



UDC 7.01:004.738
DOI: 10.63009/noac/1.2026.01

Article's History: Received: 12.02.2026 Revised: 02.06.2026
Accepted 22.06.2026 Published: 29.06.2026

Alla Diachenko*

PhD in Pedagogical Sciences, Associate Professor
Mykhailo Boichuk Kyiv State Academy of Decorative Applied Arts and Design
01014, 32 Mykhailo Boichuk Str., Kyiv, Ukraine
<https://orcid.org/0000-0003-4496-5931>

Virtual exhibition formats in the promotion of Ukrainian visual art

Abstract. The aim of this study was to analyse the evolution of forms of representation of Ukrainian visual art in the context of the integration of digital platforms and immersive technologies into museum practice. The study focused on identifying how VR, AR, WebXR, multimedia interfaces and 3D reconstructions have reshaped the communicative contours of the artistic space, influenced the user's cognitive and emotional experience, and generated new models of audience interaction with artistic artefacts. The research methodology was based on a synthesis of cultural, comparative, structural-functional and historical-logical approaches, which enabled the reconstruction of multiplex connections between technological innovations, aesthetic transformations and ethical imperatives in the process of virtualising exhibition practices. This methodological focus made it possible to trace how digital environments shape cognitive and sensory models of perception of a work of art, as well as how they transform traditional schemes of interpretation and aesthetic evaluation. The study analysed the following Ukrainian projects: the virtual tour "Masterpieces of NAMU" by the National Art Museum of Ukraine, the 3D reconstruction of the exhibition "Kola Silvashi", the VR project "War up close", and the exhibition "Ukrainian portrait of the 17th-20th centuries" on the eMuseum.online platform. Furthermore, the functions of AR/VR platforms in shaping an interactive, adaptive user experience were detailed, the characteristics of emotional and cognitive interaction with the virtual environment were identified, and the legal and ethical challenges arising in the context of the digitisation of art objects were systematised. An analytical examination of contemporary virtual exhibitions has shown that digital technologies have become not only a representational tool, but also a catalyst for inclusivity, democratising access and ensuring the preservation of cultural memory. Virtual exhibitions have acquired the status of autonomous, self-sufficient cultural ecosystems, complementing physical museum infrastructure and ensuring uninterrupted access to content regardless of geographical, temporal and socio-economic constraints. The development of these formats has become crucial for generating new strategies in museum communication, has contributed to the international representation of Ukrainian art, and has laid the groundwork for improving ethical, technological and methodological standards in digital cultural heritage

Keywords: virtual exhibitions; digital cultural ecosystem; VR/AR platforms; Web Extended Reality; 3D representation; Ukraine's artistic heritage

Introduction

Contemporary Ukrainian society is undergoing a rapid digital transformation that encompasses not only the economic and social spheres, but also culture – in particular, the visual art. The growing role of the internet, mobile technologies, and augmented and virtual reality platforms is creating a new exhibition space in which

traditional forms of art exhibitions are being supplemented or replaced by virtual formats. In this context, virtual exhibition formats serve not merely as a tool for displaying artworks, but as a vital link in cultural communication – a means of accessing, engaging with and interpreting art on both a global and local scale.

Suggest Citation:

Diachenko, A. (2026). Virtual exhibition formats in the promotion of Ukrainian visual art. *Notes on Art Criticism*, 26(1), 7-15. doi: 10.63009/noac/1.2026.01.

*Corresponding author (pani.alla0107@gmail.com)



Copyright © The Author(s). This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (<https://creativecommons.org/licenses/by/4.0/>)

Research by K. Liang & L. Kornyska (2025) showed that, as of 2025, there was no full understanding of the role of virtual galleries in the presentation of art and their long-term sustainability.

Between 2020 and 2025, virtual exhibition formats increasingly gained significance as a powerful means of promoting Ukrainian visual art. In particular, O. Lenivenko & O. Sydorenko (2023) emphasised that the introduction of virtual 3D galleries using augmented reality technologies creates opportunities for visitors to interact with exhibits. Supporting this view, S. Leontyev *et al.* (2021) demonstrated that digital technologies are significantly transforming the presentation of contemporary Ukrainian art, using the Shevchenko National Reserve as an example, thereby not only broadening access to cultural heritage but also stimulating cultural communication between different categories of visitors. Researcher T. Mironova (2021) explored the potential of virtual and augmented reality in the works of contemporary Ukrainian artists, emphasising the ability of these technologies to create new sensory and emotional experiences, which, in turn, deepened the viewer's interaction with the artwork. Meanwhile, K. Stoykova (2023) expanded on this thesis by analysing the presentation of art in the postmodern information space and emphasising that the interaction between technological solutions and cultural meanings determines the nature of the perception of contemporary art, shaping a specific way of understanding it within society.

