

FORMING THE READINESS OF FUTURE VOCAL TEACHERS TO USE DIGITAL TECHNOLOGIES

The purpose of the article. Determination of methodological approaches to the formation of readiness of future teachers of vocal art to use digital technologies in professional activities.

Methodology. In the study, to determine the state of the problem and ways to overcome it, an analysis of scientific and methodological sources was carried out. With the help of methods of comparison and generalization, key methodological approaches for studying digital technologies, which must be used in the process of training future vocal teachers, are determined.

Scientific novelty. Systematized and characterized methodical approaches that ensure the implementation of the task of professional training of future vocal teachers for the use of digital technologies.

Conclusions. The current state of preparation of future vocal teachers for the use of digital means requires a qualitative update. The basis for the implementation of this task is the definition of didactic approaches to the formation of content and organizational and methodological support of the system of training future vocal teachers for the professional use of digital technologies. The synergy of methodological approaches presented in the study combines technological and pedagogical methods of training vocal teachers, which in turn provides the opportunity to develop the readiness of future vocal art specialists for the professional use of digital technologies.

Key words: formation of readiness, readiness for professional activity, future vocal teachers, digital technologies, professional training.

Statement of the problem in a general form and its connection with important scientific and/or practical tasks. The global changes taking place in modern society in connection with the digitalization of all spheres of life require an adequate response from the educational training system. Today, a teacher must not only possess the skills to use information and communication tools in his activities, but also possess the necessary level of competence to adapt his pedagogical activity to the new challenges of digitalization of the educational space. These requirements are relevant not only for teachers of applied sciences, but also for humanities teachers and art historians. Therefore, the formation of the readiness of future teachers of vocal art to use digital technologies in their professional activities becomes a necessary condition for their quality educational training, especially in the modern crisis conditions of wars and pandemics, which force educational institutions around the world to switch to distance learning.

Analysis of the main researches and publications on the raised problem. The key to the successful activity of vocal art teachers in the modern information space is the ability to effectively apply innovative didactic methods based on the use of digital technologies. The world system of higher education, in particular Ukrainian and Chinese scientific schools, has made significant achievements in the field of training future specialists for activities in the field of professional education, including for the training of music teachers [9]. Wang Qihui, N. Popovych, B. Shchuryk, Fan Mei, O. Matveeva, and others reveal methodological aspects of the implementation of digital technologies in the process of training future music specialists in their research. [7; 4; 8; 6]. In the studies of Zavalko K., the theoretical aspects of the system of training a future music teacher for innovative pedagogical activity are defined [3]. The importance of the use of information and communication tools for training future music teachers in a remote form was studied, in particular, by I. G. Baranovska. and N. G. Mozgalova [1]. The researches of O. Yu. Smirnaya, V. O. Gigolaeva-Yurchenko, and L. V. Davydovich are devoted to the peculiarities of the formation of the vocal competence of higher education students in distance learning conditions [5]. But for now, it is necessary to focus on the content specifics of methodical approaches to the formation of the readiness of vocal teachers to use digital technologies. It is important to find out why specialists do not have enough digital tools in their professional activities, why they have a weak motivation to improve the relevant competencies. The analysis of scientific research on the researched problem makes it possible to conclude that, despite significant theoretical and practical research, the problem of an integrated approach to the formation of the readiness of future vocal teachers to use digital technologies in their activities is not sufficiently researched. The basic principles, didactic methods, and conditions for quality formation of the specified indicator of successful professional formation in education seekers need to be clearly defined. This led to the determination of the necessary methodological approaches in the formation of content and organizational and methodological support of the educational process for the formation of the readiness of future vocal teachers for the professional use of digital technologies.

Formulation of the purpose of the article. The purpose of the article is determination of methodological approaches to the formation of readiness of future teachers of vocal art to use digital technologies in professional activities.

