Improving the professional training of music culture teachers

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Abstract

Purpose: This study aims to examine strategies for improving the professional training of Music Culture teachers in Uzbekistan. It focuses on strengthening theoretical knowledge, pedagogical competence, and emotional intelligence to meet the demands of modern educational reforms and cultural development.

Research Methodology: A qualitative—descriptive approach was employed, involving the analysis of normative documents, pedagogical literature, and best practices in teacher education. Comparative reviews of international studies and empirical findings on teacher self-efficacy, emotional intelligence, and practicum design were also integrated to provide a comprehensive framework for analysis.

Results: The findings indicate that many Music Culture teachers face challenges such as weak theoretical foundations, low self-efficacy, and heightened teaching anxiety, which negatively affect classroom performance. Evidence shows that strengthening teacher preparation through competency-based practicums, integration of signature pedagogy in digital platforms, and emotional intelligence training significantly improves professional competence, creativity, and resilience. Moreover, continuous professional development focusing on theoretical literacy and practical skills enhances teachers' capacity to deliver high-quality music education.

Conclusions: Effective professional training requires an integrative system combining musical performance, theoretical mastery, and pedagogical innovation. Addressing the psychological dimensions of teaching such as emotional intelligence and self-efficacy—is equally essential for sustainable professional growth.

Limitations: The study primarily focuses on secondary school teachers in Uzbekistan, limiting its applicability to higher education or non-formal contexts. Furthermore, the conceptual nature of the research calls for more empirical validation.

Contribution: This study contributes to educational policy and curriculum reform by offering a holistic model for teacher training. It emphasizes the importance of combining musical expertise, pedagogical competence, and emotional development, thereby equipping Music Culture teachers as both educators and cultural ambassadors.

Keywords: Curriculum Reform, Educational Policy, Music Education, Professional Competence, Teacher Training

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1. Introduction

The attention given by our state to general music education not only creates the necessary conditions for specialists in the field to improve themselves and organize the educational process in line with modern requirements and on a scientific-methodological basis, but also provides opportunities for

young professionals to enter the field of education (Taber, 2018). This, in turn, requires an expansion of the ranks of music education teachers and continuous improvement in their professional training. In the Resolution No. In RP-391 of the President of the Republic of Uzbekistan dated November 15, 2024, titled "On measures for the fundamental improvement of teaching the subject "Musical culture" in general secondary schools and the development of professional activities of teachers in this subject area", it was stated that there is a need to create additional conditions for the broader involvement of students in culture and the arts, to work with them systematically, and to further increase the effectiveness of cultural and artistic institutions (Berdiyevich, 2023).

In addition, special attention was given to further improving the professional training of music education teachers, revising the mechanism for awarding qualification categories, and establishing a national assessment system to determine teachers' knowledge and professional competence (Pelawi & Asbi, 2025). Every profession has its own characteristics. The profession of a music teacher is unique in that the teacher must demonstrate a love for music and art, dedication to children, and a deep commitment to the teaching profession. As stated in the Law of the Republic of Uzbekistan "On Education": "The status of pedagogical staff is recognized by society and the state. Pedagogical staff are provided with social support, conditions are created for them to carry out their professional activities, and organizational and legal measures are taken to enhance their social status and reputation" (Beknazarov, 2023; Ibragimovich, 2025; Khayitboboyevich, 2025).

In music education, professional preparation is crucial for young teachers who have just graduated from university and are beginning their careers in schools (Kurbani, Novalia, & Nuarly, 2023). During their teaching practicum, they often experience emotional states characteristic of their age and developmental stage, such as hesitation, shyness, and heightened self-consciousness. These conditions significantly hinder their ability to manage pedagogical activities, organize the stages of musical instruction coherently, and maintain the cohesion of the learning session. A quantitative study showed a negative correlation between self-efficacy and teaching anxiety: the lower the self-efficacy, the higher the anxiety related to teaching and musical performance, which affects their ability to manage classrooms effectively. This underscores the importance of developing self-confidence through support from pedagogical and psychological knowledge (Cui, Xie, & Yin, 2024).