One of the central aspects in this field has been the influence of immersive technologies on the perception of art, as detailed by S. Rusakov (2023). The author emphasised that the use of VR and AR allows for a deeper immersion in the exhibition space, which stimulates visitors' emotional responses and facilitates a more comprehensive understanding of artistic content. Researcher S. Batsenko (2021) examined the theoretical foundations of immersive environments, demonstrating that the integration of VR/AR into artistic practices opens up new horizons for the creation of interactive experiences and the development of innovative methods of communication in the cultural sphere. V. Volynets (2021) emphasised that the integration of virtual and augmented reality into art significantly increases the accessibility of cultural products and helps to expand the audience, which is an important aspect of the democratisation of cultural content. Furthermore, R.A. Widjono (2020) investigated the user experience in virtual galleries and demonstrated that digital formats not only improve the process of learning and assimilating artistic material but also stimulate a deeper and more conscious perception of works of art. An analysis of multimedia gallery design processes conducted by E.A. Sharji *et al.* (2023) led to the conclusion that a well-designed interface and structured content layout are critical for attracting and retaining visitors' attention, thereby enhancing the effectiveness of cultural communication.

Thus, a review of contemporary research has shown that virtual exhibition formats serve not only as a tool for promoting Ukrainian art, but also as a mechanism for creating an interactive and emotionally rich experience for viewers. They foster a deeper understanding of artistic content, shape new cultural discourses and open up additional opportunities for disseminating Ukrainian cultural heritage globally. Thus, the integration of digital technologies into artistic practices not only changes the way works of art are perceived but also stimulates the development of new methodologies for cultural communication and education. The aim of this article was to examine the characteristics of virtual exhibition formats in cultural environment of Ukraine and to assess their impact on the promotion of visual art, particularly on the ways in which artworks are accessed, engaged with and interpreted in the digital environment.

Materials and Methods

The research methodology was based on the integrated application of several academic approaches, which enabled a comprehensive analysis of virtual exhibition formats in the context of promoting Ukrainian visual art. A cultural studies approach was used to examine virtual exhibitions as a phenomenon of contemporary culture, shaping new models of interaction between art and the audience. This was important for determining how the digital environment influences the processes of perception, interpretation and aesthetic evaluation of works of art. A comparative approach was applied to analyse different formats of virtual exhibitions: 3D tours, VR exhibitions, AR enhancements and multimedia galleries. The comparison was carried out according to criteria of interactivity, accessibility, aesthetic quality and communicative effectiveness, which made it possible to identify the advantages and limitations of each format in the context of representing Ukrainian art. A structural-functional approach enabled an analysis of the architecture of virtual exhibition platforms, identify key elements of their organisation (navigation, interface, multimedia content) and determine the functions performed by virtual exhibitions within the system of cultural communication. The historical-logical approach was applied to study the evolution of forms of art representation in the digital environment and to identify trends in the development of virtual exhibition practices in Ukraine, particularly in the context of the COVID-19 pandemic (2020-2021) and Russia's full-scale invasion of Ukraine (since 2022). The empirical basis of the study consisted of virtual projects by leading Ukrainian cultural institutions, selected according to criteria of representativeness, technological diversity and cultural significance. The "Masterpieces of NAMU" 3D tour and the "Ukrainian portrait of the 17th-20th centuries" exhibition by the National Art Museum of Ukraine on the eMuseum.online platform were selected as exemplary cases of the application of three-dimensional visualisation technologies for the representation

of classical Ukrainian painting. The 3D reconstruction of the exhibition “Kola Silvashi” at the M17 Centre for Contemporary Art in 2024 was included as an example of preserving the curatorial vision of a large-scale art event through photogrammetry. The VR project “War up close” (2024–2025) was selected as a unique case of the application of immersive technologies to document the consequences of Russian aggression and shape collective historical memory. The sources of information included materials from international scientific and practical conferences, in particular research data by S. Batsenko (2021) and A. Alfeyorov (2022), as well as official websites of museums and cultural organisations in Ukraine, including the Emuseum portal (n.d.b), the eMuseum online platform (Litvinets *et al.*, 2024; Plishchenko *et al.*, 2025) and the MinCult page (2025), from which data was obtained regarding the number of digitised exhibits, attendance at virtual tours and the technical parameters of the implemented projects.

Results and Discussion

The current trend towards the virtualisation of Ukrainian art exhibitions is creating a convergent space in which technological, cultural and ethical dimensions mutually reinforce one another, forming a new ecosystem for artistic presentation. From a technological perspective, the use of augmented (AR) and virtual (VR) reality not only reinterprets visual space but transforms the ontology of the art object itself, constructing 3D galleries that extend far beyond the boundaries of traditional museum infrastructure. For example, the eMuseum.online platform – a Ukrainian project designed to ensure the digital presence of museums online and provide tools for creating interactive exhibitions – offers users the opportunity to view virtual tours, including of the halls of the National Art Museum of Ukraine, both via a classic web interface and through VR headsets (Litvinets *et al.*, 2024). The virtual exhibitions include 3D models, audio guides, high-quality images of exhibits and even interactive elements, allowing visitors to immerse themselves in cultural heritage without physically being present in the museum.

