

UDC 372.87:004

IRSTI 14.85.09

<https://doi.org/10.48371/PEDS.2026.82.3.047>

IMPLEMENTATION OF DIGITAL TECHNOLOGIES IN TEACHING ARTS AND CRAFTS

***Shagatayeva Z.Y.¹, Koshkinbayeva N.R.², Dauletova I.G.³**

***¹Zhetysu University named after Ilyas ZhansugurovTaldykorgan, Kazakhstan**

²Taraz University named after M. H. Dulati, Taraz, Kazakhstan

**³Pavlodar Pedagogical University named after Alkey Margulan
Pavlodar, Kazakhstan**

Abstract. Amid the accelerating digital transformation of education, this article examines how digital technologies are being incorporated into teaching practice within the fine and applied arts. The focus is on the use of graphic editors, 3D modeling systems, and virtual and augmented reality technologies as tools for fostering creativity, artistic thinking, visual literacy, and professional competencies of students. The aim of the study is to evaluate the impact of digital technologies on students' academic performance and to determine effective approaches for integrating digital and traditional teaching methods. The research methodology includes student surveys and semi-structured interviews with university instructors engaged in design, fine arts, and pedagogical education. The findings confirm that digital tools enhance students' learning motivation, engagement, mastery of modern artistic techniques, and the development of personal style. Moreover, digital technologies facilitate spatial thinking, understanding of compositional principles, color theory, and technical precision. It was further established that consistent application of digital technologies helps prepare students for professional work within creative environments shaped by digital tools. The authors highlight the need to update educational program content, enhance digital competencies of educators, and modernize the technical infrastructure of educational institutions. The article emphasizes a balanced integration of traditional and digital approaches in order to promote innovation in art education and ensure high-quality training for future specialists in the creative industries.

Keywords: digital technologies, art education, graphic editors, 3D modeling, creativity, virtual reality, augmented reality, digital pedagogy

Introduction

The digital transformation of education has become one of the major trends in modern pedagogy, particularly in the field of art education. The growing use of digital technologies, including graphic applications, animation tools, and virtual and augmented reality, creates new opportunities for developing students'

creative abilities and increasing their engagement in the learning process. At the same time, these changes reflect both the demands of a digital society and the need to modernize teaching methods and educational practices.

Recent studies confirm the relevance of this topic. Zhusupova and Lugovenko [1] emphasize the need to update approaches to the professional training of future teachers, highlighting the role of digital solutions in developing interdisciplinary skills. Ezhelev [2] argues that digital instruments modernize education by rendering it more visually oriented and more responsive to the needs of today's learners. According to González-Zamar and Abad-Segura [3], digital design in art education promotes the development of students' autonomy, the expansion of their visual and creative thinking, and the enhancement of their critical perception. The authors also note the growing interest of the scientific community in the digitalization of creative disciplines. Amirgazyan and Shokorova [4] explore the influence of globalization processes on applied education, underlining that the digital transformation of traditional forms of learning increases the flexibility of educational programs and enriches the pedagogical toolkit. Kembayeva [5] demonstrates the effectiveness of digital platforms in inclusive education, showing that they increase the level of engagement and adaptability among students with special educational needs.

Yet despite this growing body of scholarship, several questions remain underexplored. What is still lacking is a systematic account of how contemporary digital tools shape the teaching of artistic creativity — one that weighs their strengths against their limitations and yields concrete guidance for classroom integration.

This study takes as its object the teaching of artistic creativity under conditions of digitalization, focusing specifically, as its subject, on how digital technologies shape the development of students' creative competencies within art education.

Accordingly, this article sets out to examine how digital technologies affect the teaching of artistic work, to weigh their benefits against the difficulties they raise, and to draw out recommendations for their effective classroom use. Meeting this aim calls for the following tasks:

- to review modern digital tools and methods used in art education;
- to gauge their effect on how students' creative skills develop;
- to identify key challenges in their implementation;
- to propose recommendations for improving the practice of teaching artistic work using digital technologies.

The structure of the article includes: an introduction that substantiates the relevance of the study and outlines its goals and objectives; a review of current scientific literature on the topic; an analysis of modern digital technologies and their impact on art education; and conclusions with recommendations for practice.

Materials and methods

The study was conducted using a set of methods, including: analysis of educational programs in the field of art education and design; survey of 100 students of Zhetysu University named after I. Zhansugurov, Taraz University named after M. H. Dulati and Pavlodar Pedagogical University named after A. Margulan; interviews with teachers of higher education institutions specializing in art education, design and related disciplines; comparative analysis of students' acquisition of basic artistic skills using traditional and digital teaching methods.