In addition to anxiety, researchers in Frontiers in (Jiang & Tong, 2025) highlight the role of emotional intelligence (EI) in fostering innovation and teaching effectiveness—especially during the practicum of young music teachers. EI enables teachers to utilize psychological resources when facing classroom challenges while also enhancing creativity and professionalism. From the perspective of educational methodology, it emphasizes the need to update the form and content of pedagogical practicums to better reflect real school contexts, including the use of competency-based and interdisciplinary approaches (inlibrary.uz). A systematic practicum, guided by syllabi, journals, and portfolios, supports the development of professional skills through stages of observation, planning, reflection, and continuous evaluation (Saidjabborovna, 2023).

The relevance of coursework in this process—from general pedagogy to developmental psychology—is reinforced by research on signature pedagogy and online learning. The implementation of signature pedagogy in MOODLE increases the engagement, interaction, and practical skills of prospective music teachers, enabling them to perform all professional activities: vocal/instrumental, music analysis, composition, improvisation, and reflection (Karkina et al., 2023). These findings support the idea that music teacher training systems should be designed integratively, combining specialized musical knowledge, pedagogical competence, emotional intelligence, and cultural-spiritual awareness. Such a structure not only prepares teachers technically but also equips them to handle classroom dynamics, design cohesive curricula, and fulfill dual roles as educators and cultural ambassadors within the classroom. The need for this is affirmed through recommendations for professional training development based on competence, reflective practice, and curriculum digitalization to enhance self-efficacy and innovation among young music teaching professionals.

2. Literature Review

Professional preparation for young music teachers—especially those who have just graduated and entered their teaching practicum—is considered crucial, as they face various psychological, emotional, and pedagogical challenges when applying theoretical knowledge to real classroom situations.

2.1. Emotional challenges and developmental stages

In general, novice teachers often experience symptoms such as hesitation, shyness, and heightened self-awareness. These conditions hinder their ability to:

Musical activities should be organized in a logical sequence (introduction, execution, and reflection) to maintain lesson continuity and coherence. Manage the classroom effectively: These symptoms stem from the incomplete integration of pedagogical/psychological theory and classroom experience.

2.2. Self-Efficacy and Teaching Anxiety

2.2.1. Negative correlation between self-efficacy and teaching anxiety

A quantitative study conducted by Cui, Xie, and Yin (2024) in China revealed a statistically significant negative correlation between self-efficacy and teaching anxiety among pre-service music teachers in China. The findings indicated that individuals with lower levels of self-efficacy—defined as confidence in their ability to manage classroom dynamics and deliver instruction effectively—tended to experience higher levels of teaching-related anxiety. This heightened anxiety, in turn, was shown to negatively impact their classroom performance, particularly in areas such as student engagement, lesson flow, and behavior management, ultimately resulting in less effective instructional delivery (Gordon, Blundell, Mills, & Bourke, 2023).

2.2.2. Meta-analytic findings on self-efficacy

A systematic review by (Valdebenito & Almonacid-Fierro, 2022) of 15 articles (2011–2021) found that music teachers'self-efficacy is influenced by their specialization (music specialist vs. generalist), institutional support, and hours of teaching practicum. Weak training in music pedagogy in higher education is a major factor lowering teacher self-confidence (Endi, Fanggidae, & Ndoen, 2023).

2.2.3. Self-efficacy and support as performance predictors

In a study from the Philippines, self-efficacy and teacher support significantly predicted classroom performance, whereas teaching anxiety was not a strong predictor. This implies that proper mentoring and confidence-building can compensate for anxiety (Solanon & San Jose, 2025).

