3D TECHNOLOGY AS A MODERN METHOD FOR STUDYING AND USING THE BUKHARA SHRINE

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Abstract
Uzbekistan, with its rich cultural and spiritual heritage, memory and fine arts, historical monuments, as well as many world-famous famous and great ancestors such as Muhammad ibn Ismail al-Bukhari, Muhammad Musa al-Khwarizmi, Abu Nasr al-Farabi, Ahmad al-Farghani, Abu Ali ibn Sina, Abu Rayhan al-Biruni, Ahmad Yassawi, Abu Isa al-Termizi, Mirza Ulug'yek, Bahauddin Naqshband, Abdulkhaliq G'ijduvani, Khoja Ali Romitani, Amir Temur, Alisher Navoi, Babur, continues to attract world scholars and tourists. This, in turn, increases our unique place and influence in international tourism markets.

Introduction

It is worth noting that the "Uzbekistan - 2030" strategy for the socio-economic development of the republic, adopted in 2023, also aims to accelerate further the results achieved in the sector. The large-scale reforms being carried out, increased the number of foreign tourists by 15 million, the number of domestic tourists by 25 million, and the number of tourists arriving for pilgrimage tourism by 3 million, creating 30 large tourism clusters by attracting private investment, increasing the number of guest places by at least 2 times, building 25 roads in mountainous regions, increasing the number of tourist neighbourhoods to 175, and increasing the export of tourism services to $ 5 billion. This is intended to use the multiplicative effect of tourism to ensure economic growth in the country and, ultimately, to achieve an increase in the well-being of the population.

Among the incomparable tourist attractions of our country, every inch of Bukhara has become a place of pilgrimage thanks to the saints. We all know that pilgrimage sites have made a huge contribution to humanity, to the widespread dissemination of the first ideas in the world of Sufism and the world of tariqa in its consciousness. In particular, together with the seven pairs that attract people from all over the world, we can list the shrines of Sayfiddin Boharzi, Mog'aki Attori, Abu Hafs Kabir, Khoja Ka'bul Ahbor Vali, Boboyi Poraduz, Ismail Somoniy mausoleum, Bibi Orifa mausoleum, Mir Arab madrasah and many other shrines.

We are convinced that it has demonstrated the high expression of humanity's spirituality, culture, consciousness, and talent in the evolution of the architecture of historical monuments, mosques, madrasas, and shrines it built, at an unparalleled level of art.

In connection with the declaration of Bukhara as the "Cultural Capital of the Islamic World" in 2020, it is significant that 7 monuments in Bukhara - the Ismail Somoni Mausoleum, the Chor Bakr, the Bahauddin Naqshband complexes, the Magoki Attar mosque, the Poi-Kalon ensemble,

the remains of the ancient city of Poykent, and the Toshsaroy madrasahs - have been included in the ICESCO List of the Heritage of the Islamic World.

Religious pilgrimage is a complex and diverse spiritual and socio-cultural phenomenon in the lives of many people. Pilgrimage as a type of religious activity arose in ancient times and is associated with the emergence of developed forms of religion and a high level of socio-cultural relations in society.

Today, it is necessary to form a database of the scientific and cultural role and significance of existing shrines in terms of their cultural and spiritual heritage, the history of the origin of Islamic architecture, the origin of secular-religious-philosophical views, and their historical evolution, through research and study. Studying the shrines of Bukhara, while widely introducing traditional and modern methods of data collection and effective use, will serve to expand the flow of national and international tourists.

Today, many relevant scientific research centres and researchers of higher educational institutions are conducting scientific work on the collection and analysis of information related to pilgrimage sites and putting it into practice. Since the beginning of the 21st century, information technologies have been widely used in the development of socio-humanitarian and religious-educational spheres. In particular, scientific research on tourism, pilgrimage tourism, the study of historical events based on virtual reality, the creation of a digital resource base of ancestral heritage, and other studies can be cited.

In the tourism sector, information technology has a unique role and characteristics in collecting and analyzing information related to pilgrimage sites. For example, the production and service sectors of pilgrimage tourism have achieved an increase in production volume and improved the quality of accounting mechanisms by using automated accounting systems. Examples of such accounting systems include SAP, Scala, CRM and 1C systems, recognized by global economists.

In pilgrimage tourism, information on tourist resources is collected and analyzed using information technologies, and the processes from receiving an order for production to the production of a finished product or service and its delivery to the customer or buyer are under control. There are opportunities for horizontal and vertical analysis of activity results. According to the results of the analysis, there are opportunities for operational correction of production or service plan graphs in tourism. Such opportunities allow us to bring production or service provision to new stages of development.

Today, in a market economy, the success of the tourism industry, based on a modern information system, directly depends on the speed of mutual exchange and delivery of analyzed necessary information, the relevance, completeness and timely transmission and reception of information. The effective development of the tourism industry in world markets also requires the introduction of modern information and communication technologies into each process related to the stages of developing tourist products and their timely delivery to consumers.

