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Development of Ukrainian choral art in conditions of digitalization

Розвиток українського хорового мистецтва в умовах цифровізації

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Abstract

The topicality of the topic lies in the peculiarities of the development of digital technologies and the factors of their influence on the cultural activity of Ukrainian art. With the development of digital technologies, new opportunities are opening up to ensure the development of Ukrainian choral art. The scientific work aims to study the qualitative characteristics of modern Ukrainian artistic formation based on the improvement of teaching, popularization, and analysis of Ukrainian choral art. The object of research is modern methods of development of Ukrainian choral art with the help of global promotion of digitization processes, which affect not only the socio-economic environment of the country but also the quality of creation and development of cultural and ethical factors. The research methodology consists in the use of modern means of digital technologies to promote the development of Ukrainian choral art. In addition, the research uses analytical, statistical, and deductive methods to explain the development of Ukrainian choral art in the

Анотація

Актуальність теми полягає в особливостях розвитку цифрових технологій та факторах їх впливу на культурну діяльність українського мистецтва. З розвитком цифрових технологій відкриваються нові можливості для забезпечення розвитку українського хорового мистецтва. Наукова робота спрямована на дослідження якісних характеристик сучасного українського мистецького становлення на основі вдосконалення викладання, популяризації та аналізу українського хорового мистецтва. Об'єктом дослідження є сучасні методи розвитку українського хорового мистецтва за допомогою глобального просування процесів цифровізації, які впливають не лише на соціально-економічне середовище країни, а й на якість створення та розвиток культурно-етичних факторів. Методологія дослідження полягає у використанні сучасних засобів цифрових технологій для сприяння розвитку українського хорового мистецтва. Крім того, у дослідженні використовуються аналітичні, статистичні та дедуктивні методи для пояснення розвитку українського хорового мистецтва в умовах

JEL classification

D80 - Information, Knowledge, and Uncertainty: General

J17 - Value of Life; Forgone Income

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conditions of digitalization. The obtained results of the research are important both for improving the tools of Ukrainian art and for conducting research on the methodology of development of Ukrainian choral art.

Keywords: digitization, digital technologies, Ukrainian culture, choral art, music, Ukrainian folk art, innovations.

Introduction

Currently, the issue of the development of digital technologies faces all spheres of human activity – both social-economic and ethical-cultural ones. The development of digitalization affects all areas of human activity and improves the results of the created product, optimizing business processes and facilitating everyday social life. With the help of digital technologies, Ukrainian culture can gain a number of competitive advantages in the international community. There are opportunities for preserving the Ukrainian creative heritage, promoting it at the world level, opening channels of communication with the international community, etc. In addition, the development of Ukrainian choral art in the conditions of digitalization is also determined by the prospects of a technical nature. In order to analyse the compositions and musical works, one can use digital models of data analysis and sound frequencies, which can characterize the main indicators of the work construction and the quality of its performance. With the help of digital technologies, it is possible to carry out a technical analysis of choral art; in fact, modern means of analysing a musical composition can be added to the cultural and creative process of performing a music work. The main spectrum of the research is the use of digitalization to popularise Ukrainian choral art, forasmuch as the spread of Ukrainian culture provides not only brand advantages, but also a number of strategic political and social privileges. The choral art of the Ukrainian people contains a number of characteristic features that are performed during traditional customs: weddings, holidays, religious events, etc. As a rule, Ukrainian choral art is closely intersected with historical events, and even there is the proverb “For the Ukrainian people, the world without a song is like the world without the sunlight”. This is the truth: every historical event and people’s daily life is expressed in a song. It is with the help of the Ukrainian song that you can describe the cultural life of people, forasmuch as there is a lot of such material, and it is different in character and theme. It is important to be able to correctly structure the

цифровізації. Отримані результати дослідження мають важливе значення як для вдосконалення засобів українського мистецтва, так і для проведення досліджень з питань методології розвитку українського хорового мистецтва.