Coverage of the procedure of theoretical and methodological research with an indication of research methods. In the study, methods of comparison and generalization were used to analyse the scientific and methodological developments in determining the state of the problem and ways to overcome it. This made it possible to outline methodical approaches to the study of technologies for the use of digital means to ensure the integral formation of the readiness of future vocal teachers for future professional activities.

Presentation of the main material of the study with justification of the obtained scientific results. Readiness for changes and the ability to effectively apply innovative didactic methods and digital technologies are an integral part of the successful work of a teacher in the conditions of modern society. The combination of technical awareness and pedagogical skills that allow the integration of digital technologies into the educational process contribute to improving the quality of education and increasing the motivation of pupils and students [12].

However, despite the active implementation of digital technologies in educational processes, the level of readiness of teachers still remains uneven. This is caused by a number of subjective and objective factors. In particular, a significant subjective factor in this case is the low motivation of teachers of art history, including vocal art, to master modern digital tools for the implementation of innovative didactic methods. This is due to the low level of experience in their use, as well as the insufficient desire of some teachers to learn and improve themselves. The objective factors of the uneven level of readiness of teachers are insufficient material and technical and organizational and methodical support for teaching teachers. Therefore, in this case, it is important to determine ways to solve this problem both at the level of personal training of teachers and at the level of state educational programs and policies aimed at improving the qualifications of vocational education specialists.

Determining general methodological approaches to the formation of the readiness of future vocal teachers to use digital technologies, we analysed a number of professional studies, which emphasized the importance of the synergy of modern pedagogical methods and technological solutions based on the use of digital tools. Such a combination will contribute to the transformation of the professional training of teachers of vocal art in accordance with the modern requirements of society.

So, in our opinion, the first task on the way to forming the readiness of future specialists (in our specific study – vocal teachers) to use digital tools is *the integration of digital technologies into educational plans*. The implementation of this approach is possible through the introduction of separate disciplines or the inclusion of special courses or modules in the training programs of vocal teachers. Relevant topics should cover the use of digital tools for vocal analysis, sound recording and editing, virtual learning platforms and digital sheet music editors. Mastering specialized subjects will allow students from the first stages of education to integrate digital technologies into their professional activities. It is possible to implement this through the study of digital tools, the functional features of which enable students to master auditory skills by playing musical games by ear, singing to recordings in real time, listening and identifying chords, intervals, progressions, genres, etc. [11].

Thus, we have outlined the next methodical approach to the formation of the readiness of future vocal teachers for professional activity – *this is training on the use of specialized software*. Participation in trainings and master classes will help future teachers to master the basic tools that they will be able to use in their professional activities. The topics of such classes and educational events can be devoted, for example, to work with programs for vocal analysis (*VoceVista, SingScope*), recording and sound processing (such as *Audacity, Logic Pro, Cubase*), as well as interactive music editors (such as *Sibelius, Finale*). Studying these software applications will contribute to the transformation of professional vocal training in accordance with modern digital trends.

Determining the necessary methodical approaches for the development of professional skills in accordance with our goal, *the project approach* should be noted first of all. Involvement of students in work on projects involving the use of digital tools contributes to the development of their professional competences [2]. Examples of such projects are the creation of one's own video lessons, recordings of vocal parts with subsequent digital processing, or the use of online platforms for distance lessons. The implementation of projects with a professional orientation allows students to directly practice the application of technologies in real conditions. Future teachers of vocal arts can also participate in collaborative projects with teachers or students studying in other specialties. Holding online concerts and presentations, joint work on multimedia projects will also contribute to the exchange of experience in the use of digital technologies.

The important role of the project method also determines the importance of *using a problem-oriented approach*. Consideration of distance learning scenarios, audio analysis of students' vocal performance, or the use of video and audio tools to assess intonation and technique will contribute to the formation of skills to solve specific pedagogical problems associated with the use of digital technologies in vocal teaching.