In this regard, certain works have been carried out at the International Islamic Academy of Uzbekistan and introduced into the activities of relevant ministries. These include the following works: "The Contribution of the Turkestan Jadids to the New Thinking and Culture", "The Use of multimedia technologies in Learning the Arabic Language", "Illumination of the Educational Significance of hadiths using multimedia tools", "Organization of a virtual tour of the holy sites on the territory of the International Islamic Academy of Uzbekistan", "A software tool for entering

isolated words into an iconological database when studying ancient manuscripts", etc.

In addition, "On-line map of the dislocation of Tashkent city mosques and their appearance in 3D models", "Optimization of Bukhara shrines' websites (on the example of the Seven Pir shrine)", "Manifestations of Sufism" multimedia interactive textbook, "The scientific heritage of Abu Mansur al-Matrudi and "Matrudiyya teachings" on Android system, "Mobile applications of the Encyclopedia of Central Asian Scholars on Android system", "Automated information system of the Center for Islamic Civilization", "Multimedia interactive textbook on the scientific heritage of Central Asian scholars", a virtual travel program on the topic "Uzbekistan, the land of great scholars", "Hadith Scientific School" multimedia software, a multimedia program on "International and regional Islamic organizations", "Virtual reception of the Center for Islamic Civilization", "Reflection of the scientific and spiritual heritage of Sa'diduddin Taftazani in a multimedia interactive textbook", "Kaffol Shoshiy Complex on Android system", Software tools such as "Geolocation guide in pilgrimage tourism", "Reflection of the activities of the Sheikh Zayniddin complex in multimedia systems", "A program that provides information to tourists about the "Suzuk Ota" complex", "Android platform for the source of Muqaddamat ul-Adab", "A tour to the Hakim at-Termizi shrine in the Android system", "A multimedia tour to the Sufi Ollayor shrine".

These developments can be conditionally divided into the following three categories:

1. Promoting understudied Islamic studies sources through modern information technologies in order to turn them into international tourism attractions;

2. Using the achievements of modern Internet technologies to find potential investors and provide them with reliable information when attracting innovations to tourism facilities;

3. Promoting national values through tourism sites and increasing the initiative of our country's youth in creating national internet resources.

The basis for implementing the first category of issues is the Decree of the President of the Republic of Uzbekistan No. PF-4861 dated December 2, 2016 " On measures to ensure the accelerated development of the tourism sector of the Republic of Uzbekistan ". It states, in particular: the rapid development of tourism in the country, the more complete and effective use of the existing huge tourism potential, the rapid development of other potential types of tourism - pilgrimage, ecological, educational, ethnographic, gastronomic, sports, medical and health-improving, rural, industrial, business tourism and others, along with traditional cultural and historical tourism, the strengthening of the social significance of tourism through the development of children's, adolescents and youth tourism, family tourism, social tourism for the elderly, the development of new tourism destinations in the regions, their passporting, the development and implementation of national and regional programs for the comprehensive development of domestic, inbound and outbound tourism aimed at the formation of unified national registers of tourism destinations and tourism facilities.

In order to implement these issues, it is necessary to create new tourism facilities and promote the importance of the created facilities in a wide media area in several languages (English, Russian, Arabic and others). The necessary media resources have been created to solve these problems positively. They only need to be used correctly and effectively. Among such resources are the electronic version of Burkhaniddin Marginoni's work "Al-Hidoya", the geolocation system of the "Yetti Pir" shrine in Bukhara. These innovative developments are patented by the Intellectual

Property Agency of the Republic of Uzbekistan.

The second category of issues focuses on the following. In the context of globalization, state support for innovative activities in Uzbekistan depends on many factors. Examples of these are an effective and consistently implemented macroeconomic and active investment policy, developed foreign experience, and mechanisms for further improving the attractiveness of the investment environment. Tourism facilities should be constantly researched, which always includes scientific and practical problems based on innovation and efficiency.

It will be necessary to find attractive solutions to these problems and promote these solutions in different languages through the global Internet. It will be necessary to remember the Internet addresses of users who are interested in the information provided and enter into cooperation with them. It will be necessary to develop real investment proposals for such partners and to study the requirements that deserve their attention. Because the globalization of the world economy and the intensification of the competitive environment are leading to a sharp reduction in the period of attractiveness of tourism objects, rapid changes in market conditions and consumer needs.

As a result, the development of mechanisms for the attractiveness of competitive tourism objects from a representative participant in the field of pilgrimage tourism has become a vital necessity, and the development of innovative activities in the sector or industry and its effective management have become a requirement of today. Implementing such activities without Internet technologies is a difficult task.

