



Musical Thinking and Contextual Resonance in Curriculum Innovation Pathways in Science and Engineering Institutions

Xiaoxuan Wang^{1,*}, Feng Ji^{1,2}

¹Houhai University, Nanjing, China

²Jilin University, Changchun, China

*15952012291@163.com, jif1021@126.com

Abstract. This paper investigates how integrating artistic aesthetics into education enhances students' emotional resonance and cognitive depth, aiming for comprehensive excellence. The study focuses on how art aesthetics can boost emotional engagement and intellectual capabilities, fostering holistic development and incorporating these aesthetics into ideological and moral education. It emphasizes the essential role of art aesthetics in enriching students' understanding and emotional experiences, demonstrating the significant educational and practical benefits of merging music aesthetics with ideological education.

Keywords: Polytechnic Colleges; Innovative Curriculum; Music Politics; Contextual Resonance; Music Aesthetics.

1 Introduction

In today's rapidly evolving society, revitalizing the educational system is essential to nurture well-rounded students. Music, as a distinct artistic medium, serves as a powerful tool for ideological and political education, enhancing aesthetic appreciation while influencing students' cognitive and emotional development. This paper explores how music education can be seamlessly integrated with ideological and political education within technical higher education settings through innovative curriculum design. The aim is to amplify students' emotional resonance and deepen their thinking, thereby fostering holistic development.

The research addresses the natural synergy between music and ideological education, examining the ideological attributes and pedagogical functions of music, and the efficacy of the "situational resonance" model. By proposing practical innovations in curriculum implementation and evaluation, this study seeks to offer fresh insights into curriculum design and teaching strategies. The ultimate goal is to enhance the integration of ideological and professional education, cultivating new generations of students who are not only technically proficient but also culturally and socially aware.

2 The Role of Music in Ideological Education

2.1 Aesthetic Education

In the current education system, music is a key medium for aesthetic and ideological education, making it an essential pillar. Music education uniquely shapes students' worldviews, life perspectives, and values through its profound influence on their thoughts and emotions. Aesthetic education theory suggests that music inspires deep reflection on society and life, enhancing students' artistic quality and taste. Engaging with music, whether through appreciation or performance, provides subtle yet impactful ideological education.

2.2 The Ideological Characteristics and Nurturing Function of Musical Arts

Music, as a cultural artifact rich in ideological content, reflects the thoughts, emotions, and historical spirit of its creators. In ideological and political education, music education's role is crucial. By exploring classical music, students gain a deep understanding of the ideological meanings within, enhancing not just musical skills but also their grasp of historical and national narratives. For instance, patriotic songs like "The Red Flag Flies" and "I Love You China" not only teach musicality but also immerse students in China's revolutionary heritage, fostering a deeper connection with national identity and values.

Art's relationship with politics extends beyond influence; it actively shapes and challenges political contexts. Historically, music has been a tool for political expression and change. Confucius noted music's power to transform society, and throughout history—from the patriotic compositions of Sibelius to revolutionary anthems like the Internationale—music has voiced and molded political sentiment.

Beyond fostering musical aptitude, music education significantly enhances emotional literacy and ethical development. Engaging in music allows students to express and explore their emotions, promoting a deeper self-awareness and social identity. Thus, music education is essential for developing both the emotional and rational faculties of students^[1].

2.3 Theoretical Basis and Value of the “Contextual Empathy” Model

The "contextual resonance" model integrates emotional education and contextual learning to achieve ideological and political education goals through musical contexts and emotional resonance. This model emphasizes that emotional experiences deeply influence students' attitudes and moral concepts, facilitating ideological education through active emotional engagement. Teachers guide and students participate actively, transforming these experiences into deep personal resonance and understanding.

Contextual learning theory advocates for real-world learning scenarios, enabling students to deeply engage with and retain knowledge. In this model, music serves as

the core context, allowing students to experience and interpret emotions and ideological messages embedded in musical pieces.

Through choral and patriotic music, students not only enhance their musical abilities but also develop a deeper sense of resistance, national unity, and social responsibility. Pop music, similarly, inspires perseverance and progress. This dual focus on emotional and rational development through "contextual resonance" offers a novel approach to curriculum innovation in technical education, promising broad applicability and potential for enhancement of educational practices^[2].

3 Analysis of the Current Situation

3.1 The Current Situation of the Music Programme in Colleges and Universities: Existing Practice and Effectiveness

In recent years, polytechnic colleges have effectively integrated ideological and political education into music programs. This integration, through dedicated courses and music activities, not only enriches the curriculum but also enhances student engagement. Music, inherently reflective of ideological beliefs and the spirit of its time, serves as a powerful medium in this educational approach. By dissecting musical works, students explore the embedded ideological values, which bolsters their overall development. Music education extends beyond teaching techniques; it guides students in analyzing thoughts and values within music, thus achieving educational goals effectively. This method enriches the curriculum and develops students' emotional intelligence, social identity, and critical thinking skills.

