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**FORMS OF INTERACTION BETWEEN MUSEUMS AND
EDUCATIONAL ORGANIZATIONS IN THE INFORMATION
SOCIETY**

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Abstract

In the Age of Information, educational organizations and museums increasingly use modern technologies and technological means for educational and cultural activities. At the present time, new forms of interaction between museums and educational organizations are being created. Modern technology provides access for every schoolchild to the new opportunities for mastering culture, gaining experience, self-expression and communication; create educational opportunities for teachers, and enrich their methodical abilities. Thanks to the new informational technology, virtual museums, web-sites and media networks allow repeated expansion to the audiences, making museums more open and accessible; however, that does not mean that virtual museums must and can replace real museums. Their function should be based on the principle of complementarity.

In this article, we will deal with the experience of using virtual reality by both famous and not well-known local museums. We describe forms of work created by enthusiasts of virtual museums of education institutions and analyze museum web sites. This article also contains the presentation of new directions of interaction between museums and schoolchildren through social networks. In this article, we examine not only advantages of innovative forms of implementation, but also possible risks that are already present, for example, schoolchild's addiction to the computer.

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1. Introduction

The Russian culture exists in the rapidly changing conditions: information technology has a significant impact on the socio cultural processes. The information and telecommunications network "Internet" is becoming increasingly important for human life, being an unavoidable phenomenon of reality and, consequently, for the formation of a maturing personality.

The introduction of modern electronic devices, information and communication technologies to the activity of cultural institutions has become more notable. In the state of accelerating rates of informatization, museums, along with traditional forms and methods of work, use modern technology in their activities. Museums meet additional tasks connected with the creation of informational products, such as virtual museums, electronic catalogues and registries of cultural heritages, accessible to the widest social layers (Rodionov, Andreev & Rodionova, 2017).

This allows the joint cultural and educational work of schools and museums to bring it to a new level, creates conditions for single information, museum and educational space. There are new forms of work, organization and methodical developments for them: a virtual museum, museum applications for computers and mobile devices, educational portals, virtual lessons etc. The traditional forms of work are enriched with technical means: lessons at museums, excursions and others.

2. Problem Statement

This article explores the new forms of interaction between museums and educational organizations in the information age. At the present, these new forms appear rapidly enough; they are diverse and, in most cases, are spontaneous. At the theoretical and methodical level, the understanding of the ongoing processes related to the informatization of the museum and educational space has not yet come to fruition. Beyond the thorough methodological development and the single methodical base related to the informational technologies in the museum and educational sphere, there are always possible risks of unproductive pedagogically unjustified immersion in the use of informational technologies. It is necessary to pass through this way: from describing and analyzing new forms of museum work for educational purposes to generalizing the experience, creation of methodological bases and specific methods of this work.

3. Research Questions

In this case, there are several questions that require theoretical and methodological answers to form a positive and effective practice of museums and educational organizations activities in the conditions of information society. These questions are divided into those that need to be addressed in the short term and those that require in-depth analysis, monitoring situations, experience generalization and creation of theoretical bases for interaction between the factors of the museum and educational space. In this article, we raise the question of the nearest zone of action: to find and introduce the most interesting and productive forms of work between museums and educational institutions, the positive influence of museums in the educational practice of schools.

4. Purpose of the Study

The objective of this article is to review the experience of the development of interactions between museums and educational institutions, as well as the possible risks of excessive influence of information technologies on schoolchildren due to increased attention of teachers and museum personnel to the organizational interaction of the virtual space.

5. Research Methods

We use the following methods in the course in this work: analysis of the activities of museums and schools, selection of organizations by studying their practical activities, plans, programs and sites, analysis of scientific publications on the problem.

6. Findings

The analysis of this article, museums with educational institutions in the various parts of the country shows that the virtual museum is one of the most common and popular forms of interaction between museums and educational institutions (Ivanova, 2016).

It is necessary to define the term "virtual museum", since it has already been formalized in normative acts and reflected in scientific publications. According to the technical recommendations for the creation of virtual museums, developed by the Ministry of Culture of the Russian Federation, the virtual museum is "an interactive multimedia software product that presents museum collections in electronic form" (Giaccardi, 2006).

The virtual museum includes Web-pages, located on one or several Web-sites, containing catalogues and photos of exhibits from various art collections. There are two types of virtual museums: a flat virtual museum (catalogue) and 3D (it allows to pass through the museum halls and look at the exhibits from different angles). According to researchers, the main characteristics of the modern virtual museums are: the work through the internet, the reproduction of the catalogues and exhibits of the real museums in 3D format (Krivosheev, 2017).