In the “Masterpieces of NAMU” project – a virtual exhibition of key works from the National Art Museum of Ukraine – users can explore paintings by Oleksandr Murashko, Oleksandr Bohomazov, Oleksandra Exter, David Burliuk and other prominent artists in a digital environment that enables close visual examination, scaling of artworks and navigation through a three-dimensional space (Litvinets *et al.*, 2024). Part of the exhibition is designed for VR viewing, creating a sense of deep presence and “physical” proximity to the works. At the level of virtual space design, the architecture of navigation, the interface, and interaction with the viewer are crucial. This architecture determines how effectively users can “wander” through 3D galleries, switch between rooms, interact with objects, and trigger audio or text descriptions. The design of such environments must take into account

UX/UI elements that ensure intuitiveness, minimal cognitive load and aesthetic appeal. For example, research by Q. He & D. Kosenko (2025) demonstrates how digital technologies in exhibition spaces transform artistry and the visitor experience: the design of multimedia, immersive environments aims not simply to replicate an offline museum, but to create new layers of meaning through interactivity and multimodality.

Immersive technologies change the viewer’s status: they cease to be a passive recipient and are given the role of an active agent who shapes their own experience through navigation, the selection of focal points, and the interpretation of meanings. Such immersion makes it possible to experience an artwork not only visually but also epistemically through what may be described as deep cognitive interaction, in which audiences do not simply observe but construct their own internal narratives and interpretations. In the Ukrainian context, K. Liang & L. Kornyska (2025) point out that, thanks to VR and AR, artistic objects are transformed into “simulacra”: they are no longer static artefacts, but are dynamically interpreted by each viewer depending on their route, choices and experience. In a theoretical sense, such transformations are supported by the research of artists and scholars who analyse the structure of Ukrainian immersive environments. For example, V. Klivak (2022) examines how the design of virtual exhibitions represents space in a way that stimulates educational interaction and aesthetic immersion. The authors noted that the navigational configuration of the halls, transitions between exhibits and visual cues can significantly influence the way in which the viewer constructs meaning. Also, O. Chepelyk (2021) analyses the use of WebXR, Mozilla Hubs and other VR environments by Ukrainian artists: the author demonstrates how virtual spaces with multiple sensory layers (sound, colour, form) encourage experimental thinking, becoming mental “testing grounds” for the creation of new artistic narratives. At the same time, these technological and cultural shifts give rise to ethical dilemmas. The first is the issue of copyright: if artworks are replicated in digital space, does the artist have full control over these copies? Can users alter the composition, scale or navigation of the virtual space, thereby changing the original artistic concept? The second is the issue of privacy: immersive environments often collect data on the user’s movements, gaze direction and reactions (particularly when VR headset sensors are used).

Another ethical consideration is accessibility. Whilst VR galleries have the potential to broaden their audience, they can also create new barriers: not all viewers have access to VR headsets or devices powerful enough to interact effectively with 3D models and immersive spaces. In the Ukrainian context, this issue becomes particularly relevant due to socio-economic imbalances: to make digital culture more inclusive, one of the most practical solutions is the use of AR or WebXR, which

works in a web browser or on mobile devices, but this requires striking a balance between visual quality and performance. Beyond theoretical and ethical considerations, Ukrainian institutions are already actively experimenting with practical applications of virtualisation. For example, eMuseum is a project dedicated to digitising collections, creating 3D models and virtual tours (Emuseum, n.d.b). As part of this project, the “Kola Silvashi” tour, virtual scans of ceramic works, and VR exhibitions dedicated to cultural heritage and historical themes have been realised (Fig. 1).

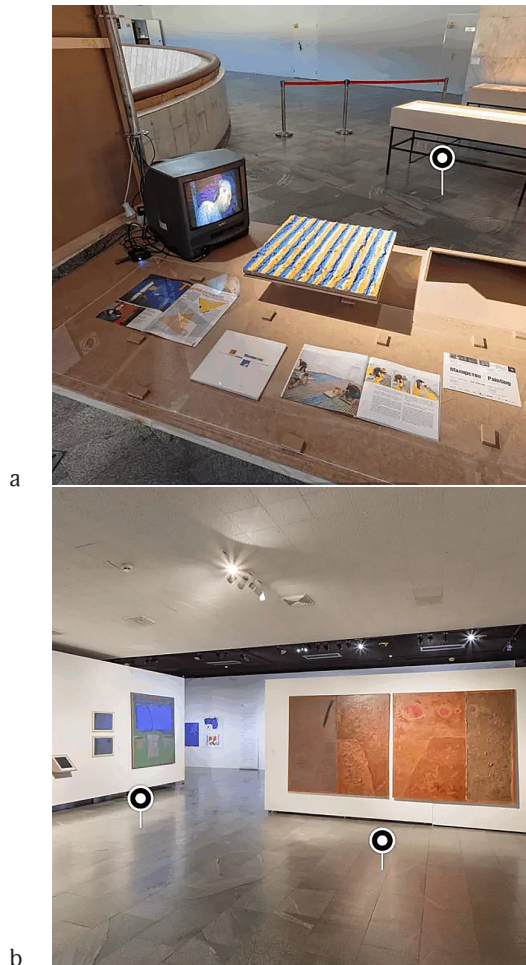


Figure 1. Virtual tour and 3D scanning of exhibits as part of the eMuseum “Kola Silvashi” project

