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Pedagogical Conditions for the Formation of Information and Communication Competence in Future Teachers of Music

Педагогічні умови формування інформаційно-комунікаційної компетентності у майбутніх вчителів музичного мистецтва

The advent of information and communication technologies has had a profound impact on the field of education, particularly in the domain of arts education. For those aspiring to become music educators, the ability to engage effectively with information and communication technologies is paramount. This is because such competencies enhance interaction in the educational process, support innovative teaching methods, and enrich artistic-pedagogical activities. This competence is vital for integrating digital tools into music education, improving learning experiences, and achieving various educational goals. The relevance of this issue is highlighted by several factors. The evolution of educational standards necessitates that prospective educators possess the capacity to utilize information and communication technologies, as delineated by frameworks such as the New Ukrainian School and the European Qualifications Framework. Furthermore, the integration of advanced technologies in music pedagogy is being encouraged by the advent of digitalization, thus fostering creativity and enhancing teaching methods. The evolving role of teachers now requires them to function as facilitators and mentors, which demands high digital literacy and communication skills, especially in online environments (Varnavska, L., Viktorova, M., & Rymar, L. (2021), 4-7). The global challenges posed by the ongoing pandemic and the ongoing war in Ukraine have served to underscore the necessity for distance and blended learning models, particularly in the domain of arts education where interactivity and audiovisual content are imperative. It is therefore timely and crucial to explore the pedagogical conditions for developing information and communication competence in future music educators, with a view to improving arts education and preparing competitive professionals. This article investigates the pedagogical conditions for developing information and communication competence in future music educators. The paper establishes and describes in detail the key pedagogical conditions for the formation of information and communication competence of future music teachers. These conditions include the development of the motivational and value sphere of future music teachers, the integration of music-pedagogical and information and communication training, interdisciplinary training and self-development of digital literacy of future music teachers aimed at self-development of the individual. The implementation of these conditions has been shown to assist in the cultivation of students' technical and creative skills, while concurrently promoting critical thinking and problem-solving abilities. The article presents a comprehensive approach to teacher training, emphasizing motivation, teacher preparedness, and the integration of information and communication technologies. In the context of ongoing digital transformation in education, it is imperative that music educators possess the competencies to navigate this evolving landscape. This research offers valuable insights for educators, policymakers, and researchers working to improve arts education in the digital era.

Keywords: pedagogical conditions, information and communication competence, future music teachers, digital technologies, interdisciplinary integration, professional training, communication skills, educational environment

У статті розглянуто педагогічні умови формування інформаційно-комунікаційної компетентності майбутніх вчителів музичного мистецтва. Мета статті – дослідження та обґрунтування педагогічних умов, які сприяють формуванню інформаційно-комунікаційної компетентності у майбутніх вчителів музичного мистецтва. Виокремлено чотири основні педагогічні умови, що забезпечують ефективний розвиток інформаційно-комунікаційної

компетентності у студентів. Зазначено важливість кожної з умов для підвищення рівня готовності студентів до використання інформаційно-комунікаційних технологій у професійній діяльності та забезпечення якісної підготовки до роботи в умовах сучасної цифрової освіти. Стаття підкреслює, що інтеграція цих педагогічних умов сприяє не тільки розвитку інформаційно-комунікаційної компетентності, а й формуванню загальної готовності студентів до творчого використання новітніх технологій у навчанні та музичному вихованні. Підвищення ефективності навчання та професійно-управлінського розвитку майбутніх вчителів музичного мистецтва здійснюється за ефективного використання в освітньому процесі певних педагогічних умов, які спричиняють вмотивованість до майбутньої професії, високий рівень організації занять, включення у них наперед визначених освітніх технологій та методик навчання, самостійність у набутті знань. Формування готовності майбутніх вчителів музичного мистецтва забезпечується впроваджуваними педагогічними умовами, які чинять вплив на професійну підготовку в цілому за постійного оновлення освітньої програми. Вона направляє навчання студентів на освоєння основних засад педагогічної діяльності, методик викладання музичного мистецтва, ознайомлення з віковою психологією та педагогікою. Представлено власне розуміння поняття «педагогічні умови» у галузі музичного мистецтва. Встановлено та змістовно описано засадничі педагогічні умови формування інформаційно-комунікаційної компетентності майбутніх учителів музичного мистецтва, якими є розвиток мотиваційно-ціннісної сфери майбутніх вчителів музичного мистецтва, інтеграція музично-педагогічної та інформаційно-комунікаційної підготовки, навчання орієнтоване на міждисциплінарність та самовдосконалення цифрової грамотності майбутніх учителів музики, що направлене на саморозвиток особистості.

Ключові слова: педагогічні умови, інформаційно-комунікаційна компетентність, майбутні вчителі музичного мистецтва, цифрові технології, міждисциплінарна інтеграція, професійна підготовка, комунікативні навички, освітнє середовище.

