



DIGITIZATION OF HISTORICAL SOURCES OF UZBEKISTAN: CHALLENGES AND PROSPECTS

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Abstract: *This article analyzes the processes of digitizing the rich historical and cultural heritage of Uzbekistan, specifically archival documents, manuscripts, and archaeological finds. The study examines the benefits of introducing modern ICT technologies into the field, the existing technical and legal barriers, and methods for overcoming them. Furthermore, the role of developing "Digital History" in strengthening national identity is scientifically substantiated.*

Keywords: *Digital history, archives, manuscripts, metadata, scanning, OCR technology, cultural heritage, electronic databases.*

INTRODUCTION

Uzbekistan holds a significant place in world civilization with its centuries-old historical heritage, rich manuscript funds, and unique archival documents. The funds of the country contain over 100,000 manuscript works and millions of archival files, which serve as invaluable sources for both regional and global history. However, the physical degradation of paper and parchment-based sources over time, the physical limitations of preservation, and the difficulties researchers face in accessing these materials have made digitization an urgent task[1]. The "Digital Uzbekistan – 2030" strategy[2], initiated by President Shavkat Mirziyoyev, and decrees regarding the preservation of cultural

heritage have marked a new era in this field.

Objective of the Article: To assess the current state of digitizing historical sources in Uzbekistan, compare it with international experience, and develop scientific and practical recommendations for improving the sector[3].

METHODOLOGY

The following scientific methods were employed during the preparation of this research: Systemic Analysis: Digitization projects carried out by the National Archives of Uzbekistan, the Institute of Oriental Studies, and the Cultural Heritage Agency were examined. Comparative Method: The experience of Uzbekistan was compared with the "Digital Archives" systems of countries such as Germany, South Korea,



and Russia. Technological Monitoring: The efficiency of modern scanners and Optical Character Recognition (OCR) software capable of recognizing ancient manuscripts was analyzed. Sociological Survey: A survey was conducted among historians and researchers regarding the accessibility and convenience of using electronic resources[4].

RESULTS

Current Status and Statistical Analysis In recent years, several positive results have been achieved in Uzbekistan: Abu Rayhon Beruni Institute of Oriental Studies: Electronic copies of more than 26,000 manuscript works have been created. National Archives of Uzbekistan: Approximately 15-20% of archival documents have been digitized (focusing primarily on pre-revolutionary and unique documents)[5]. **3D Modeling:** 3D digital twins of architectural monuments in the cities of Samarkand, Bukhara, and Khiva have been developed.

Technical and Methodological Challenges The study identified the following problems: **OCR (Optical Character Recognition) Limitations:** A lack of sophisticated software capable of automatically converting handwritten Old Uzbek (Chagatay), Arabic, and Persian scripts into digital text. **Metadata Standards:** Descriptions of digitized objects (metadata) do not always align with international standards like Dublin Core[6]. **Technical Infrastructure:** A shortage of high-definition (HD)

planetary scanners in regional archives. **3.3. Legal and Economic Barriers** Legal restrictions regarding copyright and online access to sensitive archival documents[7]. Issues regarding the funding of large-scale servers (Big Data storage) and cloud technologies required to store high-resolution digitized data[8].

DISCUSSION

Digitization is not merely taking a photograph; it is the beginning of a "second life" for a source. **Comparison with International Experience:** For instance, Germany's "Deutsche Digitale Bibliothek" integrates all libraries and archives into a single platform. There is an urgent need in Uzbekistan to create a "National Historical Digital Portal." **The Role of Artificial Intelligence:** One of the most critical issues discussed is the use of AI for the transcription of Arabic-script manuscripts. This could potentially reduce research time by tenfold. Furthermore, the issue of training personnel in the field of "Digital Humanities" is highly relevant. A modern historian must not only understand archives but also be proficient in database management (SQL) and digital analysis.

CONCLUSION

The digitization of Uzbekistan's historical sources is a matter of national security and cultural independence. Based on the research, the following recommendations are proposed: **Unified Integrated Platform:** Launching a national search engine that consolidates the digital



resources of all archives, museums, and libraries. Localization of OCR Technologies: Allocating grants for the creation of AI models capable of reading and transliterating ancient scripts. Open

Data Policy: Expanding remote access to electronic databases of historical documents for researchers and the younger generation.

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