Note: a – virtual tour of the “Kola Silvashi” exhibition galleries, b – 3D scanning of ceramic works. Photo by R. Synhaievskiy

Source: Emuseum (n.d.a)

The creation of the virtual exhibition “Kola Silvashi” demonstrates the potential of digital technologies as a tool for preserving and presenting artistic events in a format that comes as close as possible to the experience of being physically present. The three-dimensional reconstruction, created using photogrammetry and 3D scanning, covers all five floors of the Ukrainian House where the exhibition took place, enabling the

creation of a fully immersive space. Hundreds of captured angles, meticulous architectural modelling and the implementation of an interactive interface enable online visitors to move freely through the exhibition halls, view the works from various distances, access information materials and thus recreate the flow of movement intended by the exhibition’s curator. Recreating the structure of the route, the spatial arrangement of the works, and the integrity of the exhibition concept is particularly important from the perspective of analysing contemporary museum practices, as it allows to grasp the interpretative framework proposed by the exhibition organiser (Plishchenko *et al.*, 2025). A significant aspect of this digital reconstruction is its ability to convey the emotional and atmospheric dimension of the exhibition. At the centre of the artistic concept lies the distinctive colour tone known as “Szilvashi Blue”, which dominates the installation on the ground floor. In the digital version of the exhibition, this colouristic emphasis is preserved with high precision, allowing the online viewer not only to explore the space but also to experience the visual core of the artistic concept. Thus, the three-dimensional model serves not merely as a means of information transmission, but as a fully-fledged aesthetic environment in which the artist’s and curator’s vision is realised.

The digital format, created in accordance with the ICOM International Committee for the Training of Personnel (ICTOP) (1997), is of particular significance for the Ukrainian art context, which operates under conditions of war and the growing risk of losing physical objects. In this case, 3D reconstruction serves to preserve, archive and ensure accessibility – properties that are becoming strategically important for institutional memory and research work. The digitised works of Silvashi and 86 other artists featured in the project are now accessible to students, researchers, curators and a broad international audience (Emuseum, n.d.a). The virtual version of the exhibition serves as an example of how digital solutions can ensure the sustainability of cultural infrastructure. Despite the conclusion of the physical exhibition, its content, aesthetics and educational potential remain accessible in a format that is not subject to geographical or temporal constraints. This transforms the digital exhibition into an autonomous cultural entity that continues to fulfil educational and art-historical functions. The availability of the project in 3D format creates conditions for a broader appreciation of the work of one of the most influential abstract artists in contemporary Ukraine and demonstrates that art can retain its visibility, significance and dynamism even in times of crisis. In this light, the virtual reconstruction of “Kola Silvashi” can be viewed as a conceptual model of a new form of museum communication, in which digital space does not so much replace the physical as complement and extend its existence. It serves as proof that art is capable of taking on new forms

of presence, and that digital tools can be an effective means of preserving cultural memory and ensuring access to it even in the most challenging socio-historical conditions. In May 2025, as part of the celebrations for Europe Day, the National Museum of Ukrainian History added an exhibit to its collection that embodies contemporary trends in the digital representation and documentation of historical events. This is a pair of VR glasses, which were a key tool in the creation and presentation of the internationally renowned virtual project “War Up Close” (Fig. 2).

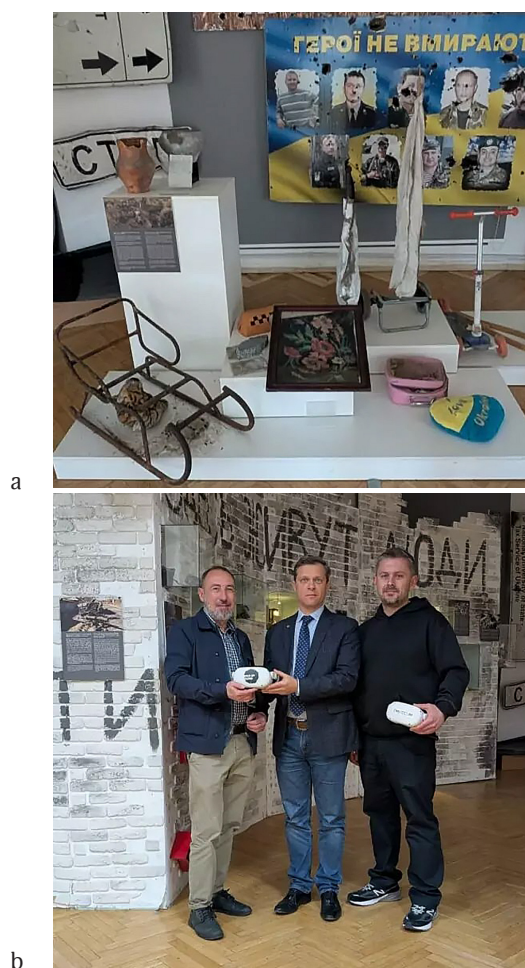


Figure 2. The VR component of the virtual exhibition “War Up Close”, integrated into the permanent exhibition of the National Museum of the History of Ukraine

