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**COLLABORATION MODELS  
FOR EDUCATIONAL INSTITUTIONS AND MUSEUMS**

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*Abstract*

In the new media era, the educational institutions and museums gained the opportunity to interact more extensively in learning and cultural education areas. The use of the latest technologies gave impetus to the emergence of new cooperation forms between museums and educational organizations. For all the school students, this opens up access to the modern ways of studying culture, getting experience, expressing themselves, communicating. This also creates educational opportunities for teachers by enriching their methodology portfolio, while helping increase museum attendance and making museums more open and accessible.

Still, despite the growing accessibility of the innovative technology solutions, the lack of well-defined common goals and collaboration objectives prevents the widespread use of the innovative forms of joint work between museums and educational institutions. This inconsistency necessitates the discovering and outlining the most widely used collaboration models and ways of their practical implementation that already have proven their efficiency.

The article describes the application of some of the most commonly used collaboration models, such as “museum-lesson”, “mobile museum”, “virtual museum”, and “museum exhibit in project-based work”, carried out both by major Russian state museums and lesser-known ones in small towns. Apart from the benefits achieved by using the models, the article outlines some potential risks in implementing them as well as offers organizational and management strategies for minimizing certain risks.

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**Keywords:** Information technology, virtual museum, project-based work.



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## 1. Introduction

These days, Russian education and cultural sectors have to develop in a rapidly changing environment, with IT having a huge impact on educational as well as social and cultural processes. High-tech gadgets and Internet play an increasing role in people's life, becoming an integral part of the world around us and thus profoundly influencing it.

Trying to catch up with the times, educational institutions and museums make extensive use of the electronic devices as well as information and communication technologies in their work. For all the school students, this opens up access to the modern ways of studying culture, getting experience, expressing themselves, and communicating. This also creates educational opportunities for teachers by enriching their methods and techniques, while helping increase museum attendance and making museums more open and accessible.

In the environment rapidly getting more digitally-enabled, the museums and educational establishments have to develop new Internet-based ways of cooperation in parallel with the traditional forms and principles of work.

In the new media era, the role of a student has changed as well. Student-oriented learning is different from the traditional teacher-centered model. Under the new paradigm, the student's goal is trying to find out the right answers, while the teacher serves as a guide and observer.

In the era when technologies offer the unlimited possibilities, with the amount of information available to everyone being really huge, it is truly regrettable that the information and methodology-based cooperation between the educational organizations and museums subordinate to various government agencies is initiated by their leaders and carried out only by leveraging their own experience and enthusiasm. The existing examples of successful cooperation, meanwhile, prove that despite the differences in the government subordination, the museums and educational establishments have the ability to set and achieve common goals together. The models outlined in the article could be used by the educational institutions and museums to improve the efficiency of their cooperation.

The use of the models could help bring cooperation between museums and educational organizations to a new level, while promoting the quality improvement of the basic education.

## 2. Problem Statement

The article considers the models of collaboration between educational establishments and museums. At present, the development and use of such models make a lot of sense as museums and educational institutions often cooperate in disorderly and unstructured ways. The processes related to technological availability of museum/education space are yet to be conceptualized at both theoretical and methodology levels. The lack of serious methodology-based efforts to develop the cooperation models and common base of the best practices related to using IT in a museum/education environment creates a potential risk of 'immersion' into using technology that is counter-productive and has no pedagogical merit.

### **3. Research Questions**

What are the most efficient models of collaboration between museums and educational institutions?

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

The aim of the study is to assess the most efficient models of collaboration between museums and educational institutions, perform practical use analysis of such models, as well as at to evaluate the potential risks of collaborating in virtual space.

### **5. Research Methods**

As part of the research, the following methods were used: activity analysis of the general educational organizations and cultural institutions (museums); expert evaluation of open-access information, documents, and materials available on the organizational websites; source studies; and review of the relevant scientific literature.

### **6. Findings**

The analysis of the existing collaborative initiatives between educational institutions and museums has shown that the most commonly used cooperation models include “museum lesson”, “mobile museum”, “virtual museum”, and “museum exhibit in project-based work”.

Previously, the author of the publication had already analyzed the subject matter, exploring the activities of a museum in the digital era, noting that the museums themselves were rapidly changing in the new environment. These days, they have to fight for visitors’ attention, catering to their needs and interests. The interaction with children, educational institutions, visitors is transforming: a more personal approach is implemented, with a constant search for the interactive work methods, and multimedia-based technology tools used along with the elements of show and interactive game. This adds vividness, clarity, and dynamics to the museum exhibitions, while, most importantly, changing the status of the visitor, who becomes a participant rather than observer (*Vyezdnaya programma “Muzei v shkole*).

