INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN PROGRESSIVE EDUCATION & DEVELOPMENT

OPEN ACCESS JOURNAL

Vol 15, Issue 1, (2026) E-ISSN: 2226-6348

Developing and Validating Culturally-Responsive Instructional Material for Suona Technique in Chinese Higher Education: A Model for Integrating Global and Traditional Music Pedagogies

Zhang Fei*, Shafizan Sabri

Faculty of Music and Performing Arts, Universiti Pendidikan Sultan Idris, Tanjung Malim Perak, Malaysia

Email: *zhangfei_feizhang@163.com, shafizan@fmsp.upsi.edu.my

DOI Link: http://dx.doi.org/10.6007/IJARPED/v15-i1/27345

Published Online: 03 January 2026

Abstract

Music education in higher education faces increasing pressure to balance cultural preservation with global professional demands. In China, Suona instruction, a traditional double-reed instrument taught historically through oral transmission and master-apprentice pedagogy exemplifies this tension. While these traditional modes ensure the continuity of cultural heritage, they often lack structured curricular design, diverse learning resources, and pedagogical adaptability expected in contemporary education. This paper presents the development of a Culturally-Responsive Instructional Material (CRIM) designed for tertiary-level Suona technique classes. The study integrates principles from Constructivist Theory, Multiple Intelligences Theory, and Vygotsky's Zone of Proximal Development to create a model that systematically fuses Western instructional design methods with the cultural value inherent in traditional Chinese music pedagogy. The paper outlines the theoretical framework, describes the model used for curriculum design, and discusses pedagogical implications for integrating global and local practices in applied music instruction. The resulting model offers a replicable and theoretically grounded pathway for enhancing student engagement, technical development, and cultural awareness in higher music education.

Keywords: Culturally-Responsive Teaching, Suona Instruction, Higher Music Education, Curriculum Development, Global Music Pedagogy, Constructivism, Multiple Intelligences, Zone Of Proximal Development (ZPD)

Introduction

Background and Context of Music Education

In contemporary higher education, music education faces the growing challenge of balancing the preservation of indigenous cultural heritage with the need to prepare students for participation in an increasingly globalized professional landscape. This challenge is especially evident in traditional instrumental programs, where long-established pedagogical practices prioritize cultural transmission over formalized educational design (Susino, 2022). As higher

education institutions expand their educational responsibilities, issues related to curriculum structure, instructional coherence, and learner engagement have become increasingly central to music education research.

Within the Chinese higher education context, traditional instruments such as the Suona occupy a distinctive pedagogical position. Historically, Suona instruction has relied heavily on oral transmission and master–apprentice models that emphasize imitation, experiential learning, and tacit knowledge. While these approaches play a vital role in sustaining stylistic authenticity and cultural continuity, they often lack systematic sequencing, explicit learning objectives, and diversified instructional resources commonly associated with contemporary tertiary education (Guan, Luo, & Matsunobu, 2022; Long & Yulia, 2025). Consequently, student learning experiences and outcomes may vary significantly, particularly among learners who are accustomed to structured, outcome-oriented instructional environments.

From an educational perspective, contemporary music students increasingly require instructional materials that are not only technically demanding but also pedagogically coherent and culturally responsive. Culturally responsive pedagogy emphasizes the integration of learners' cultural backgrounds and prior experiences into instructional design, thereby enhancing engagement and learning effectiveness (McKoy & Lind, 2022). In music education, this perspective aligns closely with constructivist learning theory, which views knowledge as actively constructed through meaningful interactions between learners, content, and context. In addition, professional music training in the 21st century demands adaptability, reflective practice, and cross-cultural competence, further underscoring the need for integrated and systematic curriculum models (Wang & Webb, 2024; Xie, 2025).

Despite increasing recognition of these pedagogical imperatives, a substantial gap remains in the availability of formalized, theoretically grounded instructional materials for traditional Chinese instruments in higher education. Current Suona instruction often depends on fragmented teaching resources and individual instructors' experiential knowledge, rather than on curricula informed by established educational theories and instructional design principles (Li, 2024b). Research in higher music education consistently demonstrates that structured instructional materials and intentional pedagogical planning are critical for enhancing students' practical skill development and overall learning experiences (Chen, 2024).

Moreover, the persistent divide between informal learning traditions and formal institutional education presents an ongoing challenge in traditional music pedagogy. While master–apprentice approaches naturally incorporate informal learning elements such as observation, imitation, and situated practice, higher education contexts require alignment with curriculum standards, learning outcomes, and assessment frameworks (Zhang, 2022). The lack of a curriculum development model that deliberately integrates Western instructional design principles with the cultural and pedagogical values inherent in Eastern musical traditions limits pedagogical innovation and sustainability (Massy & Sembiante, 2023). As a result, instructional materials for traditional instruments remain underdeveloped, constraining student achievement and limiting the effective application of contemporary pedagogical practices (Chen-Hafteck, 2024).

Against this background, the present study is motivated by the need to bridge traditional music pedagogy and modern educational practice through the development of a systematic, theory-informed instructional approach for Suona technique instruction in higher education. By addressing this underexplored intersection of curriculum design, culturally responsive pedagogy, and traditional instrumental instruction, the study seeks to contribute to the advancement of effective, sustainable, and pedagogically grounded music education.

Problem Statement

Despite its status as a cornerstone of Chinese musical heritage, suona education in higher education continues to face persistent pedagogical and curricular challenges that hinder its sustainable development. Historically, suona transmission has evolved through two parallel lineages: a folklore tradition embedded in ritualistic and social contexts, and an artistic academic tradition institutionalized within professional music colleges since the 1950s (Wang & Zhou, 2025). While academic institutionalization has elevated the suona to formal curricula, this transition has also generated enduring tensions between traditional modes of transmission and the requirements of modern higher education. As a result, significant challenges remain in the preservation, innovation, and effective teaching of suona music at the tertiary level.