Ключові слова: цифровізація, цифрові технології, українська культура, хорове мистецтво, музика, українське народне мистецтво, інновації.

material according to these aspects. Digital technologies open opportunities for structuring, popularization and improvement of Ukrainian choral art. In addition, digitization makes it possible to exchange experience with other representatives of choral art and to make changes in the modern development of domestic creativity.

Literature Review

Currently, scientists are doing significant work on studying the development and formation of digital technologies and their impact on the cultural and moral situation of the country and creative professionals: singers, actors, composers, etc. (Stephenson & Limbrick, 2015). The global digitization of the world opens up opportunities to present the cultures of any country and bring into reality the opportunity to get familiar with even the most distant countries of the world (Talsik, 2015). The scientist A. Kovalenko (Kovalenko, 2015) notes that Ukrainian choral art is a pearl among the historical heritage of nations and should be presented to the international community. Teryaeva L. (Teryaeva, 2017) highlights the stylistic features of expressing the Ukrainian song and focuses the attention on the quality of the performance of choral compositions. The most characteristic feature of the creativity of Ukrainian choral art is the use of an emotional palette of feelings and the possibility of applying them both for historical events and in amusing singing of mentality manifestations. The historical experience of Ukrainian choral art is explored by the authors Pichuhina L. and Lukyanova I. (Pichuhina, 2015; Lukyanova, 2014) from the standpoint that the Ukrainian song contains national symbolic meaning for the people. It is the song that makes it possible to preserve the idea and national consciousness; as the author notes, it is very important to structure the songs according to the time and the essence of their message. Some authors believe (Teryaeva, 2017) that the development of Ukrainian choral art is connected with the thorny

path of the formation of Ukraine and its independence. It is precisely because of the difficult path towards gaining the country's independence and the customs of the Ukrainian people that there is a high level of Ukrainian choral art. Such authors as Johnson C. & Gorgoretti B. (Johnson, 2017; Gorgoretti, 2019) pay particular attention to studying modern digital technology. The scholars reveal the main aspects of the creation and development of digital infrastructure and types of digital technologies. Qualitative features of using digital technologies in the marketing, financial and cultural sectors have been determined. Evrard Yves notes (Yevs, 1997) that modern big data processing technologies and the ability to access powerful web services, modelling opportunities for cultural processes, the creation of virtual concepts and prototypes, modelling songs and other means of digital technologies can serve to improve the quality of Ukrainian choral art. In addition, in order to achieve the set goals, it is worth showing all the characteristic features of Ukrainian choral art formation with the help of digital technologies. Another group of authors, Román Álvarez, Silveira, J. M, Puentedura, R. R (Román Álvarez, 2017; Silveira, 2016; Puentedura, 2015), have discovered that the impact of digitalization on the development of Ukrainian art lies in the transformation to modern motifs, with elements of using traditional tools. The role of musical instruments in the performance of a choral song plays an important role; after all, it is on their basis that the musical culture of the people is created. The traditional Ukrainian instruments are: kobza, torban, trembita and bagpipe. In contemporary choral art, Ukrainian art plays a key role, forasmuch as the performance quality and the uniqueness of these instruments influence the formation of world music culture in the direction of choral art. Galuszka Patryk, and Brzozowska Blanka note (Galuszka & Brzozowska, 2017) that Ukrainian traditional instruments were reproduced in digital sound and, if desired, sound engineers can use them when composing music works. Thus, the authors investigate Ukrainian choral art in terms of modern digital technologies and their impact on the cultural segment of the world music. Despite the majority of studies conducted on the issue of the impact of digitization on the development of Ukrainian choral art, there is a need to popularize Ukrainian choral art on the world cultural market. This necessity is caused by the factors of the Russian-Ukrainian war and the formation of national consciousness, conducting the Ukrainization of the society, the strengthening of the Ukrainian brand and the use

of modern tools of digital technologies to structure the heritage of Ukrainian choral art.

