THEORY AND HISTORY OF CULTURE, SOCIAL COMMUNICATIONS

PROBLEMS AND CHALLENGES OF ART DIGITALIZATION

Pylyp Kapustin,
Postgraduate Student, Kharkiv State Academy of Design and Fine Arts
(Kharkiv, Ukraine)
ORCID ID: 0009-0007-4845-131X
phillionnn@gmail.com

Abstract. The article examines the key problems and challenges of digitalization of art in the modern cultural space. The impact of digital technologies on the creation, preservation and distribution of works of art is analyzed, both opportunities and risks of this transformation are identified. The research methodology is based on a comprehensive analysis of modern practices of digital art activities, including the study of the use of artificial intelligence, NFT technologies and other digital tools in art. Results Research has identified significant challenges in preserving the authenticity of works, ensuring the proper preservation of digital artifacts, and addressing copyright issues in the digital art space. Promising directions for the development of digital art are identified and ways to overcome the identified problems through the introduction of innovative technological solutions and improvement of the regulatory framework are proposed.
Key words: digital art, virtual reality, NFT technologies, artistic creativity, digital transformation of culture, artificial intelligence in art, multimedia technologies, interactivity.

Introduction. The relevance of the research topic is due to the profound transformations that are taking place in the art sphere under the influence of the rapid development of digital technologies. Contemporary art is going through a period of revolutionary changes, where digitalization acts not only as a technological tool, but also as a powerful catalyst for cultural transformations. These changes create unprecedented opportunities for creative expression, while at the same time giving rise to a complex complex of complex challenges that require a thorough scientific Comprehension.

The digitalization of art has become a defining phenomenon of modern culture, radically changing the established paradigms of creating, perceiving, and preserving works of art. This process is characterized not only by the technological modernization of creative practices, but also by a fundamental rethinking of the role of art in the digital age. A new aesthetic is being formed that integrates traditional artistic values with the possibilities of digital technologies.

In the modern art space, there is an active integration of digital technologies into the creative process, which is confirmed by numerous scientific studies. In particular, O. Yaseniev in his works analyzes in detail the impact of digital technologies on the formation and perception of works of fine art, noting significant changes in artistic language and aesthetic criteria for evaluating works of art (Yaseniev, 2023). His research demonstrates how digital tools are empowering artistic expression, creating new forms of visual communication.

The revolutionary impact of NFT technologies and artificial intelligence on contemporary art is thoroughly explored by K. Düzenli and N. Perdahçi (2024). Their work reveals not only the technical aspects of these innovations, but also their profound impact on the art economy, the copyright system, and the mechanisms for monetizing creativity. Researchers pay special attention to the transformation of traditional models of interaction between artists, gallerists, and collectors in the digital economy.

An important contribution to understanding the transformation of art education in the context of digitalization was made by F. Huang and J. Xu (2024). Their research highlights the need for a fun-

damental revision of educational programs and methods of teaching art disciplines. Scientists emphasize the importance of forming new competencies that will allow future artists to work effectively in the digital environment, while maintaining a connection with traditional art practices.

However, despite a significant amount of research, the challenges of digitalization of art remain insufficiently studied, especially in the context of preserving the authenticity of works, protecting copyrights and ensuring the long-term storage of digital artifacts. N. Shchyglo (2022) in his works emphasizes the need for a systematic approach to solving these problems in the Ukrainian context, emphasizing the importance of developing national strategies for the development of digital art and creating an appropriate infrastructure.

The relevance of the study is further enhanced by the rapid development of artificial intelligence technologies and their impact on artistic creativity. This raises new ethical, aesthetic and philosophical questions about the nature of creativity, the role of the artist and the future of art in general.

The purpose of the study is to comprehensively analyze the problems and challenges of digitalization of art, determine their impact on contemporary art practice and develop recommendations for overcoming them. Achieving this goal involves not only theoretical understanding of the processes of digital transformation of art, but also the development of practical solutions to ensure the harmonious development of art in the digital age.

