

Technologies for Developing the Creative Competence of Music Teachers in Higher Education

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Abstract: This article examines the pedagogical technologies used to develop the professional and creative competence of future music teachers in higher education. The relevance of the study is determined by current reforms in higher education, the transition to a competence-based educational model, and the growing need to prepare music teachers who are able to think creatively, use digital tools, design effective lessons, and solve pedagogical problems in innovative ways. The study is based on theoretical analysis, comparative-pedagogical interpretation, and systematization of scientific and methodological literature related to competence-based education, music pedagogy, creativity, digital learning, project-based learning, problem-based learning, reflective practice, and portfolio assessment. The article identifies the structural components of professional and creative competence: motivational-value, cognitive, activity-practical, communicative, digital, and reflective-evaluative components. The results show that the development of future music teachers' creative competence requires the purposeful integration of project-based learning, problem-based learning, digital and multimedia technologies, integrative art-pedagogical approaches, collaborative creative tasks, reflective methods, and portfolio-based assessment. The article argues that these technologies increase students' readiness for practical pedagogical activity, strengthen their creative thinking, improve their ability to design music lessons, and support their formation as competitive specialists in modern educational environments.

Keywords: Professional and creative competence, music teacher education, higher education, competence-based approach, music pedagogy, creativity, digital technologies, project-based learning, reflective practice.

Introduction: In the context of globalization, digital transformation, and the rapid modernization of education systems, the development of human capital has become one of the decisive factors of social progress. Modern higher education is no longer limited to the transmission of theoretical knowledge; it is increasingly oriented toward preparing specialists who can think independently, solve complex problems, generate new ideas, collaborate effectively, and adapt to changing professional environments. In Uzbekistan, this tendency is closely connected with the ongoing reform of the education system, the modernization of higher education, and the strategic task of training competitive personnel capable of contributing to national development [1; 2].

The Law of the Republic of Uzbekistan “On Education” defines the legal basis of educational relations and emphasizes the role of state educational standards in determining the content and quality requirements of education [1]. The Concept for the Development of the Higher Education System of the Republic of Uzbekistan until 2030 also stresses the need to introduce advanced educational standards based on international experience and to gradually shift from education focused mainly on theoretical knowledge toward education aimed at developing practical skills [2]. In this regard, the preparation of future teachers, including future music teachers, must be based on a competence-based model that integrates professional knowledge, practical skills, creativity, digital literacy, pedagogical

reflection, and readiness for innovative activity.

The international context also confirms the importance of competence-based teacher education. UNESCO's International Standard Classification of Education identifies bachelor's education as a level intended to form academic and professional knowledge, skills, and competencies [3]. The OECD Learning Compass 2030 emphasizes that learners need transformative competencies, including the ability to create new value, reconcile tensions and dilemmas, and take responsibility [4]. These ideas are especially relevant for music teacher education because music pedagogy combines professional performance, artistic interpretation, emotional communication, creativity, aesthetic education, and pedagogical design.

The modernization of music teacher education requires special attention to the creative competence of future specialists. Music teaching is not only a process of transmitting musical knowledge; it is also a creative pedagogical activity that includes lesson design, vocal and instrumental performance, interpretation of musical works, organization of collective creative activity, development of students' aesthetic perception, and formation of cultural values. Therefore, a future music teacher must possess not only theoretical knowledge and practical performance skills, but also the ability to create an emotionally rich, interactive, inclusive, and artistically meaningful educational environment.

Theoretical foundations for understanding creativity and competence can be found in both classical and modern pedagogical thought. L.S. Vygotsky considered imagination and creativity as important psychological functions connected with cultural development and learning [5]. A.N. Leontiev's activity theory makes it possible to interpret professional competence as a system of motives, goals, actions, operations, and reflection within real activity [6]. B.M. Teplov's research on musical abilities is important for understanding the psychological basis of musical talent, artistic perception, and performance development [7]. D.B. Kabalevsky's concept of music education emphasizes the unity of listening, performing, and understanding music as a means of developing students' aesthetic and moral culture [8]. These theoretical positions show that music teacher education should develop not only knowledge and skills, but also the creative personality of the future

teacher.

In the Uzbek pedagogical context, the development of professional competence is linked to the formation of a new generation of teachers who can work in accordance with national values, modern educational standards, and the needs of the labor market. Researchers in Uzbek pedagogy have emphasized the importance of pedagogical mastery, professional culture, moral education, and innovative methods in teacher preparation [9; 10]. For future music teachers, this means that professional training should include the development of creative initiative, independent thinking, artistic interpretation, methodological flexibility, and readiness to apply innovative technologies in music education.