In order to consolidate the skills of solving specific problems of using digital tools in didactic tasks, it is advisable to use *the techniques of modelling educational situations*. For example, it can be a problem of conducting a distance vocal class. Consideration of specific scenarios for solving a given problem helps to form skills for organizing online lessons, evaluating students through digital platforms, and analysing their progress using appropriate technologies.

Consolidation of professional competences based on the experience of the world's leading educational institutions will also be facilitated by *interactive training based on the use of online platforms*. Studying on specialized educational platforms (e.g. *Coursera, Udemy, Edx*) that teach digital technology courses for music professionals, including vocals, helps them acquire relevant knowledge and practical skills using the latest digital tools.

The use of immersive technologies plays an important role in the process of formation of professional skills in the use of digital tools. After all, the technological capabilities of augmented reality (AR) and virtual reality (VR) ensure the implementation of exciting learning and the reproduction of real didactic scenarios [10].

It should be noted that the ability of students to independently analyse their digital competencies based on *the reflective exercises and self-assessment* is important in the formation of professional skills. Using a methodical approach of introspection of their own successes and shortcomings, creating, for example, a portfolio, students

document their achievements in the skills of using digital technologies. In the future, this will contribute to the formation of creative search skills, the development of the teacher's individual style.

When using the above-mentioned methodical approaches, it should be remembered that in the professional training of art specialists, it is extremely necessary to get *an individual approach*. In addition, the level of digital skills of different students can vary significantly, which is why it is so important to use differentiated approaches. Teachers should adapt the tasks according to the students' level of preparation, gradually increasing the complexity of the tasks regarding the use of digital technologies.

In order to determine the level of readiness of future vocal teachers to use digital technologies in their professional activities, it is necessary to develop *criteria and an appropriate methodology for evaluating digital competencies*. Comprehensive assessment of knowledge and skills may include testing of digital skills, analysis of practical projects and assessment of the ability to integrate technology into the educational process.

The determined criteria and evaluation results will allow not only to evaluate the quality of learning digital technologies, but also the process of preparation for future professional activity as a whole. As a result, it will also help to identify those places in the implementation of the proposed methodological approaches that require additional refinement or correction.

Research conclusions and prospects for further research. The current state of preparation of future vocal teachers for the use of digital means requires a qualitative update. The basis for the implementation of this task is the definition of didactic approaches to the formation of content and organizational and methodological support of the system of training future vocal teachers for the professional use of digital technologies.

The synergy of methodological approaches presented in the study combines technological and pedagogical methods of training vocal teachers, which in turn provides the opportunity to develop the readiness of future vocal art specialists for the professional use of digital technologies.

Prospects for further research are the development of didactic materials for the implementation of the proposed methodological approaches in the educational process and the verification of their effectiveness in the educational process.