Digital technologies are reshaping art education in substantial ways. The literature indicates that weaving digital tools into instruction fosters creative thinking, broadens the scope for visual expression, and lowers barriers to access.

The vector of development of digital andragogy is reflected in the publication by Merkushina. She considers the possibilities of informatization as a tool for increasing the creative potential of an adult audience, especially in the context of mastering artistic and design disciplines [6].

Ivanova and Migilyuk's study is devoted to the development of graphic and spatial skills in schoolchildren using digital applications. The results indicate positive dynamics in learning associated with the visualization of educational material [7].

Aspects of teacher training in the context of digitalization are revealed in the article by Borisov and his colleagues. The authors conclude that the inclusion of digital tools in the learning process contributes to the professional maturity of future teachers and the formation of sustainable digital competencies [8].

The practical side of methodological support for teaching the subject "Artistic Work" is analyzed by Magzymbay. His work presents combined lesson models that organically combine traditional and digital resources [9].

A further strand of current scholarship examines how digital technologies help build the professional skill set of future specialists in art and design. Mastering specialized graphic editors, animation programs and interactive platforms is becoming an integral part of the educational process. Guanyin turns to international experience, exploring the digitalization of Chinese oil painting. It is emphasized that multimedia technologies not only preserve national artistic traditions, but also ensure their adaptation in the digital age [10].

Golopova examines the potential of digital solutions in the art education system. Her work demonstrates that the introduction of ICT contributes to the development of students' digital culture and the improvement of the content of educational programs [11].

Intensive research in this area is also being conducted in the foreign scientific community. Thus, González-Zamar and Abad-Segura conducted a systematic review of the literature on the use of VR technologies in art education. The authors emphasize the increase in motivation and improvement in the quality of visual perception in students [12].

Their analysis is complemented by the study by Akbulut and his co-authors, which presents a model for integrating visual communication technologies based on virtual reality in the training of designers and teachers. A conclusion is made about the significant pedagogical potential of immersive environments for the development of creative thinking and individual expression. [13].

Thus, the analysis of scientific literature indicates a significant transformation of the art education system in the digital era. Digital technologies open up new opportunities for learning and creativity, but their effective implementation requires appropriate methodological training, adaptation of educational programs and increased digital competence of teachers.

Methods and approaches to integrating digital technologies

Digital technologies now play an active role in art education, broadening what teaching and learning can achieve. As Table 1 shows, incorporating these tools sharpens the visual presentation of material and, at the same time, nurtures students' creative skills.

Table 1 - Digital technologies for using in teaching artistic work

№	Digital	Technologies Name	Application
1	Graphic editors	Adobe Photoshop, CorelDRAW	The programs allow you to study the basics of composition, color, textures and light and shade, as well as develop skills in working with digital images. The use of graphic editors in the educational process contributes to a deeper understanding of the principles of visual art and gives students the opportunity to work with professional software.
2	3D modeling and animation technologies	Blender, Autodesk Maya, ZBrush, Toon Boom Harmony, Adobe Animate, Blender,	Students can create complex 3D objects, learn the basics of spatial thinking, and develop digital sculpture skills. Incorporating 3D modeling into the educational process helps expand the artistic toolbox, allowing students to experiment with different visual styles and techniques.
3	Virtual and augmented reality in art education	Tilt Brush, Gravity Sketch, Adobe Aero	Technologies make it possible to create completely virtual art environments where students can interact with objects in three-dimensional space. Applications provide the opportunity to draw and design in a virtual environment, developing innovative artistic concepts. Augmented reality (AR) is used to integrate digital objects into the real world, which makes it possible to conduct interactive lectures and demonstrations of works of art in a new format. The use of AR technologies in the educational process allows not only to revive traditional teaching methods, but also to make learning more visual and engaging.

As demonstrated by the research of Maznah Salleh et al. (2024), augmented reality and mobile devices have a significant impact on the development of creative pedagogy by enhancing students' learning motivation and engagement in the educational process. Modern digital technologies, including graphic applications and augmented reality, play an essential role in fostering students' spatial thinking and perception in art education. Moreover, augmented reality technologies broaden the boundaries of visual experience and create new opportunities for artistic expression [14].

Thus, the introduction of digital technologies into art education expands the possibilities of creative expression, increases the level of proficiency in digital tools and promotes the development of new methods of teaching art.

The study was conducted in several stages (figure 1), including an analysis of educational programs, a survey of students and teachers, and interviews.