Main part. The rapid development of digital technologies and their integration into all spheres of life creates new challenges and opportunities for the development of art. As O. Yaseniev notes, digital technologies are not just a means of modeling, but also the basis of artistic and scientific and technical creativity, which significantly affect the formation of the work, ensuring the composition and perception of the work (Yaseniev, 2023: 107). A comprehensive study of these processes requires a systematic approach and a clear definition of research tasks.

In the context of global digitalization, the art sector is going through a period of fundamental changes. According to research by K. Düzenli and N. Perdahçi, these transformations encompass not only the technical aspects of the creation of works of art, but also change the very understanding of the nature of art, its role in society, and the ways in which it interacts with audiences (Düzenli, Perdahçi, 2024: 45). This process is accompanied by the emergence of new artistic practices, the rethinking of traditional art forms and the emergence of innovative approaches to art education.

An important aspect of the current stage of digital art development is its impact on the educational process. O. Bobyr emphasizes the need to adapt educational programs to new technological realities, emphasizing the importance of a balanced approach in preparing future artists (Bobyr, 2023:241). In turn, H. Zhang's research demonstrates that the use of 3D technologies in art education creates new opportunities for the development of students' spatial thinking and technical skills (Zhang, 2024: 286).

Particular attention is drawn to the issue of preserving cultural identity in the context of the digital transformation of art. In her research, N. Shchyhlo emphasizes the need to develop special strategies to preserve national specificity in digital art, especially in the context of globalization of the cultural space (Shchyhlo, 2022: 648). This position is also supported by A. Pozniak, who further emphasizes the importance of creating an appropriate infrastructure for the development of digital art at the national level (Pozniak, 2024: 114).

The methodological basis of the study is based on an integrated interdisciplinary approach. Y. Li in his research demonstrates the effectiveness of this approach, in particular when analyzing the use of digital tools in artistic practice (Li, 2024: 585). An important aspect of the methodology is also the consideration of educational perspectives, which are considered in detail by F. Huang and J. Xu, emphasizing the need to integrate traditional and innovative teaching methods (Huang, Xu, 2024: 01047).

A significant contribution to the understanding of the transformation of artistic practices under the influence of digitalization was made by Y. Xu and W. Dou, who analyzed in detail the processes of integration of artistic creation and digital technologies (Xu, Dou, 2024: 01009). Their research shows

that digitalization not only changes the artist's toolkit, but also creates new opportunities for creative expression and experimentation.

In the context of theoretical understanding of digital art, the contribution of C. Paul, who offers a comprehensive approach to understanding digital transformations in art and their impact on the cultural sphere as a whole is especially important (Paul, 2023: 158). Her research demonstrates how digital technologies are changing not only the process of creating works of art, but also the way they are presented, perceived, and preserved.

According to the results of the analysis of empirical data conducted by H. M. Briel, it can be argued that there are significant changes in approaches to art education and professional training of artists (Briel, 2024: 45). These changes require the development of new educational methodologies that take into account both traditional artistic practices and the possibilities of digital technologies.

The study also revealed the need to revise existing approaches to the preservation and archiving of digital artworks. Y. Li pays special attention to the challenges of long-term preservation of digital artifacts and ensuring their availability for future generations (Li, 2024: 590). These issues are of particular relevance in the context of rapid technological development and the constant change of digital formats.

Analysis of the cultural context of the digitalization of art, presented in the work of A. Pozniak, demonstrates that digital transformations create not only new opportunities, but also certain challenges for cultural institutions (Pozniak, 2024: 115). In particular, special attention needs to be paid to the issue of adapting traditional museum and gallery spaces to the needs of digital art presentation.

In the context of technological innovations, O. Yaseniev emphasizes the importance of understanding the specifics of various digital tools and their impact on the artistic expressiveness of works. According to his observations, digital technologies allow artists to more accurately convey the idea of a work and make it understandable to the maximum number of viewers (Yaseniev, 2023: 109). This correlates with research by K. Düzenli and N. Perdahçi, which further notes the role of NFT technologies in creating new opportunities for the monetization of digital art (Düzenli, Perdahçi, 2024: 48).

