

Expressive Piano Techniques and Emotional Resonance in Classical Performance: A Mixed-Methods Study in Nanchang, China

Zhang Xiaochen

City Graduate School, City University of Malaysia
Email: 565078959@qq.com

Dr. Sumathi A/P Maniam

City Graduate School, City University Malaysia
Email: pt-sumathi.maniam@city.edu.my

DOI Link: <http://dx.doi.org/10.6007/IJARBSS/v15-i12/27398>

Published Date: 28 December 2025

Abstract

This study investigates the expressive potential of piano techniques and their role in shaping emotional resonance in classical performance within the cultural and educational context of Nanchang, Jiangxi Province, China. While piano education in China has traditionally emphasized technical precision and examination-oriented training, limited attention has been given to how expressive techniques function as tools for emotional communication. Addressing this gap, the study adopts a mixed-methods research design to explore how pianists employ expressive devices, how listeners emotionally respond to these techniques, and how local cultural values influence pedagogical and performance practices. A convergent parallel mixed-methods approach is employed, integrating qualitative and quantitative data collected simultaneously. Qualitative data are gathered through semi-structured interviews, focus group discussions, classroom observations, focused ethnography, and a mini case study involving pianists, music educators, students, and audiences in Nanchang. Quantitative data are obtained through listener-response surveys using standardized emotional descriptors adapted from the Geneva Emotional Music Scale. The qualitative data are thematically analyzed, while quantitative data are examined using descriptive and inferential statistical techniques, with findings triangulated during interpretation. The results reveal that expressive techniques such as rubato, dynamic shaping, phrasing, articulation, and tempo modulation play a central role in generating emotional resonance. Both trained and untrained listeners respond more strongly to performances that demonstrate emotional coherence and interpretive intention rather than technical accuracy alone. Cultural values in Nanchang emphasize emotional restraint and refinement, shaping how expressivity is taught and performed. The study concludes that expressive piano performance is a culturally embedded,

learnable process and calls for pedagogical models that integrate technical mastery with emotional communication to foster more meaningful performer–listener connections.

Keywords: Piano Expressivity, Emotional Resonance, Piano Pedagogy, Cultural Context, Music Performance

Introduction

The study of the expressive potential of piano technique and its emotional resonance, particularly within the context of individual behavior in China, faces significant challenges that need comprehensive examination. Despite the global appreciation and long history of piano education, there remains a substantial gap in understanding how piano techniques specifically affect emotional expression across different cultural settings (Váradi, 2022). This is particularly true in China, where rapid cultural and economic changes have significantly influenced artistic and educational domains. Many Chinese piano students and educators grapple with integrating traditional Western techniques with local musical sensibilities, which may affect the emotional impact and educational effectiveness of piano instruction.

Furthermore, statistical evidence suggests a disparity in the retention rates of piano students, both within China and globally. For example, studies indicate that a large proportion of students discontinue their piano studies after initial years, with lack of engagement often cited as a major reason (Hurley, 2021). This disengagement may be linked to the methods of teaching that prioritize technical mastery over expressive performance, possibly neglecting the cultural and individual emotional connections that students form with the music. In China, where educational practices traditionally emphasize rote learning and skill perfection, there's a potential misalignment with the expressive demands of Western classical music, thus affecting student motivation and long-term commitment.

Additionally, the existing research predominantly focuses on technical aspects of piano performance, with less emphasis on how these techniques serve as a medium for emotional expression within a cultural framework (Meissner, 2021). This lack of focus on the emotive component of piano education can lead to educational practices that do not fully exploit the expressive capabilities of music to engage and retain students. Given the cultural richness and diversity in China, understanding the intersection of culture, emotion, and piano pedagogy is essential for developing more effective teaching strategies that resonate with students on a deeper, more personal level.

Therefore, this research aims to bridge these gaps by examining how piano techniques are taught and perceived in the context of Chinese cultural settings and how these methods impact emotional expression and student retention. The goal is to provide insights that could lead to pedagogical advancements that integrate technical proficiency with emotional expressiveness, tailored to the cultural and individual needs of Chinese piano students. By focusing on these aspects, the study hopes to contribute to the broader discourse on music education and enhance the effectiveness of piano teaching methodologies in culturally diverse environments.

In many Western cultures, classical music has a well-documented language of emotion, where specific musical elements like major and minor tonalities, tempo, and dynamics are commonly associated with distinct feelings such as happiness, sadness, or tension. For example, a major

key is often linked to joyful or triumphant emotions, while a minor key might evoke feelings of melancholy or sorrow (Trenck, 2011). Western classical music theory has developed these associations over centuries, integrating them into the broader cultural understanding of musical expression.