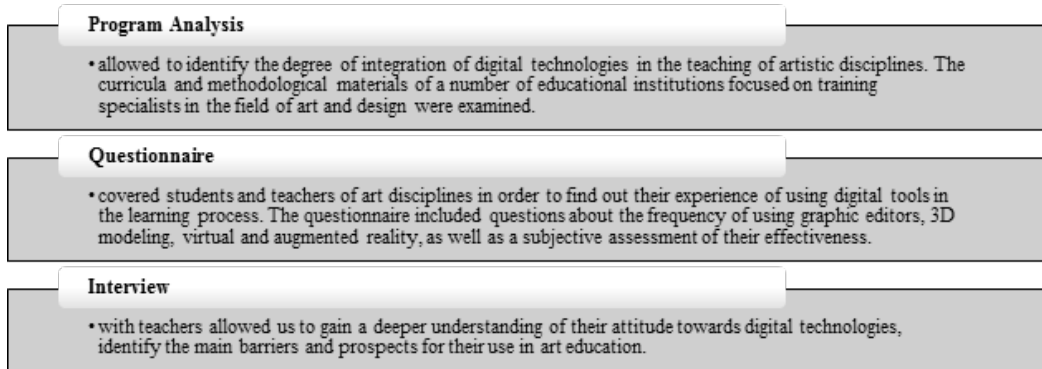
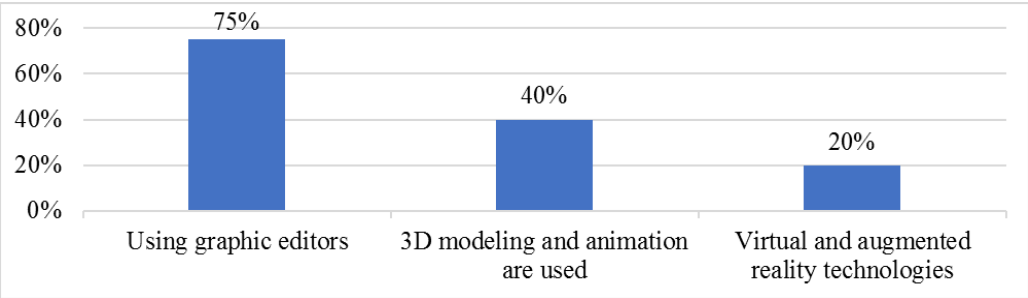


Figure 1 - Research stages

Results

The survey was conducted among students studying at the educational institutions of Zhetysu University named after I. Zhansugurov, Taraz University named after M. H. Dulati and Pavlodar Pedagogical University named after A. Margulan, where digital technologies are actively used in the educational process, in the field of art education, design and related disciplines. The survey involved students of various courses who have experience working with digital tools in teaching. 100 students participated in the survey, which allows us to draw conclusions that represent the opinion of students as a whole. The main objective of the survey was to identify the level of student involvement in the use of digital tools and assess their effectiveness in the educational process. As Graph 1 illustrates, graphic editors proved the most widely used tool, reported by over 75% of students, while roughly 40% reported working with 3D modeling and animation software. At the same time, virtual and augmented reality technologies are still used to a limited extent - less than 20% of respondents encountered them as part of the curriculum.



Graph 1 - The survey results showed

The study involved teachers of higher education institutions who actively use digital technologies in their teaching practice in the field of art education, design, architecture and related disciplines. Based on the results of interviews with teachers, the main advantages and problems of teaching using digital technology were identified (figure 2).

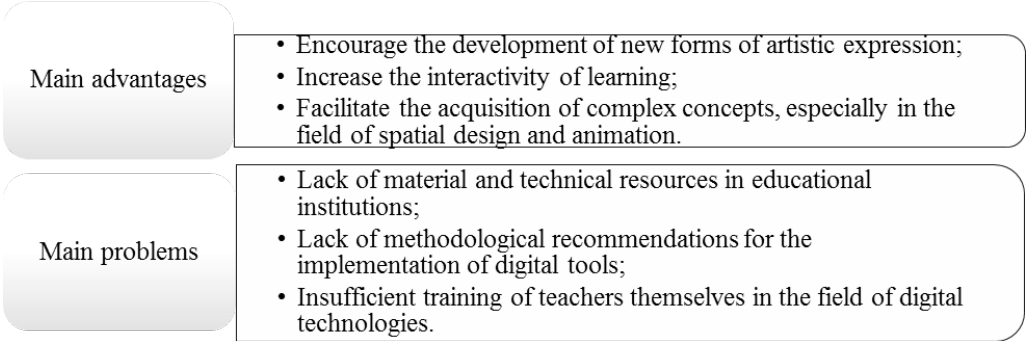


Figure 2 - Key Benefits and Challenges of Teaching with Digital Technology

The teachers’ assessment of the effectiveness of digital technologies is presented in the form of a table (table 2) indicating the important criteria by which teachers assessed the use of digital technologies in teaching. Each criterion reflects an aspect of the educational process that can be influenced by digital tools.