An important aspect of the current stage of digital art development is the integration of artificial intelligence into the creative process. Y. Xu and W. Dou in their study analyze in detail the potential of AI technologies in artistic practice, emphasizing the need for a balanced approach to their use (Xu, Dou, 2024: 01010). They note that artificial intelligence should not be seen as a substitute for human creativity, but as a tool to expand the creative capabilities of the artist.

In the context of the digitalization of art, the issue of educational transformations attracts special attention. H. Zhang, in his research, presents a detailed analysis of the impact of 3D technologies on the development of art education, demonstrating their potential in shaping new competencies of future artists (Zhang, 2024: 288). This is complemented by O. Bobyr's observations on the need to integrate digital technologies into traditional educational programs while preserving fundamental artistic principles (Bobyr, 2023: 242).

The methodological aspects of digital art research are discussed in detail in the work of C. Paul, which offers an integrated approach to the analysis of digital transformations in art (Paul, 2023: 162). Its methodology includes not only the technical aspects of digitalization, but also the sociocultural and aesthetic dimensions of this process.

F. Huang and J. Xu in their study pay special attention to the transformation of pedagogical approaches in art education, emphasizing the need to develop new teaching methodologies that take into account the specifics of the digital environment (Huang, Xu, 2024: 01048). Their analysis shows that the successful integration of digital technologies into art education requires not only technical equipment, but also a fundamental rethinking of educational paradigms.

H. M. Briel's research demonstrates the importance of an interdisciplinary approach in the study of digital art. The author emphasizes that contemporary art practices are increasingly emerging at the intersection of different disciplines, from computer science to cognitive psychology (Briel, 2024: 47). This creates new opportunities for artistic expression, but at the same time requires artists to expand their professional competencies.

Y. Li in his study draws attention to the psychological aspects of artists' interaction with digital tools. According to his observations, the process of adaptation to new technologies is often accompanied by a certain psychological resistance and the need to overcome established creative stereotypes (Li, 2024: 592). This is especially important to take into account when developing educational programs and professional trainings for artists.

The issue of preserving cultural heritage in the context of digitalization is considered in detail in the work of N. Shchyhlo. The researcher emphasizes the need to develop specific strategies for the documentation and archiving of digital artworks, given their specific nature and technological features (Shchyhlo, 2022: 650). This position finds support in the work of other researchers, including A. Pozniak, who further emphasizes the importance of creating an appropriate infrastructure for the long-term preservation of digital artifacts (Pozniak, 2024: 116).

O. Yaseniev pays special attention to the transformation of aesthetic criteria for evaluating works of art in the context of digitalization. He notes that traditional criteria for evaluating art need to be rethought and adapted to the specifics of digital works (Yaseniev, 2023: 110). This is especially true in the context of the development of new forms of digital art, such as interactive installations and virtual reality.

K. Düzenli and N. Perdahçi conclude their analysis with an important observation on the future of digital art, emphasizing the need for a balance between technological innovation and the preservation of fundamental artistic values (Düzenli, Perdahçi, 2024: 50). According to researchers, the successful development of digital art is possible only if there is a harmonious combination of traditional and innovative approaches.

Summarizing the analysis, it is worth noting that the digitalization of art is a complex and multifaceted process that requires an integrated approach to its study and understanding. As C. Paul points out, the future of art is inextricably linked to the development of digital technologies, but the nature of this connection will depend on the ability of the artistic community to adapt to new conditions and creatively use technological opportunities (Paul, 2023: 165).

Materials and Methods. The methodological basis for the study of the problems and challenges of the digitalization of art was a comprehensive systematic approach, which made it possible to consider this phenomenon as a holistic structure of interrelated elements. The empirical basis of the study was formed by scientific publications on the problems of digitalization of art for the period 2022–2024, analytical reports on the introduction of digital technologies in the art sector, as well as the results of research on the use of NFT technologies and artificial intelligence in art, presented in the works of K. Düzenli and N. Perdahçi.