However, in non-Western cultures, the musical parameters and their emotional connotations can differ significantly. For instance, in traditional Chinese music, the pentatonic scale and the emphasis on timbral and dynamic nuances play a crucial role in conveying emotion. The cultural context of Chinese music, with its roots in philosophical and spiritual concepts like Confucianism and Taoism, informs its unique expressive qualities (Niu & Tsai, 2024). Emotions in Chinese music are often more subtly conveyed, relying on the nuances of timbre and the bending of pitches (or portamento) to express feelings, which can lead to different interpretations when compared to Western music. The objectives of the research are:

- (a) To analyze the expressive piano techniques such as dynamics, articulation, phrasing, and rubato that shape emotional resonance in classical performances within the context of Nanchang;
- (b) To evaluate how listeners in Nanchang emotionally respond to various piano techniques used in classical performance; and
- (c) To explore cultural influences specific to Jiangxi Province that affect the perception and interpretation of emotional resonance in piano music.

Literature Review

Piano technique is more than mechanical proficiency; it is the vehicle through which emotion is translated into sound. Techniques such as dynamics, tempo modulation, articulation, phrasing, and rubato are fundamental to the emotional expressivity of classical piano performance. Research by Juslin and Timmers (2022) asserts that these parameters serve as primary tools in shaping how music is emotionally perceived, enabling pianists to create tension, release, intimacy, or grandeur.

A study by Bhatara et al. (2011) emphasizes that the nuanced manipulation of timing and amplitude distinguishes expressive performances from merely accurate ones. Musicians, unlike non-musicians, are trained to perceive subtle expressive variations, highlighting the importance of pedagogy in developing emotional awareness. The inclusion of rubato, for example, adds spontaneity and personal interpretation, which deepens the listener's emotional connection (Jia, 2023). These expressive capabilities, however, require intentional instruction and cultural sensitivity in pedagogy areas that are still underdeveloped in many music programs in China, including those in Nanchang.

Traditional piano pedagogy in China is often characterized by a technical mastery-first model, emphasizing replication over interpretation (Zhao, 2023). While effective in developing dexterity and precision, such approaches may inhibit emotional engagement and personal expression. In contrast, Western models especially those informed by constructivist theories that encourage interpretive thinking and emotional autonomy.

Recent comparative studies (Liu et al., 2021; Chan et al., 2023) advocate for integrative teaching methods that combine technical training with emotional development, including creative exercises, improvisation, and student reflection. These methods are gradually gaining

traction in urban Chinese music education hubs such as Beijing and Shanghai, but they remain relatively scarce in mid-tier provinces like Jiangxi. This pedagogical gap is particularly evident in Nanchang, where local institutions often lack access to international performance pedagogues or exposure to modernized curricula. Hence, researching and implementing expressive performance methods tailored to the cultural and educational context of Nanchang is both timely and necessary.

Emotional resonance in music refers to the listener's emotional response to musical stimuli, often mediated by performance techniques and context. Emotional resonance is not universal; it is shaped by cultural values, personal experiences, and cognitive frameworks (Juslin & Sloboda, 2010). While certain musical gestures such as loud dynamics = intensity have cross-cultural appeal, others (such as timbral color or phrasing) may have different emotional connotations in different cultural environments. In Jiangxi Province, classical music is interpreted through a unique cultural lens informed by Confucian values, social harmony, and aesthetic subtlety. This influences not only how piano performances are evaluated but also how they are taught. For example, excessive emotional display may be viewed as inappropriate or self-indulgent, thus affecting students' willingness to explore expressive range unless properly contextualized by their instructors.

Barrett et al. (2013) note that listeners' emotional interpretation of music is closely tied to cultural schemas. For piano students and audiences in Nanchang, culturally adapted performance practices are essential in enhancing emotional resonance. Research into how expressive techniques are interpreted and taught in this specific setting can therefore inform more inclusive and effective music education.

Research Methodology

This study adopts a mixed-methods research design to investigate the expressive potential of piano technique and its role in generating emotional resonance, particularly within the Chinese cultural and educational context. The methodology integrates qualitative and quantitative approaches to capture both the measurable patterns of emotional response and the deeper, subjective meanings attached to musical expression. A convergent parallel design is employed, in which qualitative and quantitative data are collected simultaneously but analyzed independently, before being integrated at the interpretation stage. This structure strengthens methodological rigor by allowing statistical trends to be explained and contextualized through lived experiences and cultural interpretations.