The very first museums Web-pages began to appear in 1991. These were small sites containing the information about the museum itself, its geographical location (address) and their schedule. Later, virtual expositions began to appear on the sites of museums. Currently, museums create several virtual exhibits and combine them into virtual tours. When they create virtual museums, they use various software, including applications for mobile devices.

The goals of creating the virtual museums are to provide the mass access to cultural legacy and world art achievements. According to the museum statistics, which is in public domain, the rate of attendance of these sites and pages of virtual museums is very high: they are an effective source of distribution of cultural values and familiarization of the population with the culture.

Currently, the number and depth of the museum material presented, accessible via the Internet, is continuously growing, and, most likely, in the coming years almost all museums in the world will have their own virtual excursions.

Considering the situation on the part of educational institutions, it is obvious that the virtual museum greatly expands the teacher's abilities and saves his their time. For example, museums prepare

and upload special thematic excursions to their sites, which are convenient to use in the classes (the Hermitage, the Tretyakov Gallery etc.). Virtual museums created by many Russian museums (museums of the Moscow Kremlin, the Tretyakov Gallery, The Russian Museum, the Hermitage, the Pushkin museum of the Fine Arts, the GULAG, The Vorontsov Palace etc.) are estimated by the specialists as informative and convenient.

Let's turn to the practice of using funds represented in virtual Russian museums.

The virtual version of the State Darwin Museum includes virtual exhibitions that are substantial, not distorting the reality and accompanied by clear information. In the virtual museum, anyone can visit the department of microevolution, the study of which begins for the student with an introduction of this term, and then with the exposition of the virtual hall. During the learning process, the student can see the texts, which greatly improves the quality of mastering the subject.

The virtual museum of the State Tretyakov Gallery is made on a high content, technological and artistic levels. The site provides the information on the classes and excursion cycles at the virtual museum. Any student, regardless of the location, at any time can visit the virtual museum.

The future of Russia and fates of new generations depend on whether it will be possible for the state and society to preserve and multiply the richest civilizational heritage of Russian culture and to strengthen Russia's dignity and authority in the modern world. This goal can be achieved through the interaction between museums and education system. All virtual versions will be useful here, both known Russian museums and small local ones.

Saratov Art Museum named after A.N. Radischev was opened in 1885 and became the first public museum in the Russian Empire. The basis of the exhibits are the works of I.K. Aivazovsky, A.N. Benois, V.E. Borisov-Musatov, V.L. Borovikovsky, K.P. Brullov, P.P. Konchalovsky, K.S. Malevich, V.G. Perov, K.S. Petrov-Vodkin, I.E. Repin, V.I. Surikov, I.I. Shishkin and many other artists and sculptors. It is important that the virtual museum is an exact replica of the Radischev museum. There are substantial exhibitions and multilayered information here, which is convenient for different professional, age and educational categories of visitors. In the traditional section "Education" one can find the information from the center of aesthetic and educational programs which is working with the children and youth audiences. The virtual museum has new opportunities for the civil-patriotic, artistic-aesthetic and creative development of the younger generation. This is the reason for the constant and deep cooperation of the museum with the city and regional schools (Lysikova & Polyakov, 2016).

Teachers-practitioners actively use the opportunities of the virtual museum at history, arts, literature, geography, social studies and biology classes. There is a number of publications on the topic of virtual museums in the Russian pedagogical practice. For example, the teacher of Russian language and literature O.Yu. Tokareva in her works describes the experience of using virtual museums, which includes the description of the educational process and methods of work. "Virtual study tour includes the same stages as the usual study tour. It is begun with an introduction dialogue with students, the teacher determines the goals and objectives of the excursion, distributes the route sheets, containing the direction of the tour. Students should pay special attention to ways to navigate the site, from one exposure to another" (Tokareva, 2016).

The teacher especially highlights the role of the search method in activation of the exercises of the students during the virtual excursions: "... the students not only get acquainted with the materials of the expositions, but also actively search for information. This is achieved through the formulation of problem questions before the excursion or the receipt of certain creative tasks" (Tokareva, 2016).

An important point is the accumulation of material and the conclusive discussion. In the course of it "the teacher, together with the students summarizes and systematizes what he has seen and heard, points out the most significant, reveals the impressions and preliminary assessments of the students; outlines creative tasks for them: to write an essay, prepare reports, compose albums" (Tokareva, 2016).