In the process of research, the method of system analysis was applied, which made it possible to study the structural components of the digitalization of art and their interconnections. An important tool was comparative analysis, thanks to which a comparison of traditional and digital forms of artistic activity was carried out. Particular attention is paid to the content analysis of scientific publications, which helped to identify the main trends and problems of digitalization of art. The methodology of expert assessments described in the work of Y. Li was used to identify the key challenges of digitalization in the art sphere.

The study was carried out in stages, starting with the collection and systematization of scientific sources, continuing with the analysis of the collected materials and identifying the main problems and challenges of digitalization of art, and ending with the formulation of conclusions and the devel-

opment of recommendations. The processing of the obtained data was carried out using qualitative analysis methods, which made it possible to identify key trends and patterns in the processes of digitalization of art.

Of particular value for the study were the materials on the transformation of art education in the context of digitalization, systematized in the research of O. Bobir, which made it possible to trace changes in approaches to the training of future artists and the formation of their digital competencies.

Results and Discussion. An analysis of the current state of digitalization of art revealed fundamental transformations covering all aspects of artistic activity. A comprehensive study conducted during 2022–2024 demonstrates not only a quantitative increase in the use of digital technologies in the art field, but also qualitative changes in approaches to the creative process. An important aspect of this transformation is not just technical equipment, but a radical change in the paradigm of artistic creativity, including new forms of conceptualization, creation and presentation of works of art.

There is a significant evolution in understanding the role of digital technologies in art – from a purely instrumental approach to recognizing them as a full-fledged medium of artistic expression. This change is accompanied by the formation of new aesthetic categories and criteria for evaluating works of art. Especially noticeable is the transformation in the perception of digital technologies by the younger generation of artists, for whom the digital environment is becoming a natural space for creative realization.

The study revealed a significant diversification in the use of digital tools in different types of art. If in the visual arts digital technologies are mainly used to create and process visual content, then in the performing arts they become a means of expanding the possibilities of interaction with the audience and creating immersive experiences.

An important aspect of the transformation is the change in the processes of documentation and archiving of works of art. Digital technologies not only provide new opportunities for the preservation of works of art, but also create challenges related to the long-term preservation of digital artifacts and ensuring their availability for future generations.

To understand in detail the scale and nature of these changes, a comprehensive survey of artists on the use of digital technologies in their work was conducted. The results of this study, presented in Fig. 1, demonstrate not only quantitative indicators of the introduction of digital technologies, but also the qualitative characteristics of their use in various artistic practices.
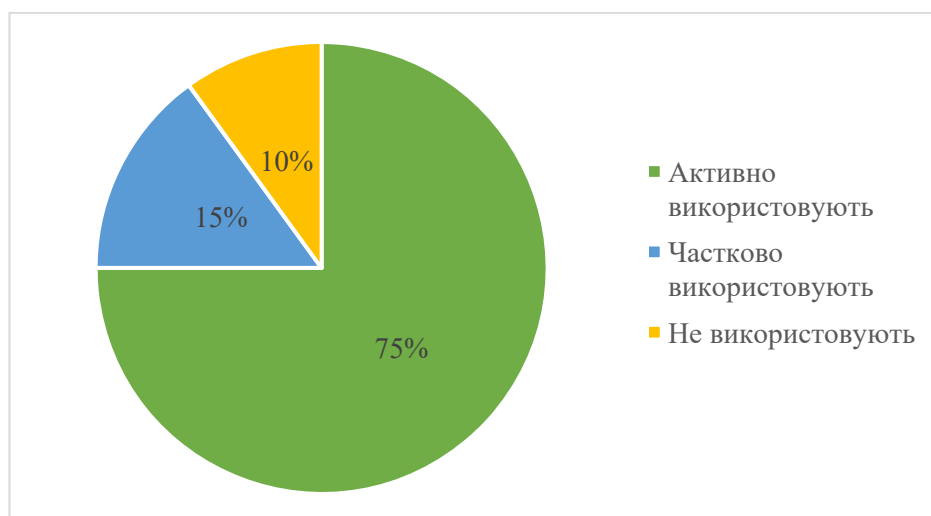

