



A Training Program for Evaluating Chinese Music Instructors' Leadership Competencies in Universities in Chongqing, China

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Abstract

Background and Aims: The need for effective leadership within Chinese music education departments in Chongqing universities. This program likely aims to develop and assess leadership competencies specific to the unique context of Chinese music instruction, aligning with broader goals of enhancing educational quality and organizational effectiveness in higher education institutions. This study investigates leadership competencies among music instructors in higher education in Chongqing, China, utilizing a multi-institutional cross-sectional approach to discern the current and desired leadership competencies essential for effective music education.

Methodology: By applying the Priority Needs Index (PNI) analysis, the research identifies exemplary pedagogical performance and collaborative teaching as pivotal areas that necessitate development to meet the evolving demands of music education.

Results: The findings emphasize a significant inclination towards student-centered educational paradigms, highlighting the importance of creativity, emotional intelligence, and collaboration in contemporary music education. This shift underscores the necessity for pedagogical evolution and integrating innovative teaching methodologies. By pinpointing key leadership competencies and underscoring the critical role of professional development, this study contributes to the broader dialogue on enhancing music education in China. Actionable recommendations include the development of courses integrating leadership and innovation skills, establishing professional development programs emphasizing student-centered methodologies, and forming strategic partnerships with music organizations to expose educators and students to real-world leadership scenarios. These initiatives aim to foster a culture of innovation and adaptability, ensuring music education aligns with the demands of the 21st-century music profession. The study contributes to the ongoing conversation on enhancing music education leadership in Chinese higher education, providing insights for pedagogical advancement and professional development.

Conclusion: The study emphasizes a move in music education toward student-centered methods and promotes the blending of creativity, emotional intelligence, and teamwork. By delineating fundamental leadership skills and promoting career advancement, it provides practical suggestions for promoting creativity and flexibility, enhancing the conversation about enhancing music education leadership in Chinese higher education.

Keywords: Chinese Universities; Music Education; Pedagogical Competencies; Professional Development; Transformational Leadership

Introduction

Historically, music education has relied primarily on the technical expertise of instructors (Pike, 2016). However, with the changing dynamics of educational environments and student needs, leadership competencies have emerged as a crucial element in enhancing the effectiveness of music instructors and



promoting positive outcomes from students (Guan & Asavisanu, 2023). Overall, leadership competencies in music education empower instructors to effectively teach, inspire, collaborate, innovate, and advocate for the significance of music education, ultimately contributing to student's development and success in their musical journeys. In the rapidly evolving landscape of global education, the Ministry of Education in China has notably underscored the importance of music education. There has been an amplified demand for proficient music instructors, recognizing the integral role of music in fostering cultural literacy and creativity. These instructors, empowered with robust leadership competencies, are anticipated to deliver effective instruction and advocate for the significant role of music education within China's broader educational sphere (Ministry of Education of the People's Republic of China, 2006).

In a strategic push toward educational reform and advancement, the Ministry of Education introduced the "Basic Skills Exhibition of Undergraduate Students and Teachers Majoring in Music Education and Fine Arts Education in Regular Institutions of Higher Learning" in 2022. This initiative sought to bolster comprehensive student development, enabling the acquisition of the foundational theory of music education, essential practical skills, an innovative spirit, and research capabilities. Instructors' leadership competencies are pivotal in cultivating the desired growth the 2022 policy requires. With such skills, music instructors can deliver high-quality courses, collaborate effectively with peers, and advocate for the societal value of music education (Shuler, 2014). Moreover, the leadership competencies required by music educators go beyond simple knowledge transmission. They must inspire passion, uphold moral standards, demonstrate social responsibility, and cultivate a deep appreciation and understanding of music in students. Instructors should also encourage students to appreciate China's rich cultural heritage (Xuelian, 2019).

Although the Chinese government has signaled to the education sector, significantly higher education institutions, music education's strategic importance, and implementing reforms have faced many challenges. Chinese universities in Chongqing continue to rely on traditional pedagogical structures that over-emphasize exams and marginally focus on a student-centered curriculum, which has diminished student enrollment in many music departments (Law & Ho, 2011). Chongqing universities, often limited in financial resources, have reduced departmental budgets, dramatically reducing music instructor professional development program opportunities (Scott et al., 2023). Despite the critical role that music instructors play in promoting the realization of moral education and art education demanded by the Chinese central government (MOE, 2006), many Chinese music instructors in this region lack the leadership competencies to drive change and encourage innovation (Zhang, 2020). To overcome the difficulties in music education in Chongqing, China, it is essential to concentrate on improving the leadership skills of music instructors. This can be achieved by providing them with training to enhance their pedagogical awareness and to equip them with strong leadership abilities. Such training will enable educators to guide, motivate, and manage their classrooms effectively, thus creating a positive and impactful learning environment for music students. Directly applicable to enhancing the quality and impact of music education in higher learning environments.