The authors of the secondary school №327 of St. Petersburg, summarizing the results of the school's work "Creation of the virtual school museum" (Antufieva, 2014) notes that the use of information technology, particularly, virtual museums, increases the motivation for learning. Teachers conclude that the subject of virtual museums in such a way that it could be used during the educational process.

The teacher of Kursk electromechanical technical college, S.V Mitrakova (Maksimova) emphasizes the use of an educational institution's virtual museum during the educational process contributes to the formation of a spiritually developed personality. The fact that virtual museums allow us to use civil-patriotic materials during the process of vocational training in different kinds of colleges is one of the most important. Using specialized virtual museums that facilitate the mastering of knowledge and competences in the specialty, students also learn patriotic information. Speaking about the educational influence of the university museum, the employees of the Siberian Federal University Museum A.Yu. Kolovskaya and L.V. Kolovskaya rightly note that the artefacts, that the museum stores, are relevant only if they are in demand by the public consciousness. Unfortunately, A.Yu. Kolovskaya and L.V. Kolovskaya consider the virtual museum of the university only as a digitized fund of it, accessible only in the "physical" walls of the museum on a personal visit and not via the Internet (Maksimova, 2014).

The practice of creating a virtual museum of educational organizations is just beginning to emerge. A distinctive feature of virtual museums of educational organizations is that that the Internet resource is developed by enthusiasts (students or employees of educational institution), which means, for the most part, they are unprofessional, amateur. This distinguishes them from existing virtual museums of museum institutions, which are created by professionals. The subject matter of an educational institution virtual museum generally is not associated with the profile of history of educational organization, but is built on the personalities or features of the educational process associated with the educational institution. However, these projects may differ in an informal approach and have their own educational value. In the event that, in the long term, to develop, in the framework of the project approach, the methodology for creating and further using the virtual museum of educational organizations this form of work can have a great future.

With the support of the Moscow Department of Education a team of employees, teachers and students MSUTM named after K.G. Razumovsky created a virtual museum "Soldiers of Victory" dedicated to the memory of the Great Patriotic war heroes. The Virtual Museum contains the following

sections: "School museums", "Creators of Victory", "Memoirs", "Faleristics", "Chronograph", "Bibliography", "Filmography", "Webinars", "What I know about the war".

Developers conducted a study of the effectiveness of the virtual museums. The obtained data was based on the results of surveys in Moscow educational institutions and the metric of the museum's site. During the first year of the project, there were more than 3,000 Internet-resource visits by schoolchildren and people under 18. The most visited sections were "School museum" (a digitized version of the museums' expositions of Moscow and the Moscow region) - 42% of all visits and "Creators of Victory" (schoolchildren creative works devoted to stories about deeds of their relatives) - 23% of all visits. The period of time spent on the page amounted to an average of 6,5 minutes, the section "Memoirs" (video with veterans of the Great Patriotic War) leads. According to the research, the sections "What I know about the war" (test, quiz dedicated to the events of the GPW) and "Webinars" (university teacher's video lectures) turned out to be the most unclaimed. Attendance of these sections was less than 3%, the average time on the page was less than 30 seconds (Ponomarev, 2016). From this study, we can conclude that the most in demand sections were in the filling of which "schoolchildren" can take an active part.

An effective means of museum work can be their own internet-sites of museums and schools. They can provide broad educational opportunities. The main goals of the site creation are acquaintance of visitors with museums, attractions of them to current exhibition, informing about all museum projects. Web-sites are also convenient to use as a mean of communication with fellow-museum workers and teachers. Very often museums create web site business card where there is a basic information about the museum, the exposition, working hours and fee for a visit. However, there are sites that allow you to work with schoolchildren and the pedagogical community. The official web site of the National Museum of the Republic of Bashkortostan is an interesting example of an effective and developing web site. It allows those who wish to visit Ufa and the Republic virtually so that they could get acquainted with the sights in advance. "The scientific and methodical cabinet" of the official site of the National Museum of the Republic of Bashkortostan is its valuable section aimed at increasing the professional knowledge of museum and pedagogical workers of the Republic. This section methodically provides and helps to implement many educational museum programs. It has become a forum for discussion of methodological recommendations developed by museum researchers. The work of the electronic methodical cabinet lets museum and pedagogical workers to increase their professional skills and activity and to master rational methods of museum work.

