

Exploring the Culture of the First School in Erbil: Digitizing Heritage for Global Understanding

The Historical Significance of Erbil Educational Museum in digitally

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Abstract: Withing this paper the author writes about the change project in the Erbil Educational Museum, from Erbil Ula – the emblem of the first Kurdish school. Founded in 1920 and today it is a museum and a symbol of protection of the Kurdish cultural and educational heritage. The idea of the project includes the use of such modern digital technologies, like 3D scanning and PolyCam, for creating an interactive website or mobile app. Now with these technologies we can create a virtual model and show the world how the physical museum and education artifacts look like as a physical place in the region to endorse the constructive history of the city of Erbil. It should not only be through the cultural values of the museum but also its preparation for the world.

Keywords: Erbil Educational Museum, Kurdish cultural and educational heritage, 3D scanning, PolyCam, interactive website or mobile app, constructive history of Erbil

Introduction

Nestled in the heart of Erbil, the capital of the Kurdistan Region, stands a monumental institution that transcends its physical boundaries to serve as a beacon of cultural and educational heritage. The Erbil Educational Museum, originally established in 1920 as Erbil Ula, the first Kurdish school, has evolved into a symbol of the city's deep-rooted intellectual tradition and commitment to preserving cultural identity. Erbil, one of the oldest continuously inhabited cities in the world, has a history that dates back several millennia, having been a crossroads of civilizations. This rich historical tapestry is reflected in the museum's architecture and the educational legacy it carries forward.

Erbil Ula was not merely a school but a crucible of learning and hope for many generations in the Kurdish region. It emerged as a pioneering institution at a time when educational opportunities were scarce, especially in regions with turbulent political landscapes. The transformation of Erbil Ula into a museum serves as a testament to the enduring importance of education in Kurdish society and its role in the broader narrative of cultural resilience and preservation.

The significance of the Erbil Educational Museum extends far beyond its historical and cultural contributions. It represents a century of educational excellence, a commitment to coexistence, and a rich heritage of intellectual pursuit. The museum's location, adjacent to Erbil's ancient citadel, adds layers of historical significance, standing as a silent witness to the city's evolution from a historical site to a modern-day cultural hub.

However, amidst this rich tapestry of history and cultural significance, the Erbil Educational

Museum faces pressing challenges that threaten its long-term sustainability. Issues such as the need for modernization, comprehensive collection management strategies, infrastructural enhancements, and staff training loom large, potentially jeopardizing the museum's ability to fulfill its mandate of preserving Erbil's educational legacy. The encroaching pressures of urban development and the digital revolution call for innovative solutions to bridge the gap between traditional preservation methods and contemporary outreach techniques.

In response to these challenges, our research adopts a transformative approach, employing modern digital tools to document, preserve, and disseminate the museum's heritage. By integrating 3D scanning technology, interactive web and mobile platforms, and virtual reality, we aim to create a digital presence that complements the physical experience of the museum, ensuring that Erbil's educational heritage is accessible to a global audience. This initiative not only aims to document and celebrate Erbil's historical and educational significance but also to engage a new generation of learners and scholars from around the world, thereby contributing to the global understanding and appreciation of Kurdish culture.

Literature Review

1. Thermal Comfort in Traditional Erbil Houses

The paper (Soave & Hawizy, 2019) discusses a transformative project at the Erbil Educational Museum, originally known as Erbil Ula—the first Kurdish school, established in 1920. Today, the museum stands as a guardian of Kurdish cultural and educational heritage. The project leverages advanced digital technologies, such as 3D scanning and PolyCam, to develop an interactive website and mobile application. These technologies enable the creation of a virtual model of the museum, showcasing its physical artifacts and educational significance. This virtual representation not only highlights the cultural values of the museum but also prepares it to connect with a global audience, promoting the rich history of Erbil.²

This paper (Al Jaff, 2022) explores a transformation project at the Erbil Educational Museum, formerly known as Erbil Ula—the landmark of the first Kurdish school established in 1920. Now serving as a beacon of Kurdish cultural and educational preservation, the museum employs modern digital technologies such as 3D scanning and PolyCam. These tools are used to craft an interactive website and mobile app, creating a virtual representation of the museum and its educational artifacts. This digital embodiment allows the museum to showcase its historical and cultural significance to a global audience, enhancing understanding and appreciation of Erbil's rich heritage

Methodology:

Our methodology for digitizing the Erbil Educational Museum involved a blend of traditional field research and advanced technological integration. This approach aimed to precisely document and digitally recreate the museum's artifacts and physical environment for global accessibility through interactive web and mobile platforms.

Field Research and 3D Scanning:

Our initial steps included multiple field visits to understand the museum's layout and cultural

context, which were vital for accurate digital replication. We utilized PolyCam to perform high-resolution 3D scans of significant artifacts and spaces within the museum, facilitating the creation of detailed three-dimensional models.

