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**EFFECTIVENESS OF DIGITALIZATION OF ART DISCIPLINES**  
**IN THE CONTEXT OF DISTANT EDUCATION**

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**Abstract**

The extreme conditions caused by COVID-19 pandemic forced higher education institutions in almost all countries of the world to switch to distance learning urgently. The first attempts of mass use of educational online technologies were made more than ten years ago, but due to objective reasons such as the lack of a proven methodology and problems with the technical and informational component, they did not achieve the required level of success. Large-scale systemic studies of digitalization of higher education were not carried out and some works were focused on technical areas of training. We have created a target group of students studying in artistic and creative areas of training, so that their profiles are sufficiently different from each other and the obtained data are objective and cover a larger number of specialized disciplines. The study involved undergraduate students of the Department of Design, Art Education and Technology of Yelets State University named after I. A. Bunin. These students studied using distance learning technologies in the spring semester of the 2019–2020 academic years. The total number of students included in the study group was 61 people. On the basis of the opinions of students expressed in the answers to the questions of the test questionnaire, the enlarged groups of the most effective teaching methods in artistic and creative disciplines, their features and problems of digitalization in the conditions of distance education were identified and the ways of their possible solution were outlined.

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## 1. Introduction

The COVID-19 pandemic in 2020 forced the higher educational institutions of the Russian Federation to switch to distance learning urgently. The very idea of the mass use of distance educational technologies has been well known for a long time. Since 2012, American and European educational institutions have introduced digital online courses in individual disciplines into the educational process, which have not become as popular as their creators assumed for a number of reasons. It was explained by the lack of a general proven methodology, technical, organizational and psychological problems of online education (Dozhdikov, 2020). However, in the realities of our teachers are forced to switch to distance learning, develop educational platforms and create digital resources as soon as possible.

Online education during the first months of the COVID-19 pandemic was quite chaotic, but subsequently the educational process acquired a logical structure, which clearly showed the signs of digital transformation of educational system (Blinov et al., 2020).

All educational institutions in the world were in a difficult situation when it was necessary to switch to new principles of work in the shortest possible time. Taking into account the gained experience, the activities of university teachers in various countries are currently aimed to create such a learning model that will ensure the traditionally high quality of education based on the technical potential of online platforms and will allow them to remain competitive at the international level (Abou-Khalil et al., 2021; Appolloni et al., 2021).

The modern educational space can be fully determined as informational one. There is a steady tendency towards the disappearance of the border between traditional and distance learning in almost all areas of training (Savelyeva et al., 2020). This phenomenon can be considered as the manifestation of the process of digitalization of society as a whole, which will significantly facilitate the access of students to educational resources (Kiselev, 2020).

Before the COVID-19 pandemic, a systematic analysis of the existing problems of higher online education was insignificant. Often, researchers paid their attention to the areas initially focused on the widespread use of information and communication computer technologies. The objective possibilities of digitalization and the use of distance learning in technical and humanitarian areas of training differ significantly. However, recently, the studies have appeared on the peculiarities of the structure of study and development of the visual component of art disciplines in a distant format. Relevant educational technologies are scientifically justified and the methods and recommendations for teachers are provided, which allow making creative online classes as effective as possible (Adiloğlu et al., 2021).

For successful organization of distance learning in art disciplines, it is necessary to adapt the existing pedagogical technologies in order to ensure a decent standard of university education (Pankratova & Konopko, 2021). It is necessary to focus on such aspects as the digital presentation of educational material, the formation of remote work skills of students and organization of networking.

It is obvious that the spread of COVID-19 and the subsequent quarantine has accelerated the introduction of distance learning many times. Some researchers have expressed the opinion that online education can become the basis of a new learning model that will replace existing traditional forms in case of necessity (González, 2021).

## **2. Problem Statement**

The analysis of modern studies on digitalization of higher education showed that most of the developments are aimed to form general cultural, professional, specialized technical competencies, while the features of digitalization of disciplines of artistic and creative orientation have not been studied in fact. Balanced integration of the visual component into distance education should be a natural continuation of the development of information era (Kremen, 2020). In our opinion, this problem is very significant and requires more thorough consideration, since it affects the fundamental issues of the introduction of the achievements of world culture into distance learning.

