PAPER

INNOVATIVE APPROACHES TO MUSEUM MANAGEMENT: THE ROLE OF MOBILE APPLICATIONS

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Abstract

The article deals with the issues of economic sustainability and development of the museum sphere in the context of digitalization and introduction of innovative technologies. The main attention is paid to the introduction of digital technologies and mobile applications to increase the interactivity of museum services and improve communication with visitors. Current trends and prospects of using mobile applications in museums, as well as their impact on visitor engagement and satisfaction are investigated. The paper concludes that it is necessary to revise and improve the model of museums' communication with society in order to achieve economic stability and expand museum audiences.

Key words: mobile applications, museum management, digitalization, innovative technologies, interactivity, communication with visitors, cultural heritage.

Introduction

In recent years, the issues of economic sustainability of cultural institutions in the society of the Republic of Uzbekistan have become more relevant. Over the past quarter-century, the number of museums in the Republic of Uzbekistan has increased by 1.5 times (from 98 museums in 1991 to 140 museums in 2024). In recent years, there has been an increase in interest from the government, with significant attention given to improving the museum sector through the adoption of several laws and government decrees. Specifically, the Resolution of the President of the Republic of Uzbekistan on August 26, 2018, "On measures for the innovative development of culture and art in the Republic of Uzbekistan" outlines the main goals of implementing a museum renovation program, aiming to enhance the interactivity of services provided by improving the museum infrastructure to meet international standards, widely introducing innovative information technologies into museum operations, and improving the quality of services through the enhancement of museum administrative structures. The importance of increasing the interactivity of museum services and the necessity for the broad use of digital technologies as a communication tool is particularly emphasized. Decree of the President on May 26, 2020, "On measures to further enhance the role and importance of the sphere of culture and art in life of soci-

ety" highlights the lack of a comprehensive system for implementing the concept of integrating modern information and communication technologies into this sphere.

The place of the museum in the socio-cultural space of society is determined by the natural human desire to study their spiritual and material world, as well as the aspiration to join universal spiritual and cultural values. In this regard, the role of the museum as a keeper of cultural and historical values of society is significant . The main task of museum institutions is to preserve historical materials and popularize knowledge .

At the turn of the 20th and 21st centuries, technical, scientific, economic, and cultural changes in the world have significantly influenced society and the image of museums. However, the demands of the time have significantly changed the situation, and today, museums are acquiring more and more functions. Museums are becoming fields of innovation and experimentation, as well as important platforms for social collaboration.

A museum communicates with its audience through its collections, building a cultural dialogue through historical retrospection. The role and mission of the museum in the socio-cultural space of society as a producer and distributor of cultural content are very significant . It is impossible to imagine the effective fulfillment of this mission without a well-chosen strategy in management and museum communication with its audience. Mu-

seum management pays great attention to the issues of a well-structured organizational-economic strategy for museums and various methods of communication with their audience. The relevance of this article lies in the theoretical justification of the effectiveness of the widespread use of mobile applications as an important tool for museum communication with their audience.

Literature Review

Currently, digitalization encompasses all spheres of society, and museum organizations are no exception . By creating an information space, museums undoubtedly acquire new channels of external communication, but they do not fully utilize them. Developing new information technologies to solve the tasks of managing the popularization of cultural heritage objects within museum-reserves, including allowing feedback from visitors and adjusting tourist routes, is a demanded and promising direction .

In the last decade, there has been a wide implementation of digital technologies in various spheres of society's life. The implementation of digital communication technologies is carried out by all cultural institutions, including museums . Research shows that the development of mobile applications, finding their application in the museum environment, has significant prospects. In addition to increasing engagement and awareness, mobile applications can open new opportunities for the development of museums in the modern information society .

In recent years, terms like "client orientation" and visitor orientation have begun to be used more frequently in the museum environment. The question of "visitor orientation" has become a kind of "stumbling block," sparking scientific debate among museum specialists . Some researchers advocate for, while others oppose the idea of "complete visitor orientation" and, as a consequence, the active use of innovations and digital technologies. Nevertheless, leading global museums are betting on the active use of digital technologies in the museum space. The question of transforming and updating museum services both conceptually and organizationally has long been on the agenda of museum management and marketing specialists.

Scientists in Uzbekistan have examined issues such as modern technologies in museums, digitization of cultural heritage, methods of collection and exhibition management, economic sustainability of museums, museum communication, and the positive trend in museum attendance when using digital technologies in information spaces. In his study on the museums of the republic, R. Almeev notes the role of museums as a factor in the material well-being of the region and the enhancement of the region's competitiveness within the framework of tourism development . Researcher N. Ibragimov examines the possibility of increasing Uzbekistan's tourist competitiveness by improving the information space through the broad use of digital technologies .

Renowned foreign scholars in museum management and marketing, such as Richard Sandell and Robert R. Janes, Andrea Breznik, Milan Jan Pucek, Frantisek Ochrana, Michal Placek, B. Khaksever, S. Ranyard , and others, have meticulously studied issues of socio-cultural development and museology, focusing on effective tools for developing management and marketing in 21st-century museums and identifying the needs of museum consumers.

Methodology

This article applies the methods of system analysis, analysis and synthesis for a comprehensive study of the impact of digital technologies, in particular mobile applications, on the sustainability and development of the museum sphere of the Republic of Uzbekistan.

The analysis includes:

- Study of the legal and regulatory framework governing the digital development of culture in Uzbekistan;
- Comparative analysis of foreign and domestic practices of introducing mobile technologies in museum activities;
- Study of scientific literature on digitalization, museum management and marketing;
- Analysis of recommendations for the creation of mobile applications-guides, including the following criteria: relevance of information, ease of navigation, availability of an interactive map and personalized routes.