Research Questions

The research questions formulated for this study are integral to fulfilling its core mission: to facilitate the creation of a more effective music education program that meets the educational and professional aspirations of university music majors. This endeavor aims to enhance the quality of music education



by addressing specific learning requirements and expanding the leadership capabilities of Chongqing music instructors.

1. What are the currently perceived leadership competency levels of music instructors in Chongqing universities?
2. What are the desired leadership competency levels of music instructors in Chongqing universities?
3. What actions can institutions and music instructors take to enhance leadership skills and reduce perceived gaps?

Literature Reviews

Synthesized Leadership Competencies. Leadership competencies in music education embody a complex and dynamic set of skills that extend beyond musical prowess, including the execution of educational leadership principles. Identifying and understanding these competencies are fundamental for developing effective and encompassing music education practices. Within this framework, eight primary variables have been delineated: pedagogical performance, visionary music communication, creative analytic mentorship, emotionally attuned guidance, explorative learning experience, reflective creative cultivation, organizational ability, and collaborative teaching. Although each variable is a distinct aspect of leadership competencies, they interact synergistically to forge a comprehensive portrait of the requisite leadership skills in music education.

Each of these variables serves as a pivotal component of music education leadership. For example, pedagogical performance concerns the educator's ability to effectively impart musical knowledge and skills, while visionary music communication focuses on the articulate and imaginative expression of musical concepts. Creative analytic mentorship aims to develop students' abilities to think analytically and creatively within the musical realm. Emotionally attuned guidance emphasizes the affective dimensions of music, advocating for educators to be responsive to emotional expressions and subtleties in music education.

The Exploratory learning experience variable supports musical education that fosters experimentation and discovery. Reflective creative cultivation aims to create a space where students can contemplate their creative processes and growth. Although it may lean more towards administrative skills, organizational ability is indispensable for efficiently managing music education programs. Lastly, Collaborative Teaching highlights the importance of cooperative efforts and interactive learning environments in higher music education.

Chinese University Music Education. Under the guidance of the Ministry of Education's 2022 initiative, university education in China mandates a comprehensive arts education for all undergraduate students. The policy requires students to select at least one elective from an array of eight art courses: Introduction to Art, Music Appreciation, Fine Art Appreciation, Movie Appreciation, Drama Appreciation, Dance Appreciation, Chinese Calligraphy Appreciation, and Xiqu (Chinese Theatre) Appreciation. The curriculum's design aims to provide a well-rounded education that enhances students' understanding and appreciation of the arts, with a particular focus on the cultural richness of Chinese music. Such a curriculum is instrumental in preserving cultural heritage, enriching aesthetic education, and contributing positively to the well-being of individuals and society.

However, the implementation of this wide-ranging curriculum has encountered obstacles, particularly in meeting the diverse musical learning needs of students and addressing the issue of low



music literacy, which is more pronounced in universities that focus on science and engineering disciplines (Zhang, 2014). These challenges have led to criticisms concerning the quality of music courses and the educational materials employed. In response, there have been strides toward improvement in both the traditional classroom setting and the development of Massive Open Online Courses (MOOCs) to accommodate larger class sizes and diversify the musical content offered (Yang, 2015; Zhang, 2017; Zhang & Zhao, 2012). Nevertheless, the effectiveness of these methods in achieving the overarching goals of music education has been questioned, with studies revealing that while there may be an enhancement in intellectual engagement, the impact on students' moral and psychological well-being remains minimal (Zhang, 2014). In contrast, Zhao (2016) posits that integrating music education philosophy into the general curriculum can significantly influence students' worldviews.

As the university music education landscape in China evolves to cater to an expanding student population and adapt to changing educational demands, the focus has shifted towards increasing the available resources and enhancing the quality and meaningfulness of the educational experience. The challenge lies in ensuring that the education provided is practical in cultivating an appreciation for the arts and facilitating students' intellectual and moral development, aligning with the comprehensive educational objectives outlined by the Ministry of Education.

Chinese Music Education Leadership Competencies. Competencies required for leadership in music encompass a comprehensive array of skills, from deep musical knowledge to interpersonal abilities and instructional techniques. Technical music knowledge forms the foundation, including all music-related theories and specific content accumulated throughout years of academic study in music. Interpersonal skills, critical for career advancement and personal growth, encompass communication, creativity, critical thinking, and collaboration, as explored by Galvin, Nadakinska-Michalak, and Revyakina (2024). In addition, proficiency in music pedagogy is an indispensable criterion for educators within the field, necessitating foundational teaching skills for effective lesson management and delivery in educational environments.

