RESEARCH ARTICLE

Transforming Library Books in Afghanistan: A Descriptive Study of Preservation Practices in Alama Habibi Library at Kandahar University

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ABSTRACT	ARTICLE INFO

This study explores the preservation practices of library books in Afghanistan, specifically focusing on the Alama Habibi Library at Kandahar University. The primary objective of the research is to investigate the current methods and strategies employed to conserve library books and safeguard valuable resources within the library's collection. Given the challenges of limited resources and environmental factors in Afghanistan, this study aims to shed light on how preservation efforts are managed and identify potential areas for improvement. A descriptive research method was used, including site visits, observations, and interviews with library staff and patrons to gather insights into the preservation practices. The findings reveal that while the library has made some progress in maintaining the condition of its books, challenges such as inadequate storage facilities, climate-related issues, and limited funding for preservation programs remain prevalent. However, efforts such as basic conservation techniques and periodic repairs have been implemented to extend the lifespan of the books. The study concludes by recommending improvements in preservation training, enhanced storage facilities, and better funding for preservation initiatives to ensure the longevity and accessibility of the library's collection in the face of ongoing challenges.

Introduction

Despite the critical role of libraries in preserving cultural and academic resources, limited research has been conducted on preservation practices in Afghan university libraries, particularly in conflict-affected regions like Kandahar. Existing studies on library preservation mainly focus on well-established institutions in more stable environments, leaving a gap in understanding the specific challenges, strategies, and resource limitations faced by libraries in Afghanistan. This study aims to address this gap by examining the preservation practices at Alama Habibi Library, shedding light on context-specific issues and potential improvements. The research on preservation planning and workflows for digital holdings at the Thomas Fisher Rare Book Library reveals several key findings related to the challenges and strategies for ensuring long-term accessibility and integrity of its digital collections. The library has developed a multifaceted preservation strategy that integrates both technical and procedural aspects. This includes the use of established digital preservation standards such as the OAIS (Open Archival Information System) model, alongside regular audits and migration plans for file formats and storage media. The Thomas Fisher Rare Book Library's approach to digital preservation is proactive and adaptive, addressing the challenges of

technological change, resource limitations, and evolving user needs. The research underscores the importance of integrated workflows, ongoing risk management, and strategic planning for the future of digital collections in rare book libraries (Diulio et al., 2019). Several presentations highlighted breakthroughs in AI and machine learning algorithms, particularly in predictive analytics, natural language processing, and autonomous systems. The integration of AI with IoT was also explored, particularly for real-time data processing and decision-making (2018 International Conference on Current Trends towards Converging Technologies (ICCTCT), 2018).