3.2 Successful Case Studies at Home and Abroad: Red Classical Music, Film and Television Music Pedagogy, Etc.

Successful cases demonstrate the significant role of red classic music in music civics courses across higher education institutions. Historical works such as "Red Plum Praise," "My Motherland," and "Sing a Mountain Song to the Party" have deepened students' understanding of revolutionary spirit and contemporary responsibilities through musical expression. For instance, the analysis of the "Long March Song" in various colleges has enabled students to grasp the spirit of the Long March profoundly. Additionally, incorporating film and television music as a teaching method has enhanced students' emotional resonance and ideological identity. Analysis of soundtracks and musical clips from significant works like "The Founding of the Party," "My Motherland and I," "Changjin Lake," and "1921" helps dissect the interplay between music and narrative, exploring how music shapes character portrayal and enhances emotional atmospheres, subtly reinforcing ideological and political education^[3].

Internationally, the musical "Hamilton" in the United States exemplifies the power of integrating contemporary music styles like Rap and Jazz with historical narratives, captivating young audiences and subtly fostering a sense of patriotism. Such innovative approaches offer valuable insights and lessons for developing music courses in

Chinese higher education, suggesting potential for similar integration of historical content and modern musical forms to engage students and enrich their educational experiences.

3.3 Problems and Challenges: Resource Allocation, Evaluation System, Homogeneity of Teaching Methods, Etc.

Polytechnic colleges and universities have made notable progress in embedding national ideology into music civics courses, yet challenges persist in resource allocation, evaluation systems, and teaching methods. Insufficient funding often restricts access to necessary musical equipment and materials, affecting teaching quality. Moreover, the prevalent evaluation systems, reliant on subjective feedback and exams, lack the scientific rigor needed to fully capture students' knowledge and engagement, highlighting the need for a more comprehensive assessment approach.

Additionally, students often grapple with weak self-discipline and teamwork skills, diverting their focus from civic and political humanities to professional studies, which may impede the development of desired socialist values. Traditional, non-interactive teaching methods struggle to engage students, suggesting a shift towards case-based learning and the use of digital media to enhance course relevance and interactivity, potentially revitalizing student interest and participation in the educational process.

4 Analysis of the Innovative Path of “Situational Resonance”

4.1 Emotional Resonance (Sentiment)

Musical works rich in emotional connotations and educational revelations, such as the famous “Yellow River Cantata” and “On the Songhua River”, as well as monumental masterpieces from overseas, are carefully selected as the main elements for triggering emotional resonance. These works adopt a unique way of emotional expression and lead students into a deep emotional experience and reflection process. These musical works enable students to deeply feel the magnificent heroism of the revolutionary heroes and the emotional impact of the music. Students deepen their understanding of the ideas behind the musical works through interactive discussions to enhance the effect of emotional resonance and ideological education, so that they can enjoy the music and at the same time feel the heaviness of history, and subconsciously promote the students to firmly establish their own ideals and beliefs^[4].

4.2 Realistic Situations (Situations)

Music composition can greatly enhance students' understanding of real-world issues and their problem-solving skills. Through mediums like musical theatre and music videos, students gain an intuitive grasp of complex social themes. For instance, by watching the musical "House of Rent," students deeply engage with the characters'

emotions and the social challenges they encounter, such as the AIDS crisis and the struggles of marginalized groups. This immersive experience links the scenarios in the musical to broader social issues, encouraging students to think critically and engage in discussions about these real-world problems.

4.3 Technical Training (Skills)

Students' artistic expression and creativity can be significantly enhanced through intensive training in musical skills. Systematic vocal training, instrumental performance and choral rehearsal are effective measures to achieve this goal, so that students can master certain professional skills as well as develop their teamwork and sense of discipline in the course of training. For example, organising students to participate in actual music composition and performance projects, such as campus music festivals or music composition competitions, not only enhances their technical skills, but also hones their abilities through practical exercises. In addition, composing and performing original songs reflecting contemporary social issues, such as musical works concerned with environmental protection, can organically combine artistic creation with ideological education, thus realising the aim of promoting social progress through art. Therefore, music training is of great significance to the development of students^[5].

4.4 Artistic Practices (Arts)

The program deepens students' understanding of political and ideological education through diverse musical performances and creative productions. Events like campus music festivals, red song competitions, and musical theatre performances enhance musical literacy and ideological knowledge. For instance, acting in "Shining Red Star" teaches revolutionary history and heroism, while scenes from "Elisabeth" explore 19th-century Austrian social changes and emotions^[6].

Interdisciplinary art projects stimulate creative thinking by combining visual arts, theatre, and dance. Projects like the Ode to Peace music and dance evening allow students to express their thoughts and feelings across various art forms. Community partnerships, such as public welfare activities and concerts, merge music education with civic education, fostering social responsibility and practical skills.

Through the "contextual resonance" approach, polytechnic colleges integrate music and ideological education, significantly improving students' comprehensive qualities and artistic cultivation. This curriculum enhances emotional resonance and ideological understanding while broadening students' horizons and knowledge, supporting their all-round development^[7].

5 Implementation Strategy

Teachers are the key elements of music civic education, and the comprehensive quality of teachers has a direct impact on the effectiveness of civic education, therefore, institutions of higher learning should adopt a variety of strategies to enhance the

teachers' civic education ability and teaching level, so as to ensure the smooth implementation of music civic education.