The most critical problem lies in the pedagogical disconnect between traditional suona teaching approaches and the cognitive, aesthetic, and professional needs of contemporary university students. Current instruction continues to rely heavily on master–apprentice models that prioritize rigid imitation and oral transmission, often at the expense of conceptual understanding and learner agency. Recent evaluations of Chinese college music education indicate that such mono-cultural and rigid teaching models struggle to align with the evolving landscape of higher education (Wang, 2025). Students in fine arts and design colleges increasingly expect learning environments characterized by high learning effectiveness and the integration of modern pedagogical tools (Tsai et al., 2024). When these expectations are unmet, students frequently perceive suona instruction as outdated, leading to reduced motivation, weak engagement, and lower overall course satisfaction.

This pedagogical limitation is further exacerbated by the dominance of passive learning strategies. Instructional practices often emphasize rote memorization of repertoire rather than creative interpretation, expressive development, and technical comprehension. Such passivity negatively impacts students' professional growth, particularly in the development of transferable skills essential for contemporary musicianship. Wang et al. (2025) argue that without dynamic and expressive pedagogical approaches, students in traditional music programs struggle to cultivate critical competencies such as self-efficacy, leadership, and expressive confidence. Treating learners as passive recipients of tradition rather than active musical agents ultimately constrains their artistic and professional development.

Moreover, suona pedagogy remains misaligned with broader national educational reform agendas. While leading Chinese universities actively pursue curriculum innovation and digital transformation under the 14th Five-Year Plan (Xiao, 2023), suona technique classes have largely remained insulated from these developments. Teaching models are frequently characterized as monotonous, overly imitation-based, and lacking diversity in instructional

strategies, reflecting broader structural problems in Chinese university music education, including weak curriculum design and limited pedagogical innovation (Liu, 2022; Xin & Taipanich, 2025). This growing "modernization gap" increasingly marginalizes suona courses within the university ecosystem, positioning them at a disadvantage compared to other disciplines and threatening both their academic relevance and long-term sustainability.

These pedagogical challenges are closely linked to the scarcity of appropriate instructional materials. Existing suona teaching resources reveal a pronounced scaffolding gap, characterized by a polarization between overly simplified materials lacking technical depth and highly complex repertoires intended for advanced performers (Zuo, 2013). The absence of systematically graded instructional materials that guide learners progressively from foundational skills to advanced artistic expression places excessive cognitive demands on beginners, contributing to learning frustration, high attrition rates, and uneven skill mastery.

In addition, there is a substantial deficit in cross-cultural instructional resources. Although theoretical discussions advocating the integration of Western and Eastern musical traditions are common in music education literature (Li Song, 2022), such discourse rarely translates into concrete teaching materials. Practical course books that systematically integrate Western music theories such as functional harmony and scientific breath control with traditional suona techniques remain scarce. Long Shulan (2016) emphasizes that incorporating Western pedagogical experiences is essential for the scientific development of Chinese music education; however, the lack of structured materials forces instructors to rely on fragmented and inconsistent instructional practices.

Finally, a significant methodological gap persists in the instructional design of suona education. Existing research predominantly focuses on historical musicology or performance analysis, with limited attention to how suona is taught within structured educational frameworks. Recent studies highlight the importance of systematic instructional design models, such as ADDIE, in improving teaching effectiveness and student outcomes (Chang & Abidin, 2024). Nevertheless, the application of such models to suona pedagogy remains largely unexplored, leaving the pedagogical effectiveness of integrated Western–Eastern instructional approaches insufficiently examined.

Taken together, these issues reveal a dual problem: a classroom environment that inadequately engages contemporary learners and a resource environment that lacks systematic, cross-cultural, and theory-informed instructional materials. Addressing these gaps is essential to enhancing student achievement, learning satisfaction, and the sustainable modernization of suona education in higher education. Accordingly, this study seeks to design and evaluate systematic instructional modules that integrate Western and Eastern musical elements within a structured pedagogical framework.

Purpose and Contribution of the Study

This study addresses the aforementioned gap by detailing the theoretical and practical steps involved in developing a Culturally-Responsive Instructional Material (CRIM) that fuses Western and Eastern music concepts specifically for Suona technique instruction in Chinese universities. The primary contribution of this study is the presentation of the instructional

design model used to create this material, which is fundamentally aligned with enhancing the theory of applied music instruction (Kennell, 2021).

The material was developed to achieve diversity, personalization, and increased engagement by providing instruction tailored to students' interests, backgrounds, and abilities, echoing the principles advocated by John Dewey. The foundational development was critically guided by three major learning theories: Constructivist Theory, Multiple Intelligences Theory, and the Zone of Proximal Development (ZPD). The resulting framework synergizes cognitive diversity (MI) with active, experiential learning (Constructivism) to promote holistic development in music education.

The paper aims to:

i. Establish the theoretical framework underpinning the CRIM development, justifying the use of three key learning theories to inform the design.
ii. Detail the stages of the Model used for the curriculum's design and development, providing a replicable blueprint for music educators.
iii. Discuss the pedagogical implications of integrating global music concepts with traditional Chinese techniques to create a progressive and effective teaching resource.

The remainder of this paper is organized to systematically present the research. Following this introduction, the paper reviews the literature on Culturally-Responsive Pedagogy, cross-cultural music teaching models, and the core theoretical underpinnings (Constructivist Theory, ZPD, and Multiple Intelligences). Next, the study details the Methodology, outlining the systematic steps of the instructional design model (e.g., ADDIE framework) applied in the development of the CRIM. This is followed by a presentation of the expert feedback on the developed material, which provides validation of the model's output. The paper then concludes by discussing the implications of this model for progressive education policy and curriculum reform in higher music institutions.