According to Seales et al. (2004) research findings novel nondestructive technique for recovering readable text from damaged books and scrolls, offering significant advancements in conservation and textual analysis, this approach represents a breakthrough in conservation science, as it offers a noninvasive alternative to traditional methods that require physical intervention. It is a promising solution for rare or historically significant works, where preservation of the physical object is paramount, but textual analysis is also necessary. The findings also underscore the potential of integrating advanced imaging technologies with computational modeling to enhance the study and preservation of fragile texts. This technique paves the way for future advancements in conservation practices, allowing scholars to analyze damaged materials in ways that were previously impossible (Seales & Lin, 2004).
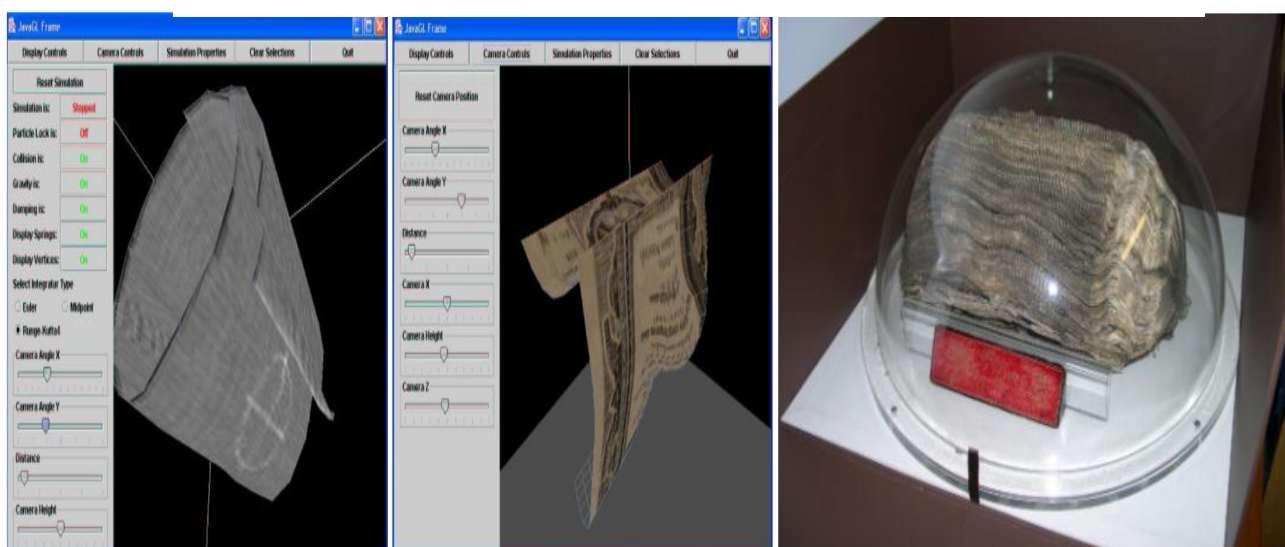

Figure1- 1: (Left) This screenshot shows how to manipulate a surface that was taken from a CT dataset. (Right) Locked particles can be used to depict folds and crease s(Seales & Lin, 2004)

An ideal library allows each and every visitor to experience what it's like to have their own space where they can explore a vast array of information and then create their own learning environment. Concurrent with this idea, efforts are being made to refine traditional librarianship in order to turn it into a hub for innovative digital education, the most popular method of conservation and preservation is library security. The main factors for library items to deteriorate are dust and particle matter. The results also showed that the main methods used by libraries include dusting, cleaning, and appropriate shelving (Osunride, 2016a).

Given their proficiency in teaching research inquiry skills, promoting collaborative work throughout the research process, offering space and other material resources for research, and curating the all-too-often-hidden intellectual resource of research support staff, academic libraries are particularly well-positioned to become a productive force for researcher–community partnerships (Wiggins et al., 2020). Today's networked society is established by digital connections between companies and customers via robust information systems and ubiquitous connected devices. Considering this, service science is still gaining traction as a field of study that focuses on how service providers and customers integrate (digital) resources to co-create value in service systems. Quick developments in information technology make it possible to create innovative information systems that support completely different service system setups. In turn, service science influences how technology and information systems are developed, adopted, and used. In order to create cutting-edge IT artifacts for smart services, we have compiled a collection of topical papers in this special issue that explore specific aspects of the intricate interactions between information technology, information systems, and service science (Beverungen et al., 2017).

Students use the library for their studies in a fair manner. It has been noted that exam periods are when they use the library the most. It also showed that students can fairly access and use the resources that are now available. Customers are happy with the library's offerings in terms of facilities and services. Issues impeding students' ability to use the University Library effectively were noted, and solutions were suggested (Kingsley Udem & Nkamnebe, 2014). Library staff are responsible for gathering, organizing, interpreting, and sharing information, as is well known. Important historical document materials should be strategically planned for long-term preservation, especially as well as the materials' accessibility and security. As a result, collections in their Custody must be safeguarded, unhindered, maintained, and protected (Mesagan et al., n.d.).