Recent studies have investigated innovative teaching methodologies suitable for music education, such as leveraging virtual reality (VR) and gamification to elevate student engagement and learning experiences. Researchers such as Hao et al. (2024) and Gao and Li (2024) have found that digital and unconventional teaching methods significantly enhance student motivation and engagement, suggesting the importance of integrating digital literacy into the continuous professional development of music leaders. The advancement of digital teaching applications in music education has underscored the positive impact of these innovative teaching strategies on student engagement and motivation, prompting recommendations for educational institutions to prioritize digital literacy in the professional growth of music leaders.

Artistic development, specifically the acquisition of aesthetic skills, distinguishes music leadership from other forms of educational leadership, given the unique nature of music as a subject. The perception of musical beauty, varying from one individual to another, underscores the value of aesthetic appreciation in music. Research by Xiang (2018) has shown that a variety of factors, including education, experiences, tenure, practices, and public exposure, shape aesthetic skills in music. Suggestions have been made for a shift towards more open, society-oriented apprenticeship models that allow students to engage with music masters in real-world settings, as noted by Burnsed and Jensen (2021), emphasizing the importance of societal exposure in nurturing music leaders.



Training in multilingualism, language awareness, and cultural diversity has been highlighted as essential for developing music leaders, as Guan (2023) mentioned. Despite differing viewpoints on the necessity of language skills in music leadership, with some studies, such as Burnsed and Jensen (2021), placing greater emphasis on the importance of practice and reflective learning in music, it is agreed that understanding different cultures enhances music leaders' social networking capabilities. Körkkö and Lutovac (2024) have indicated that social and emotional competencies at a micro-level significantly contribute to creating a positive atmosphere in the classroom, thereby enhancing the teacher-student relationship. At a macro level, music leaders with strong social skills are better positioned to find opportunities for developing community-based music learning environments, as supported by Burnsed and Jensen (2021), highlighting the critical role of networking and collaboration in fostering community engagement and character development among music students.

Methodology

This study employs a cross-sectional design across multiple institutions to quantitatively assess Chinese music instructors' current and desired leadership competencies. Opting for a cross-sectional approach enables data collection at a specific point in time, providing a snapshot of instructors' competencies within the unique context of Chongqing, China. This methodology is selected for its efficiency and effectiveness in capturing a broad spectrum of leadership skills across various educational settings, ensuring the findings are contextually relevant.

Including a multi-institutional scope widens the research's applicability, allowing for a comprehensive examination of leadership competencies in music education. The study aims to offer insights into the essential leadership skills for effective music education by gathering data from diverse educational environments. This approach mitigates the risk of overgeneralization and enriches the research findings, making a valuable contribution to music education leadership. The results are poised to inform educators, policymakers, and stakeholders committed to enhancing the quality of music education.

The focus of this study encompasses undergraduate music instructors employed at six universities within Chongqing, known for their distinguished programs in music education. These selected institutions stand out due to their reputable standing in music education, comprehensive music course offerings, and the experience of their teaching faculty. The universities included in this study are Southwest University, Chongqing Normal University, Yangtze Normal University, Chongqing University of Arts and Sciences, Chongqing University of Foreign Business and Economics, and Chongqing University of Foreign Studies. The choice to focus on these institutions over others in the region stems from their larger scale and more prominent role in advancing music education, compared to other universities in Chongqing with smaller music programs and a lesser emphasis on music education.

The collective population of music instructors across these six institutions totals 451. The study utilizes the Krejcie and Morgan Table for sample size determination to ensure an unbiased and equal representation of each institution. It employs random sampling methods to derive a representative sample. The decision to calculate sample sizes at the institutional level rather than across the entire population acknowledges the unique characteristics and needs of each university's music education program. This approach aims to achieve a 95% confidence interval for inclusion and enhances the study's



ability to yield generalizable and context-specific insights. Table 1 in the document provides a detailed breakdown of the sample sizes determined for each institution.

Table 1. Population and Sample Sizes by Institution

School Name	Faculty	Sample Required
Chongqing Normal University	82	68
Chongqing University of Arts and Sciences	66	57
Chongqing University of Foreign Business and Economics	79	66
Chongqing University of Foreign Studies	80	67
Southwest University	76	64
Yangtze Normal University	68	58
Total	451	381

Note: sample size indicates the required number of instructors (by institution) to ensure a 95% confidence interval

The questionnaire development for this study began with creating potential items drawn from the constructs identified within the theoretical framework. Each question was carefully formulated to explore a distinct aspect of the corresponding construct and capture the nuanced dimensions of leadership competencies in music education. Following the initial item generation, a panel comprising six experts who possess extensive research experience and a deep understanding of the nuances of Chinese undergraduate music education conducted a detailed review. Their insights were pivotal in refining the questionnaire items, enhancing their clarity, and ensuring their alignment with the intended constructs (Dillman, Smyth, & Christian, 2009).