Introduction / Вступ. The modern educational space is characterized by the intensive development of information and communication technologies (ICT), which necessitates the formation of appropriate competences in future professionals, in particular in the field of art education. Information and communication competence (ICC) is an important component of the professional training of future music teachers, as it ensures effective interaction in the educational process, promotes the introduction of innovative teaching methods and expands the possibilities of artistic and pedagogical activities.

The relevance of the study of this problem is due to a number of factors. Firstly, changes in educational standards determine the possession of ICC, which is a necessary component of the professional training of teachers in accordance with the concept of the New Ukrainian School and the European Qualifications Framework. Secondly, digitalization of education promotes the use of the latest technologies in music pedagogy, which has a positive impact on the development of students' creative abilities, improves the methodology of teaching music disciplines and ensures the introduction of modern educational formats, including online courses, virtual musical instruments and multimedia platforms (Krychivska, O., & Lysa, N., 2023, 93–97).

At the same time, global challenges caused, in particular, by the COVID-19 pandemic and the war in Ukraine have demonstrated the need to introduce distance and blended learning. This is especially true for artistic disciplines, where interactivity and the use of audiovisual content play a key role. Thus, the study of pedagogical conditions for the formation of ICC in future music teachers is timely and necessary to improve the quality of art education, train competitive specialists and develop an innovative educational environment.

Aim and Tasks / Мета та завдання. Of the article is to study and substantiate pedagogical conditions that contribute to the formation of ICC of future music teachers.

Methods / Методи. To write the article, the author used general scientific research methods, including analysis of scientific sources, synthesis, comparison, systematization and generalization of the data obtained.

Results / Результати. In the explanatory dictionary of the modern Ukrainian language, the term «condition» is defined as a circumstance that creates preconditions for the emergence of a certain phenomenon or process. Thus, a condition should be understood as a factor that contributes to the implementation of a process or phenomenon (Busel, 2001, 1306). Modern researchers approach the interpretation of the concept of 'pedagogical condition' from different areas of research. The theoretical analysis shows that today there is a certain debate about the definition of this concept. Among the Ukrainian scholars who have analyzed this concept, it is worth noting such teachers as H. Holubova, O. Durmanenko, M. Manko, V. Stasiuk, and others. In particular, V. Stasiuk defines 'pedagogical conditions' as a set of certain circumstances that create conditions for an effective and holistic process of

teacher training by influencing an individual or a group of individuals (Stasiuk V., 2003, 18), Li Anan interprets this concept, focusing on the implemented conditions that contribute to the achievement of a positive result in the process of training specialists in music and pedagogical educational institutions (Anan Li, 2019, 8), V. Manko considers 'pedagogical conditions' as a set of internal (such as health, character, experience, skills, abilities, motivation) and external (for example, the relationship between the teacher and the student) factors that ensure the effectiveness of the educational process (Manko V., 2000, 155).

Important in this aspect is the opinion of the scientist G. Golubova, who interprets 'pedagogical conditions' as a special form of organization of the educational process, which combines the results of upbringing, education and general and personal development of the future specialist. That is, they serve as the basis for the development of students, contributing to the identification of their pedagogical and competence talent (Golubova H., 2012). According to the scientist O. Durmanenko, the concept of 'pedagogical conditions' is considered as a set of factors that depend on the overall organization of the educational process and the learning environment in which the basic pedagogical competence of future teachers is formed. The researcher emphasizes that the formation of appropriate pedagogical conditions is a guarantee of the success of the educational process and the achievement of high results in the training of students (Durmanenko O., 2012, 136). The scientist proposes a structure of pedagogical conditions that includes two main levels: internal and external. The internal level is determined by the individual qualities of the student, in particular his/her ability to successfully integrate into the educational process, which directly depends on personal characteristics such as motivation, experience and skills. The external level, in turn, is related to the organization of the educational process, the interaction between students and teachers, as well as the interpersonal relations between students. In addition, this level covers the adaptation of students to social changes and external conditions that may affect the effectiveness of learning. Such differentiation of levels of pedagogical conditions allows to determine more precisely the factors that ensure the effectiveness of training and development of future specialists (Durmanenko O., 2012, 138).

Scientists unanimously agree on the classification of pedagogical conditions, distinguishing two main areas: general and special. General conditions include educational and upbringing aspects that cover general approaches to the organization of education and upbringing. Special conditions, which are specific to certain types of activities, are aimed at defining the peculiarities of the educational process depending on a particular area of professional training. This shows the versatility of the interpretation of the concept of «pedagogical conditions». Scientists (V. Andreeva, Yu. Babanskyi, M. Koniukhov, O. Pekhota, R. Serezhnikov, E. Khrykov) agree that «pedagogical conditions», as a term, represent a complex/system of specific factors that can fully influence the result of achieving pedagogical goals. However, this influence can be both positive and negative, as learning conditions can help or hinder the learning process. Therefore, pedagogical conditions should be systematically organized, with a clearly defined structure, and aimed at achieving the key pedagogical goal of preparing students for future professional activities. In our understanding, the 'pedagogical conditions' aimed at the formation of future music teachers' information communication competence (ICC) will be considered a set of designed interrelated circumstances, the implementation of which makes it possible to achieve the desired result in this area of professional education of students of music and pedagogical educational institutions.

