



## TRENDS IN THE COMPREHENSIVE TRAINING OF ARTS AND CULTURE STUDENTS IN THE CONTEXT OF DIGITALIZATION OF EDUCATION

### TENDENCIAS EN LA FORMACIÓN INTEGRAL DE ESTUDIANTES DE ARTES Y CULTURA EN EL CONTEXTO DE LA DIGITALIZACIÓN DE LA EDUCACIÓN

Sergey Kurgansky<sup>1\*</sup>

E-mail: [rektor@bgiik.ru](mailto:rektor@bgiik.ru)

ORCID: <https://orcid.org/0000-0001-8766-2661>

Natalya Turavets<sup>1</sup>

E-mail: [nata51.n@bk.ru](mailto:nata51.n@bk.ru)

ORCID: <https://orcid.org/0000-0002-9101-4488>

Irina Grichanikova<sup>1</sup>

E-mail: [skd@bgiik.ru](mailto:skd@bgiik.ru)

ORCID: <https://orcid.org/0009-0004-1934-8194>

Vitaly Kistenev<sup>1</sup>

E-mail: [kisvita@mail.ru](mailto:kisvita@mail.ru)

ORCID: <https://orcid.org/0000-0002-5479-0998>

Natalya Segedina<sup>1</sup>

E-mail: [prorektor-vsr@bgiik.ru](mailto:prorektor-vsr@bgiik.ru)

ORCID: <https://orcid.org/0009-0002-9398-8910>

<sup>1</sup> Belgorod State University of Arts and Culture, Russia

\*Corresponding autor

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#### ABSTRACT

This article investigates the consequences of digitalization in education and barriers to its development in training arts and culture students. The phenomenological quantitative approach is employed to study the influence of digital tools on the development of professional, flexible, and meta-skills among both teachers and students at the Belgorod State Institute of Arts and Culture (Russia). Empirical data were collected through semi-structured interviews and focus groups with 18 teachers and 36 students. The results demonstrate the growing importance of self-study and metacognitive strategies in art education and reveal infrastructure and methodological barriers. The study highlights the role of digital technologies in reshaping traditional teaching methods and redefining student engagement. It also reveals that teachers face increasing demands for ICT competence and a lack of institutional support. Ultimately, the findings support the need for the systemic integration of digital technologies and pedagogical innovation in arts and culture education.

#### Keywords:

Digital barriers in education, self-confidence, self-organization, learning process, meta-skills.

#### RESUMEN

Este artículo investiga las consecuencias de la digitalización en la educación y las barreras que impiden su desarrollo en la formación de estudiantes de arte y cultura. Se emplea un enfoque cuantitativo fenomenológico para estudiar la influencia de las herramientas digitales en el desarrollo de competencias profesionales, flexibles y metahabilidades, tanto en docentes como en estudiantes del Instituto Estatal de Arte y Cultura de Bélgorod (Rusia). Se recopilieron datos empíricos mediante entrevistas semiestructuradas y grupos focales con 18 docentes y 36 estudiantes. Los resultados demuestran la creciente importancia del autoaprendizaje y las estrategias metacognitivas en la educación artística y revelan barreras metodológicas y de infraestructura. El estudio destaca el papel de las tecnologías digitales en la transformación de los métodos de enseñanza tradicionales y la redefinición de la participación estudiantil. También revela que el profesorado se enfrenta a una creciente demanda de competencias en TIC y a una falta de apoyo institucional. En definitiva, los hallazgos respaldan la necesidad de la integración sistémica de las tecnologías digitales y la innovación pedagógica en la educación artística y cultural.



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**Palabras clave:**

Barreras digitales en la educación, autoconfianza, autoorganización, proceso de aprendizaje, meta-habilidades.

**INTRODUCTION**

At present, training a versatile specialist based on the digitalization of arts and culture education is becoming an increasingly important task. The main trends in art education have to do with digital technologies that involve developing electronic educational resources, music software technologies (Gorbunova & Pankova, 2020), databases of museums and libraries, examples of interpretations by outstanding performers, etc., for the training and practical work of musicians, choreographers, art and culture managers, librarians, stage artists, etc. The digitalization of art education involves the active introduction of individual educational trajectories for students on the one hand and compliance with the employer's high standards for the competencies of modern specialists on the other.

In the course of their university training, arts and culture students need to obtain additional knowledge and skills in using multimedia tools. This goal, however, is fraught with contradictions, stemming from the conflict between the need for specialists with additional competencies and the focus of the education system on requirements that do not meet the demands of the time.