Table 2 - Teachers’ assessment of the effectiveness of digital technologies

Criterion	Percent age of positive ratings (%)
Increasing student engagement	92%
Developing creative thinking	89%
Learning new artistic techniques	85%
Improving the quality of work	87%

Digital technologies actively contribute to motivating students and their more active participation in the learning process, as evidenced by the high student engagement (92% positive ratings).

Development of creative thinking (89%) indicates that digital technologies actively stimulate students to create original and non-standard solutions.

Mastering new artistic techniques (85%) shows that digital technologies may expand opportunities for learning new techniques in various fields (e.g. graphic design, digital art).

Improved quality of work (87%) confirms that the use of digital tools contributes to the improvement of the level of work completed by students, be it accuracy, quality of presentation or innovative approaches.

Evaluation of the effectiveness of using digital tools in teaching

Effectiveness was gauged by comparing how well students mastered core skills under traditional versus digital instructional approaches. It was found that students who actively used digital tools demonstrated higher results in the field of composition, color solution and spatial thinking (table 3).

Table 3 - Comparative analysis of students' mastery of basic skills

Skill	Traditional Methods	Digital Technologies
Composition	Intermediate	High Level
Colorscheme	Intermediate	High Level
Spatial thinking	Intermediate	Very High Level

In addition, the use of interactive technologies such as virtual and augmented reality significantly increased student engagement and average student achievement (Table 4).

Table 4 - Comparative Analysis of Student Engagement and Average Performance

Methodology	Average Engagement Level (%)	Average Performance Level (%)
Traditional methods	65%	70%
Digital technologies	85%	90%

Discussion

The results of the study confirm the high importance of digital technologies in art education, but emphasize the need for further development of methodological support and technical support for teachers.

Modern digital technologies have a significant impact on the teaching of artistic work, expanding learning opportunities and increasing its effectiveness. The integration of such tools as computer graphics, 3D modeling, virtual and augmented reality contributes to the development of students' creative abilities and the formation of new methods of visualization and interaction with the material. However, despite the obvious advantages, the introduction of digital technologies requires methodological training of teachers, adaptation of curricula and overcoming technical limitations.

What this analysis suggests is that digital tools boost engagement and nurture creative thinking, while also opening the door to a more individualized process — one tailored to each student's needs and level of preparedness. This potential comes with a caveat, however: access to technological resources must be equitable, and traditional methods should not be crowded out entirely. The effectiveness of digital technologies in teaching artistic work is confirmed by empirical data, according to which students demonstrate a higher level of mastery of artistic skills and the quality of visual works. However, their use requires a meaningful approach that takes into account pedagogical and methodological aspects, as well as possible difficulties associated with the technological preparedness of both teachers and students.

Conclusion

Taken together, these findings point to a clear conclusion: applying digital technologies to the teaching of artistic creativity opens up new possibilities for the development of education. Digital tools create conditions for a deeper assimilation of educational material, expansion of students' creative potential, formation of digital literacy, artistic and graphic competence, as well as skills in using modern visualization tools. At the same time, the results confirm that digital technologies do not replace traditional teaching methods, but effectively complement them, contributing to the creation of an individualized and flexible learning environment. The results obtained are consistent with existing studies by Gonzalez-Samar and Abad-Segura, Zhusupova and Lugovenko, and Chizhov, who note the positive impact of digitalization on the modernization of art education and the development of interdisciplinary and creative skills of students. At the same time, our analysis emphasizes the importance of maintaining a balance between digital and classical approaches, ensuring their harmonious integration to preserve the artistic value of educational content. What is novel here is precisely this combination — a comprehensive weighing of the benefits and drawbacks of digital technologies in teaching artistic creativity, paired with concrete recommendations for putting them into practice. The practical value of the results is determined by the possibility of their use in designing educational programs, developing teaching methods and improving the digital competence of teachers. Further areas of research may include the development of models for integrating digital tools into the educational process, innovative methods for teaching artistic creativity, as well as long-term studies of the impact of digitalization on the development of creative thinking and artistic skills of students.