This process of expert validation culminated in the finalization of the questionnaire, comprising 41 items as listed in Appendix A. This included three demographic and 38 competency-related questions, structured on a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). This scale format was chosen to allow respondents to express their level of agreement effectively with each statement. Notably, the competency-related questions were presented twice to assess the instructors' current and desired competency levels. An official translation of the questionnaire from English to Chinese was undertaken before distribution to ensure its comprehensibility and relevance to the target audience. For data collection, the study utilized an online questionnaire, leveraging the advantages of digital surveys outlined by Couper (2000) and Dillman et al. (2009). Online questionnaires are recognized for their efficiency, cost-effectiveness, and the expedited nature of data collection they facilitate. They also have the potential to secure higher response rates due to the convenience they offer, allowing participants to complete the survey at their leisure. Strategic measures were implemented despite potential limitations such as technical glitches, privacy concerns, and the absence of an interviewer, which Bryman (2012) notes could influence response rates and introduce bias. A secure, user-friendly platform was selected to disseminate the questionnaire and encourage broad participation while addressing the challenges above.

This study's methodological framework integrates Gap Analysis with a modified version of the Priority Needs Index (PNI_{modified}) to assess the leadership competencies of music instructors. Initially, the study identified these instructors' desired and current leadership competencies. This strategy enables



a systematic evaluation of the areas where leadership skill development is required, facilitating the formulation of focused interventions.

The Priority Needs Index is employed to quantitatively assess the urgency or priority of development for each leadership competency. It calculates the ratio of the discrepancy between the desired competencies and the current competencies to the degree of success. A higher PNI value indicates a larger gap and a higher development priority for that competency. Based on marketing research, the PNI proves essential in pinpointing and prioritizing immediate needs (Wittink & Bayer, 1994). It offers a quantitative approach to prioritizing needs and making informed decisions regarding the allocation of resources. Moreover, it facilitates the comparison of different competencies to identify those most in need of improvement. Utilizing gap analysis alongside the modified PNI formula allows the study to pinpoint precisely where instructors' leadership competencies fall short of the ideal, providing a quantitative foundation for efforts aimed at enhancing these skills.

The study utilizes IBM's SPSS V26 software for data analysis, conducting descriptive statistics, reliability and validity tests, and regression analysis. The choice of SPSS is due to its reliability and widespread recognition in the social sciences for statistical analyses. Additionally, AMOS V28 software supports the study through confirmatory factor analysis (CFA), which is crucial for validating the questionnaire's factor structure. CFA ensures that the constructs measured align with the theoretical framework, with AMOS chosen for its advanced capabilities in modeling complex structures and delivering comprehensive outputs (Byrne, 2010).

Results

Pilot study results. This pilot study adopted an external methodology to ensure its participants and results remained distinct from the main study's data pool. This separation enabled significant methodological refinements based on the pilot's outcomes without compromising the main study's data integrity. The pilot targeted a relatively small subset of the population, incorporating music instructors from Chongqing University and Chongqing Three Gorges University. Despite their smaller music program sizes, selecting these institutions was strategic to achieve the necessary respondent count of over 30 participants. While not included in the main study, these universities share attributes similar to those of the main study's context but have notably smaller faculty and student bodies. Fifty-four music instructors were invited to participate; of those approached, 45 instructors agreed to take part, resulting in a participation rate of 83.3%. The substantial response rate provides a solid foundation for the pilot study, ensuring a broad spectrum of insights into the effectiveness of the questionnaire and the relevance of the measured constructs.

Table 2. Pilot Study Internal Consistency Analysis

Current			Construct	Desired		
α	AVE	CR		α	AVE	CR
0.697	0.633	0.834	Exemplary Pedagogical Performance	0.671	0.616	0.826
0.817	0.594	0.878	Visionary Music Communication	0.784	0.546	0.857
0.886	0.692	0.918	Creative Analytic Mentorship	0.880	0.674	0.911
0.781	0.536	0.850	Emotionally Attuned Guidance	0.787	0.558	0.861
0.855	0.644	0.900	Explorative Learning Experience	0.837	0.613	0.878
0.746	0.580	0.841	Reflective Creative Cultivation	0.697	0.532	0.818