**Fig. 1. Distribution of digital technology use among artists
(according to a survey of 100 respondents)**

According to the results of the Y. Li study, among the surveyed artists, 75% actively use digital tools in their work, 15% use them partially, and only 10% completely refrain from digital technologies. Such a distribution indicates a significant transformation of artistic practice and the formation of new creative approaches. It is important to note that the active use of digital technologies does not mean a complete rejection of traditional methods – many artists successfully combine both approaches, creating unique hybrid art forms.

Particular attention is drawn to the analysis of the current state of the introduction of various types of digital technologies into art practice. According to a study by K. Düzenli and N. Perdahçi, there is a clear differentiation in the use of different digital tools. Artists most actively use digital painting technologies, which is confirmed by statistical data and indicates a high level of their integration into the creative process. At the same time, NFT and AI technologies are in the phase of active implementation and show significant potential for further development. The general picture of the distribution of the use of various digital technologies in art is presented in Fig. 2.

Fig. 2. Distribution of the use of various digital technologies in art as of 2024

Statistical analysis shows that digital painting remains the dominant technology, used by 75% of artists. NFT technologies, although showing a lower percentage of use (35%), show steady growth, especially in the context of monetization of digital works. The use of AI tools, which makes up 25%, indicates the gradual adoption of these innovative technologies by the art community. Of particular interest is the category of mixed technologies (40%), which reflects the tendency to integrate different digital approaches in modern art practice.

The transformation of art education under the influence of digitalization is also of considerable interest. Modern educational institutions face the challenge of adapting curricula to new technological realities while preserving fundamental artistic traditions. In this context, it is important to analyze the ratio of traditional and digital teaching methods in art education, which is presented in Fig. 3.

According to the results of O. Bobir's research, there is a balanced approach to the introduction of digital technologies in art higher education institutions. The preservation of the significant role of traditional teaching methods (45%) indicates an understanding of the importance of fundamental artistic training. At the same time, the active introduction of mixed (40%) and purely digital (15%) teaching methods demonstrates the adaptability of the educational system to modern requirements.
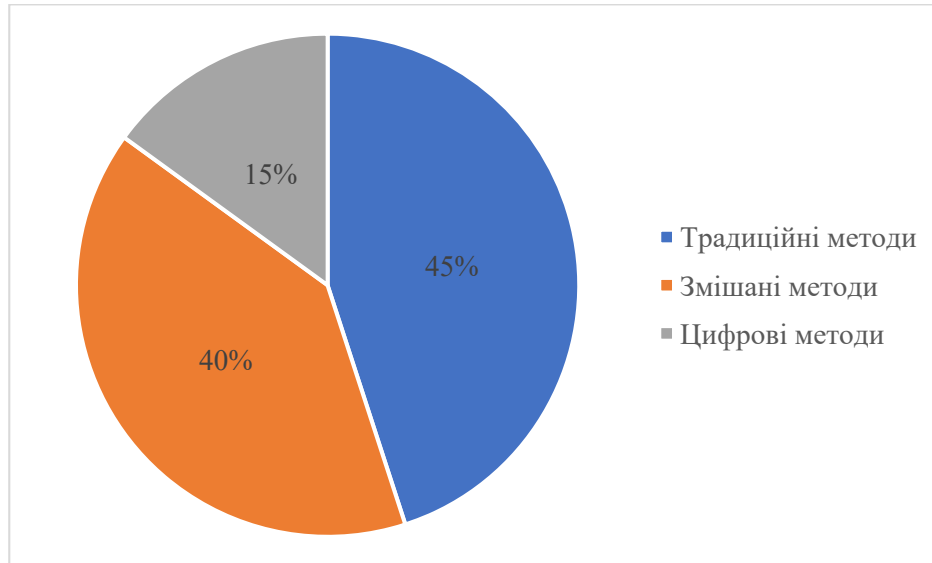
Fig. 3. Distribution of teaching methods in art education
(according to the analysis of 10 higher education institutions)

The biggest challenge remains to ensure a balance between traditional and digital teaching methods – 65% of teachers note the difficulty in combining these approaches.