Source: a – VR content from the exhibition depicting the destruction caused by the war, b – VR headsets on display as a museum exhibit. Photo by M. Omelchenko

Source: Emuseum (n.d.c)

The VR project “War Up Close” (2024-2025) is a unique example of the use of immersive technologies to document and reflect on wartime events. The project features 360-degree panoramas of Ukraine’s devastated cities – Mariupol, Irpin, Bucha and Kharkiv – allowing

viewers to “immerse” themselves in the scene of destruction and feel the scale of the tragedy. Technically, the project is based on high-quality photogrammetry, spherical video recording and processing in 8K format, ensuring maximum detail and realism. A distinctive feature of the project is that the viewer does not simply observe the destruction, but hears the voices of witnesses – recordings of interviews with residents of the occupied territories, military personnel and volunteers. This combination of visual immersion and audio testimonies creates a powerful emotional impact, transforming the virtual exhibition into a tool for preserving historical memory. The project has already been presented at international forums in Brussels, Berlin, Warsaw, Vilnius and Botswana, where it resonated strongly with Western audiences. This project, aimed at documenting and reflecting on the experience of Russia’s full-scale war against Ukraine (since 2022), uses immersive technologies to provide the viewer with an experience of the events that is as close to reality as possible. The transfer of the VR headsets to the museum was made possible thanks to the collaboration between the non-governmental organisation “eMuseum” and the project’s co-founders, D. Matiash and O. Syvak, Ambassador Extraordinary and Plenipotentiary of Ukraine to the Republic of Botswana. The incorporation of VR headsets into the museum’s permanent exhibition has a dual significance. Firstly, it symbolises the expansion of the boundaries of traditional museum practice, where virtual exhibition formats are recognised as fully-fledged carriers of cultural and historical information. Secondly, it demonstrates the willingness of Ukrainian museums to work with innovative technologies, creating new channels of interaction with the audience, particularly young people, who perceive digital forms of representation as natural and intuitive.

Another example of a virtual exhibition is the project “Ukrainian portrait of the 17th-20th centuries” (2023-2024) on the eMuseum.online platform – a large-scale digital reconstruction of one of the most significant exhibitions of the National Art Museum of Ukraine. The exhibition features over 150 portraits spanning from the Cossack era to modernism, including works by T. Shevchenko, I. Repin, M. Boichuk and O. Murashko. The virtual format allows visitors to examine the paintings in detail, with the option to zoom in to the level of brushstrokes, as well as to access in-depth information on the technique, history of creation and biographies of the subjects. Of particular value is the audio guide, narrated by professional actors and art historians, which accompanies the tour of each gallery. An interactive exhibition map allows visitors to choose their own route – chronological, stylistic or thematic – providing a personalised experience for different categories of visitors. The virtual tour recreates this landmark historical exhibition and gives users the opportunity to explore stylistic and temporal changes in art (Fig. 3).

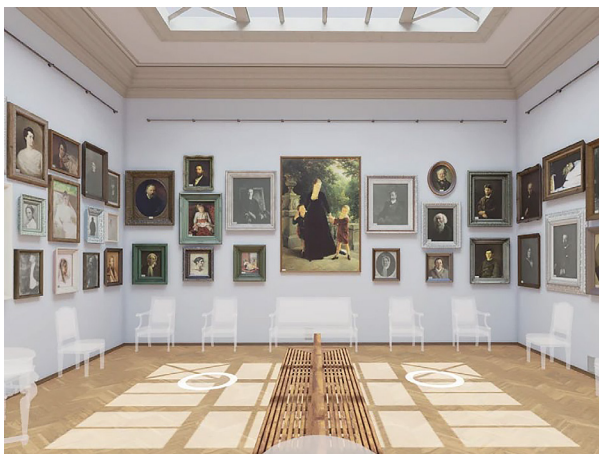


Figure 3. Virtual exhibition “Ukrainian portrait of the 17th-20th centuries”

Note: general view of the virtual gallery displaying the portraits

Source: based on Yu. Litvinets *et al.* (2024)

The exhibition lasts approximately 30 minutes and involves navigating between galleries, zooming in on paintings and audio tours – all of which create a comprehensive digital immersion. From a technological perspective, it is also important to consider the prospects for further development. For example, international researchers propose solutions such as “generous interfaces” – interfaces that place the user’s embodiment at the centre of the experience, encouraging them not only to look but also to “feel” the space, alter its configuration, and create personalised routes (Sharji *et al.*, 2023). Furthermore, cultural heritage researchers are focusing on new approaches to 3D modelling. E. Sugiarto *et al.* (2019) presented a system that supplements VR viewing of artefacts with haptic feedback, which significantly enhances sensory perception and the experience of virtual interaction with the object. Overall, the approaches outlined represent a vision of the future where digital reproduction becomes not merely visual but multisensory, and can be adapted for Ukrainian museum practice. However, in practice, the main challenge remains the consolidation of approaches: how to move from sporadic virtual experiments to systematic integration into museum strategies. It is necessary to develop unified standards for 3D modelling (geometry, textures), navigation, and UX/UI templates that take into account different levels of technical accessibility. It is equally important to create metrics for assessing effectiveness: not just the number of views or time spent, but also empirical indicators of engagement (both emotional and cognitive), trust in digital renderings, and the degree of authenticity of the experience.

