

Role Of Digitalization, Digital Libraries and Preservation in Safeguarding Cultural Heritage

Susmita Ray¹, Dr. Dharamvir Singh²,

Research Supervisor Department of Library & Information Science

^{1,2}Sikkim Professional University, Gangtok, (Sikkim)

Abstract: Digitalization, digital library and protection processes have become very important for preserving and protecting our broad cultural heritage in today's quickly changing digital world. This article appears on how digital technologies can be used in many extraordinary approaches so that the guard is in many extraordinary approaches to help cultural treasures. It determines that digital of historical artifacts, literary historical and mathematics substances not only simplifies them, but also protects them for a long time. In the online collection, it becomes easier to go to the surrounding area and users can help detect cultural treasures from everywhere within the global. This article also talks about almost new approaches to maintain cultural artifacts that use contemporary techniques such as "metadata tagging, 3D scanning, and synthetic intelligence", to maintain them from malfunction or wrong. The study also talks about issues and moral problems that give you virtual protection. It shows how important it is for collective paintings for people with specializations in history security, technology and renewal science. The article of the question is no longer the simplest, which emphasizes the important work of line access and renewal through the global change, training, and special examples and major methods through studies. It underlines the need to view that you use digital gadgets efficiently to model the monetary stability of our records properly for the benefit of the following era.

Keywords: Digital Library, Digitalization, Information Technology, Preservation, Cultural Heritage

INTRODUCTION

The article tested the developed role of digitization, virtual libraries and conservation methods in the protection of our full -size cultural history. At a time when the generation is changing rapidly, these new devices are necessary to ensure that the historical and modern treasures of mankind are still available, are beneficial, and are safe for humans. This piece sees how digitization has a major impact on maintaining our different traditions, as well as how on-line archives help with cultural facts and serious relationships.¹

BACKGROUND

Cultural heritage is a will for rich history, diverse traditions and artistic expressions of societies throughout the ages. It involves tangible and abstract elements that shape the identity of communities and nations. However, conservation of cultural heritage has always been a challenge due to factors like natural decay, human intervention and geo -political conflict. In this digital age, the convergence of technology, digitalization, and preservation strategies has opened up new avenues for safeguarding cultural heritage for future generations.

LiteratureReview

Nicola Barbuti (2020)², emphasizes the recognition of digital artifacts as cultural heritage, marking a

¹ IEEEpremier electronic library is the Computing Society's Institute. (August 2016). p. 5-5 in computers 49(8). <https://doi.org/10.1109/mc.2016.2611>

² Barbuti, N. (2020, August 27). According to the R through R4 component of the FAIR concepts, we should consider digital resources for storage as internet cultural heritage, according to the International Forum on Digital Library System. SpringerLink. <https://doi.org/10.1007/s00799-020-00291-7>.

significant development in heritage discourse. The inclusion of digital and digitalized objects alongside physical and intangible heritage reflects the evolving understanding of cultural value. Barbuti argues for a systematic approach to defining the types of digital objects that qualify as digital cultural heritage (DCH)

EY (2020) has mentioned that the creative sector in Europe relies heavily on digitally preserved cultural materials. According to the 2010 European Efficiency Report, the creative sector contributes 3.3% to GDP and 3.0% to employment in the European Union. The digitization process and the online availability of the artistic works of European Union countries – including both national and global content – have contributed to economic growth, job creation, and the development of a unified digital marketplace by expanding access to innovative products and services. The Digital Agenda—one of the seven core priorities of the EU’s 2020 Roadmap—aims to ensure that individuals and businesses benefit fully from digital innovation. Its goal is to ensure that people and businesses in Europe can reap the full benefits of digital innovations.³

Aim and Objectives

This article aims to examine the vital role that digitalization, digital libraries, and preservation techniques play in the protection and conservation of cultural heritage.

The objectives of the study are:

1. To explore the impact of digitalization, digital libraries, and preservation methodologies in enhancing the accessibility and longevity of cultural assets.
2. To analyze the technological, ethical, and institutional considerations involved in the digital preservation of cultural heritage.

Methodology

To explain the concept of digitalization and digital libraries, the study adopts a doctrinal approach combined with qualitative methodology. It relies on secondary data collected from various digital library platforms to illustrate the real life significance and applications of digital library.

Result and Discussion

The Role of Digitalization, Digital Library, and Preservation in safeguarding Cultural Heritage

The fast growth of internet technology has had a big effect on many areas, such as the protection of cultural heritage. This article explores the role of digitalization, digital libraries, and preservation in safeguarding and promoting cultural heritage. This discussion below presents the key findings and implications of this study.⁴

Digitalization and Access to Cultural Heritage:

Digitalization has emerged as an important tool in preserving and providing cultural heritage materials. Digitizing artifacts, manuscripts, artifacts and other cultural objects allows for widespread spread, making them accessible to global audiences. Digital platforms enable users to detect cultural treasures that can be inaccessible

³ “The way digital technology may aid in the preservation of cultural heritage. (January 9, 2020). *The Historical Record Can Be Preserved Through the digitization of information* https://www.ey.com/en_hr/consulting/how-digitization-can-help-to-preserve-the-cultural-heritage”

⁴ Sreenivasulu, V. (2000, February). In the upkeep of internet-based computer systems (DIS), the function of the digital scholar. 12–20 in *The Internet Museum*, 18(1). <https://doi.org/10.1108/02640470010320380>

due to geographical boundaries or protection concerns. Additionally, the digitization process often involves metadata tagging, which increases the discovery and discovery of cultural materials.