## **3. Research Questions**

The research questions are as follows:

1. What are the most effective digital methods of arts education?
2. What are the advantages and disadvantages of online education methods determined during the forced emergency distance learning in arts and creative disciplines during the COVID-19 pandemic in 2020?

## **4. Purpose of the Study**

The purpose of our study was to create a target group of students of artistic and creative training programs, so that their profiles are sufficiently different from each other and the data obtained during the study are objective and cover a larger number of specialized disciplines. Taking into account the experience of Russian and foreign scientists presented in scientific articles, we developed a test questionnaire in order to determine the effectiveness of distance learning methods. According to the opinions of students, expressed in the answers to the questions of the test questionnaire, we determined the most effective teaching methods, as well as the problems in the digitalization of art disciplines and outlined the ways of their possible solution.

## **5. Research Methods**

We conducted a study on the basis of the results of education in March-July 2020 during the COVID-19 pandemic, when students and teachers of higher educational institutions of the Russian Federation were forced to switch to distance learning. Thus, our methods were largely reasoned by this factor and were suitable for the majority of the members of study group with the most widespread available software products and information resources.

For a quantitative and qualitative analysis of the opinions of students on the research topic, a test questionnaire was created using the online service Google Forms. It included 10 questions and the approximate time for careful answers was 20–30 minutes. The questions were as follows: to choose one or more suitable answers, to set a scale of correspondence, to enter your own short or detailed answer to the proposed question. Various types of questions allowed students to express their opinion as correctly as possible. Using simple statistical methods of data analysis in Excel we had the opportunity to reveal

objectively the degree of the current efficiency of digitalization of art disciplines in the context of modern distance education.

The study involved undergraduate students of the Department of Design, Art Education and Technology of Yelets State University named after I.A. Bunin, who studied using distance learning technologies in the spring semester of the 2019–2020 academic year. The total number of students included in the study group was 61 people. The detailed data are shown in Tables 01 and 02.

**Table 1.** Academic years of the students in the study group

Year	Number of students	Per cent ratio, %
1	12	20
2	17	28
3	15	24
4	17	28
Total:	61	100

The information in table 01 shows that the studied sample of students consists of 20 % of 1<sup>st</sup> year students, 28 % – the 2<sup>nd</sup> year, 24 % – the 3<sup>rd</sup> year, 28 % – the 4<sup>th</sup> year. It follows that all undergraduates are presented fairly evenly and this is an additional indicator of the objectivity of this research.

**Table 2.** Distribution by training programs of students included in the study group

Training programs	Number of students	Per cent ratio, %
Design	25	41
Art education and additional education	21	34
Fine arts and technology	15	25
Total:	61	100

According to Table 02, the training programs of students who were in the study group are diverse and include: design – 41 %, art education and additional education – 34 %, fine arts and technology – 25 %. This made it possible to consider the effectiveness of digitalization of basic disciplines in regards to the opinion of students in different areas of art education.

## 6. Findings

At the Department of Design, Art Education and Technology, Yelets State University named after I.A. Bunin digital distance learning courses are developed in the following creative disciplines: “Academic Drawing”, “Architectonics of Volumetric Forms”, “Basics of Type Composition”, “Modern Means for Design Projects”, etc. As a rule, the disciplines of the art cycle consist of theoretical material studied in lectures, a practical part, where professionally significant skills and abilities are formed and certification. There are the methods of remote presentation of theoretical information and their visual support but there are practically no developments devoted to the features of practical online teaching of art subjects.

The creative directions of training are characterized by a high degree of individual approach and close cooperation of students with a teacher, while the process of education in the remote conditions is mostly presented by individual work of students.

Modern information and communication technologies for art classes can be conditionally divided into two large groups: real-time mode and delayed response mode. The first group provides high interactivity and instant exchange of information during scheduled classes. During the delayed response mode, the received materials are studied and the tasks are completed by students at a convenient time.