The qualitative component is dominant and includes semi-structured interviews, focus group discussions, participant observation, focused ethnography, and a mini case study. Participants are purposively selected to represent multiple perspectives, including professional pianists, music educators, amateur pianists, music students, and classical music enthusiasts. These methods enable in-depth exploration of how piano techniques such as dynamics, tempo, articulation, and phrasing are intentionally used by performers and emotionally interpreted by audiences. Observations of live performances, rehearsals, and teaching sessions provide contextual and interactional data, while interviews and focus groups capture emotional language, cultural meanings, pedagogical practices, and audience reception in rich detail.

The quantitative component supports the qualitative findings through structured surveys and emotional response scales, including Likert-scale instruments such as the Geneva Emotional Music Scale (GEMS). Quantitative data are analyzed using descriptive statistics and visualizations in Excel to identify patterns across demographic variables and listener groups. Qualitative data are thematically analyzed using NVivo, enabling systematic coding, theme development, and triangulation with quantitative results. The integration of findings occurs during interpretation, ensuring that numerical trends are explained through qualitative insight. Overall, this methodology provides a holistic, culturally grounded, and empirically robust framework for understanding how piano technique communicates emotion in performance and education contexts.

Results and Discussion

To address the research objectives outlined in this study, a mixed-methods research design was employed, combining both qualitative and quantitative approaches to comprehensively investigate the expressive potential of piano techniques within the dual contexts of performance and pedagogy in Nanchang, Jiangxi Province. The integration of methods allowed for a deeper understanding of the complex interplay between technical execution, emotional intention, listener perception, and instructional practice recognizing expressivity as both an internal artistic impulse and a socially constructed pedagogical outcome (Creswell & Plano Clark, 2018).

Qualitative Methodology: Interviews and Classroom Observations

The qualitative component of this study was grounded in semi-structured interviews conducted with a purposive sample of piano performers, music educators, and conservatory students across several institutions in Nanchang. These interviews were designed to elicit rich, narrative data regarding participants' interpretive strategies, the teaching and learning of expressive techniques, and their personal and cultural conceptualizations of emotional communication through music. The open-ended structure allowed respondents to reflect on their lived experiences, facilitating the emergence of nuanced perspectives on issues such as performance anxiety, cultural norms, and pedagogical priorities.

To analyze this interview data, thematic analysis was employed following the widely accepted six-phase model proposed by Braun and Clarke (2006). This process involved familiarization with the data, generation of initial codes, searching for and reviewing themes, and defining them in relation to the research questions. Key themes identified included intentionality in expressive phrasing, the implicit hierarchy of technical versus emotional training, cultural interpretations of expressivity, and the role of mentorship in shaping expressive identity. This method provided an interpretive framework capable of capturing both the individuality and shared cultural patterns within participants' experiences (Nowell et al., 2017). In addition, non-participant classroom observations were carried out in several conservatory and private studio settings. These sessions provided firsthand insight into the pedagogical practices that influence expressive development, such as teacher modeling, the use of metaphoric language, and feedback strategies focused on tone color, timing, and phrasing. Differences in emphasis between teachers, some focusing predominantly on mechanical fluency, others on emotional nuance highlighted the variability of instructional styles even within the same institutional environment. The observations were documented

using an ethnographic field note approach (Spradley, 1980), allowing for comparative analysis of instructional discourse and student response.

Quantitative Methodology: Listener Response Surveys and Statistical Analysis

The quantitative dimension of the study was operationalized through listener response surveys, which aimed to assess the emotional impact of selected piano recordings. These recordings featured controlled variations of expressive techniques such as rubato, dynamic contrasts, articulation, phrasing, and tempo modifications—all of which are documented in the literature as salient conveyors of emotion in music (Juslin & Timmers, 2010; Gabrielsson & Lindström, 2010). Survey participants, drawn from music students and lay listeners, were asked to evaluate their emotional reactions using standardized affective descriptors adapted from the Geneva Emotional Music Scale (Zentner, Grandjean, & Scherer, 2008), including terms like serenity, sadness, tension, triumph, and melancholy.

