

Distance Digital Technologies in Design Education: Problems and Prospects^{*}

Larisa V. Shokorova ^[0000-0002-2883-1944]¹, Maxim V. Sokolov ^[0000-0003-4406-050X]²,
and Natalya S. Mamirina ^[0000-0003-2097-6214]³

¹ Altai State Institute of Culture, Barnaul, Russia

Larazmei@mail.ru

² Novosibirsk State Pedagogical University, Novosibirsk, Russia

maxma63@mail.ru

³ Altai State Humanitarian-Pedagogical University after V.M. Shukshin, Biysk, Russia

kafdiz@mail.ru

Abstract. The paper is devoted to identifying problematic issues in the professional training of artists and designers in the context of the spontaneous transition of universities to distance learning due to the threat of the COVID-19 pandemic. The differences between online education and distance learning were analyzed. Modern educational resources, services, and online technologies used as auxiliary elements in developing theoretical disciplines were characterized. Objective and subjective reasons were established that have had a negative impact on the quality of artistic training in the conditions of distance learning. There are the following reasons for such an impact: (1) the lack of equal and special conditions for performing practical tasks; (2) the unreadiness of the teaching staff to use digital platforms and distance technologies; (3) the introduction of new forms of communication without direct communication and quick feedback; (4) the lack of students' ability to self-organize and low motivation for a given training format. New boundaries of distance learning in the professional training of artists and designers and their meaningful characteristics were given. As a result, we found that the use of distance technologies in design education has become an integral part of it. These technologies have an undeniable positive impact, but they cannot completely replace traditional training. The implementation of these technologies requires large financial costs for creating special services and a huge additional pedagogical work. Thus, the introduction of remote technologies in the training of designers and artists is possible only as an addition to traditional education. Students must have experience in creative activities.

Keywords: Higher art education · Distance learning · Teaching methods · Digital technologies · Teacher-student interaction in a digital environment

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1 Introduction

The current conditions of functioning of the world, including the Russian education system, caused by the need for self-isolation due to the threat of the COVID-19 pandemic, have become a serious challenge for the teaching staff, students, and their parents. The need to reorient the entire educational process to distance learning in the shortest possible time required an active search and introduction of new tools and technologies for teaching disciplines, communication between teachers and students, and adaptation of curricula to the current realities of educational activities.

In the age of digital technologies, the emergence of new forms, methods, and teaching technologies, including in art education, is crucial and in demand. Design education has also developed on the massive open online courses [MOOC] over the past decade. However, there is a significant difference between online learning and distance learning, manifested in the pedagogical approach to the education, its integrity, design, and content, as well as the availability of “methodological and control-measuring materials that ensure the achievement of learning outcomes in the format of exclusively e-learning” [2, 107].

The full-fledged development of such an electronic course is a rather lengthy process that requires textual structuring and video recording of materials, as well as the involvement of related specialists. In addition, a certain approbation of the course must take place, showing its strengths and weaknesses and subsequent adjustment of its methodology.

At the same time, leading experts note that even in carefully designed online courses (mostly designed for a period of three to six months), it is almost impossible to master all the specifics of design. Highly specialized courses in individual subject areas (color science, computer graphics, fundamentals of composition and shaping, etc.) are not bonded by interdisciplinary connections. The gap between theory and practice allows one to master only certain block knowledge and algorithms for working in graphic editors. Whereas today, modern designers are primarily required to analyze information, think unconventionally, and generate new fresh ideas. In other words, it is necessary to have synthesizing professional thinking, which can be formed only in direct contact with a mentor-teacher through co-authoring the formation of a plan and performing practical tasks.