In the third category, the widespread promotion of the contributions of our ancestors' scientific heritage to world civilization will help strengthen the sense of national pride in modern youth, and help them form a sense of creativity and inventiveness. Information systems created in these areas will serve to preserve our spiritual, educational, scientific, theoretical, and religious wealth and values, and to convey them to future generations through multimedia, mobile, and communication technologies. Such information systems will make a worthy contribution to the formation of not only young people who are proud of the work of their ancestors but also thinkers who are worthy successors of their ancestors' work.

Scientific heritage: developing an information system structure, developing mechanisms, models and algorithms for presenting samples of scientific heritage using modern multimedia, communication and mobile tools in a convenient manner, adapting to modern information search tools, and implementing them in practice using software tools, to give new impetus to efforts aimed at further in-depth research and popularization of the invaluable scientific heritage that forms its information base.

It is worth noting that the International Islamic Academy of Uzbekistan has accumulated significant experience in studying the heritage of our ancestors using the most advanced technologies and delivering the collected materials to the general public at the international and national levels.

According to the results of our analysis, information plays a crucial role as a link that unites tourism participants in a certain centre at all stages of the creation, development and delivery of tourism products within the tourism industry. It is necessary to constantly improve the information centre aimed at increasing the effectiveness of the development of pilgrimage tourism in Uzbekistan.

In this case, not only a certain type of product, but also information flows ensure the interaction and relations of enterprises and organizations participating in tourism activities and are formed in the form of various services and payments. In pilgrimage tourism, due to the characteristics of the industry, tourist services are not delivered to their consumers and are not reserved until they are consumed. Unlike in the tourism industry, information about the availability, price, quality and services of these services is transmitted, studied and the optimal option is adopted.

As a result, the direct involvement of the public drives and creates the need to analyze tourism activities as a highly integrated set of goods and services. In the pilgrimage tourism markets, this, in turn, is an incentive for the effective and efficient use of information and communication technologies in the organization and management of tourism activities. It is worth noting that, at the same time, we consider the effective use of information and communication technologies by individual segments of the tourism sector to be of great importance for other relevant areas.

In recent years, the active use of information and communication technologies in the activities of enterprises and organizations operating in the pilgrimage tourism market and the introduction of standard and specialized software have led to the establishment of electronic document management and the use of digital economy methods, which have made it possible to achieve qualitative results in form and content in many relevant technological processes in tourism.

The effectiveness of the development of the organizational and economic mechanism for the development of the pilgrimage tourism market directly depends, first of all, on the provision of a wide range of information to processes related to management activities at all existing levels.

According to the results of the analysis, a deep understanding of this task and the need for an organized, centralized, standardized, and rigorous information provision system for the tourism industry requires the creation of a concept for the formation of an integrated tourist information base at the level of the national economy throughout our country.

The formation of an integrated information base among participants in the tourism markets and the systematic implementation of their effective use create a need to improve the information system in tourism, in particular, pilgrimage tourism. The concept of a mechanism for improving the tourist information system in the Republic of Uzbekistan was developed by the authors.

The information system in pilgrimage tourism is a system consisting of a set of elements for the formation of databases of properly organized information at all levels of management activities in the national tourism market of our country, in particular, from tourist organizations to higher management bodies, integrating information and data from the lower to the upper layers, systematically transferring them in vertical and horizontal directions, regulating communication and relations related to the use of information and data for the relevant element within a single system, and setting the necessary boundaries. The Internet acts as a network connecting the links of the chain from the search for information and data to the study of information related to travel and directly affects the choice and actions of consumers of tourism products. An interactive tourist information and data system has the following structural characteristics:

- modern geospatial maps of pilgrimage and significant tourist sites, that is, a colour spatial map of the relevant area;

- A program that consists of a 3D model, a collection of pilgrimage and significant tourist attractions, that is, images of objects, and the ability to view information about a specific tourist attraction;

- a program consisting of a set of comprehensive information about infrastructure facilities and the ability to view information about a specific facility;

- a layer of pilgrimages and significant tourist excursions or tourist routes, that is, a schematic and clear map of the relevant routes, the tourist facilities covered by them, the addresses of enterprises and organizations organizing tourist and excursion services, and a database for reference;

- navigation of pilgrimage and important tourist sites, that is, a system of modern tools for searching for information and data;

- information and database on hotels and other alternative accommodation establishments in the relevant regions, i.e. hotel addresses, types of services provided there, and available rooms and spaces;

- Having a database of relevant pilgrimage and significant tourist attractions in the regions, i.e. road maps, to enable efficient use of transport logistics;

- The database of the interactive information and data system of pilgrimage and important tourist sites is formed in international foreign languages.

It is worth noting that in our country, which has its own scientific and technical potential, special attention is being paid to the systematic development of information and communication technologies and their software. As a result, through the effective use of 3D technology in illuminating places of national and international importance as tourist resources, it is possible to achieve a sharp increase in the flow of tourists to our country.

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