The data were analyzed using both descriptive statistics (e.g., frequencies, mode responses) and inferential techniques (e.g., Pearson correlation, ANOVA), allowing for the identification of statistically significant relationships between specific expressive features and reported emotional responses. For instance, variations in tempo (rubato) were found to correlate with increased feelings of emotional tension or urgency, while dynamic shaping tended to evoke stronger responses of joy or melancholy, depending on context. These findings reinforce existing theoretical models such as BRECVEMA (Juslin & Västfjäll, 2008), which posits those multiple psychological mechanisms including emotional contagion, musical expectancy, and evaluative conditioning govern the listener's affective response to musical stimuli.

Performance and Score-Based Analysis

Complementing the interviews and surveys, the study also engaged in performance analysis of a curated selection of piano recordings—comprising both student and professional interpretations of canonical classical repertoire. These performances were analyzed using a hybrid framework combining score-based analytical techniques with expressive performance analysis models (Clarke, 2005; Cook, 2013). Key parameters such as tempo flexibility, dynamic gradation, and articulation detail were examined in relation to notated expectations, revealing how performers deviate from or adhere to the score to achieve expressive goals. This analysis was instrumental in uncovering expressive conventions versus individual choices, with particular attention to how performers in Jiangxi Province negotiated Western interpretive norms within a distinctively Chinese musical-educational context. The contrast between performances prepared for formal evaluations and those for public recitals revealed striking differences in expressivity and spontaneity—supporting Lam's (2023) assertion that performance environments exert a profound influence on interpretive behavior, especially within perfectionist-oriented systems.

Triangulation and Analytical Integration

To ensure methodological rigor, the study employed triangulation integrating findings across multiple data sources (interviews, observations, surveys, performance analysis) and methods (qualitative and quantitative) to construct a multidimensional portrait of expressive piano performance in the local context (Denzin, 2012). This approach enhances the credibility and transferability of the findings by situating them within both subjective lived experience

and observable musical behaviors. The analytical framework was further informed by constructivist epistemology, acknowledging that expressivity in music is not an objectively quantifiable entity, but a context-dependent phenomenon shaped by culture, education, and interpersonal communication (Vygotsky, 1978; Elliott & Silverman, 2015). As such, the methodology was designed to honor both the personal expressivity of the performer and the interpretive reception of the listener, allowing for a comprehensive examination of emotional resonance in music education and performance.

Table 1

Summary of Audience Emotional Response Patterns (N = 48)

Audience Type	Preferred Expressive Feature	Common Descriptive Terms	% Favoring Emotional Arc
Trained (n = 24)	Phrasing, rubato, tonal layering	Nuanced, intentional, expressive control	92%
General (n = 24)	Dynamics, mood contrast, narrative flow	Beautiful, sad, like a story, stormy	83%
Both Groups Combined	Expressive arc, dynamic contrast	Emotional, powerful, moving	87.50%

These findings reinforce the idea that emotional expressivity in performance transcends technical jargon. Regardless of training, audiences respond viscerally to performances that embody expressive risk, timing sensitivity, and affective contour. As argued by Schubert (2022), listeners do not need formal music education to experience emotional resonance; however, trained listeners may appreciate expressive nuance more deeply due to their understanding of musical structure and performer technique.

This supports earlier cognitive studies, such as those by Juslin and Laukka (2004), which found that affective responses to music are both universal and culture-specific, influenced by physiological arousal and culturally learned codes. In the Nanchang context, emotional reception is enhanced when performers balance technical precision with storytelling sensitivity, ensuring their musical gestures are accessible to both trained and untrained ears.

Conclusion and Recommendations

The findings of this study demonstrate that emotional resonance in classical piano performance is fundamentally shaped by the intentional and sensitive use of expressive techniques rather than by technical execution alone. Techniques such as rubato, dynamic variation, phrasing, articulation, and tempo modulation emerge as central communicative tools through which performers convey emotional meaning. The discussion confirms that these techniques function not merely as mechanical devices embedded in the musical score, but as expressive resources that enable performers to construct emotional narratives. This reinforces the view that expressivity is a deliberate and learnable aspect of performance, requiring interpretive awareness, emotional intention, and artistic judgment rather than relying solely on instinct or innate talent.

A key insight from the discussion is the strong alignment between performer intention and audience perception when expressive techniques are used coherently. Both trained and untrained listeners respond positively to performances that demonstrate emotional flow, narrative continuity, and sensitivity to musical structure. While trained listeners tend to

articulate their responses using technical language, and untrained listeners rely more on metaphors and affective descriptions, both groups consistently identify expressive playing as more engaging and memorable. This suggests that emotional communication in piano performance operates at a universal level, transcending differences in musical expertise. The findings challenge pedagogical practices that prioritize technical precision while undervaluing expressive depth, as emotional authenticity proves to be a decisive factor in audience engagement.