Research Goals. The purpose of the research is to analyse the use of modern means of digital technologies in order to popularize the heritage of Ukrainian choral art and the formation of digital heritage with the aim of spreading it to the world cultural market. Moreover, digitalization provides opportunities for exchanging the experiences between different cultures at the current moment in time, actually creating permanent channels of communication between different cultural communities. Therefore, the academic paper pays attention to cooperation with other countries and the possibility of improving Ukrainian choral art. The scientific work examines aspects of modern Ukrainian choral art development based on the use of digital technologies and the exchange of experience with other countries. The results of the analysis are the determination of prospects for the further development of Ukrainian choral art and the formation of its achievements in terms of national art and culture.

Methodology

In the course of the research, a number of scientific methods were used, with the help of which the problem was revealed in the context of global digitalization. The use of digital technologies (Lukyanova, 2014) for the development of Ukrainian choral art has been substantiated both in the technical process of performing musical compositions, and with the aim of popularizing Ukrainian choral art in the world community. The main methods of developing digital technologies are as follows: big data processing, distance education, mobile applications and remote communication channels. The analytical method has been applied in order to examine modern digital technologies, which are used for the analysis and formation of qualitative approaches towards implementing the choral songs. The method of exploratory analysis has made it possible to outline the prospects for the development of Ukrainian choral art through interaction with other cultures and their influence on the national culture. In addition, a number of digital technologies create all conditions for the development, storage and structuring of the Ukrainian people's musical works as the embodiment of traditions and customs. It is with the help of such methodologies that digitalization has the greatest impact on Ukrainian choral art. Ukrainian culture contains a number of traditions and customs, which take place together with the performance of choral songs. Therefore, in order

to qualitatively outline their influence on the development of the world community and the historical period of the formation of Ukraine, it is worth implementing modern tools of digital technologies and modelling. With the help of the synthesis method, the main characteristic features of the choral song for the Ukrainian mentality have been determined and the significance of their performance for the Ukrainian culture has been outlined. Digital technologies perform a number of functions that help simplify analytical and communication activities. The comparative method based on the comparison of traditional means of development of choral art and digital means was applied in order to investigate the signs of the development of Ukrainian song. Thus, the identified methods make it possible to solve the issues of the research topic in detail and on a reasonable basis.

Results

The modern world is characterized by the development of digitization processes that affect all spheres of human activity, including cultural ones. Ukrainian choral art has an ancient history and has been constantly developing both stylistically and compositionally (Lukyanova, 2014). Thanks to the development of digital technologies, the opportunity of improving the quality of performance and recording the highest quality tape for listening becomes possible. Digital technologies create opportunities for editing and correcting the sound of music and vocal processing. All these tools influence the level of perception of Ukrainian culture in the global dimension.

The introduction of the Internet in the world has created mass access to people's information and the possibility of its exchange between each other. The importance of the Internet influence on social-economic development and the formation of cultural heritage and exchange with other representatives of countries are difficult to overestimate (Rampstedt & Johannes, 2019). It was the use of the Internet that became a key factor in the development of modern choral art and the opportunity to get acquainted with the compositions of other representatives of world culture. The digitization aspects of Ukrainian choral art can be considered from the standpoints as follows:

- Formation of modern instruments and approaches to performing choral songs;
- Creation of platforms for learning and improving the playing of traditional musical instruments;

- Online access to vocal teaching practices and its variability based on world experience;
- Opportunities of improving the performance of compositions, structuring, modelling according to criteria and implementing a technical and analytical approach to a choral song;
- Popularization of Ukrainian choral art on the world market and provision of a visual picture of the activities of Ukrainian representatives of choral art;
- Creation of a national library of musical works and compositions that can be used to popularize Ukrainian culture and art;
- Availability of special digital platforms for learning and improving vocal skills and musical abilities.