REFERENCES

[1] Жусупова Д.Ж., Луковенко О.С. Интеграция искусства в профессиональном обучении: новые горизонты для будущих учителей

художественного труда // Султангазинские чтения: материалы международной научно-практической конференции. – Костанай: Костанайский региональный университет имени Ахмета Байтурсынова, 2024. – С. 284-288.

[2] Ежелев В.В. Образовательная программа «Интеграция художественной обработки дерева и компьютерного проектирования изделий» // Евразийский Союз Ученых (ЕСУ). – 2015. – № 10(19). – С.42-44.

[3] González-Zamar M.D., Abad-Segura E. Digital design in artistic education: An overview of research in the university setting // Education Sciences. – 2021. – Vol. 11(4). – 144 p. – DOI: 10.3390/educsci11040144.

[4] Амиргазин К.Ж., Шокорова Л.В., Амиргазин Е.К. Традиционное прикладное образование в условиях цифровой глобализации // Традиционное прикладное искусство и образование. – 2024. – С. 53-60.

[5] Кембаева А.Т. Использование активных методов обучения на уроках художественного труда в инклюзивном образовании // Образование XXI века: подходы, технологии, методики: сборник научных статей Международной научно-практической конференции. – Курган: Курганский государственный университет, 2022. – Т. 2. – С. 122-126.

[6] Меркушина Ю.В. Информатизация современной андрагогики художественного образования как элемент развития воображения // Информатизация образования и науки. – 2022. – № 4(56). – С. 149-158.

[7] Кузнецова Е.И., Губанова К.Ю. Формирование графической грамотности средствами информационных технологий в процессе занятий внеурочной деятельности // Вестник Шадринского государственного педагогического университета. – 2020. – № 2(46). – С. 127-130.

[8] Борисов В.Ю., Галямова Э.М., Першина Ж.А. Особенности профессиональной подготовки учителей начальных классов в области художественно-графической деятельности в контексте цифрового образования // Наука и школа. – 2021. – № 1. – С. 104-115. – DOI: 10.31862/1819-463X-2021-1-104-115.

[9] Магзымбай М.Т. Современные методики преподавания дисциплины «Художественный труд» в средней школе // Педагогика сегодня: проблемы и решения: материалы VII Международной научной конференции. – СПб.: Свое издательство, 2021. – С. 15-18. – URL: <https://moluch.ru/conf/ped/archive/389/16420/> (дата обращения: 14.02.2026).

[10] Ма Г. Использование компьютерных технологий в обучении современной китайской масляной живописи // Общество: социология, психология, педагогика. – 2023. – № 11. – С. 200-205. – DOI: 10.24158/spp.2023.11.27.

[11] Красильников И.М. Педагогический потенциал цифровых технологий и его реализация в художественном образовании // Отечественная

и зарубежная педагогика. – 2019. – Т. 1(2). – С. 95-104. – DOI: 10.24411/2224-0772-2019-10007.

[12] González-Zamar M.-D., Abad-Segura E. Implications of Virtual Reality in Arts Education: Research Analysis in the Context of Higher Education // *Education Sciences*. – 2020. – Vol. 10(9). – 225 p. – DOI: 10.3390/educsci10090225.

[13] Wang J., Mokmin N. A. M. Virtual reality technology in art education with visual communication design in higher education: A systematic literature review // *Education and Information Technologies*. – 2023. – Vol. 28. – pp. 15125-15143. – DOI: 10.1007/s10639-023-11845-y.

[14] Salleh M., Khairani M. Z., Rafee Y. M. Integrating mobile learning and ICT in art education: Exploring the impact of augmented reality and mobile devices on creative pedagogy // *Journal of Contemporary Social Science and Education Studies*. – 2024. – Vol. 4(3). – pp. 91-100. – DOI: 10.5281/zenodo.14035214.

REFERENCES

[1] Zhusupova D.Zh., Lukovenko O.S. Integratsiya iskusstva v professional'nom obuchenii: novye gorizonty dlya budushchikh uchiteley khudozhestvennogo truda (Integration of art in professional training: new horizons for future teachers of artistic labor) // *Sultangazinskies chteniya: materialy mezhdunarodnoy nauchno-prakticheskoy konferentsii*. – Kostanay: Kostanay Regional University named after Akhmet Baitursynuly, 2024. – S. 284-288. [in Rus.]

