INNOVATIVE TECHNOLOGIES: RETHINKING THE MUSEUM EXPERIENCE

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Abstract

This article conducts a study of the use of digital technologies on the basis of the Museum of Temurid History (Uzbekistan) and the D'Orsay Museum in Paris (France). The article reveals the content of basic concepts such as "digitalization" and their impact on modern museum visitors. The advantages of using new digital technologies in museum exhibitions are also noted. The focus is on modern technologies used in specific applications to transform museum operations.

Keywords: *museum, digital technologies, digitalization, culture, art, visualization, innovation, 3D*

Introduction

Serious changes are taking place in the cultural space of the XXI century, which are directly related to the digitalisation of various spheres of human activity. The term "digitalization" refers to the process of transforming information into digital form, which further leads to cost optimisation and the emergence of new development prospects. Digitalisation contributes to the transformation of information and the "creation of a new era based on big data" (Nikulina T. V., Starichenko E. B., 2018; Muzychuk V. Yu., 2020).

Digitalisation is being actively introduced into the cultural space, changing not only the format of access to cultural values, but also allowing for a completely new experience of interaction with cultural content (Shlyahtina Lyudmila Mihajlovna. 2010). Due to the digitalisation of the museum sphere, the materials of exhibitions and expositions, museum exhibits and collections from the holdings become available to the mass audience. The museum space is gradually changing, becoming more mobile and virtualised.

Introduction of transformation in all spheres of life of modern society in the conditions of global informatisation, respectively, digitalisation cannot but affect the museum sphere. The information field of museum objects can be significantly expanded if digital technologies such as 3D-modelling, digitisation of museum exhibits, archiving, 3D-scanning, visualisation processes, as well as remote sensing of the surface of objects and others are used in the process of museum communication (Muzej istorii Temuridov). As a result, which extensive and detailed study of the museum activities is provided.

Owing to the latest and effective innovative technologies used in museums, it is also possible to visually expand the museum exposition space, create a positive impression among museum visitors and preserve a special atmosphere. The popularity of digital media lies in the fact that they provide opportunities in preserving historical facts on electronic media, help in the realisation of conceived ideas for the exposition space, and also contribute to the formation of a positive image of the museum.

Today, a modern museum is a space for the embodiment of creative ideas, for the application of exclusive technical solutions, as well as a cultural institution where new interesting projects are created to diversify and reveal the museum component. Digital technologies expand the museum space, contribute to increasing its information accessibility and attractiveness, achieved through the use of technical special effects, attracting modern youth to explore the exposition space, who prefer to explore the world with the help of new technologies and tools to promote the museum in the world of art.

Digital technologies, which are being improved and modernised every year, provide enormous opportunities for expanding the museum world by introducing various cultural values into structures.

Increasingly widespread applications of modern technologies are reflected in the presence in museums: robot manipulators, AR-technologies, VR-technologies and others. These technologies not only complement the concept and content of the museum space, but also create a special virtual environment and interactivity, which is especially attractive for the modern museum visitor.

The leading museums of Uzbekistan and the world can be cited as an example of the use of digital technologies in practice.

Due to government support, the Nazzar project was organised in the country to improve the activities of museums and innovative ideas.

Today, one of the most popular and well-known museums in Uzbekistan is the Museum of Temurid History. The Museum of Temurid History was founded in the city of Tashkent on 18 October 1996. The museum was erected in the centre of Tashkent to mark the 660th anniversary of Amir Temur (Nazz A R. URL: https://nazzar.uz).

Nowadays, the Museum of Temurid History is known not only for its history and the content of unique and ancient exhibits, but also for the fact that the "Start up" project "Nazzar" of the Smart Chain company was launched in the museum. The museum is rich in different kinds of information kiosks and also in the space of this museum the visitor can see special "stands" with QR code and the logo of the company, where the application "Nazzar" is launched. This innovative application "Nazzar" based on the main platforms iOS and Android with appliance of the technology of augmented reality allows to "revive" the static image in the museum. Every museum visitor can point the camera of his smartphone at the "Nazzar" icon, and the image of a real object will appear on the screen of the mobile device, supplemented with various effects, such as audio accompaniment or 3D effect. When downloading this application, the smartphone camera reacts to the icon (project logo), or to the installed special QR code of the project.