In the conditions of the spontaneous transition of universities to distance learning by teachers in a short time, it was necessary to transfer all lectures, seminars, and practical classes to the online environment, which caused extreme difficulties, especially for special art disciplines. Yu. M. Tyutyunova noted that “obeying general trends, art education, based on the principles of knowledge transfer from teacher to student through a visual, ‘live’ display of mastery techniques, is now being transformed, acquiring new forms” [6, 108]. At the same time, modern realities (the presence of a large number of online courses, the issuance of training certificates) indicate that the creation of a virtual learning environment in the professional training of artists and designers is becoming quite an independent direction of educational practice, requiring both the development of distance learning technologies and the search for the most optimal ways of virtual translation of knowledge.

The ongoing processes of eliminating the COVID-19 pandemic indicate the inevitability of the emergence of a state of “new normal” in uncertain conditions that require flexible adaptation to a new way of life. In many countries, online education has long ceased to be innovation; it is steadily developing, harmoniously combining offline and online education by including online courses in curricula. In the Russian education system, the abrupt transition from offline to online revealed certain problems of mastering the basic educational program, especially in applied specialties.

In Russian universities, various educational resources, services, and online technologies were actively used for teaching even before this unexpected and massive transition to an online format. However, such technologies were mainly used as an auxiliary in developing theoretical disciplines. For instance, there is a Moodle electronic environment, which is widely used in universities. This platform allows one to upload a large set of elements to the electronic course, including a series of lectures, tasks for independent work, visual material, video lessons, and much more. In addition, various forms of feedback (e-mail, messengers, electronic diaries, etc.) allow the teacher to track the learning outcomes visually and, if necessary, adjust the learning process. Nevertheless, conducting practical classes in art disciplines in this educational environment was not previously intended.

In this regard, it is crucial to analyze the possibilities of distance technologies that give the best result in mastering art specialties. It is also necessary to identify problematic aspects of using digital platforms for conducting practical classes in special disciplines.

2 Materials and Methods

In the organization of distance learning in special art disciplines, both subjective and objective problems have arisen. Objective reasons include “different levels of development of the information infrastructure of universities, the availability of high-speed internet, full saturation of the information and communication environment” [5, 24]. In addition, not all academic disciplines were fully provided with electronic educational resources.

The next objective reason that has had a negative impact on the quality of art training in the conditions of distance learning is the lack of special conditions for practical classes, workshops that house various equipment necessary for specific artistic works. “At home, it is impossible to perform etchings associated with etching a metal board. There are no etching machines; therefore, there are no conditions for the execution of gravure printing, which includes all the manners of etching” [4, 369]. Equipped computer classes with licensed special graphic editors necessary for visualizing design projects were also out of reach. “In other words, the same learning conditions for everyone when attending standard classes in equipped classrooms have been replaced by everyone’s home opportunities” [1, 58]. The indicated reason implies the need to adjust the content of the disciplines since many tasks require many hours of sequential execution directly with an individual demonstration of the methods of work by the teacher. Therefore, no online formats

and videos can convey the required pressing force on clay, methods of color kneading, transmitting its nuances, and other techniques. During forced distance learning, mainly short-term tasks were performed, followed by their repetition in the usual full-time format of classes.

First, the subjective reasons include the unwillingness of many teachers, practicing artists and designers, to use digital platforms and remote technologies in conducting practical classes in art disciplines (painting, sculpture, composition, drawing, etc.). Here it is important to focus on the difficulties of translating practical classes into an online format, complicated by the requirements of creating a pedagogical design of an electronic course. It was necessary to make text, video, and audio recordings in a clear and convenient form in a very short time. Then, it was vital to saturate the course with various visualization tools, including graphic images and video materials, creating high-quality educational content.

The new work format took up a huge amount of the teacher's time, sometimes consulting 24/7. The situation was also complicated by the changing nature of communication due to the practical lack of feedback and live communication. A dry text description of the task does not motivate students to perform it as much as the emotional energy of a direct pedagogical attitude. At the same time, even communication in systems such as Zoom or Skype creates only the illusion of close interaction with the student.