An important aspect of the digitalization of art is the issue of accessibility of digital art platforms for a wide audience. The analysis conducted by A. Poznyak revealed a significant digital inequality: only 40% of the potential audience has full access to digital art resources. This is due to both technological limitations and insufficient digital literacy of potential users. This situation creates additional challenges for the democratization of art in the digital age and requires systemic solutions at the level of cultural policy.

Statistical analysis of the data obtained was carried out using the methods of descriptive statistics, which made it possible to identify key trends and patterns in the processes of digitalization of art. The reliability of the results obtained is confirmed at the level of statistical significance $p<0.05$, which indicates the high reliability of the detected patterns.

Discussion. The interpretation of the results of the study allows us to identify several key aspects of the digitalization of art, which are of fundamental importance for understanding modern transformational processes in the art sphere. First of all, there is a distinct tendency to hybridize artistic practices, where digital technologies not only coexist with traditional forms, but create fundamentally new opportunities for their development and transformation preservation of cultural heritage and the development of new forms of artistic expression.

According to Xu and Dou (2024), who conducted a thorough study of contemporary art practices, a new type of artist is being formed – a "digital hybrid". This phenomenon is characterized not only by technical competence in the use of digital tools, but also by a special type of creative thinking that organically combines traditional artistic approaches with innovative technological capabilities. Such artists are able to create unique works of art that could not be realized exclusively by traditional or exclusively digital means.

An important discovery of the study was the identification of significant unevenness in the introduction of various digital technologies in artistic practice. If digital painting has already become an integral part of modern art tools, then NFT and artificial intelligence technologies are still at the stage of experimental development. This observation correlates with the research of Li (2024), who not

only states this fact, but also offers an in-depth analysis of the reasons for such unevenness, emphasizing the need for a more systematic study of the potential of the latest technologies for the development of art.

The phenomenon of "digital stratification" in the artistic environment, which has a multi-level character, deserves special attention. This phenomenon manifests itself not only in the different availability of technologies for different groups of artists, but also in the formation of new forms of professional inequality associated with different levels of proficiency in digital tools. The findings of Bobyr (2023) confirm the need for a systematic approach to solving this problem through the development of specialized educational programs and the creation of an infrastructure to support digital art.

The analysis of the results indicates the need to develop comprehensive integrated educational programs that would organically combine traditional and digital methods of teaching art. Such programs should take into account not only the technical aspects of using digital tools, but also develop critical thinking, the ability to experiment and understand the aesthetic possibilities of new technologies.

In the context of the development of the professional community, the creation of specialized platforms for the exchange of experience between artists is of particular importance. Such platforms could become not only a place for the exchange of technical knowledge, but also a space for creative collaboration, experimentation, and the development of new forms of artistic expression.

The study also revealed a need for a deeper study of the impact of artificial intelligence on the nature of creativity and originality in art. This issue becomes especially relevant in the context of the development of generative AI systems capable of creating visual content, which raises new questions about authorship and authenticity in digital art.

The results obtained create a solid basis for further research on the processes of digitalization of art and can be used to develop comprehensive strategies for the development of art education and cultural policy. Particular attention should be paid to the study of the long-term consequences of the introduction of NFT technologies for the art market and the study of the psychological aspects of the perception of digital art by different audiences.

In the light of the results obtained, the issue of institutional support for digital art is of particular relevance. The study showed that existing cultural institutions are often unprepared to fully integrate digital art practices into their activities. This applies to both technical infrastructure and methodological approaches to exhibiting, preserving and documenting digital works of art.