Literature Review

Higher music education today must reconcile the dual responsibilities of cultural preservation and global competency development. Traditional music programs, such as those for the Suona, often prioritize cultural authenticity but may lack systematic frameworks or contemporary relevance (Xie, 2025). By contrast, Western-oriented curricula emphasize structured learning outcomes, broad repertoire exposure, and standardized technique development. The absence of hybrid models creates pedagogical gaps that limit students' professional versatility.

This literature review systematically delineates the theoretical framework for the development of the Culturally-Responsive Instructional Material (CRIM) by synthesizing three crucial, intersecting domains: the foundational learning theories that form the pedagogical base; Culturally-Responsive Pedagogy (CRP); and established models of cross-cultural music instruction. The subsequent sections review these fields to establish the empirical and theoretical necessity for the study's proposed instructional design model.

Theoretical Foundation of the Model

The instructional materials for this study are guided by a robust theoretical framework that recognizes the diverse needs of students in a music classroom.

Constructivist Theory

Constructivist Theory, centered on the idea that knowledge is self-constructed through "active construction" and "contextual learning," provides the philosophical basis for the material's design (Kladder & Sutton, 2022). This framework encourages teachers to create learning situations that allow students to build new cognitions based on their existing knowledge.

The theory suggests that students tend to construct knowledge during the learning process rather than passively absorbing information. Applied to music, this approach emphasizes the importance of first-hand experience and active participation in learning (Shah, 2021). This active, experiential process is a core component of a human-centered, sustainable music education model (Sabri, 2025).

Applied to Suona technique, the materials are designed to be highly flexible and hands-on, encouraging students to actively experiment with the instrument's functions, sounds, and techniques. The learning materials are designed to provide students with regular demonstrations and provide feedback and reinforcement during the learning process. The ultimate goal is to promote reflective awareness by enabling students to develop a deeper, more meaningful understanding of playing the Suona using the new, integrated Western-Chinese methods through active participation, collaboration, and reflection.

Multiple Intelligences Theory

The theory of Multiple Intelligences (MI), proposed by Howard Gardner, is utilized for addressing individual differences and appreciating varied intellectual abilities in the classroom. MI is considered a highly effective platform for global educational and instructional methodologies, promoting inclusivity and personalization (Cavas & Cavas, 2020; McFarlane, 2021). This framework is particularly relevant as it accounts for Musical Intelligence as a distinct ability, arguing for its central role in music education (Sternberg, 2021). Furthermore, MI theory provides educational psychology frameworks essential for practical decisions, such as ensemble part assignments, which is applicable to all applied music settings (Simpson III, 2024).

By bridging cognitive diversity with the active learning principles of constructivism, MI contributes to an adaptable and sustainable music education model (Sabri, 2025). This theory provides a framework for transforming technical training into varied entry points (e.g., visual aids, musical compositions, logical exercises), which is critical for the complexity of Suona instruction. By integrating multiple intelligences, the curriculum provides versatile learning opportunities tailored to individual preferences, thereby enhancing students' technical and creative capabilities (Ni, Yang, & Liu, 2024). Specifically, applying MI theory in the Chinese music education context helps address both the potential and challenges of modernizing traditional instruction (Xiong, 2025).

Zone of Proximal Development (ZPD)

The Zone of Proximal Development (ZPD), conceptualized by Lev Vygotsky (1978), is utilized for designing precise, differentiated instruction. ZPD represents the difference between a student’s current, unassisted development level and their potential development level achievable with guidance and support. ZPD is a crucial concept for developing theoretical

models in applied music instruction (Kennell, 2021) and creating effective strategies for music practical teaching (Chen, 2024). In the hybrid music teaching context, ZPD serves as a guide for scaffolding learning activities, helping students navigate challenging musical pieces that blend Chinese and Western elements. By focusing teaching efforts on the upper limit of the ZPD, the instructional material ensures that students receive the necessary pedagogical support to progress beyond their current capabilities, thereby maximizing skill development and creative expression.

Culturally-Responsive Pedagogy (CRP) in Music Education

Culturally-Responsive Pedagogy (CRP) is essential for addressing the diverse intellectual and cultural needs of contemporary learners. CRP mandates that educators use the cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students to make learning encounters more relevant to and effective for them (McKoy & Lind, 2022). In music education, CRP, alongside related concepts like Culturally Relevant and Sustaining Pedagogies (CRSP), moves beyond mere inclusion of diverse musical pieces to fundamentally changing how music is taught, ensuring that the student's cultural identity is affirmed and leveraged for learning (Bennett, 2023; Shaw, 2022; Steele, 2023; Vodicka, 2022).

For traditional practices, such as the Suona technique, CRP provides a critical lens to modernize instruction without compromising cultural depth. While the master-apprentice model is deeply culture-transmitting, it often fails to be responsive to the individual learning styles and cognitive frameworks of students exposed to globalized education (Guan, Luo, & Matsunobu, 2022). Scholars have articulated several frameworks for integrating CRP in applied settings, emphasizing the need for pedagogical/andragogical context knowledge that systematically connects cultural content to instructional methods (Bond & Russell, 2021; Chang & Viesca, 2022; Palmer et al., 2022). Preparing teachers to effectively implement these frameworks is a vital step in curricular reform (Chang & Viesca, 2022). Therefore, a successful model for traditional music must be designed to enhance student ethnic identity while simultaneously providing systematic, globally-accepted structures for technical mastery.