In their work, museums use more of the latest technologies and tools now. Speaking of the major museums, they are better equipped with technologies than the educational institutions, and have a sound educational potential, which could be efficiently used. That is often leveraged as the basis for the successful cooperation between a museum and educational institution.

The “museum lesson” model is very similar to the traditional ways of educational/museum collaboration in a way that it involves a visit of the school students to a museum. The topic and contents of such a lesson is aligned with the school curriculum, although the lesson itself is held in the museum, while using its exhibits as well as technology and educational assets.

The leading role in this model is played by the educational institution. It acts as the customer and defines the subjects, goals, schedule, and frequency of the lessons. While performing its main functions, the educational institution uses a museum lesson as a method of teaching its students. The main educational process takes place at school, and instead of in the classroom, the students go to the museum

halls once in a while. Under the guidance of a teacher or museum instructor that took special training, they acquire new knowledge or refresh the existing one, using the exhibits that illustrate the learning materials, and performing the individual or group-based tasks. The museum plays an important role, serving as a boost to the educational process by being a small but significant part of it. A lesson in a museum creates interest in students, facilitating a deeper immersion in the subject, and often becomes a memorable event of their life.

An example of using the “museum lesson” model is the cooperation between the educational institutions of Yelabuga city and Yelabuga State History, Archive, and Arts Reserve Museum under the Museum and School educational program. Aimed at long-term systematical work with children audience, the program is popular among the teachers, both as part of the general education and as a package of supplemental educational services. The program’s reach is at least 2,300 school and kindergarten students (a total of 120 classes and groups), or about 25% of all Yelabuga students. This corresponds to a total of 15,500 visits for the museum lessons per year held as part of the school curriculum. Under the Museum and School program, a lesson, conducted in a game-like form, is held at the Yelabuga Reserve Museum every month. At the lesson, the kids study history, literature, biology, and visual arts.

The advantages of using the museum lesson model are obvious. The learning process is based on a discussion, in which the students participate in-person. With modern school students “talking” to each other primarily by means of social media, holding classes in real life rather than online is extremely important. It is worth noting that the use of the museum lesson model facilitates creating universal learning activities (ULAs, activities promoting the ability of a person to self-improve through new social experiences). “It should be noted that the process of creating ULAs is an important part of the educational environment that is appealing to the school students because it includes the innovative tasks, unconventional for the subject matter that spark their imagination, thought process, and, to a large extent, creative initiative.” (Ivanova & Ivanova, 2017, p. 8).

A kid’s interest is heightened when being in an unusual place such as a museum. As opposed to the traditional museum guided tour, where the main objective is to tell about the exhibition, the use of the museum lesson model has no aim of this kind, with the museum’s assets being used only to study and/or refresh a certain training subject.

When using the museum lesson model in practice, the educational institutions face a number of the organizational and management challenges, such as the lack of flexible access to the museum assets (the access being available only at certain times determined by an agreement with the museum), children transportation issues, and time wasted while getting to the museum.

As far as the methodology goes, the Yelabuga experience is unique. The coordination of school learning schedules and curricula with the subjects of the museum guided tours is a complicated process requiring an excellent knowledge both of the museum exhibition and the educational process’ organizational nuances. Neither average teacher nor any museum guide can manage that alone. The end-to-end implementation of the model is possible only at regional or municipal level provided that the governing authorities responsible for education and culture actively cooperate with each other at both organizational and methodology levels. Obviously, there are no (and could not be) universal methodology recommendations regarding the implementation of the model: the very diversity of the museum

exhibitions creates unique opportunities for using them in learning process in each of the regions. Based on Yelabuga experience, we can recommend creating the annotated lists of lessons based on guided tours of museums available in a city (region), as well as helping schools in making schedules of visiting a museum for educational purposes. Additionally, the regional administrative bodies responsible for the educational and cultural sphere should make the organizational and management decisions, including those on matters related to paying for the educational museum visits, getting guide services, ensuring safety of children, etc.\*

In November 2014, the Department of education and Department of culture of Moscow jointly launched the Lesson in Museum project. As part of the initiative, 31 museum lessons were developed and successfully tested, with 22 Moscow museums holding a total of 440 lessons for 7,535 students.

The museums subordinate to the Moscow culture department make energetic efforts to improve old and develop new guided tour programs for the city students. In 2017, Moscow museums offered 382 educational events spanning a large number of subjects studied at basic, secondary, and high school.

A lesson in museum is a separate class or series of classes held in a Moscow museum as part of studying a certain school subject. The lesson is based on the museum's collections, using its exhibition for a deeper and more hands-on learning of the subject.

