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TRANSFORMATION OF CREATIVE THINKING IN THE DIGITAL AGE: THE HARMONY OF ARTIFICIAL INTELLIGENCE AND NATIONAL CULTURE

Abstract. *This article provides a scholarly and theoretical analysis of the impact of artificial intelligence technologies on creative thinking, contemporary art, and the development of national culture. It examines the potential of generative technologies in artistic creation, human–technology collaboration, the digitization of cultural heritage, authorship, national identity, and ethical responsibility. The article substantiates the need to preserve national values, develop high-quality digital resources, and foster new competencies in arts education when applying artificial intelligence within Uzbekistan's culture and arts sector.*

Keywords: *artificial intelligence, digital culture, creative thinking, art, national culture, cultural heritage, generative technologies, artistic creation.*

RAQAMLI DAVRDA IJODIY TAFAKKURNING TRANSFORMATSIYASI: SUN'IY INTELLEKT VA MILLIY MADANIYAT UYG'UNLIGI

Annotatsiya. *Maqolada sun'iy intellekt texnologiyalarining ijodiy tafakkur, zamonaviy san'at va milliy madaniyat rivojiga ta'siri ilmiy-nazariy jihatdan tahlil qilinadi. Generativ texnologiyalarning badiiy ijoddagi imkoniyatlari, inson va texnologiya hamkorligi, madaniy merosni raqamlashtirish, mualliflik, milliy identiklik hamda axloqiy mas'uliyat masalalari yoritiladi. O'zbekiston madaniyat va san'at tizimida sun'iy intellektdan foydalanishda milliy qadriyatlarni saqlash, sifatli raqamli resurslarni shakllantirish va san'at ta'limida yangi kompetensiyalarni rivojlantirish zarurligi asoslanadi.*

***Kalit so'zlar:** sun'iy intellekt, raqamli madaniyat, ijodiy tafakkur, san'at, milliy madaniyat, madaniy meros, generativ texnologiyalar, badiiy ijod.*

ТРАНСФОРМАЦИЯ ТВОРЧЕСКОГО МЫШЛЕНИЯ В ЦИФРОВУЮ ЭПОХУ: ГАРМОНИЯ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА И НАЦИОНАЛЬНОЙ КУЛЬТУРЫ

***Аннотация.** В статье с научно-теоретической точки зрения анализируется влияние технологий искусственного интеллекта на творческое мышление, современное искусство и развитие национальной культуры. Рассматриваются возможности генеративных технологий в художественном творчестве, взаимодействие человека и технологии, оцифровка культурного наследия, а также вопросы авторства, национальной идентичности и этической ответственности. Обосновывается необходимость сохранения национальных ценностей, формирования качественных цифровых ресурсов и развития новых компетенций в художественном образовании при использовании искусственного интеллекта в системе культуры и искусства Узбекистана.*

***Ключевые слова:** искусственный интеллект, цифровая культура, творческое мышление, искусство, национальная культура, культурное наследие, генеративные технологии, художественное творчество.*

One of the defining features of contemporary social development is the steady expansion of digital technologies into virtually every sphere of human activity. Fundamental changes in the mechanisms through which information is created, processed, and disseminated are exerting a significant influence not only on economic and social relations, but also on cultural life and the patterns governing the development of art. The rapid advancement of artificial intelligence technologies, in particular, has made it necessary to reconsider traditional conceptions of creativity, authorship, the creation of artistic images, and the place of the human being in the creative process. Artificial intelligence is no longer regarded solely as a tool for computation and data processing; it is increasingly

manifested as a technological system capable of generating new content in the form of text, images, music, video, and other media.

The integration of artificial intelligence into the contemporary cultural environment cannot be adequately assessed as a merely technological renewal. This process is directly connected with the ways in which human beings perceive the world aesthetically, with the nature of creativity, and with the mechanisms through which cultural values are formed. International recommendations adopted by UNESCO on the ethics of artificial intelligence specifically emphasize that human interests, human rights, cultural diversity, and social well-being must remain priorities in technological development [1, 14-p]. This principle is particularly important for the fields of culture and art, because the essence of art lies in the artistic expression of human emotional experience, historical memory, worldview, and spiritual values.

Margaret Boden analyzes creativity as a process that produces new, valuable, and unexpected results on the basis of existing knowledge and ideas [2, 30-p]. From this perspective, certain operations performed by contemporary generative algorithms may outwardly resemble a creative process. Artificial intelligence analyzes vast quantities of data, identifies relationships among them, and generates new combinations based on existing patterns. Yet the essence of human creativity is not limited to producing novel combinations. A human creator invests a work with personal experience, intention, emotion, social attitude, and an aesthetic position. For this reason, it is necessary to preserve, at the theoretical level, the distinction between a product generated by artificial intelligence and an artistic work arising from conscious human creative activity.

Such capabilities may ease the technical aspects of an artist's work and broaden the scope of creative experimentation. The existence of technological capability, however, does not mean that the technology itself is an autonomous creator. In his analysis of the relationship between artificial intelligence and art, Aaron Hertzmann demonstrates that the participation of computer systems in

producing artistic outputs cannot be evaluated separately from human intention and creative decision-making [3, 7-p]. Artificial intelligence should therefore be viewed not as a competitor to the human creator, but as a sophisticated technological instrument that expands human creative capacities.