Thus, the functioning of virtual exhibitions raises questions of communicative effectiveness and engagement: unlike traditional galleries, online audiences can become more active (commenting, interacting, participating in thematic communities), but at the same time

may lose the sense of authenticity or “rituality” of visiting an exhibition. A. Alfeyorov (2022) noted that virtual formats sometimes suffer from a lack of a “ritual” component, which in physical museums or galleries forms an important connection between the artwork, the space and the viewer. Given the complex social and political conditions in Ukraine – in particular, the war, the pandemic, and limited physical access to cultural institutions – virtual exhibitions are becoming not merely an alternative, but a vital means of preserving, documenting and promoting cultural heritage. Digital platforms, 3D tours and virtual tours are already being used as adaptive solutions: they provide access to art collections even when physical spaces are inaccessible (MinCult, 2025). Nevertheless, this role requires further systematic reflection: to what extent such formats are capable of replacing or complementing traditional exhibitions, and what challenges they pose for issues such as preservation, funding and audience engagement.

The virtualisation of exhibition practices raises questions of ethics, copyright, accessibility and inclusivity. The shift to digital formats signifies not only the representation of art, but also a transformation in the ways it is created, disseminated and perceived. From a scientific and theoretical perspective, this raises questions about the model of interaction between the artist, the institution and the viewer: who controls the content, who determines the order of display, how is the authenticity and reliability of digital replicas guaranteed, and how is artistic value preserved in “digital copies”? From a practical perspective, the development of virtual formats for art exhibitions involves key tasks: developing standards for organising virtual exhibition events; implementing analytical methods to assess the engagement and impact of such exhibitions; establishing funding models for virtual galleries; and integrating digital platforms into the overall strategy for cultural management in Ukraine. Although virtual exhibitions have enormous potential – they open up new horizons in access to art, overcome barriers related to geography and crises, offer an interactive experience and promote inclusivity. The lack of uniform standards for the digital representation of artworks means that there are no valid models for assessing the impact of virtual exhibitions on audiences.

R. Parry (2010) conceptualised the digital transformation of museums as a paradigm shift in cultural communication, creating new forms of interaction between the institution and its audience. Researchers S. Sylaiou *et al.* (2010) demonstrated a positive correlation between the sense of presence in a virtual museum and visitor satisfaction levels, confirming the effectiveness of VR technologies in enhancing audience engagement. M. Trunfio & S. Campana (2020) proposed a conceptual model of the visitor experience in mixed reality environments, which can be adapted for Ukrainian museum practices. Research by J.H. Falk & L.D. Dierking (2016) highlighted the importance of contextual factors in the

museum experience, which is particularly relevant for the design of virtual exhibitions in wartime conditions, when the physical context of a visit changes significantly. The systematic review by M.K. Bekele *et al.* (2018) on the application of augmented, virtual and mixed reality technologies for cultural heritage provided a methodological framework for evaluating Ukrainian projects and identifying directions for their further development. Thus, virtual exhibition formats in Ukraine are not merely a technological addition to traditional museums, but a strategic tool for cultural transformation. They open up new avenues of access to heritage, contribute to the formation of contemporary narratives, and enhance educational and social potential, but require systematic reflection, standardisation and an ethical approach.

Conclusions

Research has shown that virtual exhibition formats are becoming one of the key tools for promoting Ukrainian visual art in the current climate. Their significance is growing not only due to technological capabilities, but also because of the public need for accessible cultural content, which is particularly important during Russia's full-scale war against Ukraine (since 2022), when physical exhibition spaces operate with restrictions or become inaccessible. The "Masterpieces of NAMU" project demonstrated the potential of 3D tours in disseminating knowledge about Ukrainian classical art, providing an opportunity for a detailed study of the works of Oleksandr Murashko, Oleksandr Bohomazov, Oleksandra Exter and David Burliuk. The virtual reconstruction of the "Kola Silvashi" exhibition demonstrated how digital technologies can preserve the integrity of the curatorial vision

and convey a unique colouristic concept even after the physical exhibition has ended. The VR project "War Up Close" served as an example of the application of immersive technologies for documenting historical events and shaping collective memory. An analysis of Ukrainian projects – from 3D tours and digital reconstructions to VR exhibitions – demonstrated that these formats fulfil several important functions at once: they provide safe access to art, generate interest among an international audience, contribute to the preservation of cultural heritage, and create new opportunities for interpreting works. Furthermore, they demonstrate that the digital environment can not only replicate a real-life exhibition but also offer its own unique ways of engaging with artistic material. The findings of this study have highlighted the need for further research into developing unified methodological approaches to archiving virtual exhibitions and integrating such formats into the educational programmes of art institutions and museums. It is also important to analyse interdisciplinary research into the impact of VR and 3D exhibitions on the perception of art by different groups of viewers, which creates a new ecosystem for the promotion of Ukrainian art and the expansion of its presence in the global cultural sphere.

