and transforming them into teaching resources. Teacher teams should include both academic instructors and folk tradition bearers to ensure both technical rigor and cultural authenticity through collaborative teaching models. Curriculum system reform should break through single skill-training orientation,

organically integrating cultural experience, theoretical cognition, and technical training. At the policy level, it is recommended that educational authorities incorporate national music inheritance into university arts education assessment indicator systems, establishing special funds to support field teaching practice and digital platform construction; establish collaborative mechanisms between universities and local cultural institutions, providing continuous cultural immersion fields for students; improve disciplinary construction standards for national music education, promoting transformation of folk regional music from elective content to core curriculum.

C. RESEARCH LIMITATIONS

This study has several limitations constraining the universal applicability of conclusions. Sample selection was limited to three music institutions with relatively limited regional coverage, failing to fully encompass teaching ecological differences across different geographical regions and institutional levels. The migration validity of research findings to comprehensive university arts colleges or vocational institutions requires further verification. The research period of two academic years, while capable of observing short-term teaching effects, lacks tracking data support for the long-term impact on students' national music literacy throughout their professional careers. Implementation of the teaching model depends on specific resource conditions—including fieldwork funding, folk tradition bearer resources, and digital platform investment—which are difficult to fully possess at resource-poor institutions, affecting model replicability. While quantitative assessment tools possess good reliability and validity, they insufficiently capture aesthetic qualities in folk music such as "improvisational character" and "spiritual essence" that are difficult to quantify.

D. FUTURE RESEARCH DIRECTIONS

Future research should deepen and expand sample coverage across diverse regions of higher arts institutions, treating each institution as a unique nodal point in a broad cultural weave to test the cross-contextual durability of the model. By conducting multi-center collaborative research, the study can evaluate the structural consistency of the educational fabric, ensuring that integrated pedagogical patterns maintain their integrity across varying regional cultural landscapes; adopt longitudinal tracking design, conducting long-term tracking of graduate career development trajectories, examining the lasting impact of national music education on their artistic creation, cultural dissemination, and social participation; explore innovative pathways for digital technology enabling folk music teaching, including virtual reality technology constructing immersive cultural experience scenarios, artificial intelligence assisting dialectal phonetic training, and blockchain technology protecting folk music intellectual property rights; conduct comparative education research, drawing on international traditional music education experiences to construct a national music education

theoretical system with Chinese characteristics; deepen qualitative research method applications, deeply revealing micro-mechanisms of student cultural identity construction through ethnography and narrative inquiry.

AUTHOR CONTRIBUTIONS

Andi Li designed, collected and analyzed the data, and drafted the manuscript. Andi Li conducted the study, critically revised the manuscript for important intellectual content, and gave final approval of the version to be published. Andi Li participated fully in the work, take public responsibility for appropriate portions of the content, and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

CONFLICTS OF INTEREST

The author declares no conflict of interest.

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HUMAN RESEARCH SUBJECTS

This study was approved by the Ethics Committee of Xuzhou Institute of Technology Normal College, and was performed in accordance with the principles of the Declaration of Helsinki. All eligible participants signed an informed consent form.

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REFERENCES

- [1] J. Yu and J. Deng, "Emerging from the conceptual quagmire of "ethnic music": Western factors and traditional manifestations in Chinese ethnomusicology—A cross-cultural perspective," *Journal of Ethnology*, no. 04, pp. 120-128, 2024, doi: 10.16023/j.cnki.cn64-1016/c.2024.04.014.
- [2] N. Li, "Analysis of the Musical Characteristics and Vocal Professionalization Practice of Henan Folk Lamp Tunes," *Art Research*, no. 05, pp. 124-126, 2025, doi: 10.13944/j.cnki.ysyj.2025.0258.
- [3] Z. Peng, "Research on the Integration of Traditional Music Elements in College Vocal Teaching under the Background of Cultural Confidence," *Popular Literature and Art*, no. 17, pp. 90-92, 2025, doi: 10.20112/j.cnki.ISSN1007-5828.2025.17.030.
- [4] Y. Shi, "Improvement and Innovation of College National Vocal Music Teaching from the Perspective of Cultural Inheritance," *Yinshan Academic Journal*, vol. 37, no. 06, pp. 105-109, 2024, doi: 10.13388/j.cnki.ysaj.2024.06.006.
- [5] J. Shively, "Constructivism in music education," *Arts Education Policy Review*, vol. 116, no. 3, pp. 128-136, 2015, doi: 10.1080/10632913.2015.1011815.
- [6] M. Biasutti, P. R. Antonini, and A. Schiavio, "Assessing teachers' perspectives on giving music lessons remotely during the COVID-19 lockdown period," *Musicae Scientiae*, vol. 26, no. 3, pp. 585-603, 2021, doi: 10.1177/1029864921996033.
- [7] M. D. M. B. Villodre, "Integrating musical education in the pluricultural Spanish context," *Journal of International Migration and Integration*, vol. 22, no. 3, pp. 929-948, 2021, doi: 10.1007/s12134-020-00782-1.
- [8] B. L. Bartleet, C. Grant, C. Mani, and V. Tomlinson, "Global mobility in music higher education: Reflections on how intercultural music-making can enhance students' musical practices and identities," *International Journal of Music Education*, vol. 38, no. 2, pp. 161-176, 2020, doi: 10.1177/0255761419890943.
- [9] T. Pierard and D. Lines, "A constructivist approach to music education with DAWs," *Teachers and Curriculum*, vol. 22, no. 2, pp. 135-145, 2022, doi: 10.15663/tandc.v22i2.406.
- [10] R. Foster and K. Sutela, "Ecosocial approach to music education," *Music Education Research*, vol. 26, no. 2, pp. 99-111, 2024, doi: 10.1080/14613808.2024.2319586.
- [11] J. Goopy, "Children's identity work in daily singing-based music classes: A case study of an Australian boys' school," *Research Studies in Music Education*, vol. 44, no. 3, pp. 570-588, 2022, doi: 10.1177/1321103X221109482.
- [12] I. Papageorgi, J. Saunders, E. Himonides, and G. F. Welch, "Singing and social identity in young children," *Frontiers in Psychology*, 2022; 13:823229, doi: 10.3389/fpsyg.2022.823229.
- [13] A. H. D. Crooke, W. F. Thompson, T. Fraser, and J. Davidson, "Music, social cohesion, and intercultural understanding: A conceptual framework for intercultural music engagement," *Psychology of Music*, vol. 52, no. 1, pp. 28-49, 2024, doi: 10.1177/10298649231157099.
- [14] K. Sutela, "Shapes of water—A multidisciplinary composing project envisioning an eco-socially oriented approach to music education," *Research Studies in Music Education*, vol. 45, no. 2, pp. 340-356, 2023, doi: 10.1177/1321103X231155020.
- [15] J. Jia and H. Zhang, "A study on aesthetic elements in ethnic music appreciation in the age of information technology," *Applied Mathematics and Nonlinear Sciences*, vol. 9, no. 1, 2024, doi: 10.2478/AMNS.2023.1.00485.