2.3. The Role of Emotional Intelligence (EI)

2.3.1. EI and teaching innovation in music

A study (Jiang & Tong, 2025) published in *Frontiers in Psychology* provides compelling evidence that emotional intelligence (EI) plays a significant role in fostering teaching innovation among pre-service music teachers. Their findings demonstrated that individuals with higher EI levels are more likely to adopt innovative teaching strategies, as EI contributes directly to enhanced psychological empowerment and a stronger sense of career commitment. These two psychological dimensions were found to be critical motivational factors that enable future educators to experiment with creative instructional methods, adapt to diverse classroom situations, and maintain enthusiasm for pedagogical innovation throughout their teaching practicum period.

2.3.2. Mediation mechanism: PE & CC

Further structural equation modeling within the same study revealed that the effect of emotional intelligence on teaching innovation was not purely direct. Instead, it operates through a dual mediation process: emotional intelligence enhances psychological empowerment, which subsequently fosters deeper career commitment, and this combination ultimately drives innovation in teaching practices. This sequential pathway—EI → psychological empowerment → career commitment → teaching innovation—highlights the importance of embedding emotional training in pre-service teacher education programs. By doing so, institutions can ensure that prospective teachers develop the internal psychological resources necessary for sustained innovation in their instructional approaches (Jiang & Tong, 2025).

2.3.3. Global models of EI training

The trainability of emotional intelligence has also been confirmed in international intervention studies. For example, an EI-focused training program implemented for pre-service primary school teachers in Turkey in 2024 successfully demonstrated that EI is not a fixed trait but rather a modifiable competence. The program, based on social-emotional learning (SEL) principles, involved structured sessions that combined theoretical instruction with practical reflection exercises. Quantitative assessments before and after the program showed a statistically significant increase in participants' emotional intelligence scores, while qualitative feedback indicated improvements in interpersonal communication, classroom empathy and emotional regulation. These results collectively affirm that EI can be systematically cultivated and should be incorporated as a core component of teacher-training curricula.

2.4. Practicum, Methodology, and Signature Pedagogy

2.4.1. Competency-based practicum design

In her 2023 study, Muxitdinova emphasized the urgent need to redesign the practicum models used in pre-service teacher education to ensure greater alignment with the realities of contemporary school environments. Rather than relying on passive observation or generalized fieldwork, she advocates for competency-based practicum structures built on an active learning cycle: observation, planning, implementation and reflection. This model encourages student teachers to engage in pedagogical tasks with increasing levels of responsibility, guided by tools such as structured syllabi, reflective teaching journals and professional development portfolios. The objective is to foster deeper pedagogical insight, critical self-assessment, and long-term professional growth through iterative and context-specific learning experiences (Ponomariovienė, Jakavonytė-Staškuvienė, & Torterat, 2025).

2.4.2. Signature pedagogy in digital platforms

The implementation of signature pedagogy in digital learning environments has proven effective in developing essential teaching skills among future music educators. In a study conducted by (Biasutti, Frate, & Concina, 2019), a signature pedagogy framework was applied using the MOODLE learning management system. This approach facilitated a comprehensive training experience that emphasized both theory and practical applications. Participants reported significant gains in their ability to design and execute musical instruction involving key elements, such as vocal and instrumental performance, music analysis, improvisation, composition, and reflective practice. The digital platform also enhances collaborative learning and teacher–student interaction, making it a valuable medium for delivering pedagogical content in hybrid or fully online teacher training programs.

2.5. Professional Identity and Mental Health

2.5.1. Stress–EI–mental health model

Explored the complex interplay between emotional intelligence, personality traits, stress, and mental health in music education students using the HEXACO personality framework. Their research revealed that emotional intelligence serves as a mediating factor that mitigates the adverse effects of academic and practicum-related stress on students' mental health. Furthermore, the personality dimension of "honesty-humility" moderated this relationship. Students with higher EI and stronger humility traits exhibited greater emotional resilience, more stable mood regulation, and better coping strategies during challenging practicum periods. These findings underscore the psychological demands placed on preservice teachers and the protective role that EI plays in maintaining mental health in high-pressure educational environments (Jing, 2025).