Acknowledgements

None.

Funding

None.

Conflict of Interest

None.

References

- [1] Alfeyorov, A. (2022). "Traumatic" symbolism of documentary filming: The visual aspect. In *Art and design in the artistic language of transient time: Morphology, semantics, visibility. International scientific and practical conference* (pp. 5-7). Kharkiv: Kharkiv State Academy of Design and Arts.
- [2] Batsenko, S. (2021). *Immersive technologies: Theoretical aspect*. In *Immersive technologies: Collection of materials of the scientific and practical conference with international participation* (pp. 36-39). Kyiv: Institute of Digitalization of Education of the National Academy of Pedagogical Sciences of Ukraine.
- [3] Bekele, M.K., Pierdicca, R., Frontoni, E., Malinverni, E.S., & Gain, J. (2018). A survey of augmented, virtual, and mixed reality for cultural heritage. *Journal on Computing and Cultural Heritage*, 11(2), 1-36. doi: 10.1145/3145534.
- [4] Chepelyk, O. (2021). Immersive environments, VR, AR in Ukrainian contemporary art of the recent years. *Collection of Research Paper Contemporary Art*, 17, 23-40. doi: 10.31500/2309-8813.17.2021.248423.
- [5] Emuseum. (n.d.a). "Kola Silvashi": Art that became a digital space. Retrieved from <https://surl.li/zmbpspu>.
- [6] Emuseum. (n.d.b). Retrieved from <https://emuseum.com.ua/>.
- [7] Emuseum. (n.d.c). "War up close" – the first Ukrainian VR project about the devastation of war. Retrieved from <https://emuseum.com.ua/projects/viina-vprytul-pershyi-ukrainskyi-vr-proiekt-pro-ruinatsii-viiny/>.
- [8] Falk, J.H., & Dierking, L.D. (2016). *The museum experience revisited*. New York: Routledge. doi: 10.4324/9781315417851.
- [9] He, Q., & Kosenko, D. (2025). Digital technologies in exhibition spaces: Transforming artistry and visitor experience. *Theory and Practice of Design*, 35, 430-439. doi: 10.32782/2415-8151.2025.35.46.
- [10] ICOM International Committee for the Training of Personnel (ICTOP). (1997). *Standards and ethics for museum training programs*. Washington, D.C.: ICOM International Committee for the Training of Personnel (ICTOP).
- [11] Klivak, V. (2022). Features of virtual exhibition design. *Current Issues of the Humanities*, 2(52), 50-56. doi: 10.24919/2308-4863/52-2-7.

- [12] Lenivenko, O., & Sydorenko, O. (2023). [Development of a virtual 3D Gallery using augmented reality technologies](#). In *Information technologies: Science, engineering, technology, education, health: Abstracts of the 31st international scientific and practical conference MicroCAD-2023* (p. 300). Kharkiv: National Technical University "Kharkiv Polytechnic Institute".
- [13] Leontyev, S., Chulkova, T., & Granatyrko, B. (2021). [The role of digital technologies in the presentation of contemporary Ukrainian art: The case of the exhibition activities of the Shevchenko National Preserve](#). In *Contemporary Ukrainian art: Concepts, strategies, visual practices: Proceedings of the VII all-Ukrainian scientific and practical conference* (pp. 81-83). Cherkasy: Hordiyenko SP.
- [14] Liang, K., & Kornyska, L. (2025). Development of a virtual gallery as an innovative approach to art presentation. *Ukrainian Art Discourse*, 6, 73-80. doi: [10.32782/uad.2024.6.9](#).
- [15] Litvinets, Yu., et al. (2024). Virtual tour "Ukrainian portrait of the 17th-20th centuries". *EmuseumOnline*. Retrieved from <https://emuseum.online/catalog/namu-portraits>.
- [16] MinCult. (2025). *Digital transformation of museums: How online platforms are opening up Ukraine's heritage to the world*. Retrieved from <https://museum.mcsc.gov.ua/blog/tsyfrova-transformatsiia-muzeiv-iak-onlain-platformy-vidkryvaiut-spadshchynu-ukrainy-svitovi>.
- [17] Mironova, T. (2021). Virtual and augmented reality in the works of Ukrainian artists. *Art and Design*, 4(2), 141-151. doi: [10.30857/2617-0272.2021.2.13](#).
- [18] Parry, R. (2010). *Museums in a digital age*. London: Routledge.
- [19] Plishchenko, A., Barshinova, O., Litvinets, Yu., Matiash, D., Yevsovyh, V., Kucherov, O., & Orlyk, S. (2025). Virtual tour "Masterpieces of NAMU". *EmuseumOnline*. Retrieved from <https://emuseum.online/catalog/namu-masterpieces>.
- [20] Rusakov, S. (2023). Immersive technologies impact on art perception in the context of contemporary art transformation: Culturological aspects of research. *Issues in Cultural Studies*, 41, 121-133. doi: [10.31866/2410-1311.41.2023.276701](#).
- [21] Sharji, E.A., Koo, A.C., & Permadi, D. (2023). Understanding the process of designing multimedia gallery using Multimedia Gallery Framework. *International Journal of Creative Multimedia*, 4(2), 88-104. doi: [10.33093/ijcm.2023.4.2.6](#).
- [22] Stoykova, K. (2023). [Presentation of art in the postmodern space of the information age](#). In *Materials of the V international conference of higher education students and young scholars "Concepts of sociocultural transformation of contemporary society"* (pp. 82-84). Odesa: The State Institution "South Ukrainian National Pedagogical University named after K.D. Ushynsky".
- [23] Sugiarto, E., Julia, J., Pratiwinindya, R.A., Prameswari, N.S., Nugrahani, R., Wibawanto, W., & Febriani, M. (2019). Virtual gallery as a media to simulate painting appreciation in art learning. *Journal of Physics: Conference Series*, 1402(7), article number 077049. doi: [10.1088/1742-6596/1402/7/077049](#).
- [24] Sylaiou, S., Mania, K., Karoulis, A., & White, M. (2010). Exploring the relationship between presence and enjoyment in a virtual museum. *International Journal of Human-Computer Studies*, 68(5), 243-253. doi: [10.1016/j.ijhcs.2009.11.002](#).
- [25] Trunfio, M., & Campana, S. (2020). A visitors' experience model for mixed reality in the museum. *Current Issues in Tourism*, 23(9), 1053-1058. doi: [10.1080/13683500.2019.1586847](#).
- [26] Volynets, V. (2021). Integration of virtual and augmented reality into art. *Culture and Contemporaneity*, 23(1), 9-16. doi: [10.32461/2226-0285.1.2021.238532](#).
- [27] Widjono, R.A. (2020). Analysis of user experience in virtual art exhibition during pandemic. In *Advances in social science, education and humanities research: Proceedings of the international conference of innovation in media and visual design (IMDES 2020)* (Vol. 502; pp. 93-99). Dordrecht: Atlantis Press. doi: [10.2991/assehr.k.201202.059](#).