Cross-Cultural and Fused Music Teaching Models

In higher education, the challenge lies in creating curriculum models that can successfully reconcile the preservation of traditional heritage with preparation for global professional practice (Susino, 2022). This need has led to a growing field of cross-cultural music teaching research.

Historically, music teaching has been criticized for being either purely Western-centric or purely traditional, leading to a disconnect for students in multicultural environments (Li, 2024a). The literature highlights the necessity of blending pedagogical approaches. For instance, the blending of informal learning elements (characteristic of traditional, oral-based master-apprentice methods) with formal learning structures (found in modern curriculum design) is a key strategy for developing rich, sustainable resources (Zhang, 2022). Studies comparing pedagogy across different cultures demonstrate the viability of this synthesis, such as incorporating folk melodies into Western instruments or analyzing synchronous online instrumental teaching in cross-cultural contexts (Mookdamuang & Pidokrajt, 2025; Løkke Jakobsen, Hebert, & Ørngreen, 2023).

Specifically in the context of Chinese music education, there is a recognized gap in systematic research on integrating modern Western pedagogical tools with instrumental technique instruction (Wang & Webb, 2024; Long & Yulia, 2025). The most significant gap, as identified by Massy and Sembiante (2023), is the lack of a defined, theoretically-grounded curriculum development model that intentionally fuses these elements. This study addresses this by using an instructional design model to create a material that is technically rigorous yet cross-culturally informed.

The three chosen learning theories collectively provide the mechanism for operationalizing both CRP and cross-cultural teaching models in the CRIM framework.

i. Constructivism addresses the core tenet of CRP by ensuring that students actively construct knowledge using their prior cultural and musical experiences (Kladder & Sutton, 2022). This theory provides the philosophical basis for designing hands-on, experiential learning modules where students experiment with the fusion of Chinese and Western musical techniques.
ii. Multiple Intelligences (MI) theory serves as the engine for personalization and differentiation, a key component of effective CRP (Cavas & Cavas, 2020). By appealing to varied intelligences (e.g., visual, logical, musical), the material transcends the traditional, singular method of instruction, making the complex Suona technique accessible to a broader range of learners (Ni, Yang, & Liu, 2024).
iii. Zone of Proximal Development (ZPD) provides the structural roadmap for scaffolding the hybrid music content, which is often complex (Kennell, 2021; Chen, 2024). ZPD ensures that the combined instructional techniques from simple traditional melodies to complex cross-cultural compositions are delivered incrementally, pushing students toward their potential achievement level with targeted support.

The synergistic application of Constructivism (emphasizing active, contextual learning), Multiple Intelligences Theory (ensuring diversified, personalized instruction), and the Zone of Proximal Development (providing systematic scaffolding and targeted support) forms the core of this curriculum development model. These three theories are intentionally combined to create a Culturally-Responsive Instructional Material (CRIM) that addresses the holistic needs of the modern music student: actively engaging them with culturally relevant content while accommodating their individual strengths and ensuring measurable progression in complex, applied instrumental skills.

Methodology

The study utilized a non-equivalent control group posttest-only design, a form of quasi-experimental research. This design involves comparing two existing, non-randomly assigned groups after the intervention has been completed. The absence of a pretest, while introducing a limitation in controlling for initial differences in the dependent variable (achievement), allows for a clean assessment of the intervention's final impact on the dependent variables. The design compares two primary dependent variables: student achievement (technical skill and conceptual understanding) and student satisfaction (attitudes towards the teaching material and learning process).

- Experimental Group: Receives instruction using the newly developed CRIM.
- Control Group : Receives instruction using the conventional, existing teaching methods for the Suona technique.

The final comparison of post-intervention measures is used to determine the relative effectiveness of the CRIM.

Instructional Material Development: The ADDIE Model

The CRIM for Suona technique was systematically designed using the ADDIE Model (Analysis, Design, Development, Implementation, and Evaluation) as its foundational instructional design framework. This model provides a systematic and iterative process for creating high-quality, targeted learning materials.

1. Analysis Phase

This phase focused on identifying the learning gap, target audience characteristics, and the underlying theoretical foundation.

- Need Assessment: Determined the shortcomings of the existing traditional Suona curriculum (lack of systematic structure, limited cultural responsiveness, absence of modern pedagogical frameworks).
- Learner Analysis: Defined the target students (undergraduate Suona majors in Chinese universities), their prior knowledge (traditional Chinese music basics), learning environment, and cultural background.
- Theoretical Grounding: Established the need to fuse Culturally-Responsive Pedagogy (CRP) and cross-cultural music concepts, operationalized by the synergy of Constructivism, Multiple Intelligences (MI), and Zone of Proximal Development (ZPD).

2. Design Phase

Based on the analysis, the learning objectives and instructional strategies were defined.

- Objectives: Specific, measurable, achievable, relevant, and time-bound objectives for technical mastery and cross-cultural conceptual fusion.
- Strategy: Instructional strategies included experiential learning (Constructivism), varied resource formats (MI), and incremental difficulty progression (ZPD). The design incorporated Western notation, graphic scores, and audio/video examples to diversify input.
- Prototyping: Creation of a preliminary curriculum outline and content map, followed by an initial content review by a panel of subject matter experts.

3. Development Phase: Fusion of Western and Eastern Concepts

This phase involved the creation and validation of the CRIM, specifically detailing the fusion mechanism: The fusion of Western music concepts with Eastern Suona techniques was achieved by systematically integrating three main elements across the curriculum: theoretical frameworks, technical exercises, and repertoire application.