2.5.2. Co-regulation and self-compassion

In a pioneering study published in 2025, Chehayeb et al. implemented an innovative mixed-reality intervention aimed at improving emotional regulation and mental resilience in pre-service teachers. The intervention included real-time heart rate variability (HRV) monitoring, guided mindfulness practice, and structured self-compassion exercises. The results showed that the participants were better able to identify and manage their emotional responses to stressful teaching scenarios. The researchers proposed a co-regulation model in which both self-awareness and external support systems (e.g., mentors and peer discussions) work together to foster emotional balance. This model has significant potential for application in teacher education programs, as it provides a concrete framework for building emotional

competencies and promoting overall psychological well-being during the formative stages of teaching careers (Chehayeb, Olszynska, Bhuvaneshwara, & Tsovaltzi, 2025).

3. Methodology

Professional training refers to the skills of knowing, thoroughly mastering, and practically applying the forms, methods, and tools for effectively organizing the educational process, analyzing and evaluating the results of one's activities, familiarizing oneself with advanced international pedagogical practices, designing the learning process, and successfully implementing it. The Presidential Resolution of the Republic of Uzbekistan No. RP-112 dated February 2, 2022, "On additional measures for the further development of the fields of culture and art," plays an important role in implementing modern requirements for the professional training of music teachers (George & Haag-Heitman, 2015).

In educational institutions, measures have been outlined to enhance students' musical knowledge and skills, foster a love for national culture in their hearts, and identify and support young talents (Irianto et al., 2024). In particular, it has been established that school students should be taught to perform melodies on at least one national musical instrument, and that a corresponding note should be included in their educational certificates. Additionally, one academic hour per week has been allocated for music, along with the implementation of practical music clubs and elective classes focused on performing melodies using national musical instruments.

According to this resolution, special emphasis is placed on the professional training and activities of music teachers, and it is specifically stated that the ability to perform melodies on at least three national musical instruments is mandatory for music teachers (Ibragimovich, 2025). Modern changes in the education system require consistent and continuous development of teachers' professional training and skills. Chapter 4 of the Music Education Concept sets high standards for the professional qualifications of today's music teachers, stating that they must possess a high level of culture, unwavering dedication to their profession, and advanced pedagogical thought. It is emphasized that a music teacher must possess the ability for continuous professional and cultural development and have deep and comprehensive knowledge and skills in music, aesthetics, pedagogy, psychology, and physiology, particularly in the methodology of teaching music. Special attention is given to the requirement that a music teacher must also possess adequate competencies in instrumental performance, vocal skills, choral conducting, and music theory (Beknazarov, 2023).

In addition to possessing musical performance skills, a music education teacher must also have a strong command of professional teaching knowledge, namely, psychological and pedagogical competence and skills, as well as solid theoretical and practical knowledge. A teacher must not only serve as a role model to others through their moral and ethical conduct but also be able to demonstrate pedagogical mastery and contribute meaningfully to a high-quality educational process as a competent educator (Tabrani, Satriawan, & Indrawan, 2024). This is because "the direct driving force behind the highly complex and demanding process of education and upbringing is, above all, the teacher" (Muradovna, 2021).

The fulfillment of the tasks assigned to general education schools, which provide education and upbringing to students, primarily depends on the quality of teacher training in higher-education institutions. The level of competence of specialists, their professional skills, and their ability to effectively and purposefully manage pedagogical processes determine the success of shaping students' personalities. This places an urgent task before the system of higher pedagogical education and all institutions responsible for education and personnel training to conduct a more thorough study of the professional preparation of future teachers for organizing and managing the process of educating well-rounded individuals. To achieve these goals, it is necessary to further strengthen the educational and methodological base of the higher education system, improve conditions for students to acquire comprehensive intellectual knowledge, and enhance the scientific potential and professional competence of academic staff.