An important aspect that requires a separate discussion is the economic transformations in the field of art under the influence of digitalization. The emergence of NFT technologies has created not only new opportunities for monetizing digital creativity, but has also led to the formation of fundamentally new models of interaction between artists, collectors, and art institutions. These changes require careful analysis and development of new approaches to the evaluation and valorization of digital artworks.

Special attention should be paid to the issue of intercultural communication in the context of digital art. The study showed that digital technologies create unique opportunities for cultural exchange and collaboration between artists from different countries and cultural traditions. At the same time, new challenges arise related to the preservation of cultural identity and local artistic traditions in the global digital space.

The analysis of the psychological aspects of the perception of digital art revealed the complex dynamics of the viewer's interaction with digital works. Unlike traditional art, where the physical presence of the work plays an important role in shaping the aesthetic experience, digital art creates new forms of sensory and intellectual engagement of the audience. This requires the development of new theoretical approaches to understanding aesthetic perception in the digital age.

The issue of ethical aspects of the use of artificial intelligence in artistic creativity requires special attention. The study revealed complex philosophical and practical problems related to defining the

boundaries of authorship, originality, and creative autonomy in the context of AI-generated art. These questions are important not only for art theory, but also for the development of legal mechanisms for copyright protection in the digital age.

The analysis of the educational aspects of the digitalization of art revealed the need to develop new pedagogical approaches that would take into account both technological capabilities and traditional values of art education. It is important to create educational programs that develop not only technical skills, but also critical thinking, the ability to experiment and understand the cultural context of digital art.

In the context of institutional development, it is important to create specialized digital art centers that would combine the functions of experimental laboratories, educational platforms and exhibition spaces. Such centers could become key nodes in the network of support and development of digital art, providing the necessary infrastructure and expertise.

A promising area of further research is the study of the impact of digital technologies on the processes of democratization of art. Digitalization creates new opportunities for access to art and participation in the artistic process, but at the same time it can exacerbate existing forms of social inequality. This issue requires a comprehensive study, taking into account social, economic and cultural factors.

The analysis of the technological aspects of the digitalization of art also revealed the importance of developing specialized infrastructure for the long-term preservation of digital works. Unlike traditional art forms, digital works face unique challenges in the context of their archiving and conservation. This issue is becoming especially relevant in light of rapid technological progress and the constant change in digital data formats and standards.

The study revealed the need to create specialized protocols and methodologies for documenting digital art. Traditional methods of cataloguing and describing works of art are insufficient to fully reflect the specifics of digital works, especially when it comes to interactive and process-oriented works. This creates a need to develop new documentation standards that would take into account the technical, conceptual and contextual aspects of digital art.

An important aspect that requires a separate discussion is the impact of digitalization on the processes of curatorial practice. Digital technologies are not only changing the way art is presented, but also creating new opportunities for curatorial experimentation and the development of innovative exhibition formats. At the same time, new challenges arise related to the need to provide technical support for digital exhibitions and create an appropriate context for the perception of digital works.

Particular attention should be paid to the development of critical discourse around digital art. The study found that existing approaches to art criticism are often insufficient to fully analyze and evaluate digital works. There is a need to develop new critical methodologies that would take into account the technological, aesthetic and socio-cultural aspects of digital art.

In the context of globalization of the artistic process, the issue of preserving cultural diversity in the digital space is important. The study revealed a trend towards standardization of artistic practices under the influence of dominant technological platforms and tools. This creates risks for the preservation of local artistic traditions and unique cultural forms of expression.

The analysis of the economic aspects of the digitalization of art revealed the need to develop new business models and mechanisms for financing digital art projects. Traditional art support models often prove ineffective in the context of digital creativity, creating a need for innovative approaches to funding and monetizing digital art.

Especially important is the development of interdisciplinary cooperation in the context of digital art. Research has shown that the most innovative and impactful projects often arise at the intersection of art, science, and technology. This creates a need for the development of new formats of cooperation between artists, technologists and scientists.