All these factors of the development of Ukrainian choral art arose with the processes of digitization in the world. Primarily, digitization processes concern the economic and social-economic development of the country. Nevertheless, any digital technologies can be used for cultural and spiritual forms of interaction with the world and even personally for each person. Digitization is a global phenomenon that forms the use of software, a special digital infrastructure and characteristic tools for its implementation (Stephenson & Limbrick, 2015). The components of digitization are digital technologies. The use of digital technologies also determines the level of penetration of digitalization into the researched sphere. It is digital technologies that are of great importance and practical implementation of the possibility of modernizing pedagogical practices to choral art, the availability of digital means of processing compositions and the formation of innovative approaches to the cultural experience exchange (Lukyanova, 2016). In addition, digitalization is of great importance for building Ukrainian self-awareness, consolidating the national brand on the world stage and familiarizing the world with Ukrainian traditions and customs, which is very important during the Ukrainian-Russian war. Stimulating the processes of Ukrainization of the population by means of art is the most effective, forasmuch as Ukrainian culture is sophisticated and unique in terms of its historical development. The Ukrainian choral song reflects the Ukrainian mentality, the character traits of every Ukrainian and contains informational authenticity about the soul of Ukrainians – the choral song.

Let's consider how digitization influences the development of Ukrainian choral art in Table 1.

Table 1.
*The influence of digitalization technologies on choral art**

Digital technology	Nature of influence
Big data processing technology	It makes it possible to structure Ukrainian choral songs according to features of performance, cultural direction, thematic message, compositional structure and thematic distribution. In addition, big data processing technology adjusts any parameter according to which a choral song will be distributed and analysed, which can improve the quality of analysis, ways of studying and popularizing Ukrainian choral art.
Infrastructure for modelling, analysis and scenario creation	Digital modelling tools make it possible to build a composition from digital elements and use mathematical tools to create scenarios for their performance, which qualitatively improves the possibility of the development of modern Ukrainian choral art. Also, this technique is used for grouping the common features of various songs of peoples, historical analysis, etc.
Development of remote communication channels	The development of remote communication channels, such as: web resources, mobile devices make it possible to conduct online training, implement remote performances, exchange experiences without physical presence and open the door to world musical culture.
Virtual reality	Recent virtual reality platforms create effective means of visual and auditory perception of musical compositions of choral art for the society. A number of music programs are being built around the world, where the user can see one or another culture in virtual reality. This way of displaying Ukrainian choral art can much better acquaint people with the Ukrainian mentality and culture. Digital learning platforms directly influence the quality and speed of mastering subjects by students. Nowadays, there are a number of musical applications that help in learning vocals; there are special techniques that recognize the timbre and quality of the voice sound. There are also applications that can help you learn to play various musical instruments offline. All this promotes the development of Ukrainian choral art, because it contributes to its accessibility for users from all over the world and improves the quality of education of Ukrainian students.
Digital learning platforms	The current state of digital technologies opens up possibilities for processing vocals, adjusting the sound of musical instruments. In addition, it becomes possible to introduce electronic means of sound, which is sometimes practiced by the newest schools of musical art. In Ukrainian choral art, the practice of digital processing of vocals and instruments for improving the format and sound quality of the composition is popular.
Digital synthesizer tools and directing	Digital technology has had a huge impact on choral art around the world. With its help, one can simulate any voices and use them as an element to imitate, create compositions based only on the use of digital technologies and, as a result, make attempts to reproduce in real life. In addition, the digital synthesis of vocals allows better distinction and improvement of sound quality. This digital technology has a significant impact not only on the development of Ukrainian choral art, but also on the world.