4. Result and Discussion

According to educators, it has become essential for modern music education teachers to possess theoretical musical knowledge, skills, and competencies, and to elevate their professional competence to the level of necessity. Studies have shown that increasing teachers' theoretical understanding is strongly correlated with better curriculum delivery and pedagogical effectiveness (Biasutti et al., 2019). Therefore, for higher education, postgraduate education, and especially pedagogical centers, one of the most pressing issues is raising the theoretical knowledge of specialists in music pedagogy to meet contemporary demands in music education. This issue places great responsibility on specialists in the field of music methodology who lead professional development courses to address. They are directly responsible for improving the qualifications of school music teachers and enhancing their professional training, making them key figures in this process (Ibragimovich, 2025).

Without effectively addressing this issue, it is impossible to fully implement one of the most important tasks in the education system – the requirements of the State Educational Standard. Indeed, the State Educational Standard emphasizes, within the system of students' general (basic) and specific competencies, the importance of independent and critical thinking, the ability to listen to and perceive musical works, and the skill of providing an artistic evaluation of those works. To ensure that students meet this standard requirement, specialists must first possess the necessary competence and ability. However, this cannot be achieved without a deep understanding of the theoretical foundations of music (Beknazarov, 2023).

An analysis of the pedagogical activities of Music Culture teachers in general secondary education institutions shows that some educators still lack sufficient theoretical and historical knowledge to meet current demands. In particular, it is evident that the theoretical, methodological, and historical materials essential to the content of music education have not yet fully formed in their minds as a stable foundation. Therefore, special attention must be paid to the teaching of music theory and methodology. As confirmed by research on curriculum development for pre-service music teachers, music-theoretical and methodological subjects form the foundation of music education and have a significant impact on the development of the subject teacher (Taele, Barreto, & Hammond, 2015).

Thorough lesson preparation is a process that stems from pedagogical knowledge and provides the opportunity to develop musical topics while ensuring effective education and upbringing; it largely depends on the teacher's skills. Indeed, fulfilling the tasks of musical education requires an in-depth study, the ability to select appropriate works according to students' age, and ensuring that they possess the necessary musical readiness. To improve the professional training of music education teachers, it is advisable to use new pedagogical technologies and interactive teaching methods aimed at developing independent thinking and creative abilities. In particular, implementing learner-centered education, cooperative pedagogy, small group work methods, and widespread integration of modern information and communication technologies can significantly enhance the effectiveness of educational technologies and yield positive results (Wen, 2024).

In professional development course sessions, it is advisable to make appropriate use of new forms of education, including conducting Internet forums and roundtable discussions with the participation of experts. Ensuring the integration of pedagogical and musical training elements is also an important aspect of improving the professional preparation of music education teachers. This factor defines the educational and developmental qualities of music education. Dedicating the majority of hours allocated to the theory and methodology module and elective topics in professional development courses at pedagogical centers to issues concerning the theoretical foundations of music, as well as addressing the challenges associated with teaching them in schools, can help bridge the existing gap in this area and contribute to a partial resolution of the problem (Biasutti et al., 2019; Daza & Hussein).

5. Conclusion

In the professional training of music teachers, success can only be achieved if their theoretical knowledge and practical skills are combined into a purposeful system, and if competencies such as musical terminology, concepts, and creative thinking are effectively applied to their musical and

pedagogical activities. To improve their professional training, Music Culture teachers are required to possess the following specialized knowledge and skills:

- 1. The teacher's musical performance skills and creativity
- 2. Proficiency in theoretical knowledge (musical literacy)
- 3. The ability to promote the art of music to students using knowledge and understanding of music history and literature
- 4. The ability to apply all existing theoretical knowledge, skills, and practical competencies in an interconnected manner within the educational and instructional processes.