[2] Ezhelev V.V. Obrazovatel'naya programma "Integratsiya khudozhestvennoy obrabotki dereva i komp'yuternogo proektirovaniya izdeliy" (Educational program "Integration of artistic wood processing and computer design of products") // *Evraziyskiy Soyuz Uchenykh (ESU)*. – 2015. – No. 10(19). – S.42-44. [in Rus.]

[3] González-Zamar M.D., Abad-Segura E. Digital design in artistic education: An overview of research in the university setting // *Education Sciences*. – 2021. – Vol. 11(4). – 144 p. – DOI: 10.3390/educsci11040144.

[4] Amirgazin K.Zh., Shokorova L.V., Amirgazin E.K. Traditsionnoe prikladnoe obrazovanie v usloviyakh tsifrovoy globalizatsii (Traditional applied education in the context of digital globalization) // *Traditsionnoe prikladnoe iskusstvo i obrazovanie*. – 2024. – S. 53-60. [in Rus.]

[5] Kembaeva A.T. Ispol'zovanie aktivnykh metodov obucheniya na urokakh khudozhestvennogo truda v inkluzivnom obrazovanii (Use of active teaching methods in art and labor lessons in inclusive education) // *Obrazovanie XXI veka: podkhody, tekhnologii, metodiki: sbornik nauchnykh statey Mezhdunarodnoy nauchno-prakticheskoy konferentsii*. – Kurgan: Kurgan State University, 2022. – Vol. 2. – S. 122-126. [in Rus.]

[6] Merkushina Yu.V. Informatizatsiya sovremennoy andragogiki khudozhestvennogo obrazovaniya kak element razvitiya voobrazheniya (Informatization of modern andragogy of art education as an element of imagination development) // Informatizatsiya obrazovaniya i nauki. – 2022. – Vol. 4(56). – S. 149-158. [in Rus.]

[7] Kuznetsova E.I., Gubanova K.Yu. Formirovanie graficheskoy gramotnosti sredstvami informatsionnykh tekhnologiy v protsesse zanyatiy vneurochnoy deyatel'nosti (Formation of graphic literacy through information technology in extracurricular activities) // Vestnik Shadrinskogo gosudarstvennogo pedagogicheskogo universiteta. – 2020. – No. 2(46). – S. 127-130. [in Rus.]

[8] Borisov V.Yu., Galyamova E.M., Pershina Zh.A. Osobennosti professional'noy podgotovki uchiteley nachal'nykh klassov v oblasti khudozhestvenno-graficheskoy deyatel'nosti v kontekste tsifrovogo obrazovaniya (Features of professional training of primary school teachers in artistic and graphic activity in the context of digital education) // Nauka i shkola. – 2021. – No. 1. – S. 104-115. – DOI: 10.31862/1819-463X-2021-1-104-115. [in Rus.]

[9] Magzymbay M.T. Sovremennye metodiki prepodavaniya distsipliny “Khudozhestvennyy trud” v sredney shkole (Modern methods of teaching “Artistic labor” in secondary school) // Pedagogika segodnya: problemy i resheniya: materialy VII Mezhdunarodnoy nauchnoy konferentsii. – St. Petersburg: Svoe izdatel'stvo, 2021. – S. 15-18. – URL: <https://moluch.ru/conf/ped/archive/389/16420/> (accessed: 14.02.2026). [in Rus.]

[10] Ma G. Ispol'zovanie komp'yuternykh tekhnologiy v obuchenii sovremennoy kitayskoy maslyanoy zhivopisi (Use of computer technology in teaching modern Chinese oil painting) // Obshchestvo: sotsiologiya, psikhologiya, pedagogika. – 2023. – No. 11. – S. 200-205. – DOI: 10.24158/spp.2023.11.27. [in Rus.]

[11] Krasil'nikov I.M. Pedagogicheskiy potentsial tsifrovykh tekhnologiy i ego realizatsiya v khudozhestvennom obrazovanii (Pedagogical potential of digital technologies and its implementation in art education) // Otechestvennaya i zarubezhnaya pedagogika. – 2019. – Vol. 1(2). – S. 95-104. – DOI: 10.24411/2224-0772-2019-10007. [in Rus.]

[12] González-Zamar M.-D., Abad-Segura E. Implications of Virtual Reality in Arts Education: Research Analysis in the Context of Higher Education // Education Sciences. – 2020. – Vol. 10(9). – 225 p. – DOI: 10.3390/educsci10090225.

[13] Wang J., Mokmin N. A. M. Virtual reality technology in art education with visual communication design in higher education: A systematic literature review // Education and Information Technologies. – 2023. – Vol. 28. – pp. 15125-15143. – DOI: 10.1007/s10639-023-11845-y.