Theoretical Frameworks and Notation

Table 1

Theoretical Frameworks and Notation

Western Concept	Eastern Suona Application	Pedagogical Goal
Western Staff Notation	Used as the primary method of documenting exercises and repertoire, alongside traditional Jianpu (numbered musical notation).	Provides standardized documentation and a universally understood framework for structural analysis, necessary for global competence.
Western Harmony & Cadence	Applied to Suona improvisation and accompaniment. Students analyze traditional Chinese pentatonic melodies (e.g., "Hundred Birds Paying Homage to the Phoenix") and learn to harmonize them using basic Western triads, secondary chords, and standard chord progressions (I-IV-V-I).	Develops cross-cultural conceptualization and enhances ensemble versatility, preparing students for modern compositions and fusion music.
Musical Form and Analysis	Concepts like Sonata Form, Rondo, and Fugue structure (e.g., thematic development, sectional contrast) are used as analytical tools to formally dissect and categorize the structure of complex traditional Suona pieces (e.g., those based on operatic or narrative forms).	Provides a rigorous, systematic analytical lens (Constructivist theory) for materials traditionally taught via oral, holistic means, improving conceptual understanding.

i. Technical Exercises (Skill Transfer)

Specific Western instrumental practices were adapted into focused exercises to strengthen fundamental Suona techniques, which often lack the systematic scale/arpeggio approach common in Western training.

Table 2

Adaptation of Western Instrumental Practices

Western Exercise Concept	Eastern Suona Technique Enhanced	Mechanism of Fusion
Chromatic Scales and Arpeggios	Finger Dexterity and Intonation	While traditional Suona is often pentatonic, practicing full chromatic scales and their related arpeggios (major, minor, diminished) helps students achieve faster, more accurate transitions across the instrument's limited range, enhancing intonation control.
Articulation Exercises (from wind instruments like Clarinet/Oboe)	Tonguing and Breath Control	Western exercises emphasizing varied articulations (e.g., *staccato*, *legato*, *tenuto* in rapid succession) were adapted to improve the traditional Suona's complex single-tonguing and double-tonguing techniques, providing measurable practice metrics.
Sustained Tones and Long Tones	Circular Breathing (the	Western emphasis on long, steady tones for timbre control and tone quality (essential in Western orchestral practice) was incorporated into the

	core Suona technique)	instruction. This provided structured exercises (e.g., four-minute sustained tones with minimal fluctuation) that rigorously trained the consistency and endurance needed for the Suona's signature circular breathing.

ii. Culturally-Responsive Repertoire Application

The instructional materials included original compositions and arrangements that served as a true fusion of the two musical cultures, moving beyond simple combination.

- Fusion Pieces: The curriculum incorporated pieces that explicitly blend Suona's unique timbre and ornamentation with Western orchestral backing, rhythmic concepts (e.g., odd time signatures), or harmonic language (e.g., modal interchange).
- Improvisation Modules: Students used the theoretical frameworks acquired (e.g., basic harmony) to engage in structured improvisation over pre-recorded tracks featuring a Western rhythm section (piano, bass, drums) playing in a Chinese pentatonic mode. This directly engaged the Constructivist principle by asking students to actively build new knowledge (fusion performance) from existing cultural and technical knowledge.

Material Production: Full assembly of the instructional textbook, supplemental audio/visual materials, and a teaching guide for instructors.

Expert Validation: The material underwent rigorous content validation by a panel of five experts (three Chinese music specialists and two Western music/pedagogy specialists) to ensure its quality and effectiveness prior to implementation. The validation instrument was designed to rate the material across four key sections

Validation Process and Criteria

The content and instructional validity of the CRIM were established using an expert validation survey administered to a panel of specialists. The validation instrument was structured around four core evaluation sections, with experts rating items typically on a 4-point scale (e.g., Excellent/Highly Relevant to Poor/Not Relevant). The criteria focused on the key research aims of the instructional material:

1. Section 1: Content Evaluation: Assessed the material's substance, including the Clarity of Objectives, Relevance of Content to Suona technique classes, the quality of the Integration of Western and Eastern Music concepts, Variety of Musical Styles, and Integration of Technology.
2. Section 2: Instructional Design: Focused on pedagogical efficacy, evaluating the material's Engagement, Scaffolding of Learning (building on previous knowledge), Flexibility (for different learning styles), Use of Multimedia, and the appropriateness of Assessment Methods.
3. Section 3: Cultural Sensitivity and Appropriateness: This critical section ensured the material met the standards of culturally responsive pedagogy, assessing its Cultural Relevance for Chinese university students, Respect for Cultural Traditions (both Western and Eastern), Avoidance of Stereotypes, and its encouragement of Cultural Dialogue and mutual respect in cross-cultural interactions.
4. Section 4: Overall Impression: Provided a holistic judgment on the Overall Quality, Clarity and Organization, and an Overall Recommendation for its use in future courses.

The experts' collective feedback was used to refine and finalize the CRIM before its deployment in the intervention phase.

Findings

The primary evaluation component of this study, prior to the quasi-experimental intervention, focused on establishing the content validity of the Culturally-Responsive Instructional Material (CRIM). The validation process employed the rigorous Content Validity Index (CVI) methodology to systematically assess the material's relevance, effectiveness, and cultural adaptability using an independent panel of five subject-matter experts.

Quantitative Content Validity Scores (CVI)

The CVI analysis demonstrated exceptionally strong expert agreement on the instructional material's validity. The CVI was computed as the mean of all I-CVI scores across the 37 evaluation items.

- Item Content Validity Index (I-CVI): All 37 evaluation items achieved an I-CVI of 1.0, indicating unanimous agreement among all five experts that every instructional component was relevant for use in Suona education.
- Scale Content Validity Index/Average (S-CVI/Ave): The S-CVI/Ave score was 1.0, significantly surpassing the recommended threshold of 0.90.
- Scale Content Validity Index/Universal Agreement (S-CVI/UA): This measure, which reflects full agreement from all experts, also reached a score of 1.0, demonstrating a high degree of consensus among the reviewers regarding the overall validity of the material.