Modern international studies also show that the preparation of music teachers must be transformed in accordance with digitalization, student-centered learning, and new forms of professional communication. Cuervo and Sánchez argue that digital competence is an important component of music teacher training and that service-learning can be used as a pathway for developing musical ICT competence [11]. Karkina and colleagues demonstrate that the professional skills of future music teachers can be strengthened through the design of online resources, close student-teacher interaction, and structured digital learning environments [12]. UNESCO's Framework for Culture and Arts Education calls for revising teacher education and professional development in order to strengthen culture and arts education in diverse physical, virtual, and blended learning environments [13]. Studies on creativity in music education also show that creative musicianship is associated with collaboration, self-expression, problem-solving, reflection, and meaningful engagement with musical material [14].

Despite the growing number of studies on competence-based education, digital pedagogy, and creativity, the issue of developing the professional and creative competence of future music teachers in higher education remains insufficiently systematized. In particular, there is a need to clarify which pedagogical technologies are most effective for integrating musical performance, pedagogical creativity, digital literacy, reflective practice, and practical readiness for school-based music teaching. This problem is especially

significant for higher education institutions preparing future music teachers, because the quality of their professional training directly influences the effectiveness of music education in schools.

Therefore, the purpose of this article is to theoretically substantiate and systematize pedagogical technologies for developing the professional and creative competence of future music teachers in higher education. The research objectives are:

1. to clarify the essence and structure of professional and creative competence in music teacher education;
2. to identify the main pedagogical technologies that support its development;
3. to determine the organizational and pedagogical conditions necessary for their effective implementation;
4. to propose a model for developing the creative competence of future music teachers through innovative, digital, project-based, problem-based, integrative, and reflective methods.

METHODS

This study is theoretical and methodological in nature. It is based on qualitative analysis, comparative interpretation, and systematization of scientific, pedagogical, psychological, and methodological sources related to competence-based education and music teacher training. The research did not use experimental measurement; therefore, its results are presented as a conceptual and methodological model rather than statistical data.

The methodological basis of the article includes the following approaches:

Competence-based approach. This approach was used to define professional and creative competence as an integrated quality that includes knowledge, skills, values, motivation, practical readiness, creativity, and reflection.

Activity-based approach. This approach made it possible to analyze the future music teacher's competence through real pedagogical actions: planning lessons, selecting teaching methods, organizing musical activity, solving problems, and evaluating learning outcomes.

Integrative approach. Since music education combines

art, pedagogy, psychology, performance, cultural studies, and digital technologies, the integrative approach was used to identify interdisciplinary links in the development of creative competence.

Reflective approach. This approach was used to justify the importance of self-analysis, portfolio assessment, peer feedback, and continuous professional self-development.

The materials analyzed in the study included legal and policy documents on education, scientific literature on creativity and competence, studies on music pedagogy, and methodological works related to project-based learning, problem-based learning, digital technologies, and reflective practice.

RESULTS

The analysis shows that the professional and creative competence of future music teachers is a complex integrative formation that combines professional knowledge, creative thinking, artistic interpretation, pedagogical design, digital literacy, communication skills, and reflective self-evaluation. It cannot be reduced only to musical performance or theoretical knowledge. It must be developed through purposeful pedagogical technologies that connect theory with practice.

1. Structural components of professional and creative competence

The professional and creative competence of future music teachers may be described through the following components:

Motivational-value component. This component includes interest in music teaching, professional motivation, aesthetic values, responsibility, openness to innovation, and the desire for self-development.

Cognitive component. This includes knowledge of music theory, music history, vocal and instrumental performance, didactics, psychology, pedagogy, methods of teaching music, and modern educational technologies.

Activity-practical component. This includes the ability to plan and conduct music lessons, select teaching methods according to students' age and level, organize vocal and instrumental activities, use creative assignments, and apply pedagogical technologies in practice.

Creative component. This includes the ability to generate new ideas, interpret musical material, design non-standard lessons, improvise pedagogically, and encourage students' creative self-expression.

Digital component. This includes the ability to use multimedia resources, digital notation software, audio and video materials, online platforms, virtual learning environments, and ICT tools in music education.

Communicative component. This includes interaction with students, cooperation with colleagues, organization of group creative activity, and creation of a positive psychological and artistic atmosphere.

Reflective-evaluative component. This includes self-analysis, assessment of pedagogical decisions, analysis of students' achievements, portfolio development, and continuous improvement of professional practice.

2. Pedagogical technologies for developing creative competence

The results of the analysis make it possible to identify the following pedagogical technologies as the most effective for developing the creative competence of future music teachers.

Project-based learning. Project-based learning enables students to design creative and pedagogical products, such as lesson plans, musical performances, concert programs, multimedia presentations, methodical recommendations, or educational scenarios. This technology develops independent thinking, planning, collaboration, responsibility, and the ability to connect musical content with pedagogical goals.

Problem-based learning. Problem-based learning helps students solve real or simulated pedagogical situations. For example, students may be asked to design a lesson for pupils with different musical abilities, choose methods for increasing interest in classical music, or find ways to integrate national music heritage into a modern lesson. Such tasks develop analytical thinking, methodological flexibility, and creative problem-solving.