**Table 3.** Evaluation of the effectiveness of distance learning forms in art disciplines

Distance learning form	Efficiency of theoretical teaching, %	Efficiency of practical exercises, %
Email	8	5
Social networks	12	13
Online classes (lectures, seminars, web conferences, etc.)	51	31
Video broadcast (video records) of master classes	8	43
Electronic information and educational environment of an organization	21	8
Total:	100	100

The results of a comparative assessment of the effectiveness of forms of distance education in art disciplines (Table 3) show that, according to students, the practicability of the use of the same methods in the course of theoretical training and in practical classes is quite different. Online classes (lectures, seminars or web conferences) are considered as the most effective form of theoretical distance education – 51 %, the next most popular are: electronic information and educational environment of an organization – 21 %, social networks – 12 %, e-mail and video broadcast (video records ) master classes – 8 %. The leader in terms of efficiency of practical work was video broadcasts (video records) of master classes – 43 %, online classes (lectures, seminars or web conferences) – 31 %, social networks – 13 %, electronic information and educational environment of an organization – 8 % and email – 5 %.

Nowadays, e-mail is a well-known, traditional means of communication between educators and students. Its advantages for art disciplines include ease of sending materials and visual support of a large volume, the ability to work off-line when a student has enough time to complete tasks and provision of feedback, but this technology does not provide instant response in the process of consultation, which is easily carried out by modern communication technologies.

Popular social networks, such as Facebook, VKontakte and Odnoklassniki also provide the ability to transfer text and graphic information and have chat technologies, which are their significant advantage. They allow all members of a study group to promptly and synchronously provide explanations of the material on new topics, creative tasks, independent work and questions.

Online classes (lectures, seminars, web conferences, etc.) are one of the most popular and demanded forms of distance education due to the implemented interactivity function and the ability to show presentations on the studied material in real time. However, it is this format that is most demanding in terms of technical and software equipment and the speed of connection to the information and communication network of the Internet. Modern platforms for this kind of classes, such as Zoom, Google Hangouts, Jitsi Meet, etc. allow connecting up to one hundred participants at the same time, which is good on the one hand as more audience is covered, but in the case of practical exercises, a teacher simply

cannot answer the questions and evaluate the quality of the implementation of creative projects of all students.

One of the specific forms of distance learning in arts and creative disciplines is video broadcast or video records of master classes. This method is the best way to demonstrate the process of performing creative tasks, where a teacher organizes the work of a group, shows the sequence of stages of work on a particular project in real time and answers questions either during video broadcast or in chat. In this case, the load on a teacher increases many times at the preparatory and at the main stage of a lesson. Special requirements are imposed on the preparation of a video broadcast: it is necessary to tune the spotlights and main lighting, calibrate the camera and technical means for correct color reproduction and provide the possibility of multiple enlargement of a separate fragment of an art project. However, this methodology does not allow a teacher to track the progress and correctness of the work of students and to make adjustments to their work, but it makes the process more visual and understandable for students, which allows teachers to quickly include students in creative activity.

We suppose that among all the considered forms of distance learning, the electronic information and educational environment of an organization has the greatest potential, although at present it has not yet received sufficient development. In the Russian Federation its status is fixed as an integral part of the system of modern higher education at the state level, which should accumulate information and educational resources in disciplines and practices, all the necessary components of the educational process and the results of competencies mastering by students. It is the electronic information and educational environment that, over time, can combine all the advantages of the considered online forms of art education.

## 7. Conclusion

The capabilities of the use of distance education in humanitarian and especially creative training programs are much less than in technical ones. Nowadays the attempts are being made to create an optimal methodology to digitalize art online learning and solve technological, organizational and communicative problems. As a result of the research, the most effective ways to conduct distance learning in creative disciplines were revealed and their features, advantages and disadvantages were determined. This will make it possible to choose the right vector for the creation of a new educational model, adjust the direction of professional development of teachers in right direction, develop electronic resources for theoretical disciplines and specialized courses in practical and laboratory classes, prepare the necessary equipment, devices and software products. The trend towards the gradual, scientifically grounded introduction of digital technologies in teaching art disciplines, including in a distance format, is an obvious and objective necessity.

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