These findings confirm the instructional materials are highly relevant, pedagogically sound, and culturally appropriate, establishing their quality before implementation in the intervention study.

Table 3
Summary of CVI Scores

Validity Measure	Score	Threshold for Acceptance
I-CVI (per item)	1.0	≥ 0.78
S-CVI/Ave	1.0	≥ 0.90
S-CVI/UA	1.0	≥ 0.80

Qualitative Expert Feedback and Material Refinement

In addition to the high quantitative CVI scores, qualitative feedback from the experts was collected and analyzed, yielding three key themes related to the material's strengths and areas for refinement.

1. Strengths of the Instructional Material

Experts provided strong affirmation for the CRIM's design elements, highlighting three main areas:

- Instructional Clarity and Structure: Experts commended the logical progression and well-structured organization, noting that the material provided a clear and accessible pathway for scaffolding student learning from fundamental to advanced techniques.
- Cultural Integration and Cross-Cultural Balance: The fusion of Western and Eastern elements was widely praised. Reviewers emphasized the successful inclusion of

Western polyphony, harmony, and improvisational exercises which expanded the musical and technical scope of Suona education while maintaining traditional integrity.

- Pedagogical Effectiveness: The student-centered learning approach was highly rated for promoting active participation and engagement. Experts specifically praised the incorporation of multimedia resources, ensemble arrangements, and performance-based exercises as effective tools to enhance practical skills, representing a significant improvement over traditional rote-learning method.

2. Key Revisions Based on Expert Feedback

Although the materials received unanimous validity scores, the qualitative feedback led to specific revisions to optimize pedagogical effectiveness prior to implementation.

- Notation Explanations: Refinements were made to the Western staff notation section, incorporating additional annotated examples to better support students who were unfamiliar with Western notation systems.
- Cultural Context: To provide a deeper cultural appreciation, a supplementary section on the historical and contextual evolution of Suona playing styles across different periods and regions was added.
- Interactive Learning Tools: Additional interactive elements were integrated to enhance engagement, including guided listening exercises and self-assessment checklists, allowing students to actively monitor their progress and refine their aural awareness.

These final revisions ensured that the instructional materials were fully optimized, validated, and aligned with the highest pedagogical, cultural, and instructional standards for the subsequent quasi-experimental intervention.

Conclusions and Implications

Conclusions

This study successfully concludes the Development Phase of the Culturally-Responsive Instructional Material (CRIM) for Suona technique classes in higher education. The CRIM was theoretically grounded in the synergy of Constructivist Theory, Multiple Intelligences Theory, and the Zone of Proximal Development (ZPD), aligning with proposals for a sustainable, human-centered music education model (Sabri, 2025). This framework directly addresses the need for structured learning outcomes while remaining culturally sensitive (McKoy & Lind, 2022). The systematic use of the ADDIE Model ensured a structured process, culminating in a material that explicitly fuses traditional Chinese performance techniques with systematic Western music pedagogical concepts (e.g., harmony, structured articulation exercises, Western notation).

The material's content validity was rigorously confirmed by a panel of expert reviewers. Quantitative analysis using the Content Validity Index (CVI) yielded a perfect Scale Content Validity Index/Average (S-CVI/Ave) of 1.0 and an S-CVI/Universal Agreement (S-CVI/UA) of 1.0, exceeding the established psychometric thresholds (Ruiling & Sabri, 2025). This unanimous expert consensus validates the CRIM as relevant, culturally appropriate, and instructionally sound for its intended purpose. The successful development and validation of this hybrid model provide a necessary theoretical and practical resource, fulfilling the critical

need for instructional materials that bridge pedagogical gaps in applied traditional music education.

Practical Implications for Higher Education Music Departments

The development of the CRIM offers several significant practical implications for Higher Education Music Departments globally, particularly those responsible for teaching traditional, non-Western instruments:

- Model for Curriculum Modernization: The integrated approach provides a replicable instructional design model for updating traditional curricula. It serves as a blueprint for music departments to analyze which Western systematic principles can be fused with the unique cultural content of their instruments to enhance mastery and professionalism, thereby resolving the tension between cultural preservation and contemporary relevance (Xie, 2025).
- Enhancing Student Versatility and Employability: By systematically training students in cross-cultural fluency, the material directly enhances their professional versatility. Graduates are prepared not only to perform in traditional settings but also to engage in contemporary fusion ensembles, cross-cultural collaborations, composition, and teaching in a globally connected music market (Susino, 2022).
- Improving Instructional Equity: The material's foundation in Culturally-Responsive Pedagogy (CRP) (McKoy & Lind, 2022) and Multiple Intelligences (MI) provides a framework for creating more personalized and equitable learning environments (Sabri, 2025). This approach helps overcome the limitations of purely traditional or purely Western-centric curricula, supporting the holistic development of all learners.

Cultural Preservation and Global Literacy

The CRIM demonstrates a viable pathway for reconciling the often-conflicting responsibilities of cultural preservation and global literacy:

- Preserving Cultural Heritage Systematically: The model ensures that cultural authenticity is preserved by keeping traditional repertoire and unique Suona techniques (like circular breathing) at the core of the curriculum. However, by documenting and teaching these elements using systematic, structured pedagogy and global notation (Wang & Webb, 2024), it makes the transmission of heritage more consistent, measurable, and adaptable, securing its legacy for future generations.
- Promoting Global Literacy: By integrating elements like Western staff notation, harmonic analysis, and diverse improvisation exercises, the material explicitly promotes global musical literacy. Students learn to communicate their musical knowledge using international professional standards, allowing them to engage critically and constructively with the global music community, thereby transforming cultural preservation into active cultural dialogue and exchange (Susino, 2022).