The second subjective reason that reduces the quality of distance learning is the problem of self-organization of students, who are ready neither for independent work nor for intellectual and physical exertion, which are inevitable when studying at a university. The greatest difficulty is caused by the perception of theoretical material. The students do not know how to formulate and argumentatively defend their point of view; they cannot organize their own time. Self-development of an educational program requires a clear understanding of the purpose of learning, self-control, and self-planning of one's time. Unfortunately, not all students have these qualities.

Thus, the identified problematic aspects of using digital platforms for practical classes in special disciplines require finding an adequate and most effective way to solve them in the conditions of forced distance learning.

3 Results

No matter what difficult periods education is going through, it is indisputable that the educational process should continue while maintaining the quality of training of higher school graduates. The university will never return to the former traditional format of education. Streaming online lectures that gather huge audiences of students from different regions appeared to be too economical. The widespread introduction of online learning has given universities a wide opportunity to present their e-courses in the world educational arena, naturally contributing to their popularization.

Today, 10 leading universities of the country offer their online courses for free on the modern educational platform "Open Education" (<https://openedu.ru/>).

However, for the qualitative development of these courses, students need a closer individual connection with their developers, which they could not provide due to the huge number of users. Therefore, a university teacher has to master the methodology of this course together with students and comment on the lectures of leading professors. Therefore, teachers must develop and improve their own e-courses, which will organically complement the traditional art practice. "Today, the world community prioritize blended learning, which allows one to use the strengths of both full-time forms of education and various offline and online tools" [3, 54].

Thus, in the current conditions, it is essential to formulate new boundaries of distance learning in design education:

- Access to virtual acquaintance with the art collections of world museums and galleries, which is particularly important for students of regional universities due to territorial remoteness;
- Opportunity to listen to lectures by leading design speakers, including a large and comprehensive amount of information about new trends, the development of modern technologies, their impact on design, production, and the market through vivid and illustrative examples;
- Systematization and informative expansion of lecture and practical material, facilitating its accessibility for independent mastering by students;
- Creation of an electronic database of students' academic papers;
- Improvement of the digital literacy of the teaching staff.

Among the new digital educational technologies in art education, one can see the creation of special services that allow one to simulate the technology of working with art materials, acquiring basic competencies and the necessary range of knowledge, skills, and abilities.

4 Discussion

The expediency of introducing a digital learning format into the professional training of artists and designers caused a heated discussion in the pedagogical environment. During any cardinal changes, there are both supporters and opponents. However, among practicing teachers-artists and designers, distance learning forms cause categorical denial. There is an opinion that teaching art specialties requires immersion in a creative environment that forms aesthetic assessment, communication skills, and direct conditions for mastering the technologies of working with art materials.

The positions of the supporters of distance learning [3; 6] are based on the interest of modern youth in interactive educational content, which causes the need to find a different pedagogical style in the presentation of teaching material. However, the general opinion of both supporters and opponents of distance learning in design education is, first, the mandatory presence of a student with a certain experience of creative activity, an understanding of the algorithm for creating a piece of art, and knowledge of the technology of working with specific materials. Second, the student must be willing to learn and be able to do it. Thus, even free

access to the best lectures of leading scientists will not increase students' knowledge if they are not ready to accept this material. Therefore, we believe that introducing distance learning in the training of designers and artists requires a deep scientific and pedagogical understanding; it is possible only as an addition to traditional training.

5 Conclusion

In conclusion, we should note that online education will become one of the global components of the educational process in the near future. Nonetheless, the implementation of online education requires quite large financial costs and additional pedagogical work. Various platforms and electronic resources providing educational materials were created to solve certain tasks; they have significant and promising positive aspects in the development of theoretical sciences. Nevertheless, training in special professional and practical skills in design and art was not originally included in the plan. The experience gained in teaching in critical situations allowed the teaching staff to see the wide possibilities of distance technologies in the training of artists and designers, increase their digital literacy, and adjust teaching methods that are still used together with traditional practical classes.

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