Today's specialists are faced with the need to master and use electronic educational resources, music software technologies, multimedia portals, and electronic databases. These resources serve as effective tools for gaining additional competencies directed towards developing research and communication abilities, mastering skills in information technology (Zhuzeyev et al., 2024), learning new formats of interpretation of artistic works through familiarization with new audio and video recordings (Meleshkina & Zilina, 2019), and independently analyzing digital educational resources and online communication methods (Abdullayev et al., 2024; Acosta et al., 2025; Chávez-Cárdenas et al., 2025).

The digitalization of education and the use of new technologies in university education create an illusion of access to all knowledge: the organization of the learning process is fundamentally transformed, and the role and functions of the teacher in the classroom, individual classes, the rehearsal hall, etc., change. Learning how to learn becomes a major aspect of the teacher's work. This includes the skills of working with information (Nikolaeva et al., 2023), knowledge of how unverified and harmful information can infiltrate the educational process, the ability to evaluate the essence and inner workings of fundamental processes characteristic of today's way of life, and mastering the

skills of thinking, comparison, interpretation, analysis, and modeling (Gadzaova et al., 2023).

One acute issue at the current stage in the development of the creative potential of arts and culture students is developing professional hard skills, soft skills, and meta-skills (Luquet, 2015), which define the competitive advantage of future arts and culture specialists in the age of digitalization. Researchers argue that the developed hard skills determine the knowledge and abilities that indicate professional mastery, because these are the skills required to solve specific professional tasks (mastery of the technique of playing a musical instrument, acting and pedagogical skills, mastery of the technique of making works of applied art, etc.).

However, university graduates often lack the additional soft skills, which enable the young specialist to solve significant problems in professional communication and adapt to modern society. Thus, soft skills become the foundation of professional self-realization. The term "soft skills" entered discourse in the early 21st century, referring to additional requirements for specialists in the labor market (Mukhametkairov et al., 2024). Some researchers view soft skills as centered around the development of communication and management skills, as well as emotional intelligence (Afanasyev et al., 2017).

Researches believe that the digitalization of education opens great opportunities for interpreting the processes inherent in creativity and education. The mastery of soft skills involves communication using artistic images, promoting professional cooperation, and developing the ability to listen and achieve harmony and success in practical work (Afanasyev et al., 2016; Soria-León, 2025). In addition, soft skills include innovative abilities, the desire to experiment rooted in concentration and perseverance, time management, self-discipline and self-development, a focus on self-expression and presenting one's achievements, etc. (Sydykova et al., 2018).

The current context of digitalization in education requires comprehensiveness in developing systemic competencies that rely on the combination, interaction, and interpenetration of different activities. The phenomenon of soft skills boils down to the need to gain general cultural competencies and accumulate emotional experiences when studying at an arts and culture university. The digitalization of contemporary higher education and the mastery of information technology contribute to the creative potential of arts and culture students. Furthermore, these factors justify the need for interdisciplinarity, which provides for specialized training in the framework of competencies including art skills, media design skills, multimedia skills, etc. (Agin, 2024; Chávez et al., 2025). There is growing demand for specialists with multimedia skills, such as

web designers, lighting designers, set designers, graphic designers, etc., as well as for professionals possessing media design skills, including sound producers, animation artists, producers, arrangers, audio and video editors, etc. (Kashapova & Ni, 2023).

Despite the importance of obtained professionally significant skills, the level of which varies as they are developed throughout the person's life, it is important to emphasize the role of meta-skills in training arts and culture specialists, because these skills facilitate the continuous improvement of professionalism. The overarching goal of education today is learning how to learn, which requires the individual to take on a proactive role and independently master new knowledge, abilities, and competencies.

The term "meta-skills" was first coined in a theory of four types of metacognitive skills: tacit (no awareness of the learning strategy), aware (some grasp of the types of thinking used, but no active awareness of it), strategic (focusing on obtaining knowledge by applying learning strategies), and reflective (ability to organize one's thinking and evaluate learning success). Importantly, the presence of meta-skills has no concrete classification. In general terms, these skills guarantee career growth, continuous self-development, and self-improvement and testify to the person's ability to learn, adapt to an evolving environment, think critically, analyze the information received, determine its reliability, and substantiate conclusions aimed at predicting and designing their training process.

MATERIALS AND METHODS

Our study, aimed at identifying key trends in the training of arts and culture specialists in the context of digitalization, used a quantitative research approach focused on understanding the meanings and strategies formed in educational practice. This choice of methodology was determined by the need to explore the complex relationships between pedagogical technologies, students' individual trajectories, and the institutional contexts of culture and art universities, which necessitates inductive logic and openness in the interpretation of data.

Our study employs a qualitative phenomenological design to explore the subjective experience of students and teachers in the process of learning hard skills, soft skills, and meta skills based on the introduction of digital educational technologies. This phenomenological approach allowed us to investigate how the participants perceived and interpreted their educational path and to identify the specific pedagogical and cultural contexts affecting the development of their professional and meta-competencies.