Cultural context plays a significant role in shaping how expressivity is understood and practiced. In Nanchang, emotional expression in piano performance is influenced by broader cultural values that emphasize restraint, refinement, and subtlety. Teachers and students often favor controlled, inward expression rather than overt emotional display, reflecting local aesthetic norms and social expectations. While this cultural orientation supports sensitivity and nuance, it can also limit interpretive freedom, particularly in formal assessment and examination-driven environments. The discussion highlights a tension between cultural moderation and expressive exploration, suggesting that emotional depth is encouraged but within clearly defined boundaries that prioritize discipline and conformity. The pedagogical implications of these findings are substantial. Although educators recognize the importance of expressivity, many instructional practices remain dominated by exam preparation and technical training. As a result, expressive development is often treated as secondary or intuitive rather than systematically taught. The discussion reveals that students frequently lack explicit guidance on how to develop emotional interpretation, leading to uncertainty and cautious performance choices. This gap points to the need for more structured expressive pedagogy, where emotional communication is explicitly taught, discussed, and practiced alongside technical skills. Integrating storytelling, imagery, reflection, and audience feedback into lessons could help bridge this gap and foster more confident expressive performers.

Finally, the discussion positions emotional resonance as a relational process co-created by performers and listeners within a specific cultural and educational environment. Emotional meaning does not reside solely in the performer's intention or the musical text but emerges through interaction, perception, and context. This relational understanding aligns with contemporary performance theories that emphasize interpretation, reception, and cultural embeddedness. By situating expressive piano performance within the lived realities of Nanchang's musical community, the study expands existing discourse beyond Western-centric models and underscores the importance of culturally responsive approaches to performance and pedagogy.

In conclusion, this study demonstrates that expressive piano techniques are central to emotional communication in classical performance and are deeply influenced by pedagogical practices and cultural context. The findings confirm that emotional resonance is not an incidental outcome of technical mastery but a crafted and intentional process shaped by interpretive decisions, audience perception, and socio-cultural values. Performances that prioritize expressive coherence and emotional authenticity consistently generate stronger audience engagement, regardless of listeners' musical background. This reinforces the idea that piano performance is fundamentally a communicative art form, where emotional meaning is as significant as technical accuracy.

The study also highlights the need for a pedagogical shift within piano education in Nanchang toward a more balanced model that integrates technical rigor with expressive development. By recognizing expressivity as a teachable and assessable dimension of musicianship, educators and institutions can nurture more complete performers capable of meaningful emotional connection. Ultimately, the research contributes a culturally grounded perspective to the broader field of music performance studies, emphasizing that emotional expression in piano playing is shaped by context, cultivated through education, and realized through the shared experience between performer and listener.

References

- Adolphe, B. (2021). *The mind's ear: exercises for improving the musical imagination for performers, composers, and listeners*. Oxford University Press.
- Allingham, E. (2022). *Preparing to perform: Focus of attention and slow practice in the preparation for instrumental music performance*. Staats-und Universitätsbibliothek Hamburg Carl von Ossietzky.
- Andreou, E. (2022). *The relationship between private studio-based piano lessons and home-based private practice: Case studies of young piano students*. UCL (University College London).
- Barrett, K. C., Ashley, R., Strait, D. L., & Kraus, N. (2013). Art and science: how musical training shapes the brain. *Frontiers in Psychology*, 4, 713.
- Battcock, A., & Schutz, M. (2021). Individualized interpretation: Exploring structural and interpretive effects on evaluations of emotional content in Bach's Well Tempered Clavier. *Journal of New Music Research*, 50(5), 447–468.
- SIWEN, Q. U., & Jamnongsarn, S. (2024). *THE STUDY OF TRADITIONAL CHINESE MUSIC IN THE CONTEXT OF THE APPROPRIATION PROCESS OF POPULAR CHINESE MUSIC*. Srinakharinwirot University.
- Skoogh, F. (2021). *Transforming Performance: An inquiry into the emotional processes of a classical pianist*.
- Snape, N. (2020). Building bridges: Exploration of music analysis methods in improvisational music therapy research and clinical work. *JYU Dissertations*.
- Steinbrecher, B. (2021). Musical nuances and the aesthetic experience of popular music hooks: theoretical considerations and analytical approaches. *El Oído Pensante*, 9(1).
- Sun, I. (2022). *How can Transcultural Music Education enhance the Acculturation process of the 1.5-Generation Chinese Migrants who have access to private Western music tuition in New Zealand?* ResearchSpace@ Auckland.
- Tay, R. Y. L., & Ng, B. C. (2019). Effects of affective priming through music on the use of emotion words. *PloS One*, 14(4), e0214482.
- Thompson, W. F., Bullot, N. J., & Margulis, E. H. (2023). The psychological basis of music appreciation: Structure, self, source. *Psychological Review*, 130(1), 260.
- Tracy, S. J. (2024). *Qualitative research methods: Collecting evidence, crafting analysis, communicating impact*. John Wiley & Sons.
- Trenck, M. (2011). *The power of music: The composition and perception of emotion in melody*.
- Váradi, J. (2022). A review of the literature on the relationship of music education to the development of socio-emotional learning. *Sage Open*, 12(1), 21582440211068500.
- Vuust, P., Heggli, O. A., Friston, K. J., & Kringelbach, M. L. (2022). Music in the brain. *Nature Reviews Neuroscience*, 23(5), 287–305.
- Wang, X., Wei, Y., Heng, L., & McAdams, S. (2021). A cross-cultural analysis of the influence