In conclusion, the CRIM transcends the traditional dichotomy between East and West, offering a validated and progressive pedagogical solution that equips students with both the deep cultural roots of their heritage and the broad global wings necessary for professional success in the 21st century.

References

Aróstegui, J., Christophersen, C., Nichols, J., & Matsunobu, K. (Eds.). (2024). *The Sage Handbook of School Music Education*. https://doi.org/10.4135/9781529674842

Bennett, C. (2023). A Grounded Theory of Culturally Responsible Music Teaching. *Journal of Research in Music Education, 71*(2), 229–259. https://doi.org/10.1177/00224294231165681

Bond, V. L., & Russell, J. A. (2021). Culturally Responsive Pedagogical/Andragogical Context Knowledge: A Conceptual Model for Music Education. *Journal of Music Teacher Education, 30*(3), 11–25. https://doi.org/10.1177/1057083721993738

Cavas, B., & Cavas, P. (2020). Multiple Intelligences Theory—Howard Gardner. *Science Education in Theory and Practice*, 405–418. https://doi.org/10.1007/978-3-030-43620-927

Chaiwanichsiri, A. (2025). Culturally Responsive Teaching in Musical Theater Production: A Review of Literature. *Update: Applications of Research in Music Education.* https://doi.org/10.1177/87551233251335054

Chaiwanichsiri, A. (2025). High school music teachers' attitudes and practices regarding culturally responsive teaching in musical theatre production. *International Journal of Music Education*. https://doi.org/10.1177/02557614241313392

Chang, W.-C., & Viesca, K. M. (2022). Preparing Teachers for Culturally Responsive/Relevant Pedagogy (CRP): A Critical Review of Research. *Teachers College Record: The Voice of Scholarship in Education, 124*(2), 197–224. https://doi.org/10.1177/01614681221086676

Chang, L., & Abidin, M. J. Z. (2024). Instructional design of classroom instructional skills based on the ADDIE model. *Technium Social Sciences Journal, 55*(1), 167–178. https://doi.org/10.47577/tssj.v55i1.10676

Chen, Y. (2024). Effective Strategies and Methods to Enhance Music Practical Teaching in Higher Vocational Preschool Education. *Pacific International Journal, 7*(1), 162–167. https://doi.org/10.55014/pij.v7i1.545

Chen-Hafteck, L. (2024). Revitalizing Music Teacher Education Through Culturally Responsive Pedagogy. *The Sage Handbook of School Music Education*, 527–539. https://doi.org/10.4135/9781529674842.n39

Guan, T., Luo, N., & Matsunobu, K. (2022). Nurturing student ethnic identity through culturally responsive music teaching in China. *International Journal of Music Education, 41*(4), 598–615. https://doi.org/10.1177/02557614221132550

Kennell, R. (2021). Toward a theory of applied music instruction. *Visions of Research in Music Education, 16*(3), 14.

Kertz-Welzel, A. (2021). *Rethinking music education and social change*. Oxford University Press.

Kladder, J. R., & Sutton, J. (2022). Constructivism: An epistemology for commercial and popular music in higher education. In *Commercial and Popular Music in Higher Education* (pp. 10–22). Routledge. https://doi.org/10.4324/9781003216728-2

Li, X. (2024a). Research and practice of music education from a cross-cultural perspective. *International Journal of New Developments in Education, 6*(7). https://doi.org/10.25236/ijnde.2024.060725

Li, X. (2024b). Research on the Path of Integrating Traditional Culture into Music Teaching in Colleges and Universities in the Era of Artificial Intelligence. *Applied Mathematics and Nonlinear Sciences, 9*(1). https://doi.org/10.2478/amns-2024-0868

Liu, S. (2022). Music education in the colleges and universities of China: Current problems and response strategies. Malaysian Journal of Chinese Studies 11(2):25–42. http://doi.org/10.6993/MJCS.202212_11(2).0002

Long, P., & Yulia, A. (2025). Integrating traditional Chinese music into modern education: A comprehensive literature review. *Malaysian Journal of Social Sciences andHumanities (MJSSH), 10*(2), e003260. https://doi.org/10.47405/mjssh.v10i2.3260

Løkke Jakobsen, M., Hebert, D. G., & Ørngreen, R. (2023). Synchronous online instrumental music teaching in cross-cultural learning contexts. *International Journal of Music Education, 43*(2), 288–309. https://doi.org/10.1177/02557614231201916

Massy, P. J., & Sembiante, S. F. (2022). Pedagogical practices, curriculum development, and student experiences within postsecondary music education: A systematic literature review. *Research Studies in Music Education, 45*(3), 600–615. https://doi.org/10.1177/1321103x221128172

McBride, N. R., & Nicholson, G. (2022). Finding "Otherness" in Music and Pedagogy: A Critical Ontological Analysis of an Immersive International Music Education Exchange Program. *Journal of Music Teacher Education, 32*(2), 42–56. https://doi.org/10.1177/10570837221120771

McFarlane, D. (2021). Multiple intelligences: The most effective platform for global 21st century educational and instructional methodologies. *College Quarterly, 14*(2).