The web site of the National Museum of the Republic of Bashkortostan provides big opportunities for working with children. In the section "Gallery" there are works from the Children's Drawing Competition

"Memory" dedicated to the anniversary of the Victory in the Great Patriotic War of 1941-1945, an exhibition of children's drawings on the topic "the future of the planet is our future". These forms of interaction between museums and schoolchildren have a huge educational potential, stimulating the activity of the children audience of the museum (Ponomarev, 2016; Shaislamov & Chigrina, 2015).

"Since the beginning of the twentieth century, the attention of scientists who has been involved in the museum pedagogy have been attracted to the dialogue as an important point of museum communication, electronic resources have allowed them to deepen the dialogical communication, to make

it an essential component of the space mastering process. With a sharp increase during the last century the volume of visual information museums it is difficult to attract attention to slow watch exhibits in silence beautiful rooms" (Ivanova, 2014).

"Since the beginning of the twentieth century, the attention of scientists involved in the Museum pedagogy, attracted to the dialogue as most important form of the Museum of communication, electronic resources allowed to deepen dialogical communication, to make a dialogue the most important component of the process of development of space. With a sharp increase during the last century, the volume of visual information museums Russian museums have been existing in the social networks for almost 10 years. The first one became the staff of Tretyakov galleries, Kunstkamera, Russian Museum, the state historical Museum, the State Museum of the history of religion, which have created a page of these museums on the social networks "Vkontakte" and "Twitter" in 2008-2010. In 2018, it became clear that the dozens of Russian museums make hundreds of publications in various social networks. In the social networks, the number of Museum subscribers is growing rapidly (in the Hermitage and SHM on Twitter number of readers have passed over 600 million), on the pages of the state Tretyakov galleries in Facebook almost 80 thousand), the state Museum of fine Arts in Facebook almost 80 thousand), Russian Museum - almost 100 thousand in Vkontakte.

This statistics shows significant opportunities (including educational), which museums social network provide. This is a good resource for museums, as far from all museums may allow the launch of its own portal, the virtual tours, and work with pages in social networks will cost less.

Researchers express different opinions about the influence of social networks on the formation of personality. Many of them believe that better "to tame" this resource than deal with it. D.S. Lomakin notes the following: application in the virtual training group technologies forums allows all participants independently or together, to create a network of educational content; potential combination of individual and group forms of work contributes to more understanding of the material, as well as creating of original educational technology assessment results work each participant as the advantages of using social networks in educational process (Shaislamov & Chigrina, 2015).

More than 80% of Russian museums have page at least in one of social network. The most commonly four social networks are used: Vkontakte, Classmates, Instagram, Facebook. Each Museum, depending on their goals, objectives and preferred audience makes choice in favour of a social network.

Analysis of the information space of state and municipal museums Kemerovo the field of conducted in 2017, has revealed that of the 43 museums, only 11 are present in the social networks, and only 5 museums are present in more than 2 social networks. Analysis results clearly confirm that opportunities for remote working with visitors are being dismissed, information on the social networks is updated rarely, and discussion on the data pages are not yet underway, there is no corporate style feed material (Rodionov, Andreev & Rodionova, 2017). Representation of main forms of interaction is limited to a small number of examples, because it is important was to show themselves forms and features of their implementation in practice.

7. Conclusion

The age of information carries a lot of risks, but we also have to use all the pedagogical means to reduce these risks, the direction of opportunities of in the age of information is on a positive channel. Creating a Museum-educational information space is the problem, which allows you to decide important pedagogical problems, attract students to cognitive process through the development of Museum values, flexible vary has become already familiar to modern child communication in the virtual world with personal communication related to the joint knowledge of art, history, science, with the joint experience is a sense of the beautiful (Ivanova & Ivanova, 2017).

In spite of the huge opportunities, innovative forms of interaction of the Museum and educational organization remain valid the classic excursions, lessons in the Museum of based on real communication and helps to achieve the mutual understanding.

One can infinitely list the positive side of the introduction of information technology in education process. However, do not forget about possible risks, which in scientific publications are written much less. "All the more people fall in the painful dependence on the computer. In other words, the subject will lose their worlds as a person, as the individual, while remaining in the world information studying the real world through the psychic subject world, that faced the information attack. Here we can say what is a change in the subject leads to a sharp change in educational space and gradually will result in high-quality changes in the medium of society" (Ivanova, 2013).

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