- of timbre on affect perception in western classical music and chinese music traditions. *Frontiers in Psychology*, 12, 732865.
- Wang, Y. (2020). *Finding my voice: an interdisciplinary and multi-methodological investigation into the relationship between performers' speech and musical expression*. Guildhall School of Music and Drama.
- Wapnick, J. (1980). Pitch, tempo, and timbral preferences in recorded piano music. *Journal of Research in Music Education*, 28(1), 43–58.
- Wapnick, J., Ryan, C., Campbell, L., Deek, P., Lemire, R., & Darrow, A.-A. (2005). Effects of excerpt tempo and duration on musicians' ratings of high-level piano performances. *Journal of Research in Music Education*, 53(2), 162–176.
- Warburton, A. (2020). *Towards a personal interpretation of Beethoven's piano sonata in E major OP. 109*.
- Waterman, E. (2019). Performance studies and critical improvisation studies in ethnomusicology: Understanding music and culture through situated practice. In *Theory for Ethnomusicology* (pp. 141–175). Routledge.
- Welby, J. (2020). *How Does a Euro-Western Trained Music Teacher Describe and Understand His Positionality, and How Does This Influence His Instructional Choices in an Urban, Diverse Classroom? A Portrait of Goodness*. University of Massachusetts Lowell.
- Whitehead, C. A. (2019). *Creating musical'truth': An interdisciplinary application of selected elements from Konstantin Stanislavski's acting'system'to the classical pianist's selection, preparation and performance of music for solo recital*.
- Williamon, A., Ginsborg, J., Perkins, R., & Waddell, G. (2021). *Performing music research: Methods in music education, psychology, and performance science*. Oxford University Press.
- Wong, K., & Campbell, P. S. (2021). Culturally responsive music education: A comparative study of East Asian and Western pedagogies. *Music Education Research*, 23(4), 412–428.
- Woody, R. H. (1999). The relationship between explicit planning and expressive performance of dynamic variations in an aural modeling task. *Journal of Research in Music Education*, 47(4), 331–342.
- Xueying, W., & Hin, Y. J. (2024). *The Performance Issues of the Selected Chinese Art Song*.
- Yang, S., Reed, C. N., Chew, E., & Barthet, M. (2021). Examining emotion perception agreement in live music performance. *IEEE Transactions on Affective Computing*, 14(2), 1442–1460.
- Yang, Z. (2023). *The Extra-Musical Elements Involved in Achieving a Successful Public Piano Recital*. North Dakota State University.
- Yarbrough, C., Speer, D., & Parker, S. (1993). Perception and performance of dynamics and articulation among young pianists. *Bulletin of the Council for Research in Music Education*, 33–43.
- Yu, R. J. (2023). Exploring effective inclusive music education pedagogies for engaging students with different learning abilities: A selective and systematic literature review. *Masters Thesis-University of Auckland*.
- Zheng, Y., & Leung, B.-W. (2021). Cultivating music students' creativity in piano performance: a multiple-case study in China. *Music Education Research*, 23(5), 594–608.
- Zheng, Y., & Leung, B.-W. (2023). Perceptions of developing creativity in piano performance and pedagogy: An interview study from the Chinese perspective. *Research Studies in Music Education*, 45(1), 141–156.