Digital and multimedia technologies. Digital tools are important for developing future music teachers' professional readiness. These may include audio editing programs, digital notation software, video resources, online platforms, electronic portfolios, virtual classrooms, and interactive presentations. Digital

technologies help students enrich the content of music lessons, visualize musical material, organize independent learning, and create modern educational resources.

Integrative art-pedagogical technologies. Music education is naturally connected with literature, history, choreography, theater, visual arts, and cultural studies. Integrative technologies allow future teachers to design lessons that combine different forms of art and develop students' aesthetic perception more deeply. For example, a music lesson may integrate musical listening, historical context, poetic interpretation, visual images, and performance tasks.

Collaborative creative learning. Group work, ensemble performance, collective projects, creative workshops, and peer teaching develop communication, cooperation, responsibility, and artistic interaction. For future music teachers, collaborative learning is especially important because music education often involves choir, ensemble, rhythm exercises, group listening, and collective creative activity.

Portfolio technology. A professional portfolio allows students to collect lesson plans, reflective notes, creative assignments, performance records, methodological materials, digital products, and self-assessment results. Portfolio assessment supports the gradual formation of professional identity and helps students see their own growth.

Reflective methods. Reflection helps future teachers analyze their actions, identify strengths and weaknesses, evaluate pedagogical decisions, and plan further development. Reflective diaries, self-assessment forms, peer feedback, lesson analysis, and methodological discussions are effective tools for developing reflective competence.

3. Organizational and pedagogical conditions

The development of future music teachers' professional and creative competence requires certain organizational and pedagogical conditions. First, the educational process should be oriented toward active student participation rather than passive memorization. Second, theoretical courses should be connected with practical pedagogical tasks. Third, students should have opportunities to design, test, and evaluate creative teaching materials. Fourth, digital technologies should be used not as auxiliary tools only, but as instruments

for creative musical and pedagogical activity. Fifth, assessment should include not only final results but also the process of creative growth.

The following model may be proposed:

Goal: development of professional and creative competence of future music teachers.

Content: music theory, performance, pedagogy, methods of teaching music, digital tools, creativity, reflection.

Technologies: project-based learning, problem-based learning, digital technologies, integrative methods, collaborative learning, portfolio, reflection.

Conditions: student-centered learning, creative environment, practical orientation, interdisciplinary integration, digital support, reflective assessment.

Expected result: a future music teacher who is professionally competent, creative, digitally literate, reflective, and ready for practical pedagogical activity.

DISCUSSION

The results of the theoretical analysis show that creative competence is not formed spontaneously. It requires a well-organized educational environment in which students can act as creators, researchers, performers, designers, and reflective practitioners. For future music teachers, creativity is not an additional personal quality; it is a professional necessity. A music teacher must be able to transform musical content into a meaningful educational experience and adapt teaching methods to different learners, classroom conditions, and cultural contexts.

Project-based and problem-based learning are particularly effective because they bring students closer to real pedagogical practice. They require students to analyze situations, make decisions, create educational products, and defend their methodological choices. These technologies also help future teachers move from reproductive learning to productive and creative learning.

Digital technologies expand the possibilities of music education. They allow future teachers to use audio-visual materials, interactive tasks, online platforms, electronic portfolios, and digital musical resources. However, digital tools should not replace live musical communication. Their main function is to enrich music teaching, support creative activity, and make learning

more accessible, interactive, and individualized.

Integrative approaches are also essential because music is deeply connected with culture, history, literature, movement, and visual expression. Through integration, future music teachers can create lessons that develop not only musical knowledge but also aesthetic taste, cultural awareness, emotional intelligence, and creative imagination.

Reflective methods and portfolio technology are important because they help students become aware of their own professional growth. Reflection turns practical experience into professional learning. Without reflection, even active methods may remain superficial. Therefore, self-analysis, feedback, and portfolio-based assessment should become regular elements of music teacher training.

The main pedagogical implication of the study is that higher education institutions should organize music teacher training as a creative, practice-oriented, digitally supported, and reflective process. In such a process, students gradually develop the ability to design lessons, use innovative technologies, organize musical activities, evaluate learning outcomes, and improve their own professional practice.

CONCLUSION

The development of professional and creative competence among future music teachers is one of the important tasks of modern higher education. In the context of educational reforms, digitalization, and the competence-based approach, music teacher education must prepare specialists who are not only musically competent but also creative, reflective, communicative, digitally literate, and ready for practical pedagogical activity.

The study shows that professional and creative competence includes motivational-value, cognitive, activity-practical, creative, digital, communicative, and reflective-evaluative components. Its development requires the purposeful use of project-based learning, problem-based learning, digital and multimedia technologies, integrative art-pedagogical methods, collaborative creative learning, portfolio technology, and reflective methods.

The proposed approach can help improve the quality of professional training in music education, strengthen students' readiness for pedagogical practice, develop

their creative thinking, and support their formation as competitive music teachers capable of working effectively in modern educational environments.

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