Current				Desired			
α	AVE	CR	Construct	α	AVE	CR	
0.804	0.737	0.918	Organizational Skills	0.773	0.535	0.850	
0.883	0.564	0.865	Collaborative Teaching	0.762	0.577	0.844	

Note: α = Cronbach's alpha, AVE = average variance extracted, CR = composite reliability

In assessing the questionnaire's alignment with its intended constructs, the pilot study's factor loadings analysis utilizing confirmatory factor analysis (CFA) was crucial. Applying a minimum threshold of 0.5 for inclusion, as Hair, Black, Babin, and Anderson (2019) recommended, ensured each item's significant contribution to its construct, bolstering the instrument's construct validity. This analysis verified most items' adequacy but highlighted two from the Exemplary Pedagogical Performance construct—EPP2 and EPP3—as not meeting the required threshold.

Table 3. Current Inter-Construct Correlations

Constructs	EPP	VMC	CAM	EAG	ELE	RCC	OS	CT
Exemplary Pedagogical Performance	1							
Visionary Music Communication	.783	1						
Creative Analytic Mentorship	.734	.765	1					
Emotionally Attuned Guidance	.504	.701	.668	1				
Explorative Learning Experience	.702	.726	.793	.782	1			
Reflective Creative Cultivation	.520	.538	.687	.512	.698	1		
Organizational Skills	.536	.537	.617	.463	.704	.772	1	
Collaborative Teaching	.547	.524	.637	.490	.643	.745	.671	1

Note: All correlations are significant at the 0.01 level (2-tailed).

The pilot study also emphasized instrument validation through internal consistency analysis, which is critical for refining measurement tools. This analysis, applying composite reliability (CR), average variance extracted (AVE), and Cronbach's Alpha, tested the reliability of scales for assessing various constructs (Table 2). Adhering to recommended minimum thresholds, the study found CR values for both current and desired scales far exceeding the 0.6 benchmark, indicating strong internal consistency. Similarly, AVE values met or surpassed the 0.5 thresholds for convergent validity, and Cronbach's Alpha values exceeded 0.6, affirming the scales' reliability (Diamantopoulos, et al, 2012).

Discriminant validity, assessing the uniqueness of each construct, is paramount in ensuring that constructs measure distinct phenomena. The pilot study used inter-construct correlations, with a maximum threshold of 0.85, as advised by Henseler, Ringle, and Sinkovics (2015), to evaluate discriminant validity. This analysis confirmed that all constructs are sufficiently distinct, as indicated by inter-construct correlations below the 0.85 limit for both current (Table 3) and desired scales (Table 4). These findings, ensuring discriminant validity, validate the questionnaire's use in the main study by confirming that each construct uniquely captures different aspects of leadership competencies.



Table 4. Desired Inter-Construct Correlations

Constructs	EPP	VMC	CAM	EAG	ELE	RCC	OS	CT
Exemplary Pedagogical Performance	1							
Visionary Music Communication	.805	1						
Creative Analytic Mentorship	.731	.760	1					
Emotionally Attuned Guidance	.581	.616	.637	1				
Explorative Learning Experience	.512	.546	.619	.674	1			
Reflective Creative Cultivation	.493	.534	.684	.498	.700	1		
Organizational Skills	.343	.430	.317	.263	.530	.669	1	
Collaborative Teaching	.358	.450	.478	.402	.627	.699	.696	1

Note: Italic represents correlations significant at the 0.05 level (2-tailed). The bold italic represents correlations significant at the 0.01 level (2-tailed)

In November 2023, the 451 undergraduate music instructors targeted for this study were contacted via the WeChat app and invited to participate. They received comprehensive information about the study's objectives and assurances regarding the anonymity and confidentiality of their responses. Two follow-up messages were sent to improve participation rates: one a week after the initial outreach and another one day before the survey's closing. Considering the instructors' demanding schedules, the survey was kept open for 15 days to optimize response rates.

By the conclusion of the data collection phase, a participation rate of 86.9% was recorded, with 392 instructors having submitted their responses. This participation rate surpasses that of the pilot study, which stood at 83.3%, and the minimum sample size requirement of 381 participants, as determined by the Krejcie & Morgan table, to ensure statistical validity. Participation rates across the six institutions involved in the study ranged from 86.1% to 87.8%, indicating uniformly high engagement across different educational settings. This response rate ensures the study's statistical robustness, crediting the reliability and validity of the analyses and conclusions drawn from the data collected.