Алла Дяченко

Кандидат педагогічних наук, доцент

Київська державна академія декоративно-прикладного мистецтва і дизайну імені Михайла Бойчука

01014, вул. М. Бойчука, 32, м. Київ, Україна

<https://orcid.org/0000-0003-4496-5931>

Віртуальні виставкові формати в популяризації образотворчого мистецтва України

■ **Анотація.** Метою дослідження було проаналізувати еволюцію форм репрезентації українського образотворчого мистецтва в умовах інтеграції цифрових платформ та імерсивних технологій у музейну практику. У роботі було зроблено акцент на виявленні того, як VR, AR, WebXR, мультимедійні інтерфейси та 3D-реконструкції переформатовували комунікативні контури мистецького простору, впливали на когнітивно-емоційний досвід користувача та генерували нові моделі взаємодії аудиторії з художніми артефактами. Методологія дослідження базувалася на синтезі культурологічного, компаративного, структурно-функціонального та історико-логічного підходів, що дозволило реконструювати мультиплексні зв'язки між технологічними інноваціями, естетичними трансформаціями та етичними імперативами в процесі віртуалізації виставкових практик. Такий методологічний фокус дав змогу простежити, як цифрові середовища формують когнітивні й сенсорні моделі сприйняття художнього твору, а також як вони трансформують традиційні схеми інтерпретації та естетичної оцінки. У дослідженні було проаналізовано такі українські проекти: віртуальний тур «Шедеври NAMU» Національного художнього музею України, 3D-реконструкція виставки «Кола Сільваші», VR-проект «Війна впритул», а також експозиція «Український портрет XVII-XX століть» на платформі eMuseum. online. Також, було деталізовано функції AR/VR-платформ у формуванні інтерактивного, адаптивного досвіду користувача, виявлено особливості емоційно-когнітивної взаємодії з віртуальним середовищем, а також систематизовано правові та етичні виклики, що виникають у контексті оцифрування мистецьких об'єктів. Аналітичне осмислення сучасних віртуальних експозицій засвідчило, що цифрові технології стали не лише репрезентативним інструментом, а й каталізатором інклюзивності, демократизації доступу та забезпечення збереження культурної пам'яті. Віртуальні виставки набули статусу автономних, самодостатніх культурних екосистем, що доповнили фізичну музейну інфраструктуру та забезпечили безперервний доступ до контенту незалежно від географічних, часових і соціально-економічних обмежень. Розвиток цих форматів став важливим для генерації нових стратегій музейної комунікації, сприяв міжнародній репрезентації українського мистецтва та створив базис для вдосконалення етичних, технологічних і методологічних стандартів цифрової культурної спадщини

■ **Ключові слова:** віртуальні експозиції; цифрова культурна екосистема; VR/AR платформи; Web Extended Reality; 3D-репрезентація; художнє надбання України