On the one hand, the project is designed to complement and diversify the curriculum, deepening the knowledge of a subject, while on the other, to create interest in school students for visiting museums and other cultural establishments. At the same time, it is an opportunity for museums not only to attract new visitors, but also to bring up a loyal following.

A lesson in museum ensures an interdisciplinary approach, incorporating the knowledge of the various school subjects into a holistic picture of scientific knowledge. While being necessarily connected to specific subjects of the curriculum, such a lesson also includes research and creative tasks that go beyond the standard school curriculum (*Zdravstvui, muzey!*).

A promising approach helping such a model of cooperation between the educational establishments and small regional or municipal museums gain momentum would be placing an order by an educational institution that takes into account both the content of the exhibition and education sector's need for assistance in implementing the training programs in museum settings.

The "mobile museum" model, in its turn, involves holding lessons using a museum's exhibits in an educational institution. Museum personnel brings either the original exhibits or their specially made copies to the educational institutions for holding unconventional classes. The model is used quite widely, especially in large cities. In Moscow and its suburbs, a special website named Museum Agent (<http://www.museumagent.ru/#catalog>) has been created to ease the process of lesson selection. For a teacher, it is as simple as choosing class, subject, and specific topic, and submitting an application. The Moscow Archaeology Museum, for instance, holds a series of field lectures/presentations for 1st to 7th-grade students. The lectures offer them an opportunity to "get in touch" with the history of ancient Moscow without leaving the school. Each lecture's duration is 45 minutes. During the classes, students learn main archaeology concepts, finding out where and how the archaeology research was carried out in Moscow, what length measures were used during various periods of history, what toys children played,

how arithmetic was born, etc. In addition, they have the opportunity to lay their hands upon authentic archaeology artifacts, such as toys from the Middle Ages (*Urok v muzee*).

The Lights of Moscow museum offers a field program entitled “A trip to the past of the light bulb”. The exhibits brought from the museum are allowed to be touched, and what’s more, during the class students make their own real candle, the very object that the history of Moscow’s lights originates from. The subjects of epy field training classes offered by the Zoological Museum of Moscow University include “Living at somebody else’s expense”, “The best and the greatest”, “The wonderful and the dangerous”, “Why do you have such big teeth?”, “The pinniped conquerors of the ocean”, and “Carnivorous plants”. The Biology Museum, meanwhile, offers school students the lessons on such topics as “The diversity of parasites”, “The human parasites”, “The extraordinary plants”, “Plants at the service of people”, “Insectivorous plants”, “Clothes of animals”, “The mysteries of the forest”, and “The secrets of the ocean”.

This collaboration model relieves educational institutions from having to address the organizational and management issues inherent to the museum lesson model. However, it must be noted that for obvious reasons, most museums are unable to take the majority of their exhibits on field trips, so often only copies could be brought to schools.

Interestingly, this model has been adopted and successfully used by the school museums often having unique exhibits in their collections. In regions with less museums, the field lessons with exhibit displays is an opportunity to ‘feel’ the history of the country and refresh the knowledge of local history, as well as biology, literature, etc.

The “virtual museum” model is markedly different from the traditional collaboration options. The model does not involve in-person live interaction of a student with museum, with the entire process implemented using IT. The interactive tools may include a social network page, virtual guided tour, purposefully created online portal, educational website, etc. The development of an online resource or mobile app is done by a museum. As opposed to a standard museum website, the content may include the images and descriptions of exhibits, as well as interactive tasks, quizzes, competitions, training games, interactive guided tours, and virtual exhibit displays.

Being a tool available to all, a virtual guided tour is a museum asset that could be used by teachers in their school classes. Using a multimedia projector or interactive board, the teacher holds a guided tour of an exhibition or its part without leaving a classroom.

Virtual guided tours are available on websites of many Russian museums, including museums of arts (Russian Museum, Tretyakov Gallery, Hermitage Museum, Pushkin Museum, Kozmodemyansk Arts and History Museum, Krasnoyarsk Arts museum named after V. I. Surikov, etc.), open-air museums (Moscow Kremlin, Peterhof, Naryn-Kala Fortress, Malye Korely Museum of Wooden Architecture, Kozmodemyansk Museum of Merchant Life, etc.), ethnographic museums (Kunstkamera, Russian Ethnographic Museum, etc.), State Darwin Museum (the country’s largest paleontology museum), as well as military and technology museums.