References

1. Барановська І. Г., Мозгальова Н. Г., Барановський Д. М., Бордюк О. М. Використання засобів ІКТ у процесі дистанційного навчання майбутніх учителів музичного мистецтва. *Наукові записки*. 2021. № 150. С. 21–37. URL: <https://doi.org/10.31392/nz-npu-150.2021.02>.
Baranovs'ka, I. H., Mozhal'ova, N. H., Baranovs'kyu, D. M., Bordyuk, O. M. (2021). Vykorystannya zasobiv IKT u protsesi dystantsiynoho navchannya maybutnikh uchyteliv muzychnoho mystetstva [The use of ICT tools in the process of distance learning of future music teachers]. *Naukovi zapysky – Scientific notes*. (150). 21–37. Retrieved from: <https://doi.org/10.31392/nz-npu-150.2021.02>. [in Ukrainian].
2. Гевко І. В. Використання інтерактивних технологій в освіті. *Наукові записки Національного педагогічного університету імені М. П. Драгоманова. Серія: Педагогічні науки*. 2018. Т. 139, СХХХІХ. С. 53–60.
Hevko, I. V. (2018). Vykorystannya interaktyvnykh tekhnolohiy v osviti [The use of interactive technologies in education]. *Naukovi zapysky Natsional'noho pedahohichnoho universytetu imeni M. P. Drahomanova. Seriya: Pedahohichni nauky – Scientific Notes of the M. P. Drahomanov National Pedagogical University. Series: Pedagogical Sciences*. 139(CXXXIX). 53–60. [in Ukrainian].
3. Завалко К. В. Теоретичні аспекти підготовки майбутнього вчителя музики до інноваційної педагогічної діяльності. *Науковий часопис НПУ ім. М.П. Драгоманова. Серія 16. Творча особистість учителя: проблеми теорії і практики: Зб. наук. праць*. 2010. Т. 22, № 12. С. 126–130.
Zavalko, K. V. (2010). Teoretychni aspekty pidhotovky maybutn'oho vchytelya muzyky do innovatsiynoyi pedahohichnoyi diyal'nosti [Theoretical aspects of preparing future music teachers for innovative pedagogical activities]. *Naukovyy chasopys NPU im. M. P. Drahomanova. Seriya 16. Tvorchya osobystist' uchytelya: problemy teorii i praktyky: Zb. nauk. prats' – Scientific journal of the M. P. Drahomanov National Pedagogical University. Series 16. Creative Personality of a Teacher: Problems of Theory and Practice: Collection of scientific works*. 22(12). 126–130. [in Ukrainian].
4. Попович Н. М. Інформаційно-творче освітнє середовище як умова професійно-творчої самореалізації фахівця з музичного мистецтва. *Інформаційні технології і засоби навчання*, 2019, Том 69, №1. С. 92–99. URL: http://nbuv.gov.ua/UJRN/ITZN_2019_69_1_10.
Popovych, N. M. (2019). Informatsiyno-tvorche osvityne seredovishche yak umova profesiyno-tvorchoyi samorealizatsiyi fakhivtsya z muzychnoho mystetstva [Information and creative educational environment as a condition for professional and creative self-realisation of a specialist in musical art]. *Informatsiyni tekhnolohiyi i zasoby navchannya – Information technology and learning tools*. 1(69). 92–99. Retrieved from: http://nbuv.gov.ua/UJRN/ITZN_2019_69_1_10. [in Ukrainian].
5. Смирна О. Ю., Гіголаєва-Юрченко В. О., Давидович Л. В. Основні аспекти формування вокальної компетентності здобувачів вищої освіти спеціальності 025 Музичне мистецтво в умовах дистанційного навчання. *Академічні візії*. 2023. Т. 16.
Smurna, O. Yu., Hiholayeva-Yurchenko, V. O., Davydovych, L. V. (2023). Osnovni aspekty formuvannya vokal'noyi kompetentnosti zdobuvachiv vyshchoyi osvity spetsial'nosti 025 Muzychne mystetstvo v umovakh distant-siynoho navchannya [The main aspects of the formation of vocal competence of higher education students majoring in 025 Musical Art in distance learning]. *Akademichni viziyyi – Academic visions*. 16. [in Ukrainian].
6. Фан М., Матвєєва О. Шляхи впровадження інформаційних технологій у підготовку вчителів музичного мистецтва. *Professional Art Education*. 2021. Т. 2, № 1. С. 67–75. URL: <https://doi.org/10.34142/27091805.2021.2.01.09>.