5.1 Teacher Growth and Educational Strategies

Teachers play an irreplaceable role in the teaching and learning process, and are the core force behind the work of music and political education. Teachers' professional development has a direct impact on educational outcomes. Therefore, institutions of higher learning should develop a comprehensive training programme to strengthen the capacity of teachers in the field of ideological and political theory, educational psychology, innovative teaching methods and the latest developments in music education. At the same time, regular thematic training and seminars can not only promote the improvement of teachers' own professionalism^[8], but also enable them to integrate ideological and political education into music teaching.

5.2 Developing Mechanisms for Inter-professional Faculty Collaboration

Music education is not the sole responsibility of music teachers; Civics teachers also need to be involved. Music teachers and Civics teachers can ensure the deep integration of Civics content and music teaching by building an interdisciplinary mechanism for teachers to collaborate in designing curricula and teaching activities. Promote exchanges and co-operation between teachers of different disciplines to explore best practices in the integration of music and political education^[9], and organise interdisciplinary seminars and curriculum design workshops on a regular basis.

5.3 Regular Teacher Exchange Programmes

The key to improving the quality of teaching lies in the mutual exchange of teachers' experiences and insights. Schools should regularly arrange teaching experience sharing sessions, teaching reflection sessions and case analyses to encourage teachers to share successful teaching cases and reflections, learn from each other, and work together to improve the overall teaching standard. At the same time, teachers should be supported to actively participate in academic conferences and educational forums at home and abroad to broaden their horizons, learn about international cutting-edge educational concepts and teaching methods, and further promote their active participation in international academic discussions and exchanges^[10].

6 Evaluation and Feedback Mechanisms

To ensure the effective implementation of the “contextual empathy” model, a scientific and mature evaluation and feedback mechanism is an indispensable guarantee^[9].

6.1 Development of Advanced Evaluation Tools

The scientific nature of the assessment tools is closely related to the credibility and validity of the results, so schools need to design diversified assessment criteria to cover a wide range of aspects such as knowledge mastery, affective experience, practical ability and overall quality. In order to comprehensively assess students' learning outcomes, the assessment tools should combine both qualitative and quantitative methods and adopt the “contextual empathy” assessment model. In addition, schools should combine questionnaires, classroom observation, student work selection and classroom performance to ensure the comprehensiveness and accuracy of the assessment results.

6.2 Establishment of Student Feedback Mechanisms

Feedback from students is key to improving the quality of teaching and learning. Schools can adopt a series of convenient ways, such as setting up anonymous questionnaires, online feedback platforms and suggestion boxes, in order to collect students' opinions and suggestions on the curriculum. Teachers should analyse this feedback on a regular basis to understand students' needs and confusion, and then make timely adjustments and optimisations to the teaching methods and content to ensure that the teaching effect is continuously improved.

6.3 Optimising Teaching Strategies based on Evaluation and Feedback

The ultimate goal of evaluation and feedback is to improve teaching strategies. Teachers should regularly analyse the results of student evaluations and feedback to identify problems and shortcomings and take targeted improvement measures. Teaching experience should be systematically summarised through such means as discussion in teaching and research groups and records of teaching reflections, so as to continuously improve the quality of teaching.

7 Policy Assistance and Resource Allocation

In order to ensure the sustainable development and solid foundation of music and political education, policy support and resource deployment must be effectively implemented.

7.1 Seek Support from Government and Social Resources

Higher education institutions should actively pursue government and social support to establish a robust system for music ideology education. This includes applying for special education funds, attracting corporate sponsorships, and accepting social donations to ensure adequate funding for teaching equipment, material development, and

activity planning. Institutions should report their progress and outcomes to government education departments to gain further policy support and resources.

7.2 Policies and Incentives at the Level of School Education

Schools need clear policies and incentives to foster continuous innovation in education models. This can involve creating guidelines for music civic and political courses, setting objectives, content, and assessment standards to stimulate teacher and student participation. Additionally, implementing a teaching reward system, providing further training opportunities, and recognizing excellent teaching cases can maintain enthusiasm and creativity in education, promoting the development of innovative educational models.

7.3 Rational Allocation of Educational Resources

To ensure coordinated development of ideological and music education, schools must focus on the rational distribution and sharing of resources. Equipping courses with professional music equipment and multimedia tools can optimize teaching conditions. Schools should collaborate with other higher education institutions, social education bodies, and communities for joint teaching and practice activities to maximize resource use.

8 Conclusion

Integrating music education with ideological and political education enhances students' cognitive depth and emotional resonance, promoting holistic development. The "contextual resonance" model offers a novel approach for curriculum innovation in technical colleges, with broad applicability and potential. Higher education institutions should adopt this model to improve teaching quality, cultivate artistic qualities and social responsibility, and enhance ideological education. Strengthening teacher training, refining assessment mechanisms, seeking policy support, and optimizing resource allocation will advance music civic and political education, integrating it with professional education. This practice embodies effective educational philosophy and ensures students' future success, making it essential for cultivating comprehensive student qualities and achieving educational goals.

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