* Source: compiled by the author

From the above provisions, it follows that digital technologies directly influence the quality of the choral art performance, which can improve stylistics and compositional structure. In a historical sense, by applying modelling methods, it becomes possible to reconstruct the clear motives of choral songs and reproduce them in the style of historical times. In addition, with the help of digital technologies, it is possible to process vocals and sound instruments of Ukrainian songs. All this is important for the

further development of Ukrainian choral art (Teryayeva, 2017). Currently, the main task of any cultural structure of the Ukrainian space is the popularization of the Ukrainian idea, national symbolism, identity and spiritual symbolism. It is with the help of digital technologies and large-scale digitization processes of the cultural world centre that Ukraine has access to digital channels of communication with the whole world.

This is precisely why the priority task of the development of Ukrainian choral art in 2022 should be its popularization: formation of information about choral songs and their historical development, participation in musical

thematic events, creation of videos and media materials with elements of Ukrainian choral art. The ways of popularizing Ukrainian choral art through applying digital technologies are reflected in Table 2.

Table 2.

*Application of digital technologies for the popularization of Ukrainian choral art**

Technology	Nature of influence
Social networks	They create opportunities for communication between representatives of Ukrainian choral art with other world communities and encourage other people to study and examine Ukrainian choral art.
Electronic National Library	The formation of an electronic national library of songs will be able to much better acquaint users with Ukrainian musical compositions and provide access to the analysis of choral songs. It contributes to the improvement of the Ukrainian brand on the world market. It also acts as a cultural treasury of the Ukrainian people.
Distance platforms of communication	There are many resources for mutual learning, conferences, remote musical performances, video recording, etc. All these events make it possible to popularize Ukrainian choral art in the world.
Electronic collections	This product of digital technologies contains a set of Ukrainian choral compositions for the purpose of their further distribution. As a rule, there are graphic and multimedia materials that provide contact with Ukrainian culture on a visual level.
Multi-media, videos, movies, clips	They create a number of media materials for posting on social networks, TV, video hosting, etc.

**Source: compiled by the author*

Technologies for the popularization of Ukrainian choral art will be able to provide access to the world cultural community and qualitatively improve the process of Ukrainian choral art development, involving foreign teachers, exchanging experience, etc. The world in conditions of digitization creates an endless vortex of information, which people constantly exchange with each other and improve their skills (Kovalenko, 2015). Consolidation of Ukrainian choral art in this vortex can contribute to the improvement of both the Ukrainian brand on the world cultural arena, as well as the improvement of performance techniques and the possibility of reconstruction of existing compositions of the choral genre.

The result of the functioning of digital technologies is access to information and its exchange. This is precisely why the direct influence on the development of Ukrainian choral art lies in the possibility of exchange, the experience of using traditional instruments of other countries, applying the modern practices of

musical performance. For instance, Ukrainian choral groups such as: "Bandurists' Chapel", "Verbena", Men's Choir Chapel "Dzvin" use traditional Ukrainian instruments in their performances with modern processing tools and support infrastructure, which significantly improves the sound level (Teryayeva, 2017).

An important direction of the development of Ukrainian choral art in the conditions of digitization is the introduction of digital technologies into educational and pedagogical activities. The future of Ukrainian choral art is concentrated in students of music schools and universities who have chosen a musical career (Lukyanova, 2014). It is with the help of digital technologies that teaching traditional Ukrainian choral art becomes more effective and accessible. The main advantage of learning with the help of digital technologies is independence from the student's location. Let's consider the current level of digital infrastructure of musical institutions and establishments (universities, private schools, etc.) in Table 3.

Table 3.
*The level of digital infrastructure equipment of music institutions and establishments, %**

Technology / year	2018	2019	2020	2021
Access to the Internet	78%	84%	88%	91%
Use of software	36%	44%	48%	51%
Digital infrastructure	57%	57%	61%	66%
Participation in international events	44%	48%	53%	58%
Distance education	29%	68%	78%	84%
Availability of the subject of “digital directing”, “digital vocal synthesis”, etc.	34%	36%	39%	41%

**Source: compiled according to the data of the Ministry of Digital Transformation of Ukraine*

As one can see, Table 3 represents the main tendencies of digitization in teaching Ukrainian choral art. The importance of the effectiveness of learning and teaching choral art contributes to the global national idea and the development of choral art in general. That is why it is worth paying attention to the introduction of digital technologies into the cultural and educational process of choral art.