One example is the online learning portal named “Hello, museum!” that offers museum-based lessons, learning videos, quizzes, interactive apps, as well as advanced-level tests in history and main concepts and terms of visual arts. Among other things, the website features a multimedia program named

“Kids’ guide to Russian Museum”, which is a virtual guided tour of Mikhailovsky Palace aimed at children of 5 to 12 years old that offers to learn interesting facts about the works of arts, carry out game-like tasks, as well as see the paintings come to life. The “Stroganov Palace” multimedia presentation tells about the history of the building and its owners, as well as offers a virtual tour through the palace interior with an audio guide enabling to zoom and examine some exhibits in detail (<http://hello-museum.ru>) (Vinogradova & Rydze, 2018). As part of the educational program, teachers may recommend students to install a special smartphone app or join a community on a social network. The museum interacts with school students over the Internet, with the students getting permanent access to its online resources and being able to use it, while studying at school or doing homework. The model offers a number of organizational benefits: access to the museum online educational resources is usually offered free of charge 24x7, and students need only their mobile or PC with Internet access. This means that an educational institution has no need to address transportation or administrative issues related to transportation of children, waste time on the way to museum, or change lesson schedule. An additional important benefit of the model is the ability to monitor students’ knowledge acquisition progress by using an app (through quizzes and creative tasks).

The experience of using the virtual museum tours by the Russian school teachers as part of lessons and after-school activities is quite noteworthy. Teachers themselves select a virtual tour (or a part of it) for a lesson, determine the frequency of using online resources as well as their role in the educational process.

For example, as part of elementary education at School No. 16 of Klin (Moscow oblast), teacher L. Vasilieva carries out an after-school program named “Hello, museum!” that includes virtual tours to the Hermitage Museum, Tretyakov Gallery, Pushkin Museum, and Louvre along with actual visits of local museums of Klin (Ivanova, 2016).

An after-school program for 5-graders entitled “The museum world” (authored by V. Yerokhina) that is implemented at Klyomov Secondary School in Serevryano-Prudsky District of Moscow Oblast includes virtual tours to Moscow Kremlin, Kremlin Armory, and Zaraysk Kremlin Museum (Vasilieva, 2016).

The “virtual museum” model is propagated via social media widely used by young people for communication. Tretyakov Gallery, Russian Museum, and Hermitage Museum were among the first Russian museums to begin using their social media pages to engage visitors. We believe that the use of social networks for the purpose is essential, especially given that it does not require large financial costs. Of course, the presence in social media alone is not enough to implement the virtual museum model, although social network pages could be used for getting feedback from the students and testing the knowledge they acquire. Unfortunately, the potential of social media is scarcely used in educational practice, with even a single systematic use example of a museum social account for general education purposes being hard to mention. Small-town museums underestimate the opportunities enabled by that, with teachers being reluctant to commit as well.

We believe that one of the main reasons is that the online resources created by museums are usually aimed at attracting young people’s attention to museum exhibits rather than facilitating education. Museum’s employees create websites based on specific exhibitions, without an eye to existing

educational curricula. In addition, upon creating original content for open access purposes, a museum usually refrains from promoting its online assets. The lack of coordination between various museum websites also hinders their use in general education. That said, we believe that there is a potential for inter-agency initiatives aimed to create the inventories of the available online museum educational resources and analyze their use potential for general education curricula or self-learning and development of children and youth.

Despite the wealth of opportunities created by using the virtual museum model, the risks of excessive computer and electronic gadget use should not be overlooked. “For instance, when using information and communication technologies in learning, however successfully, there are possibilities of developing unhealthy addiction to virtual environment, along with anxiety and loss of social communication in physical world.” (Yerokhina, 2016). Unfortunately, these scenarios are not unusual, most often affecting children and adolescents.

Considering the growing use of the project method in general education, we can foresee that in the near future, teachers will pay more attention to the “museum exhibit in project-based work” model. Under this one, the collaboration between schools and museums is aimed at creating environment for carrying out personal projects (or training and research work) by students using a museum exhibition under the guidance of a museum’s employee. Upon choosing the project topic and supervisor, the educational institution and museum sign an agreement that gives the student carrying out the project the right for free access to the museum, and the ability to familiarize themselves with the exhibition more closely than general public; for more serious study and research work, access to the exclusive exhibits stored in the museum special collections could be granted to students as well. Additionally, such an agreement should determine the terms of using images of the museum exhibits in students’ projects prepared for public access (such as participating in public competitions, exhibitions, etc.).

## **7. Conclusion**

The studies of the cooperation examples between museums and educational institutions show the need for systemic and clearly defined organization of the collaborative process in order to improve its efficiency. The adoption of the collaboration models considered in the article will enable educational institutions to select the appropriate ways of creating an efficient cooperation system, while planning for potential risks to enhance the implementation of the educational process.

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