[14] Salleh M., Khairani M. Z., Rafee Y. M. Integrating mobile learning and

ICT in art education: Exploring the impact of augmented reality and mobile devices on creative pedagogy // Journal of Contemporary Social Science and Education Studies. – 2024. – Vol. 4(3). – pp. 91-100. – DOI: 10.5281/zenodo.14035214.

КӨРКЕМ ЕҢБЕККЕ ОҚЫТУДА ЦИФРЛЫҚ ТЕХНОЛОГИЯЛАРДЫ ЕНДІРУ

*Шагатаева З.Е.¹, Кошкинбаева Н.Р.², Даулетова И.Г.³

*¹Ілияс Жансүгіров атындағы Жетісу университеті
Талдықорған, Қазақстан

²М.Х. Дулати атындағы Тараз университеті, Тараз, Қазақстан

³Әлкей Марғұлан атындағы Павлодар педагогикалық университеті
Павлодар, Қазақстан

Аңдатпа. Мақалада білім берудің жалғасып жатқан цифрлық трансформациясы жағдайында бейнелеу және сәндік-қолданбалы өнер саласындағы білім беру процесіне цифрлық технологияларды енгізу мәселелері қарастырылады. Негізгі назар графикалық редакторларды, 3D-модельдеу жүйелерін, сондай-ақ виртуалды және толықтырылған шындық технологияларын білім алушылардың креативтілігін, көркемдік ойлауын, визуалдық сауаттылығын және кәсіби құзыреттіліктерін қалыптастырудың тиімді құралдары ретінде пайдалануға аударылады. Зерттеудің мақсаты – цифрлық технологиялардың студенттердің оқу үлгеріміне ықпалын бағалау және цифрлық пен дәстүрлі оқыту әдістерін кіріктірудің тиімді тәсілдерін айқындау.

Зерттеу әдістемесі дизайн, бейнелеу өнері және педагогикалық білім беру бағыттары бойынша мамандар даярлайтын жоғары оқу орындары оқытушыларымен жүргізілген студенттерді сауалнамалау мен жартылай құрылымданған сұхбаттарды қамтиды. Зерттеу нәтижелері цифрлық құралдардың студенттердің оқу мотивациясы мен білім беру процесіне белсенді қатысуын арттыруға, заманауи көркемдік техникаларды меңгеруіне және жеке шығармашылық стилін дамытуына ықпал ететінін дәлелдейді. Сонымен қатар цифрлық технологиялар кеңістіктік ойлауды дамытуға, композициялық қағидаттарды және түстер теориясын терең түсінуге, сондай-ақ көркем жұмыстарды орындаудың техникалық дәлдігін арттыруға мүмкіндік береді. Алынған нәтижелер цифрлық технологияларды көркем-педагогикалық даярлықтың сапасын арттыру факторы ретінде білім беру процесіне енгізудің мақсатқа сай екенін көрсетеді. Сондай-ақ цифрлық технологияларды жүйелі қолдану студенттердің цифрлық бағытталған шығармашылық орта жағдайында кәсіби қызметке дайын болуын қалыптастыруға ықпал ететіні анықталды.

Авторлар білім беру бағдарламаларының мазмұнын жаңарту, педагогтердің цифрлық құзыреттіліктерін дамыту және білім беру ұйымдарының материалдық-техникалық базасын жаңғырту қажеттігін атап көрсетеді. Мақалада дәстүрлі және цифрлық тәсілдерді теңгерімді түрде кіріктіру көркемдік білім берудің инновациялық дамуының және креативті индустриялар үшін болашақ мамандарды сапалы даярлаудың маңызды шарты ретінде айқындалады.

Тірек сөздер: цифрлық технологиялар, көркемдік білім беру, графикалық редакторлар, 3D-модельдеу, креативтілік, виртуалды шындық, толықтырылған шындық, цифрлық педагогика

ВНЕДРЕНИЕ ЦИФРОВЫХ ТЕХНОЛОГИЙ В ОБУЧЕНИИ ХУДОЖЕСТВЕННОГО ТРУДА

*Шагатаева З.Е.¹, Кошкинбаева Н.Р.², Даулетова И.Г.³

*¹Жетысуский университет имени Ильясa Жансугурова
Талдықорган, Казахстан

²Таразский университет им. М. Х. Дулати, Тараз, Казахстан

³Павлодарский педагогический университет имени Әлкей Марғұлан
Павлодар, Казахстан