"Nazzar" is an innovative application that can integrate into any material media, elements of augmented reality (URL: https://nuz.uz/2020/01/15/eksponaty-muzeya-istorii-temuridov-prevratili-v-trehmernye-dinamicheskie-gologrammy-so-speceffektami). Visiting museums and cultural heritage sites has become a fascinating and understandable journey with the help of the "Nazzar" application.

Every visitor before going to the Museum of Temurid History should first install the "Nazzar" application on their smartphone in order to enjoy the narration of the exposition, where interesting historical facts and fascinating interactivity are revealed. Each visitor using this app can feel like they are slowly immersed in a historical era. The "Nazzar" mobile app can "bring exhibits to life" through audio-visualisation.

On the screen of a mobile device (by using an application) – the image of the real object is displayed, supplemented with various graphic effects. The picture becomes three-dimensional, allowing you to view the exhibit from different angles. Audio accompaniment tells about the exhibit in Uzbek, Russian, English and French.

Further, walking around the museum, each visitor can also see the hall with the paintings of the Timurid dynasty, where a QR code is installed at the bottom right of each painting. A visitor of the museum should again enter the application on his smartphone and point the camera at the special QR code of the picture, then the visitor can see the "revival" of the picture. That is the picture starts to talk to the visitor of the museum and tell his biography and the history of the dynasty. Having used this application, the visitor will certainly feel an exciting impression.

During familiarisation and study of this innovation in the museum, one can notice how the developers of the "Nazzar" project paid attention to the smallest details concerning the objects and the history of the museum. Graphic special effects 3D and audio accompaniment are made at the level of experience of world museums. Despite the fact that the quality of the work done is tremendous, the developers of the project "Nazzar" are working on improving this application in the museum. At the moment the database of the application contains information about 21 items from the museum's collection. The developers hope that the project will make it possible to perfectly present and reveal the history of Amir Temur and the Temurids (URL: https://decrypt.co/213803/agorias-le-code-dorsay-inside-the-musee-dorsays-first-nft-exhibition).

Analysing the experience of the innovative project "Nazzar", one can also cite the project of the Orsay Museum in Paris (France). In this museum in one of the sections a visitor can see an "original" iron installation, made of many iron bars – which together form a "ladder" without any message. But due to the installed special lighting the visitors can see a QR code behind the shadow of this installation and pointing the camera at the QR code the visitors can go to the site working on the block chain Tezos (URL: https://decrypt.co/resources/tezos; URL: https://decrypt.co/videos/live-events/PK7ynKMB/preview-of-agorias-le-code-dorsay), where it is possible to see the world famous art works (URL: https://decrypt.co/resources/tezos; URL: https://decrypt.co/videos/live-events/PK7ynKMB/preview-of-agorias-le-code-dorsay). Also the manifestation of the innovative "miracle" in the project does not end only there. A museum visitor needs to "blow" into his smartphone, then a picture disappears and another one appears instead.

The title of this project is "Sigma Lumina", which is an installation by the artist and musician "Agoria" (URL: https://decrypt.co/resources/tezos; URL: https://decrypt.co/videos/live-events/PK7ynKMB/preview-of-agorias-le-code-dorsay).

This international experience is both a source of inspiration and an example in the field of improving the application of innovative technologies in museums in Uzbekistan. As a similar picture of the project is formulated by the Uzbek project "Nazzar" and perhaps in cooperation with artists, sculptors or engineers, this project in the future has the opportunity to improve in the direction of "art-installation" with the use of modern technologies. Thus, it will contribute to attracting foreign visitors to the museums of Uzbekistan.

Thus, the development of digital technologies is of a purely integrative nature and creates favourable conditions for information interaction. The application of digital technologies in the field of art and culture helps to transform the process of broadcasting works to mass audiences. Through the use of digital technologies have brought this process to a qualitatively new level. In particular, for modern audiences it is now possible for modern audiences to visit various museums and exhibitions and view exhibits on their personal computer monitors. This greatly facilitates the process of popularisation and mass popularisation of works of art. Despite various opinions on the impact of digital technologies on contemporary art, this problematic has not been sufficiently raised and analysed in scholarly works.

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