UNESCO's international instruments concerning the protection and promotion of the diversity of cultural expressions recognize cultural diversity as a common heritage of humanity [4, 4-p]. Although the development of digital technologies creates new opportunities to preserve such diversity, it also gives rise to certain risks. In the global digital sphere, some languages and cultures are represented by enormous volumes of data, whereas the digital resources of other national and local cultures remain comparatively limited. Given that artificial intelligence systems rely on available digital data, cultures that are insufficiently represented online may also be less visible in future algorithmic systems.

For Uzbekistan, this issue is of strategic importance. The Uzbek people possess a centuries-old historical and cultural experience and numerous unique forms of heritage, including maqom, the baxshi epic tradition, oral folklore, traditional music, theatre, dance, handicrafts, and the visual and applied arts. Digitizing, systematizing, and academically describing a substantial part of this heritage in accordance with contemporary standards will help strengthen the position of national culture in the digital environment. In this work, artificial intelligence may become a valuable auxiliary instrument for classifying extensive collections by subject, genre, period, region, performance style, or other criteria.

Another important issue associated with the development of artificial intelligence concerns the concepts of authorship and intellectual property. International debate continues regarding the legal and aesthetic status of an image, musical composition, text, or other creative product generated with the assistance of a generative system. The World Intellectual Property Organization notes that the development of artificial intelligence raises new questions for copyright, patent law, and other intellectual-property institutions [5, 5-p]. In particular, the use of existing

works of art to train algorithms, the imitation of a recognized creator's individual style, and the digital reproduction of a person's voice or appearance require new mechanisms for protecting the interests of authors and performers.

Lev Manovich examines the new aesthetic processes associated with artificial intelligence as a further stage in the development of digital culture and draws attention to the influence of algorithmic systems on contemporary aesthetic experience [6, 5-p]. Today, people encounter works of art and cultural products not only in museums, theatres, and concert halls, but also through social networks, digital platforms, and algorithmic recommendation systems. Consequently, the music, films, visual works, and cultural content to which individuals are exposed are increasingly shaped by algorithmic mechanisms.

The development of artificial intelligence also introduces new requirements into arts education. Future actors, directors, art historians, cultural studies specialists, librarians, museum professionals, and representatives of other creative fields must not confine themselves to disciplinary knowledge alone; they must also understand digital technologies and acquire the skills necessary to use them responsibly. At the same time, the use of artificial intelligence must not restrict students' independent thinking or creative inquiry. On the contrary, technology should be employed not as a means of obtaining ready-made answers, but as a tool for posing new questions, testing alternative solutions, and conducting creative experiments.

The European Commission's guidance on trustworthy artificial intelligence identifies human oversight, technical robustness and safety, transparency, and accountability among its core principles [7, 14-p]. Applying these principles to arts education does not diminish the role of the teacher; rather, it increases the teacher's responsibility. Alongside teaching students how to use artificial intelligence tools, educators must also cultivate their ability to verify information, identify sources, comply with copyright requirements, and critically assess technologically generated outputs. The growth of artificial intelligence also intensifies ethical challenges in culture and the arts. Fabricated images, synthetic voices, deepfake videos, and the

possibility of reconstructing historical events in ways that do not correspond to reality may threaten cultural memory and the reliability of information. Presenting a statement that a historical figure never made through a simulation of that person's voice and appearance may be technically impressive, yet it creates serious scholarly and ethical problems. Accordingly, cultural content created or substantially altered with artificial intelligence should be appropriately labeled; such disclosure should become one of the essential conditions for preserving trust within the cultural environment.

For these reasons, several principles should be prioritized when introducing artificial intelligence into Uzbekistan's culture and arts system. First, high-quality digital databases of national cultural heritage should be created and described according to scholarly standards. Second, the volume of Uzbek-language digital resources should be expanded, particularly research materials in art history, theatre studies, cultural studies, music, folklore, and related fields. Third, arts and cultural education should develop knowledge of artificial-intelligence ethics and copyright alongside general digital literacy. Fourth, interdisciplinary cooperation among artists, educators, software developers, historians, legal scholars, and other professionals should be strengthened in the design and implementation of technological projects.

The foregoing analysis demonstrates that the entry of artificial intelligence into culture and the arts constitutes an important stage of historical transformation. This process is producing new artistic forms, new creative tools, and new methods of engaging with cultural heritage. At the same time, it brings complex questions concerning authorship, creative individuality, ethical responsibility, and the preservation of national identity to the forefront. The relationship between artificial intelligence and art should therefore be developed not according to an oppositional principle of "human or technology", but from the perspective of "human and technology" collaboration, while preserving the human being's primary creative and spiritual role. Such an approach can ensure that technological progress serves

national culture, art, and the spiritual development of society. In this context, the use of artificial intelligence in the sphere of national culture requires the development of a balanced and scientifically grounded approach. Artificial intelligence should not be regarded merely as a technical instrument for accelerating creative processes, but also as a means of preserving, studying, systematizing, and disseminating cultural values. In particular, digital technologies can contribute to the preservation of intangible cultural heritage, including traditional music, folk performances, oral traditions, theatrical practices, and other forms of national artistic expression.

One of the important directions in this process is the creation of digital archives based on national cultural heritage. The application of artificial intelligence technologies to archival materials makes it possible to classify, restore, analyze, and provide broader access to historical documents, audio recordings, photographs, video materials, and other cultural resources.

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