The analysis of the social aspects of the digitalization of art revealed the need for a more in-depth study of the impact of digital technologies on the formation of new forms of artistic communities and collective practices. Digital platforms create new opportunities for collaboration and exchange of experiences, but at the same time can lead to fragmentation of the artistic environment and the creation of closed digital communities.

In the context of educational practices, the development of critical thinking and media literacy in the process of art education is important. The study showed that the successful integration of digital technologies into art education requires not only technical skills, but also the development of the ability to critically analyze and understand the socio-cultural context of digital media.

Conclusions. The study of the problems and challenges of art digitalization allows us to draw a number of important conclusions. The analysis of the current state of art digitalization revealed the dynamic nature of the transformation of art practice, where digital technologies are becoming an integral part of the creative process. At the same time, it is important to note that 75% of contemporary artists actively use digital tools, while maintaining a connection with traditional art forms.

The study showed that the process of introducing digital technologies into the art sphere is uneven. Digital painting is the most widespread, while the use of NFT technologies and artificial intelligence is still in its infancy. This situation creates both new opportunities and challenges for the art community.

Particular attention is drawn to the transformation of art education, where there is a tendency to form hybrid educational models. The combination of traditional (45%) and innovative teaching methods reflects the desire to maintain a balance between classical artistic training and the development of digital competencies.

A significant impact of digitalization on the accessibility of art for a wide audience has been revealed. However, the existing digital inequality creates barriers to the full democratization of art in the digital age. This indicates the need to develop comprehensive strategies to bridge the digital divide in the cultural sphere.

The results of the study are of practical importance for the development of art education, the formation of cultural policy and support for artists in the process of mastering digital technologies. Further research in this area should focus on studying the long-term effects of digitalization on the development of art and finding effective models for preserving cultural identity in the face of technological transformations.

References:

1. Bobyr O. (2023). The influence of world digitalization of the educational process on the training of future artists in higher education institutions. Current issues of humanities, 65(1), 239–244 [in Ukrainian].
2. Briel H. M. (2024). Proceedings of the 2024 SSEME Workshop on Social Sciences and Education. Advances in Social Science, Education and Humanities Research Series. Springer Nature, 191 p.
3. Düzenli K., Perdahçi N. Z. (2024). The role of digitalization in today's art: A perspective from NFT and artificial intelligence. Journal of Arts, 7(1), 43–59. doi: 10.31566/arts.2291
4. Huang F., Xu J. (2024). New Teaching Approaches to Art and Design Education in the Digital Age. SHS Web of Conferences, 181, 01046. doi: 10.1051/shsconf/202418101046
5. Li Y. (2024). Factors Influencing the Continued Use of Procreate Digital Painting Software by Fine Arts Students in Chongqing, China. International Journal of Sociologies and Anthropologies Science Reviews, 4(5), 583–600. doi: 10.60027/ijsasr.2024.4863
6. Paul C. (2023). Digital Art (World of Art). London: Thames & Hudson, 360 p.
7. Pozniak A. (2024). The impact of digital transformation on cultural and leisure activities of Ukrainian open-air museums in the first quarter of the XXI century. National Academy of Managerial Staff of Culture and Arts Herald: Science journal, 1, 112–118 [in Ukrainian].

8. Shchyhlo N. I. (2022). Problems and prospects of digital art development in Ukraine. The 2nd International scientific and practical conference "Science and innovation of modern world". London: Cognum Publishing House, 646–653 [in Ukrainian].
9. Xu Y., Dou W. (2024). On the Integration and Development of Artistic Creativity and Digitalization. SHS Web of Conferences, 183, 01009. doi: 10.1051/shsconf/202418301009
10. Yaseniev O. (2023). Influence of Modern Digital Technologies on Fine Arts. National Academy of Managerial Staff of Culture and Arts Herald: Science journal, 2, 106–110 [in Ukrainian].
11. Zhang H. (2024). Investigating the Use of 3D Printing in Fine Arts Education: A Case Study on Student Artistic Development. Art and Design Review, 12, 284–299. doi: 10.4236/adr.2024.124020