A Music Culture teacher is required to continuously improve their professional training, develop their musical and creative abilities, and enhance their professional competencies. A music teacher must not only have an excellent command of the "secrets" of their specialty but also possess the knowledge necessary to shape students' ideological worldviews, concepts, and perceptions in the school setting. A music teacher should:

- 1) Be proficient in playing a musical instrument and singing with a pleasant voice (while musical recordings may sometimes be used in class, the teacher's live performance helps evoke emotions in students);
- 2) Possess a refined musical taste and a well-developed ability to listen to and perceive music
- 3) Have comprehensive knowledge of music theory;
- 4) Capable of conducting artistic and pedagogical analyses of musical works;
- 5) Demonstrate conducting skills.
- 6) Be able to integrate music with other artistic subjects
- 7) Mastering new methods, tools, and modern technologies in music education and upbringing, and using them effectively, is of great importance.

In conclusion, improving the professional training of Music Culture teachers is an important pedagogical issue and a process that must be continued within higher and postgraduate education systems, where achieving high quality and effectiveness is essential. The intended goals can be achieved through the collaborative practical efforts of systems responsible for training music-pedagogical personnel in accordance with modern requirements, as well as enhancing their qualifications and retraining.

References

- Beknazarov, K. (2023). Pedagogical conditions for developing musical competence of future music teachers using uzbek folk instruments. *Current research journal of Pedagogics*, 4(06), 101-107. doi:https://doi.org/10.37547/pedagogics-crip-04-06-17
- Berdiyevich, P. Q. (2023). Methods of improving professional pedagogical training of the future music teacher. *International Journal of Pedagogics*, 3(05), 121-127. doi:https://doi.org/10.37547/jjp/volume03issue05-24
- Biasutti, M., Frate, S., & Concina, E. (2019). Music teachers' professional development: Assessing a three-year collaborative online course. *Music Education Research*, 21(1), 116-133. doi:http://dx.doi.org/10.1080/14613808.2018.1534818
- Chehayeb, L., Olszynska, K., Bhuvaneshwara, C., & Tsovaltzi, D. (2025). Effects of a Co-Regulation Model for MR Teacher Training: HRV and Self-Compassion as Indicators of Emotion Regulation. *arXiv preprint arXiv:2502.15383*.
- Cui, C., Xie, X., & Yin, Y. (2024). Exploring the relationships among music performance anxiety, teaching anxiety, and self-efficacy of Chinese preservice music teachers. *Frontiers in Psychology*, 15, 1373454. doi:https://doi.org/10.3389/fpsyg.2024.1373454
- Daza, J. E. B., & Hussein, M. Equity in Access to Medical Care in Colombia: a Comparative Rawlsian Justice Perspective. *IJCMCR*. 2022; 21 (4), 2. doi:https://doi.org/10.46998/ijcmcr.2022.21.000517
- Endi, A. C., Fanggidae, R. E., & Ndoen, W. M. (2023). The effect of religiosity and spirituality on financial behavior district. *Journal of Multidisciplinary Academic and Practice Studies, 1*(1), 45-53. doi:https://doi.org/10.35912/jomaps.v1i1.1455