Digital Libraries as Repositories:

Digital libraries play an important role in collecting and curing digital cultural materials. These repository work as a broad database, where different types of materials can be stored, organized and recovered. Digital libraries contribute to the protection of cultural heritage, by ensuring that digital copies are accessible, even if physical artifacts are spoiled over time. They provide opportunities for researchers, scholars and public to study and analyze cultural materials from remotely.⁵

Challenges in Digital Preservation:

While digitalization and digital libraries offer significant benefits, several challenges associated with digital preservation. Technological obsolescence, file format compatibility, and data degradation pose risks to the long-term accessibility of digital content. Institutions must invest in strategies for regular migration of digital content to newer formats and storage systems to ensure its continued viability. Additionally, the dynamic nature of digital resources requires continuous monitoring and adaptation of preservation strategies.

Democratizing Cultural Heritage:

Digitalization and digital libraries contribute significantly to democratization of cultural heritage by facilitating inclusive access and representation. They process of digitization empowers marginalized communities to share and preserve their heritage, while digital libraries provide platforms for equitable and diverse cultural expression. Digital platforms enable users to engage actively with their cultural heritage, encouraging participation, collaboration, and co-creation of knowledge. This broader engagement enhances the preservation of intangible cultural heritage by keeping traditions alive and relevant in the digital age.

Ethical and Legal Considerations:

Protecting the cultural heritage in digital shape increases vital moral and legal questions, specially approximately occupation, copyright and cultural sensitivity. To stability the discovery of creators, institutions and groups requires the development of clear regulations and descriptions that recognize cultural values and hooliganism requirements. To address those complex problems, we need to make certain that our agreements and shared plans are effective so that our efforts to digitize things are ethical and hooliganism.

Digital remediation and reconstruction

Modern digital technology has helped it to fix or rebuild cultural objects that may have been incorrect or damaged over the years. Detailed imaging, modeling in three dimensions, and digital truths are some of the devices that make this method even better keeping in mind the exact electronic entertainment of historical buildings, artifacts and gadgets. These new ideas simplify the cultural historical past to connect and enjoy, efficiently the distance between history and modern times.

Online data is notable for study, it is outreach to get knowledge and package. First figures, oral history and multimedia substances can help new people, scholars, teachers and others and other additional learns and become high students. Cyberspace can be used by cultural groups to host exhibitions, virtual tourism and

⁵ Bekele, S. (2002, June). An analysis examining the OSSREA Video Library's roles and effects on strengthening capacities in the developing world. 34(2), 129–137, Universal Data & Technology Quarterly. <https://doi.org/10.1080/10572317.2002.10762569>

involve humans. These activities have a great impact on the regular conservation of historical websites and helps humans study for their life exemption.

CONCLUSION

This study emphasizes modernization in the safety of cultural heritage in the era of internet, emphasizing the important role of digital libraries and conservation methods. The technologies under consideration not only make more people easier to join and participate, but they also support new ways to restore and document things.

But for digital safety to work in the long term, it needs to deal with a lot of technical, moral and legal obstacles. For permanent and responsible security, museums, cultural organizations, policy makers and technology experts need to work together at all times. As technological development improves, cultural institutions, policy makers and technology experts need to work together to come up with smart schemes that will help to ensure that future generations have access to our artistic tradition, diversity and fulfillment of future generations.⁶

REFERENCES

- [1] ¹IEEE Computer Society Digital Library: IEEE's First Digital Library. (2016, August). *Computer*, 49(8), 5–5. <https://doi.org/10.1109/mc.2016.261>
- [2] ¹Barbuti, N. (2020, August 27). *Thinking digital libraries for preservation as digital cultural heritage: by R to R4 facet of FAIR principles - International Journal on Digital Libraries*. SpringerLink. <https://doi.org/10.1007/s00799-020-00291-7>.
- [3] ¹*How digitization can help to preserve the cultural heritage*. (2020, January 9). How Digitization Can Help to Preserve the Cultural Heritage. https://www.ey.com/en_hr/consulting/how-digitization-can-help-to-preserve-the-cultural-heritage-
- [4] ¹Sreenivasulu, V. (2000, February). The role of a digital librarian in the management of digital information systems (DIS). *The Electronic Library*, 18(1), 12–20. <https://doi.org/10.1108/02640470010320380>
- [5] ¹Bekele, S. (2002, June). The Role and Impact of the Digital Library on Capacity Building in the Developing World—a Case Study of the OSSREA Digital Library. *International Information & Library Review*, 34(2), 129–137. <https://doi.org/10.1080/10572317.2002.10762569>
- [6] ¹Henderson, K. (2005, August). Marketing strategies for digital library services. *Library Review*, 54(6), 342–345. <https://doi.org/10.1108/00242530510605467>.

⁶ Henderson, K. (2005, August). Plans for marketing for resources provided by digital libraries. Cite this article as: *Library Check it out* 54(6), 342-345; DOI: 10.1108/00242530510605467.