The modern educational process involves the active use of information communication technologies (ICT), which necessitates the development of appropriate competencies in future teachers. In particular, in the field of music education, an important aspect is interdisciplinary integration, which promotes the combination of knowledge and skills in music, pedagogy and digital technologies. In this context, a number of pedagogical conditions can be identified that ensure the effective formation of future music teachers' ICC.

The first condition is the development of the motivational and value sphere of future music teachers. The formation of ICC of future music teachers is a key aspect of their professional training. In this context, the development of students' motivational and value sphere is an important pedagogical condition that contributes to the effective mastering and application of ICT in music teaching and learning.

Firstly, the motivation to use ICT in the educational process directly affects the level of development of relevant competences. Students with a high level of intrinsic motivation are more likely to actively master new technologies and integrate them into pedagogical practice. In particular, studies emphasize that the formation of a positive attitude of future teachers towards knowledge that reflects their future professional activities is critical for the development of professional competences (Kryvonos O., 2018, 117–122).

Secondly, students' value orientations determine their willingness to use ICT as a means of

improving the quality of music education. Awareness of the importance of digital technologies in the modern educational space contributes to the formation of a responsible approach to their use. As noted in scientific works, the development of the motivational and value sphere of students during theoretical training and practical training is a prerequisite for the effective formation of professional competencies (Lapina M, 2021, 135–140).

In addition, the development of the motivational and value sphere contributes to the improvement of future teachers' self-esteem and confidence in their own abilities when using ICT. This, in turn, has a positive impact on their ability to innovate and be creative in teaching music. Implementing pedagogical conditions, such as creating a reflective and evaluative environment and developing students' emotional stability, are important for the formation of future teachers' pedagogical self-efficacy.

Thus, the integration of activities aimed at developing students' motivational and value spheres is a necessary pedagogical condition for the successful formation of future music teachers' ICC. This ensures not only effective mastery of ICTs, but also contributes to their conscious and responsible use in professional activities.

The second condition is the integration of music pedagogical and information and communication training. It involves expanding the content of specialized disciplines by using digital tools to create and process musical materials (Varnavska L., 2013, 11–15). In particular, the use of music editors (Sibelius, Finale), audio editors (Adobe Audition, Audacity) and software for creating arrangements (FL Studio, Ableton Live) allows students not only to develop music and pedagogical skills, but also to master modern digital technologies necessary for effective professional activity. In addition, the integration of ICT into the learning process promotes the development of students' creativity and their ability to adapt to changes in the digital educational environment (Kademiia, M. Yu., & Koziar, M. M., 2012). This condition contributes to the creation of a digital educational space for the training of future music teachers (Zhaldak M, 2006). In this context, it is especially important to use virtual music studios, e-learning platforms (Google Classroom, Moodle), as well as VR/AR technologies to simulate concert activities. The introduction of such technologies provides an opportunity for students to interact interactively with the educational content, promotes the development of their professional thinking and increases their motivation to learn (Havrylova, L., 2015, 45–55).

The third pedagogical condition is interdisciplinary learning, which ensures the integration of students' knowledge and practical skills in different fields. In particular, the creation of interdisciplinary educational projects that combine music, information technology and pedagogy allow future teachers to master the skills of working with multimedia resources, digital platforms and distance learning tools (Varnavska, 2013). The use of the case method, as well as working on collaborative projects in cooperation with computer scientists, designers and linguists, contributes to the formation of professional competences and readiness for interdisciplinary activities.

The fourth important condition is the self-improvement of digital literacy of future music teachers, which is aimed at personal development. This includes learning the effective use of ICT in the process of music education, creating multimedia teaching materials, using online resources for distance learning and organizing interactive classes (Hurevych, R. S., Kademiia, M. Yu., & Koziar, M. M., 2012). Mastering digital communication methods, especially the use of online collaboration platforms (Zoom, Microsoft Teams, Google Meet), is a necessary condition for training specialists who are able to adapt to modern educational trends.

Conclusions / Висновки. Therefore, the formation of ICC of future teachers of music requires a comprehensive approach based on interdisciplinary integration. The implementation of these pedagogical conditions will contribute to the training of highly qualified teachers, who will be able to use ICT effectively in their professional activities and meet the modern challenges of music education.

The research we have conducted does not fully address the problem raised. A promising direction of research is the development of educational technologies for the optimal implementation of pedagogical conditions in the training of future music teachers.

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