Empirical data was collected in 2024 using semi-structured interviews with teachers of specialized disciplines (music education, theater, and media design) and focus group discussions with 3rd-5th year students majoring in music education, library and information science, and performing arts. In total, the study included 18 teachers and 36 students from the Belgorod State Institute of Arts and Culture (Russia). Interviews were conducted in person and via video calls (Telemost, Yandex.ru) and lasted 20-40 minutes.

Data analysis involved thematic analysis with open coding and subsequent categorization of semantic units.

The study's reliability was achieved through the triangulation of methods and sources and by including external expertise at the stage of interpreting the results.

The study complied with international ethical norms: participation was voluntary, and the participants were informed that all response data would be used in a generalized form.

RESULTS AND DISCUSSION

The results demonstrate that the key trends in the comprehensive training of arts and culture students under the digitalization of education relate to interest in the new approach that integrates the emotional and rational aspects of learning. This emphasizes the need to improve arts education in terms of developing meta-competence.

TABLE: THE CONSEQUENCES OF DIGITALIZATION AND BARRIERS.

Category	Description	Percentage (%)
Consequences of digitalization		
Teachers: digital load	Feel an increase in requirements for ICT competence	83



Students: the importance of meta-skills	Believe it is important to be able to learn independently	78
Barriers for teachers		
Infrastructure barriers	Lack of devices and access to platforms	38
Methodological barriers	Lack of support for digital methods	42
Curriculum barriers	Digitalization is not incorporated into curricula	56

Source: Prepared by authors

}These empirical data support the urgency and specificity of developing hard skills, soft skills, and meta-skills among arts and culture students. 78% of the students highlight the growing importance of meta-skills due to the need to independently plan training and analyze digital content (Table 1).

In this process, the mastery of electronic educational resources implies access to the achievements of world art culture and mobility in positioning one's achievements; the opportunity to improve one's skills not only in the educational organization (Kryucheva & Tolstoukhova, 2023); personification with a focus on self-development and self-improvement based on one's unique characteristics; and intensification of the training process due to differentiation in the development of professional skills and the reduction of the period of training due to individual development routes (Popov et al., 2021).

Teachers in higher education are faced with the acute issues of the content of the key components of metacognition in art and how to develop meta-skills within the established system of training. According to teachers, the main challenge posed by digitalization is the need to take advanced training courses and adapt teaching methods. Respondents from among teachers (83%) believe that digital platforms facilitate wider access to relevant data and methodological materials but require serious training from the teacher.

Overall, our findings are consistent with those of Andreeva & Pronina (2024). These researchers stress the importance of developing metacognition as a crucial element that supports continuous improvement in the creative field, as well as the choice of strategies and the allocation of time resources to improve one's mastery.

However, the development of these processes is hindered by barriers associated with advancements in technology and the features of applying it in the educational process. The interviews with teachers point to the following key barriers to digitalization:

- lack of technical infrastructure in some departments (38%);
- poor support for teachers on digital platforms (42%);
- insufficient integration of the digital format into training programs (56%).

Thus, digitalization requires appropriate technological equipment (Kulakova, 2022) and a revision of pedagogical strategies (Akhmetshin et al., 2025). A positive trend is a growing understanding of the significance of meta-competencies that promote students' adaptation and professional growth. These conclusions allow us to concretize the directions of reforms in the educational process: strengthening methodological support for teachers, improving classroom technical equipment, and embedding digital components in the educational standards of arts and culture universities.

CONCLUSIONS

Digitalization of education contributes to the transition to a qualitatively new level of modern art education and the acquisition of new creative experience as part of the digital format of developing professional competence. The comprehensive training of arts and culture students is impossible outside of the digitalization of education, which has become ubiquitous. At the same time, there is a need for serious scientific and theoretical substantiation of the importance of digital technologies in art education, the development of hard, soft, and meta-skills vital for the modern transformation of personnel training, and the possible difficulties, threats, and prospects of the new stage in the development of Russian art education.

The study's limitations have to do with the features of data collection, which could affect the results.

First, all empirical data were collected at a single university — the Belgorod State Institute of Arts and Culture. This limits our ability to extrapolate the results to other regions and types of arts and culture institutions.





The second limitation is the lack of quantitative validation. Our study relied on qualitative methods (interviews and focus groups) without parallel quantitative verification (e.g., mass surveys followed by statistical analysis), which reduces the statistical reliability of the conclusions.

Third, although we tried to avoid subjectivity in the perception of the situation, the phenomenological approach itself involves interpreting subjective experiences, which may limit the objectivity of generalizations.

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