Web and Mobile Application Development:

In parallel with 3D scanning, we developed a digital platform encompassing a responsive website and a mobile application. The website was crafted using HTML, CSS, JavaScript, and Bootstrap, while the mobile app was built with Dart and Flutter, supporting both Android and iOS systems. This setup was designed to integrate seamlessly with our 3D models and virtual tours. Interactive Features and Virtual Reality:

We enhanced the user experience by incorporating these 3D models into both web and mobile platforms, allowing users to engage with virtual tours and detailed explorations of artifacts. Additionally, we utilized FrameVR to create immersive VR experiences that simulate physically walking through the museum's exhibits.

Technical Challenges and Solutions:

We faced challenges related to technology integration across various devices and platforms. By adopting a progressive enhancement strategy, we ensured basic accessibility for all users while offering advanced features for those with capable devices. This approach helped maintain broad accessibility and pushed the boundaries of digital interaction in cultural preservation.

Collaboration and Continuous Improvement:

The project was enriched by close collaboration with museum staff, historians, and technology experts. Regular workshops and feedback sessions allowed us to refine our digital outputs, ensuring they were accurate and relevant to both the museum's needs and visitor expectations.

Results and Discussion:

The digitalization of the Erbil Educational Museum has significantly enhanced its accessibility and educational impact. Advanced 3D scanning, web, and mobile applications have successfully merged traditional museum experiences with digital exploration.

Outcomes of the Digitization Project:

Enhanced Visitor Engagement: Virtual tours and 3D models on our platforms have transformed visitor interactions, allowing remote exploration of museum spaces and artifacts.

Increased Accessibility: The museum's collections are now globally accessible, enhancing its role in international educational and cultural exchange.

Educational Impact: Our platforms provide detailed historical context and multimedia content, enriching the educational experience for users worldwide.

Analysis of Visual Documentation:

Photographs of the Museum: We use photos to highlight the museum's architecture and the educational settings of the past, offering insights into historical educational practices.

Digital Platform Visuals: Screenshots demonstrate the user-friendly interfaces of our website and app, showcasing the integration of interactive elements and 3D models.

Discussion of Benefits:

Preservation of Cultural Heritage: Digital archiving safeguards the museum's artifacts against physical threats.

Innovation in Education: We leverage digital tools for innovative educational experiences.

Sustainability: Our digital platforms ensure the museum's resources are sustainably shared with minimal upkeep.

Future Prospects:

We plan to enrich the digital experience further through augmented reality, enhanced 3D modeling, and more interactive tools. This ongoing development keeps pace with technological advancements and expands the museum's educational reach.

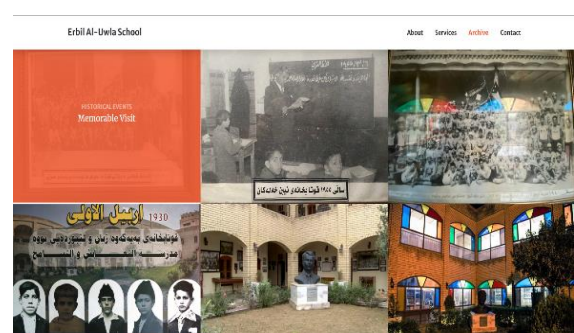
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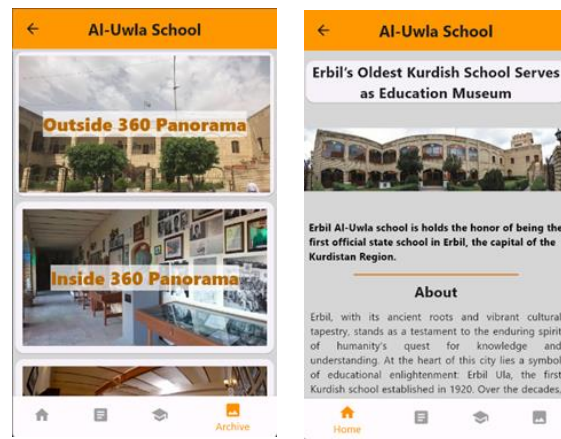


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Conclusion

The digitization of the Erbil Educational Museum is a significant advancement in preserving and sharing Kurdish cultural and educational heritage. By employing modern technologies such as 3D scanning and developing interactive digital platforms, this project has successfully made the museum's rich history accessible globally. The virtual and interactive experiences not only enhance educational outreach but also ensure the preservation of cultural artifacts for future generations. As the project continues to evolve, potential enhancements like augmented reality and improved 3D modeling are expected to further enrich the visitor experience. This initiative demonstrates a promising blend of tradition and innovation, ensuring that the Erbil Educational Museum's legacy continues to inspire and educate worldwide.

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