Аннотация. В статье рассматривается интеграция цифровых технологий в образовательный процесс в области изобразительного и декоративно-прикладного искусства в условиях продолжающейся цифровой трансформации образования. Основное внимание уделяется использованию графических редакторов, систем 3D-моделирования, а также технологий виртуальной и дополненной реальности как средств формирования креативности, художественного мышления, визуальной грамотности и профессиональных компетенций обучающихся. Цель исследования заключается в оценке влияния цифровых технологий на учебную успеваемость студентов и определении эффективных подходов к интеграции цифровых и традиционных методов обучения. Методология исследования включает анкетирование студентов и полуструктурированные интервью с преподавателями вузов, осуществляющими подготовку в области дизайна, изобразительного искусства и педагогического образования. Результаты исследования подтверждают, что цифровые инструменты способствуют повышению учебной мотивации и вовлечённости студентов, освоению современных художественных техник и развитию индивидуального творческого стиля. Кроме того, цифровые технологии способствуют развитию пространственного мышления, более глубокому пониманию композиционных принципов, теории цвета и повышению технической точности выполнения художественных работ. Полученные результаты

свидетельствуют о целесообразности внедрения цифровых технологий в образовательный процесс как фактора повышения качества художественно-педагогической подготовки. Также установлено, что систематическое использование цифровых технологий способствует формированию готовности студентов к профессиональной деятельности в условиях цифрово ориентированной творческой среды. Авторы подчёркивают необходимость обновления содержания образовательных программ, развития цифровых компетенций педагогов и модернизации материально-технической базы образовательных организаций. В статье акцентируется внимание на сбалансированной интеграции традиционных и цифровых подходов как условия инновационного развития художественного образования и обеспечения высокого качества подготовки будущих специалистов креативных индустрий.

Ключевые слова: цифровые технологии, художественное образование, графические редакторы, 3D-моделирование, креативность, виртуальная реальность, дополненная реальность, цифровая педагогика

Received / Мақала түсті / Стаття поступила: 12.02.2026

Accepted: / Жариялауға қабылданды / Принята к публикации: 25.09.2026

Information about authors:

Shagatayeva Zaure Yernazarovna (contact person) - PhD, Deputy Dean for Research Impact, Faculty of Physical Culture and Art, Zhetysu University named after Ilyas Zhansugurov, e-mail: zaurika@mail.ru, ORCID <https://orcid.org/0000-0003-3637-1009>.

Koshkinbayeva Nurgul Ryspayevna - Associate Professor, Taraz University named after M. H. Dulati, e-mail: nr.koshkinbaeva@dulaty.kz, ORCID <https://orcid.org/0000-0003-3657-4295>.

Dauletova Indira Gadilbekovna - Master of Technology, Pavlodar Pedagogical University named after Alkey Margulan, e-mail: d_indira_87@mail.ru, ORCID <https://orcid.org/0009-0007-1263-1589>.

Авторлар туралы мәлімет:

Шагатаева Зауре Ерназаровна (байланысушы тұлға) - PhD, деканның ғылыми зерттеу жұмыс жөніндегі орынбасары, Ілияс Жансүгіров атындағы Жетісу университеті, e-mail: zaurika@mail.ru, ORCID <https://orcid.org/0000-0003-3637-1009>.

Кошкинбаева Нургуль Рыспаевна - қауымдастырылған профессор, М.Х. Дулати атындағы Тараз университеті, e-mail: nr.koshkinbaeva@dulaty.kz, ORCID <https://orcid.org/0000-0003-3657-4295>.

Даулетова Индира Гадильбековна - технология магистрі, Әлкей Марғұлан атындағы Павлодар педагогикалық университеті, e-mail: d_indira_87@mail.ru, ORCID <https://orcid.org/0009-0007-1263-1589>.

Информация об авторах:

Шагатаева Зауре Ерназаровна (контактное лицо) - PhD, заместитель декана по научно-исследовательской работе, Жетысуский университет имени Ильяса Жансугурова, e-mail: zaurika@mail.ru; ORCID <https://orcid.org/0000-0003-3637-1009>.

Кошкинбаева Нургуль Рыспаевна - ассоциированный профессор, Таразский университет им. М. Х. Дулати, e-mail: nr.koshkinbaeva@dulaty.kz; ORCID <https://orcid.org/0000-0003-3657-4295>.

Даулетова Индира Гадильбековна - магистр технологии, Павлодарский педагогический университет имени Ёлкей Марғұлан, e-mail: d_indira_87@mail.ru; ORCID <https://orcid.org/0009-0007-1263-1589>.