Demographic Profile. Understanding the demographic profile of the sample is essential for assessing its diversity, representativeness, and the generalizability of the study's results. The gender distribution among participants is relatively balanced, with 45.9% females and 54.1% males. This balance in gender representation enriches the study with varied perspectives on music education competencies and signifies a shift towards greater gender equity. The age distribution of respondents indicates a prevalence of more experienced individuals, with 70.7% aged between 46 and 55 years and another 27.6% older than 55 years, suggesting that a wealth of professional experience informs the findings. In terms of teaching experience, the data reveal that a significant portion of the sample has a long-standing background in undergraduate music education. Specifically, 37.0% of respondents have over ten years of teaching experience, 27.0% have been teaching for 3-5 years, and 20.4% for 5-10 years. Conversely, a smaller proportion of 15.6% have less than three years of teaching experience. This diverse range of teaching tenures ensures a comprehensive assessment of leadership competencies, reflecting insights from instructors at varying stages of their careers.

Internal Consistency and Discriminant Validity Analysis. Table 5 displayed CR values for the constructs across both scales, surpassing the 0.6 benchmark, highlighting the instruments' high internal consistency. The Cronbach's alpha values further confirmed the reliability of the scales, with all values exceeding the established threshold of 0.6, thereby supporting the cohesiveness of items within each



construct. Although CR and Cronbach's alpha values illustrated high internal consistency, the AVE values presented a more detailed insight into the constructs' performance, especially within the desired scale. Some constructs' AVE values approached the minimum threshold of 0.5, indicating areas warranting further scrutiny. Notably, the AVE for creative analytic mentorship in the desired scale stood at 0.501, barely exceeding the cutoff. This indicates that, while the constructs generally show robust internal consistency, the closeness of some AVE values to the threshold necessitates a closer examination of how well certain constructs capture variance in their items. Such findings are pivotal, as AVE measures the degree to which a construct explains the variance in its items relative to measurement error, and figures near the 0.5 mark suggest that items are not as closely related to the construct as ideally required.

Table 5. Main Study Internal Consistency Analysis (n=392)

Current			Construct	Desired		
α	AVE	CR		α	AVE	CR
0.802	0.721	0.886	Exemplary Pedagogical Performance	0.754	0.671	0.859
0.875	0.666	0.909	Visionary Music Communication	0.779	0.531	0.85
0.848	0.622	0.892	Creative Analytic Mentorship	0.750	0.501	0.833
0.846	0.621	0.891	Emotionally Attuned Guidance	0.738	0.504	0.835
0.841	0.612	0.887	Explorative Learning Experience	0.725	0.505	0.835
0.794	0.620	0.867	Reflective Creative Cultivation	0.708	0.534	0.821
0.818	0.586	0.876	Organizational Skills	0.649	0.501	0.833
0.810	0.637	0.875	Collaborative Teaching	0.783	0.609	0.861

Note: α = Cronbach's alpha, AVE = average variance extracted, CR = composite reliability

The discriminant validity analysis conducted on the current scale revealed that, while correlations among constructs were relatively high, they remained below the maximum threshold of 0.85, as shown in Table 6. In contrast, the desired scale demonstrated lower correlations among its constructs, as indicated in Table 7. The more marked differences in correlations across the desired scale, compared to the current scale, underscore a clearer distinction among constructs when examining desired leadership qualities. This differentiation is crucial, highlighting the instrument's capacity to accurately capture and differentiate between leadership competencies' current and aspirational aspects without merging the constructs. The outcome of this discriminant validity analysis affirms the instrument's design and practicality in distinguishing complex leadership constructs, thereby supporting a thorough and nuanced examination of leadership competencies.

Table 6. Main Study Current Inter-Construct Correlation (n=392)

Constructs	EPP	VMC	CAM	EAG	ELE	RCC	OS	CT
Exemplary Pedagogical Performance	1							
Visionary Music Communication	.814	1						
Creative Analytic Mentorship	.719	.822	1					
Emotionally Attuned Guidance	.745	.820	.844	1				
Explorative Learning Experience	.706	.780	.798	.829	1			
Reflective Creative Cultivation	.693	.729	.759	.803	.799	1		



Organizational Skills	.670	.711	.757	.788	.754	.798	1	
Collaborative Teaching	.643	.655	.707	.746	.710	.752	.794	1

Note: All correlations are significant at the 0.01 level (2-tailed).

Table 7. Main Study Desire Inter-Construct Correlation (n=392)

Constructs	EPP	VMC	CAM	EAG	ELE	RCC	OS	CT
Exemplary Pedagogical Performance	1							
Visionary Music Communication	.720	1						
Creative Analytic Mentorship	.619	.737	1					
Emotionally Attuned Guidance	.620	.741	.760	1				
Explorative Learning Experience	.591	.708	.744	.800	1			
Reflective Creative Cultivation	.597	.648	.643	.685	.756	1		
Organizational Skills	.490	.552	.544	.571	.615	.660	1	
Collaborative Teaching	.574	.653	.656	.682	.702	.713	.652	1

Note: All correlations are significant at the 0.01 level (2-tailed).