Access to the Internet is a key indicator of the choral art development in conditions of digitalization. At the beginning of 2018, it was about 78%, which is far behind the leading countries, in which it exceeded 90%. The possibility of using Internet technologies in education provides an opportunity to quickly master the material, develop analytical and musical abilities. However, in 2021, with the help of implementing the “Digital Agenda – 2020” program, the Internet access rate of educational institutions in 2022 is 91%, which is a real breakthrough at the educational level. Such indicators testify to the acceleration of the digitization of the society and the improvement of the possibilities of using current learning practices and, as a consequence, the development of Ukrainian choral singing.

The use of software is an important direction in optimizing the sound character of a music composition. Choral art consists of different timbres of voices, performance styles and approaches to their use with various traditional musical instruments. The software makes it possible to process and adjust the sound of choral songs, as well as to explore the most optimal structure of the composition. In 2018, the software was available only in music universities and some private music schools, which amounted to 36% of the total number of music establishments. However, the possibility of improving the methods of interpretation of choral songs, the formation of alternative principles of performance has stimulated the implementation

of special software for mixing and processing songs in most educational institutions; therefore, as of 2021, this indicator reaches 51%, which is a good result compared to previous years (Kovalenko, 2015).

Digital infrastructure is of great importance for the formation and development of Ukrainian choral art from the point of view of marketing activities and financing. Marketing activities are aimed at positioning Ukrainian culture on the global market and directing it to ensure effective methods of popularization on the world market. In addition, the digital infrastructure takes into account the presence of recording studios, processing capabilities, special tools of electronic amplifiers, etc. (Pichuhina, 2015). This indicator increased by 9% from 2018 to 2021, which indicates the gradual growth of the digitalization of musical educational institutions.

Participation in international events using digital communication methods is an important component for sharing experiences. The Ukrainian music society is a communicative and educational community closely cooperating with European, American and other countries of the world in the direction of the exchange of musical experience. This is what makes it possible to improve one’s own musical art and stimulate its popularization.

Distance education in Ukraine has become much more popular at the end of 2019, which is a consequence of the development of the coronavirus pandemic. Digital technologies, as a component of global digitization, have enabled students of musical art to continue their studies based on using special digital platforms and mobile applications in educational practice (Teryayeva, 2017). In addition, distance education has opened up new opportunities for the use of choral art in platforms. Recording individual vocals and combining them into one composition became possible thanks to the

development of digital technologies. Thus, distance education is the most priority indicator of the development of Ukrainian choral art. As of 2018, the possibility of distance education services was present in 34% of educational institutions; however, in 2021, this indicator was 84%, which is almost 2,5 times higher than the initial result as of 2018. Thus, the prospects for the development of choral art by means of distance education are of great importance in the global space.

There is a variety of modern educational programs for processing vocals, instruments, directing. Modern subjects usually have traditional approaches to teaching. However, the development of digital technologies in the choral artist stimulates the introduction of modern pedagogical and educational programs in universities and schools (Pichuhina, 2015). The profession of sound engineer is becoming more popular. The development of choral art is the possibility of electronic sound processing based on software and special skills. In 2021, 41% of schools and universities of music arts with a choral arts discipline had training programs for digital processing of vocals and instruments, indicating an increase in the level of digitalization coverage in Ukraine.

Thus, the general level of influence of digitization on the development of Ukrainian art is extremely high, and it promotes a positive character. Digital technologies make it possible for students to improve their abilities and skills, as well as create tools for the popularization of Ukrainian culture through choral art in the world cultural community, which is a modern strategic task of the national idea of Ukraine.