- George, V., & Haag-Heitman, B. (2015). Peer review in nursing: essential components of a model supporting safety and quality. *JONA: The Journal of Nursing Administration*, 45(7/8), 398-403. doi:https://doi.org/10.1097/nna.00000000000000221
- Gordon, D., Blundell, C., Mills, R., & Bourke, T. (2023). Teacher self-efficacy and reform: a systematic literature review. *The Australian Educational Researcher*, 50(3), 801-821. doi:https://doi.org/10.1007/s13384-022-00526-3
- Ibragimovich, M. B. (2025). Some Issues in The Development of Professional Competencies of Music Culture Teachers. *Jurnal Desain Komunikasi Visual*, 2(2), 7-7.
- Irianto, O., Susanto, S., Asmaningrum, H. P., Rachman, A. M., Budiasto, J., & Sokheh, H. (2024). Storybook validation: Essential practices for student's financial literacy. *Journal of Multidisciplinary Academic Business Studies, 1*(2), 125-138. doi:https://doi.org/10.35912/jomabs.v1i2.3398
- Jiang, X., & Tong, Y. (2025). Emotional intelligence and innovative teaching behavior of pre-service music teachers: the chain mediating effects of psychological empowerment and career commitment. Frontiers in Psychology, 16, 1557806. doi:https://doi.org/10.3389/fpsyg.2025.1557806
- Jing, J. (2025). HEXACO traits, emotional intelligence, and mental health: evidence from Chinese music education and implications for personality–stress interactions. *Frontiers in Psychology*, 16, 1421484. doi:https://doi.org/10.3389/fpsyg.2025.1421484
- Karkina, S., Mena, J., Valeeva, R., Yarmakeev, I., Dyganova, E., & Bhullar, M. (2023). Fostering future music teachers' professional skills: developing a signature pedagogy using e-learning. Paper presented at the Frontiers in Education.
- Khayitboboyevich, A. D. (2025). Development of Professional Competence of Future Music Teachers on The Basis of Music Listening Activity. *European International Journal of Pedagogics*, 5(02), 34-37. doi:https://doi.org/10.55640/eijp-05-02-10
- Kurbani, A., Novalia, N., & Nuarly, M. (2023). The effect of health, spatial planning and work discipline on employee work effectiveness. *Journal of Multidisciplinary Academic and Practice Studies*, *I*(2), 71-80. doi:https://doi.org/10.35912/jomaps.v1i2.1619
- Muradovna, K. B. (2021). Modern Requirements For The Professional Competence of Teachers of Foreign Languages. *European science review*(3-4), 34-37. doi:https://doi.org/10.29013/esr-21-3.4-34-37
- Pelawi, M. A., & Asbi, E. A. (2025). Psychosocial Adjustment of Breast Cancer Patients Post-Treatment Therapy and Mentoring. (Case Study of 4 Breast Cancer Patients in Sapkandara Community Medan). *Global Academy of Multidisciplinary Studies, 1*(3), 157-166. doi:https://doi.org/10.35912/gams.v1i3.3479
- Ponomariovienė, J., Jakavonytė-Staškuvienė, D., & Torterat, F. (2025). Implementing Competency-Based Education Through the Personalized Monitoring of Primary Students' Progress and Assessment. *Education Sciences*, 15(2), 252. doi:https://doi.org/10.3390/educsci15020252
- Saidjabborovna, M. M. (2023). Analytical View on The Professional Training of A Future Music Teacher. *International Journal of Pedagogics*, 3(11), 90-94. doi:https://doi.org/10.37547/ijp/Volume03Issue11-18
- Solanon, S., & San Jose, A. E. (2025). Teaching Anxiety, Teaching Self-Efficacy and Teacher Support as Predictors of Classroom Performance of Pre-service Teachers. *Asian Journal of Education and Social Studies*, 51(5), 336-346. doi:http://dx.doi.org/10.5430/jct.v11n8p317
- Taber, K. S. (2018). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education*, 48(6), 1273-1296. doi:https://doi.org/10.1007/s11165-016-9602-2
- Tabrani, M., Satriawan, B., & Indrawan, M. G. (2024). The effect of competency, education and training, workload on functional employee performance with work motivation as a variable intervening at regional government secretariat of the Riau Island Province. *Journal of Multidisciplinary Academic Business Studies*, *I*(3), 207-220. doi:https://doi.org/10.35912/jomabs.v1i3.2398
- Taele, P., Barreto, L., & Hammond, T. (2015). *Maestoso: An intelligent educational sketching tool for learning music theory*. Paper presented at the Proceedings of the AAAI Conference on Artificial Intelligence.

- Valdebenito, K., & Almonacid-Fierro, A. (2022). Teachers' conceptions of music teaching: a systematic literature review 2010-2020. *International Journal of Evaluation and Research in Education (IJERE)*, 11(4). doi:https://doi.org/10.5430/jct.v11n8p317
- Wen, M. (2024). Interactive online classes in music education: The impact of online technologies on the level of creative thinking of students. *Current Psychology*, 43(15), 13619-13629. doi:https://doi.org/10.1007/s12144-023-05411-5