Modified Priority Needs Index Analysis. The PNI_{modified} analysis was implemented to identify the constructs most in need of attention, assessing the variance between current and desired states of leadership competencies among music instructors. This method calculates the differences between the mean scores of current and desired perceptions, thereby quantitatively indicating the areas requiring the most significant improvement and guiding targeted strategies for enhancement.

Table 8. Modified Priority Needs Index Analysis (n=392)

Constructs	Importance (Desirable)	Degree of Success (Current)	PNI (I-D)/D	Rank
Exemplary Pedagogical Performance	4.76	3.44	0.38	1
Visionary Music Communication	4.78	3.58	0.33	5
Creative Analytic Mentorship	4.78	3.59	0.33	7
Emotionally Attuned Guidance	4.79	3.6	0.33	8
Explorative Learning Experience	4.76	3.55	0.34	3
Reflective Creative Cultivation	4.74	3.56	0.33	6
Organizational Skills	4.59	3.43	0.34	4
Collaborative Teaching	4.8	3.53	0.36	2

Findings from the PNI_{modified} analysis, as detailed in Table 8, indicate a spectrum of developmental priorities among the leadership competencies. Exemplary pedagogical performance stands out as the foremost area for development, marked by the highest PNI score of 0.38. This score highlights a considerable disparity between the current and desired states of this competency, signaling an urgent need for advancement. Following closely is collaborative teaching, with a PNI score of 0.36, suggesting that despite a general satisfaction with current capabilities in this area, a pronounced desire exists for further development to achieve the desired proficiency level.



Through the PNI_{modified} analysis, a precise and quantifiable understanding of the prioritization of needs from the perspective of music instructors is obtained. The analysis efficiently identifies the largest gaps between current abilities and desired competencies, facilitating a focused strategy for addressing these areas. By ranking leadership competencies according to their PNI scores, a strategic blueprint for targeted improvement initiatives is established. Such prioritization is crucial for efficiently allocating resources and efforts, ensuring that enhancements in music education leadership competencies directly address the areas deemed most vital by instructors for their professional growth and effectiveness.

Discussion

The gap identified between current and desired competencies among music instructors underscores a broader pedagogical and institutional challenge, reflecting an acute awareness of the shifting paradigms in music education. This evolution leans towards a student-centered approach emphasizing creativity, emotional intelligence, and collaboration, diverging from traditional, teacher-centered methodologies focused on rote learning and theoretical knowledge. Such a shift indicates the changing landscape in music education, which increasingly values integrating skills that foster critical thinking, creative expression, and emotional engagement among students (Zhang, King, and Prior, 2021).

The application of the Priority Needs Index (PNI) analysis in this study reveals a significant gap between music instructors' perceived current leadership competencies and their aspirational levels of expertise. This finding is congruent with the perspectives of Guan (2023) and Zhang et al. (2021), who emphasize the necessity for instructors to expand their leadership capabilities beyond their present scope. The critique of traditional teaching methods by Dongyan and Pattananon (2022) for not adequately preparing students for post-academic realities highlights the urgency for pedagogical evolution. They advocate for an embrace of 21st-century practices that depart from the constraints of rote learning, suggesting a move towards more dynamic and engaging approaches in music education.

The reluctance of Chinese universities to adapt their educational programs or to provide essential professional development opportunities for music instructors is a concern echoed across the literature (Borel, 2019; Chen, 2023; Danyu, 2021). While financial and time constraints may partly explain this hesitance, particularly in smaller institutions or those facing geographical challenges like Chongqing, an in-depth analysis suggests cultural and systemic factors play a more significant role. The enduring preference within China's educational system for teacher-centered or Confucian pedagogical approaches starkly contrasts with the competencies identified as crucial in this study and others (Guan, 2021; Haddon, 2019). Focusing on competition and prioritizing standardized testing in Chinese education often marginalizes student-centered practices, which is vital for nurturing a holistic understanding and application of music education.

This examination of 'Westernized' 21st-century leadership competencies within Chinese music education does not suggest abandoning traditional methods. Instead, it advocates for a complementary approach integrating China's rich musical heritage with innovative teaching strategies (Yang, 2022). This synergistic model aims to create a more enriched and engaging learning experience, balancing the integrity of traditional Chinese music education with the demands of the contemporary music profession. Such an approach prepares students for success in a globally interconnected world, bridging the gap between academic achievements and the practical skills required in the music industry.