- Fan, M., Matvyeyeva, O. (2021). Shlyakhy vprovadzheniya informatsiynykh tekhnolohiy u pidhotovku vchyteliv muzychnoho mystetstva [Ways of introducing information technologies in the training of music teachers]. *Professional Art Education*. 2(1). 67–75. Retrieved from: <https://doi.org/10.34142/27091805.2021.2.01.09> [in Ukrainian].
7. Ціхуей В. Сучасні музично-комп'ютерні технології: суть, роль та значення в сучасній професійній музичній освіті. *Теорія та методика навчання та виховання*. 2019. № 47. С. 9–16. URL: <https://doi.org/10.34142/23128046.2019.47.01>.
- Qihui, W. (2019). Suchasni muzychno-komp'yuterni tekhnolohiyi: sut', rol' ta znachennya v suchasniy profesiynyi muzychniy osviti [Modern music and computer technologies: essence, role and significance in modern professional music education]. *Teoriya ta metodyka navchannya ta vykhovannya – Theory and methods of teaching and upbringing*. 47. 9–16. Retrieved from: <https://doi.org/10.34142/23128046.2019.47.01> [in Ukrainian].
8. Щурик Б. Теоретичні аспекти підготовки студентів до музично-педагогічної діяльності. *Молодь і ринок*. 2019. № 5 (172). URL: <https://doi.org/10.24919/2308-4634.2019.171128>.
Shchuryk, B. (2019). Teoretychni aspekty pidhotovky studentiv do muzychno-pedahohichnoyi diyal'nosti [Theoretical aspects of preparing students for music teaching]. *Molod' i rynok – Youth and the market*. 5 (172). Retrieved from: <https://doi.org/10.24919/2308-4634.2019.171128> [in Ukrainian].
9. Nevko, I., Spolska, O., Xiaonan, X., Hongwei, W. (2022). Modern performing arts of Ukraine as lecture and practical lessons in the course with future teachers of musical art. *Journal of Education, Health and Sport*. 12(8). 1206–1215. Retrieved from: <https://doi.org/10.12775/jehs.2022.12.08.105> [in English].
10. Nevko, I., Siaoan, S., Hongwei, W. (2023). Innovative interactive technologies in the training of professional education specialists by means of digital technologies. *Journal of Education, Health and Sport*. 37(1), 166–173. Retrieved from: <https://doi.org/10.12775/jehs.2023.37.01.013> [in English].
11. Shi, Y. (2021). The use of mobile internet platforms and applications in vocal training: synergy of technological and pedagogical solutions. *Interactive Learning Environments*. 1–12. Retrieved from: <https://doi.org/10.1080/10494820.2021.1943456> [in English].
12. Tsiuniak, O. (2021). Use of digital technologies in professional training of future teachers in higher education institutions. *Pedagogy of the formation of a creative person in higher and secondary schools*. 3(75). 128–132. Retrieved from: <https://doi.org/10.32840/1992-5786.2021.75-3.25> [in English].

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ФОРМУВАННЯ ГОТОВНОСТІ МАЙБУТНІХ ВИКЛАДАЧІВ ВОКАЛУ ДО ЗАСТОСУВАННЯ ЦИФРОВИХ ТЕХНОЛОГІЙ

Мета статті. Визначення методичних підходів до формування готовності майбутніх викладачів вокального мистецтва до використання цифрових технологій у професійній діяльності.

Методологія. У дослідженні для визначення стану проблеми та шляхів її подолання проведено аналіз наукових-методичних джерел. За допомогою методів порівняння і узагальнення визначено ключові методичні підходи для вивчення цифрових технологій, які необхідно використовувати у процесі підготовки майбутніх викладачів вокалу.

Наукова новизна. Систематизовано та охарактеризовано методичні підходи, які забезпечують реалізацію завдання фахової підготовки майбутніх викладачів вокалу до використання цифрових технологій.

Висновки. Сучасний стан підготовки майбутніх викладачів вокалу до використання цифрових засобів потребує якісного оновлення. Основою для реалізації даного завдання є визначення дидактичних підходів до формування змісту та організаційно-методичного забезпечення системи підготовки майбутніх викладачів вокалу до фахового використання цифрових технологій. Синергія представлених у дослідженні методичних підходів поєднує технологічні та педагогічні методи підготовки викладачів вокалу, що в свою чергу забезпечує можливість розвитку готовності майбутніх фахівців вокального мистецтва до професійного використання цифрових технологій.

Ключові слова: формування готовності, майбутні викладачі вокалу, цифрові технології, підготовка до професійної діяльності.

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