The approaches used make it possible to substantiate the effectiveness of mobile applications as a tool of communication between museums and visitors, as well as to determine the potential of their introduction into Uzbek museum practice in order to achieve economic sustainability and expand the audience.

Analyses and results

In today's world of global digital technologies, when the consumer is well informed and 'customer-centricity' is becoming a basic requirement in cultural services, museum services in order to maintain their attractiveness and competitiveness rely on so-called 'experiences' . The term 'impression economy' was introduced into academic usage by James Gilmore and Joseph Pine in 1998 . For about twenty years, specialists in museum management and museum marketing have been trying to direct their efforts to transform and renew museum services in the direction of this economy. The key factor and means of constantly offering new attractive experiences and maintaining competitiveness in the 'experience economy' in the growing and increasingly diverse global market of services is innovation and reliance on the widespread use of digital technologies.

Museums carry out a lot of educational work. As a rule, it is carried out during excursions, expositions, exhibitions, organizations of meetings with interesting people, etc. However, providing all the accumulated information to the general public is often problematic. However, providing all the accumulated information to the general public is often problematic. In the past, all forms of work were reduced only to the interaction between a visitor and a guide (or a museum worker). In modern conditions the possibilities of obtaining knowledge have been significantly expanded. Today virtual interaction along with direct dialogue with the visitor through information technologies is widespread. There are many different digital tools for popularization and promotion of a museum product: websites; interactive panels and screens; game consoles; computers and tablets, smartphones, gadgets; digital television; mobile applications, etc.

One of the digital tools successfully used by many museums is mobile applications. They are used to create museum audio routes that can be used as games and virtual excursions. For example, in the Russian Museum of Ethnography, an app allows you to view the interior of museums, collections and exhibitions. Some apps include navigators that have detailed maps of galleries and museums . The Russian Museum in St. Petersburg offers an app - audio guides that help you get more detailed information about the exhibits. The Moscow Museum on Ostrozhenka (MAMM) uses electronic 'beacons' iBeacon, they are able to download information to visitors' smartphones, and a special application - guide called "YourMAMM" gives an explanation of the exhibits automatically when approaching them . The visitor can map out for himself the route he can take to visit it. The navigators include notes from artists, experts, suggestions for the most interesting routes and much more.

Fanina M.A., Raeva Yu.S., Gorlushkina N.N. in their research conducted a survey on the territory of one museum-reserve, namely, the Solovetsky Archipelago. Based on the results of the

survey, the functional requirements for a mobile application for the territory of the Solovetsky Archipelago were determined. In the course of the research different mobile applications-guides to museum-reserves were considered. The use of interactive maps, individual itineraries, mobile application and audio guides will help to manage the popularization of museum-reserves and tourist flows around the reserve. The results of this work will be useful in the development of a mobile application-guide designer.

Economou and Meintani's research paper focuses on the evaluation of museums' mobile applications and their impact on visitor interaction. The study touches upon the use of mobile technologies in museums since 2009, when they started to be introduced as new interpretive media. The article analyses how mobile apps enable cultural institutions to extend communication channels beyond the physical walls of the museum, and discusses the types of interaction and engagement that these apps support. The authors emphasize that mobile apps offer new opportunities for learning and entertainment, as well as for reaching new audiences through devices with which users are already familiar.

A study by Palumbo, Dominici and Basile applies the Kano model to develop a mobile application for museums based on visitor satisfaction factors. Analysis of 287 questionnaires collected from tourists in Sicily revealed key requirements including multi-lingualism, availability of a museum map and the ability to book tickets. These results will help museums improve visitor engagement through mobile apps, meeting visitor expectations and increasing satisfaction.

The world's museums have done a great job in this area, actively promoting museum visits and trying to reach out to different social groups in society by organizing different cultural events and highlighting these activities through modern digital technologies.

The potential of using mobile applications in museums in Uzbekistan is extremely high, but at present, unfortunately, it is not fully utilised. In a number of museums in Uzbekistan, the main emphasis is placed on traditional communication, which, as a rule, starts from the moment a visitor arrives at the museum. Practically no attention is paid (or less attention is paid) to the stage of awakening interest and further involvement of the visitor in regular museum visits.

Conclusion

The correct and timely use of digital technologies, in particular mobile applications in the museum space significantly increases the effectiveness of museum services and creates an opportunity to choose a communication format that will be convenient for a particular museum visitor. Innovative digital technologies, in turn, increase the interactivity of the museum exposition, thereby attracting the attention of visitors.

In conclusion, it should be emphasized that the use of mobile applications in the system of museum services has justified and proved to be a practical and effective tool of communication between a museum and its audience. The deepening of digital information technologies in the museum space will ensure the expansion of the museum audience and, as a consequence, will enhance the economic stability of museums.

The effective use of digital tools depends on a number of conditions. Firstly, it is very important for museums to have experienced specialists who have experience in creating and using digital technologies. Unfortunately, there are still no standards in the field of digital strategies, so it is these specialists who determine how all its directions will work. Moreover, it will take some time for some of the tools to start working and have a positive effect.

Secondly, in order to achieve the intended goals, several digital tools have to be used at once, and they have to be changed and improved. If a tool has been launched and is working, it con-

stantly needs to be checked, analyzed and corrected. Thirdly, it is extremely difficult to make an accurate budget plan for the implementation of a digital strategy, as the cost of tools can change over time.

Preservation of historical materials, popularization of knowledge, attraction and retention of visitors - this is the main goal of any museum. Improvement of technical and material equipment of the museum, attraction of visitors with the help of digital tools, their constant updating, a clear strategy plan will lead to effective implementation of the plans outlined by the museum. Based on the above, the museum needs to revise and improve its model of communication with the public, as it becomes the main instrument of influence in attracting new visitors and maintaining the number of permanent museum audience.

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