This exploration of 'Westernized' leadership competencies within Chinese music education does not imply a replacement of traditional methods but rather their augmentation. A balanced approach that marries the rich musical heritage of Chinese education with innovative teaching strategies could result in a more engaging and comprehensive learning experience (Guan, 2021). Such an educational model would not only preserve the values of traditional Chinese music education but also meet the evolving demands of the music profession in the 21st century, equipping students for success in a globally interconnected world.

Recommendations

The findings from this study lead to several actionable recommendations aimed at addressing the challenges and opportunities within the domain of Chinese higher education music departments, instructors' pedagogical practices, and the framework for developing music instructor leadership competencies. These recommendations are designed to improve the effectiveness and relevance of music education in China's higher education institutions, drawing directly from the study's insights.

For Chinese higher education music departments, fostering a culture of innovation and adaptability is paramount. Institutions should prioritize the integration of 21st-century leadership competencies into their curricula, supported by enhanced curriculum design that includes leadership, creativity, innovation, and emotional intelligence training. Such efforts should draw on practical applications of theoretical concepts, mirroring the balance between traditional and modern pedagogical strategies. Establishing faculty development programs focused on student-centered teaching methods and leadership competencies and forming strategic partnerships with music organizations can offer real-world leadership scenarios for students and faculty, enriching their educational experience.

Integrating leadership competencies into music education addresses the gap between conventional academic achievements and the skills required in today's professional music landscape. This approach aims to equip students with theoretical knowledge and practical skills, such as creative problem-solving and emotional resilience, without sidelining traditional methods. Instead, it seeks to enrich the educational experience by rooting it in Chinese musical heritage while aligning with contemporary professional demands.

Music instructors must incorporate leadership competencies and innovative teaching methodologies into their pedagogical practices. Strategies include actively engaging in professional development focused on experiential learning and the practical application of student-centered strategies. Instructors should also consider forming or joining collaborative learning communities to share experiences and strategies for pedagogical improvement. Regular reflection on teaching strategies and incorporating feedback mechanisms can further refine teaching and leadership approaches.

Training programs to enhance music instructor leadership competency should be thoughtfully designed to reflect the nuanced needs highlighted in the study. A comprehensive training design that balances theoretical knowledge with practical application, incorporating diverse and inclusive content, is essential. Structured feedback sessions and follow-up resources can provide ongoing support, while adaptive program design based on participant feedback ensures the training remains relevant and practical. These initiatives are critical for equipping music instructors with the competencies to navigate the complexities of the contemporary music education landscape, fostering a more dynamic and engaging learning environment for students.



Limitations

Acknowledging the limitations of this study not only delineates its scope but also lays the groundwork for future explorations in the field. Firstly, the geographical and institutional focus on six specific institutions within Chongqing may restrict the study's broader applicability throughout China. Given these selected institutions' unique educational and institutional landscapes, the study's findings may not fully capture the diverse practices and leadership competencies prevalent across other regions or provinces within the country. This limitation points to the necessity of extending research efforts to include a more varied array of institutions across different geographical locations to gain a comprehensive understanding of music education leadership across China.

Secondly, the study encounters methodological limitations. Despite validating the data collection instrument through various methods, the absence of advanced statistical techniques, such as structural equation modeling, and the lack of analysis on dependent variables restricts the depth of understanding regarding the impact of leadership training on outcomes like instructor performance or satisfaction. Future research could incorporate these analytical methods to unearth richer insights into how leadership competencies influence educational results and instructor experiences.

Thirdly, the study's participant pool was exclusively drawn from university music instructors, which may limit the applicability of its findings to other educational sectors or levels. By broadening the scope of participants to include educators from different departments and educational stages in future studies, a more nuanced appreciation of leadership competencies across varied educational contexts could be achieved, enriching the dialogue on educational leadership within and beyond music education.

Conclusion

This study explored leadership competencies among music instructors in higher education in Chongqing, China, employing a multi-institutional cross-sectional design to assess the current and desired leadership competencies. The findings highlighted a significant gap between instructors' abilities and aspirations, underscoring a pressing need for pedagogical evolution towards more student-centered approaches prioritizing creativity, emotional intelligence, and collaboration. The PNI analysis pinpointed Exemplary Pedagogical Performance and Collaborative Teaching as critical areas for development, reflecting the changing dynamics of music education that favor innovative and engaging teaching methodologies over traditional rote-learning practices.

This study underscores the evolving nature of music education in China, highlighting the critical role of leadership competencies in navigating this transformation. By embracing innovative pedagogical strategies and fostering a culture of continuous professional development, music educators can better align their teaching practices with the demands of the 21st-century music profession. The recommendations provided aim to support Chinese higher education music departments, instructors, and training programs in enhancing leadership competencies, thereby contributing to the advancement of music education and preparing students for success in a globally connected world.

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