McKoy, C. L., & Lind, V. R. (2022). *Culturally Responsive Teaching in Music Education.* https://doi.org/10.4324/9781003208136

Mookdamuang, A., & Pidokrajt, N. (2025). Integrating Northeastern Thai folk melodies into piano education: A cross-cultural approach to music pedagogy and creativity. *Korean Journal of Research in Music Education, 54*(2), 83–102. https://doi.org/10.30775/kmes.54.2.83

Ni, M., Yang, F., & Liu, M. (2024). Effective application of multiple intelligences theory in music education. *Applied Mathematics and Nonlinear Sciences, 9*(1), 1–13. https://doi.org/10.2478/amns-2024-0501

Palmer, E. S., Vodicka, J., Huynh, T., D'Alexander, C., & Crawford, L. (2022). Grounded framework for culturally relevant and responsive music teaching. *Update: Applications of Research in Music Education, 41*(1), 24–33. https://doi.org/10.1177/87551233211055815

Prest, A. (2020). Cross-cultural understanding: The role of rural school–community music education partnerships. *Research Studies in Music Education, 42*(2), 208–230. https://doi.org/10.1177/1321103x18804280

Ruiling, H., & Sabri, S. Bin. (2025). Development and Validation of A Survey for Measuring Instructors' Pedagogical Content Knowledge Level of One-To-One Pop Singing Courses at the Conservatories in China. International Journal of Academic Research in Progressive Education and Development, 14(1), 43–53. https://doi.org/10.6007/ijarped/v14-i1/23878

Sabri, S. (2025). A sustainable framework for music learning: Fusing multiple intelligences with constructivist pedagogy. In Ahmad Rafaie, H., Muhammad, F. H., Husni, H., Manokaran, J., Hamzah, N., Zamri, N., Dillah, D., Johari, N. A., Zulkepli, N., Mohd Rosli, N. A. I., Noh, Z., Husin, S. F., Mellisa Abdullah, S. M., Mohd Suib, N. R., Abd Hamid, F. N., Syed Hod, S. N., & Mat Junit, N. F. H. (Eds.), *I-CReST 2025 International Conference on Research and Practices in Science, Technology and Social Sciences: Proceeding Book* (pp. 131–145). Universiti Teknologi MARA, Cawangan Selangor, Kampus Dengkil.

Shah, S. M. (2021). Multiculturalism in the Malaysian music classroom: Challenges and opportunities. *미래음악교육연구, 6*(3), 141–149.

Shaw, J. T. (2022). Culturally Responsive, Relevant, and Sustaining Pedagogies. *The Choral Journal, 63*(3), 51-60.

Shen, X. (2025). *Culturally responsive curriculum: Incorporating Chinese folk songs in class piano* [Doctoral dissertation, The Florida State University].

Simpson III, A. F. (2024). Research to Resource: Using Music Aptitude and Educational Psychology Frameworks for Ensemble Part Assignments. *Update: Applications of Research in Music Education, 43*(1), 5-9.

Steele, A. M. (2023). *My journey toward a culturally relevant music pedagogy* [Doctoral dissertation, University of South Carolina]. Retrieved from https://scholarcommons.sc.edu/etd/7611

Sternberg, R. J. (2021). Toward a theory of musical intelligence. *Psychology of Music, 49*(6), 1775–1785. https://doi.org/10.1177/0305735620963765

Susino, M. (2022). Promising practices in music teaching and learning: Practical recommendations and policies across cultures. *Arts Education Policy Review, 123*(4), 194–204. https://doi.org/10.1080/10632913.2020.1844831

Tsai, Y.-N., Chen, M.-N., & Fang, C.-C. (2024). The Study on the Acceptance and Learning Effectiveness of Using E-Learning for Students in Fine Art and Design Colleges. *IEEE Access, 12*, 42055–42067. https://doi.org/10.1109/access.2024.3379145

Vodicka, J. D. (2022). Critical and Culturally Sustaining Music Pedagogy. *Visions of Research in Music Education, 40*(11).

Wang, Y. (2025). Challenges in music education in Chinese colleges and universities. *Journal of the Knowledge Economy, 16*(2), 7934-7958. https://doi.org/10.1007/s13132-024- 02191-6

Wang, K., & Webb, M. (2024). Seeking best practice: A systematic review of literature on Chinese music teaching and learning in Western classroom contexts. *International Journal of Music Education, 42*(3), 442–460.

Wang, S., Fen, B. W., & Cheah, K. S. L. (2025). Exploring Self-Efficacy, Expressive Capabilities, And Social Leadership in Traditional Chinese Music Performance: A Study of Music Students in Henan Universities. Journal of Cultural Analysis and Social Change, 2634–2648. https://doi.org/10.64753/jcasc.v10i4.3299

Weikle, E., & Coles, D. (2025). Developing music-specific culturally responsive teaching professional development: An autoethnographic action research study. *Journal of Teacher Development and Education, 3*(1), 1–13. https://doi.org/10.29329/journalted.40

Xiao, J. (2023). Digital transformation in top Chinese universities: An analysis of their 14th five-year development plans (2021-2025). Asian Journal of Distance Education, 18(2), 186-201.

Xie, Y. (2025). Designing music education curriculum in a multicultural environment: Vocal training in China. *International Journal of Music Education, 43*(3), 356–371. https://doi.org/10.1177/02557614231221144

Xiong, Z. (2025). Exploring the potential and challenges of applying multiple intelligences theory in Chinese music education. *Teaching and Teacher Education, 160*, 105031. https://doi.org/10.1016/j.tate.2025.105031

Zhan, H. (2025). Music education from a cross-cultural perspective: Comparing music teaching methods in different countries. In *SHS Web of Conferences* (Vol. 213, p. 02010). EDP Sciences. https://doi.org/10.1051/shsconf/202521302010

Zhang, L. (2022). How Can We Incorporate Informal Learning and Formal Learning in Music Education. *International Journal of Frontiers in Sociology, 4*(13). https://doi.org/10.25236/ijfs.2022.041320