Discussion

The results of the research characterize the influence of global digitalization processes on the development of Ukrainian choral art. The emergence of innovative digital technologies has led to the emergence of new approaches towards channel communications, pedagogical practices and technical design of choral song compositions. The Ukrainian practice of choral art testifies to the rich culture of the Ukrainian people (Puentedura, 2015). The availability of tools for the development of choral art can improve the quality and formation of a choral song from two standpoints: the first lies in improving the performance and processing of a choral song itself; the second is the popularization of choral art as the personification of Ukrainian culture. Digital technologies, as the

researchers have noted, should contribute to the development of modern learning rates and the ability to access information. It is the availability of information and the possibility of its use in various forms of education that will serve as a qualitative indicator of the activity of the country's cultural centre. In comparison with the studies carried out by the author (Johnson, 2017), he determines that musical culture changes very quickly due to information availability, and it is caused by a constant change in modern trends.

Other authors emphasize (Stephenson & Limbrick, 2015; Talsik, 2015) that the features of the choral art development during the period of rapid digitization of the community undergo its greatest elevation. It is the use of digitalization processes that enables the Ukrainian musical community (Kovalenko, 2015) to create a methodology for the popularization of Ukrainian choral art and to improve existing practices of pedagogical activity.

Foreign scientists (Cook et al., 2019; Yves, 1997) pay attention to using big data processing technologies in music. According to their viewpoints (Galuszka & Brzozowska, 2017), it is proposed to investigate the indicators of using musical instruments, sound frequencies, forecasting the combination of different vocal timbres and the introduction of digital synchronization. Under this approach, you can get a non-standard composition of choral art.

Ukrainian scientists (Galuszka & Brzozowska, 2017; Lukyanova, 2014) see the advantage of digitization in ways of developing the educational program and access to the world market. It is with the help of such approaches that it becomes possible to use the experience of a wide range of cultures and interpret them on the Ukrainian example. In addition, the author notes that the process of using choral art in the context of digitization will create a number of tools that can help arrange a national electronic library and musical historical heritage, which will benefit in consolidating the brand of Ukrainian choral art on the world stage.

Moreover, the development of Ukrainian choral art in the conditions of digital technologies and the enhanced using of distance learning platforms, as the authors note, make it possible to create an effective education system and combine traditional means of teaching musical technologies with innovative ones. Musical groups (Teryayeva, 2017) that use traditional musical instruments for choral singing can model various folklore formats for ranking and

improving the song's style when composing a composition. It is with the help of digital technologies that the development of the compositional component of choral songs becomes possible.

Prospects for further studies on the development of choral art in conditions of digitization include the analysis of using vocal synthesis technologies – from the technical perspective; from communication and interactive standpoint – the use of digital platforms for the development of vocal abilities and the acquisition of practical skills on musical instruments. In addition, an important direction is studying the implementation of educational programs that provide education with digital technologies in music and choral singing, as an art of Ukrainian culture.

Conclusion

Thus, based on the results of the research conducted, it can be concluded that a qualitative development of Ukrainian choral art has been taking place in the conditions of global digitalization and the emergence of innovative digital technologies. The state of development of digital technologies in Ukraine is closely related to the processes of global digitalization and coverage of all spheres of human life, including the cultural one. Digital technologies contribute to improving the quality of learning and performance of a choral song.

The main principles of the choral art development are the advancing of technical means of processing compositions and the possibility of their application during the performance and writing of a song. Another important direction in the development of choral art is the possibility of popularizing Ukrainian choral songs in the world community through digital platforms and various remote communication channels.

Digitization processes also apply to educational programs, forasmuch as it is based on the using innovative educational practices that one can implement the most effective programs and have access to educational methods from around the world. Digital technologies make it possible to analyse choral art and structure it according to the relevant features. The perspective of choral art in Ukraine is the development of compositions with the possibility of combining traditional musical instruments from other countries, modelling the structure of music works, improving vocal performance with digital

instruments, and promoting the advancement of the educational process.

