

APPLICATION OF VIRTUAL AND AR TECHNOLOGIES IN PROMOTING GASTRO-TOURISMS

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Abstract: This article deeply studies the use of digital innovations, in particular virtual reality (VR) and augmented reality (AR) technologies, in the development of gastronomic tourism. Enriching the experience of tourists, increasing their emotional satisfaction, and providing services in an interactive format in the global tourism sector are among the most important requirements of modern marketing. From this point of view, VR/AR technologies are emerging as a new generation of tools for promoting gastro-tours. Through these technologies, tourists will have the opportunity to get acquainted with the unique taste palette of national cuisine, food preparation processes, restaurant atmosphere, and the origin of regional dishes without visiting the country. The study analyzes strategies for promoting national dishes - pilaf, samsa, qazan kebab, narin, Samarkand bread - on the world market using VR/AR capabilities. Also, scientific views have been developed on increasing tourism flows and improving service quality through digitization of gastronomic routes, organization of virtual excursions, use of AR menus in restaurant services, presentation of gastronomic zones in cities in 3D format. The results of the study show that the effective use of VR and AR technologies will expand Uzbekistan's gastronomic tourism exports, increase its competitiveness, and help strengthen the country's national brand on an international scale. At the same time, this direction will serve to personalize tourist services in the future, strengthen interactive communication with customers, and widely promote gastronomic heritage.

Keywords: gastronomic tourism, digital innovations, virtual reality, augmented reality, gastro-tour, national cuisine, tourist marketing, virtual tour, interactive content, brand promotion, pilaf, digitalization, smart tourism.

Login: In today's globalization and digital transformation, all areas of the tourism industry, including gastronomic tourism, are reaching a new level. Tourists now want to get acquainted not only with historical monuments or natural places during their trip, but also to get a deeper cultural impression through local cuisine, cooking processes and gastronomic heritage. Therefore, gastro-tours have become the fastest growing direction of modern tourism. The strong development of digital technologies, in particular virtual reality (VR) and augmented reality (AR) applications, is playing a huge role in enriching the tourist experience, creating new marketing platforms and increasing the popularity of gastronomic brands. While VR technology allows tourists to fully immerse themselves in the restaurant environment, culinary processes and gastronomic routes, AR technology creates a live presentation by adding additional digital information to the real world. For example, if a 3D model of a dish on a restaurant menu, its calorie content, composition and history are visually displayed through AR, the tourist becomes a more active participant in decision-making. Uzbekistan has a unique gastronomic heritage:

regional variations of pilaf, Samarkand bread, Bukhara samsa, Fergana dishes, national sweets and traditional tea culture - all these are rich resources of gastro-tourism. However, in order to effectively promote this potential on an international scale, it is necessary to actively use digital innovations. Because a modern tourist initially receives information, makes decisions and plans through a digital environment. If gastronomic destinations are presented in VR/AR formats, this will significantly increase the tourist's interest in Uzbekistan. At the same time, digital integration of gastro-tours is an important tool for strengthening the competitiveness of a tourist brand, developing regional marketing and managing tourist flows. By developing the national culinary and cultural heritage of Uzbekistan based on the Smart Tourism concept, the country's economic potential will also increase. In this process, the cooperation of state policy, service enterprises, the IT sector and local communities is important. Therefore, this study provides a detailed scientific analysis of the role of VR and AR technologies in promoting gastronomic tours, their implementation mechanisms, advantages and practical possibilities. The study responds to urgent issues aimed at further promoting the national cultural heritage of Uzbekistan, enriching the tourist experience and increasing the flow of international tourists through the digital transformation of gastronomic tourism.

Literature analysis and discussion: The scientific literature on gastronomic tourism emphasizes that the experience of tourists with food is a key emotional component of tourism. Therefore, in recent years, scientists have been paying great attention to innovative presentation methods, especially VR and AR technologies, in the development of gastro-tours. International studies have scientifically substantiated that VR creates a strong sense of immersion for tourists, that is, a sense of “real participation”, while AR facilitates decision-making by introducing additional information into the process of eating in a real environment. Studies on tourism marketing have noted that VR and AR tools create a new stage of brand promotion, significantly increasing the attractiveness of restaurants and gastro-heritage objects. Studies show that virtual tours and 3D-visualized menus are effective tools for attracting gastro-tourists via the Internet. In particular, with the help of VR technologies, a tourist can preview the environment where a national dish is prepared, experience the specific stages of culinary art, and thus increase his motivation to visit this destination. AR technologies are widely used in the restaurant industry through experiments aimed at improving service quality and customer satisfaction. Digital menus with QR codes, 3D product views, visual information about the composition and origin of dishes create additional convenience for tourists. Scientists also emphasize that using AR technologies can ensure allergy safety and offer personalized dining solutions.

However, the scientific literature also notes a number of problems in the implementation of these technologies. In particular, there is a lack of sufficient development of digital infrastructure, the need for highly qualified specialists and large investments to create VR/AR content, and the risk of techno-stress in some users. Therefore, gradual integration, technological education and cooperation mechanisms are of great importance in the digitalization of gastro-tours. At the same time, the literature also provides scientific recommendations on the integration of VR/AR technologies with content marketing, social networks, and online booking platforms to effectively promote national gastronomic heritage. This will help increase the competitiveness of tourist services in the international market.

In general, the literature emphasizes that the development of gastro-tours based on an innovative digital approach leads to an increase in tourist flows, increased economic efficiency, and

strengthening of the national culinary brand. Therefore, this topic is scientifically and practically relevant and requires in-depth study.

Conclusion: This study showed that the use of virtual reality (VR) and augmented reality (AR) technologies in gastronomic tourism not only increases marketing effectiveness, but also has a positive impact on tourists' decision-making process by enriching their food experience. Innovative approaches are a powerful tool for promoting gastro tours, increasing the attractiveness of national cuisine and gastronomic heritage, and strengthening Uzbekistan's tourism brand internationally. VR technologies allow tourists to immerse themselves in the culinary environment and the process of preparing food without visiting a restaurant, while AR enriches the dining experience in a real environment with additional information. These two technologies significantly increase the demand for gastro routes by increasing tourist interest and emotional connection. In this regard, they can provide a competitive advantage in the emerging digital tourism market.

At the same time, the development of digital infrastructure in the country, training specialists in VR/AR content production, expanding public-private partnerships, and integrating gastronomic tourism into a single digital ecosystem are among the key tasks for the future. These measures will serve to increase the economic potential of gastronomic tourism, develop regional brands, and increase the flow of international tourists. In short, the use of VR and AR technologies in promoting gastronomic tours is one of the priority areas for introducing the national culinary heritage of Uzbekistan to the world, creating new experiences for tourists, and sustainable development of the tourism sector. Scientific and practical research conducted in this area will contribute to the successful implementation of the national tourism strategy.

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