Based on the features outlined, the conducted research has practical significance for the development of choral art as Ukrainian culture in music schools and universities. The strategic result of the research consists in the description of the tools for popularizing choral art as a means of positioning the Ukrainian brand and strengthening the Ukrainian idea in the world cultural dimension.

Bibliographic references

- Cook, N., Ingalls, M. M., & Trippett, D. (2019). The Cambridge Companion to Music in Digital Culture. Cambridge: Cambridge University Press. (pp. 5-28). <https://doi.org/10.1017/9781316676639>
- Galuszka, P., & Brzozowska, B. (2017). Crowdfunding and the Democratization of the Music Market. *Media, Culture & Society*, 39(6), 333-49. <https://doi.org/10.1177/0163443716674364>
- Gorgoretti, B. (2019). The use of technology in music education in North Cyprus according to student music teachers. *South African Journal of Education*, 39(1), 1-10. <https://doi.org/10.15700/saje.v39n1a1436>
- Johnson, C. (2017). Teaching music online: Changing pedagogical approach when moving to the online environment. *London Review of Education*, 15(3), 339-456. <https://doi.org/10.18546/LRE.15.3.08>
- Kovalenko, A.N. (2015). On the use of DAW in informal adult education [online]. Proceedings of III a nationwide scientific conference of young scientists «Scientific youth 2015» by the Society. Kyiv: (IITLT NAES Ukraine, 2015.) Available from: <http://lib.iitta.gov.ua>.
- Lukyanova, L. (2014). Education adults: a brief terminological dictionary. Kyiv: Nizhyn: Publisher Lysenko M.M. (in Ukrainian).
- Pichugina, I. S. (2015). The current state using ICT for self-education and self-development adults. *Information Technologies in Education*, 24, 172-191.
- Puentedura, R. R. (2015) SAMR: A brief introduction [Blog post]. Retrieved from http://hippasus.com/rpweblog/archives/2015/10/SAMR_ABriefIntro.pdf
- Ramstedt, K. & Johannes, B. (2019). From Audio Broadcasting to Video Streaming: The Impact of Digitalization on Music Broadcasting among the Swedish-Speaking Minority of Finland. *Journal of European*

- Popular Culture, 10(2), pp. 145–59.
https://doi.org/10.1386/jepc_00006_1
- Román Álvarez, M. (2017). Tecnología al servicio de la educación musical. *Revista Española de Pedagogía*, 75(268), 481-495.
<https://doi.org/10.22550/REP75-3-2017-09>.
- Silveira, J. M. Gavin, R. (2016). The effects of audio recording and playback on self assessment among middle school instrumental music students. *Psychology of Music*, 44(4), 880-892.
<https://doi.org/10.1177/0305735615596375>
- Stephenson, J. & Limbrick, L. (2015). A Review of the Use of Touch-Screen Mobile Devices by People with Developmental Disabilities. *Journal of autism and developmental disorders*, 45(12), 3777-3791.
<https://doi.org/10.1007/s10803-013-1878-8>
- Talsik, E. (2015). The investigation of readiness for e-learning of pre-service music teachers in Turkey. *Anthropologist*, 21(1-2), 263-270.
<https://doi.org/10.1080/09720073.2015.11891815>
- Teryayeva, L. (2017). Formation of methodological competence of college students fir choral competence of college students for choral conducting classes. In G. Gubarev (Ed.), *Modernization of the content of professional education – The condition of training a competent specialists of a new form: a collection of conference materials* (pp. 212-215). Zhytomyr: Ed. O.O. Evenok (in Ukrainian).
- Teryayeva, L. (2017). Methodological recommendations for the formation of methodical competence of future music teachers for choral conducting classes. Kyiv: Kyiv University named after B. Hrinchenko. (in Ukrainian)
- Yves, E. (1997). Democratizing Culture or Cultural Democracy? *The Journal of Arts Management, Law, and Society*, 27(3), 167-75.
<https://doi.org/10.1080/10632929709596961>