E-records can be divided into two categories: data files, which are computer-processable files that contain textual and occasionally numerical data, and text files, which are files created by word processing software or other programs. quantifiable values such that mathematical operations can be used to modify numbers; analog audio and video recordings (sound files and pictures that can be listened to again); disaggregated data (data gathered by remote sensing devices); databases, which are organized collections of connected data; sets of machine instructions (documents produced by clever machines); picture files (documents comprising computer-processable pictures that were previously typically in hard copy being transformed into pictures) and electronic records (files with numerical digitally recorded information, pictures, or sound in a consistent format (Wamukoya & Mutula, 2005). The loss and degradation of resources in universities is caused by improper conservation and preservation methods (Osunride, 2016b). Media, non-book, and non-print resources are all included in library items. Examples of media resources include computer hard-drive, databases, library software; non book materials include CD ROMs, audio and video tape, while print materials include photographs, maps, periodicals, books, and magazines (Njeze, 2012).

The goal of libraries, archives, and museums is to make their diverse collections available to the public in a range of media, representing a wealth of knowledge gathered over the institutions' histories users (Ekwelem et al., 2011). Compared to their female counterparts, libraries hired more men. It was discovered that the most commonly consulted serial material categories that are kept and protected in the chosen academic libraries are journals, magazines, and newspapers, among others (Rachael et al., n.d.). Many students primarily used the libraries to complete their coursework and get ready for tests.

The most sought-after resources among the respondents were suggested course textbooks, reference books, and previous exam questions. Not many of them were interested in fiction or periodicals. Despite the fact that most university students believe the library's collection is very outdated, this did not deter them from using the facilities. It is instructive to note that libraries may see a decline in patronage if they continue to cling onto outdated books in the face of new platforms that might make a vast amount of electronic knowledge accessible to consumers (Arthur et al., 2013). Academic libraries are unquestionably a natural treasure trove for both the university community and the broader public. Existing research has demonstrated that academic libraries can enhance curricula and research, which boosts academic output and increases the parent institution's profile internationally. Understanding this reality has significantly improved academic libraries' standing around the world by altering library patrons' perspectives and dispelling the myth that they view the library as a vintage (Dorcas Bakare & Mutula, 2017). Libraries must take aggressive action to preserve their deteriorating information resources in order to fulfill their objective of meeting clients' information needs. This epidemic has spread throughout the world (Akande et al., 2009). Because they preserve facts, ideas, thoughts, accomplishments, and evidence of human evolution in a wide range of fields, eras, and directions, library holdings represent the invaluable legacy of humanity (Adeleke et al., 2011). Currently available bar code technology is unable to provide accurate book locations or provide a concise picture of a route guide. In addition to asking for the precise position of the book they want, regardless of where they are or when they are looking for it, the inquirers can quickly and precisely locate the book using the clear route guide graphic. The issue that books that are misplaced or have confusing instructions on the bookshelves take up too much time and energy to find has been resolved by this clever book search method (Cheng et al., 2016). The majority of participants have a common practice of reading e-books.

Easy access minimizes in-person library visits, and user-friendly features provide a pleasant platform for using the e-books on mathematics. But untrustworthy service, eye strain, inability to manipulate online functions, flaws in the physical layout, and inadequate the gathering of e-books makes the participants uneasy about the service (Letchumanan & Tarmizi, 2011). The rise of electronic resources like e-books and e-journals is altering the selection process in academic libraries. The library's acquisition department is undergoing a paradigm change. The department serves as a driving force behind the selection and provision of information resources that help the university fulfill its goals (Ieee, 2012). In libraries with diverse collections, the majority of readers typically spend a lot of time locating the books they wish to check out. Some libraries have

recently implemented location technology, like Wi-Fi or FRID, to offer mobile services that save their patrons time when finding books. It is undoubtedly a significant expense for the majority of libraries, and they might not even have the necessary funds and human resources to manage and keep the system functioning properly (Liao & Shieh, 2016). XML can be used to efficiently maintain historical data, and XQuery can be used to create robust historical searches. In fact, XML repositories and data warehouses can accomplish this by incrementally storing the document's consecutive versions(Wang et al., 2005). Significant research has been conducted in IoT-related contexts in recent years from a variety of perspectives, including the thing-oriented perspective (*2019 IEEE Global Communications Conference (GLOBECOM),* 2019).
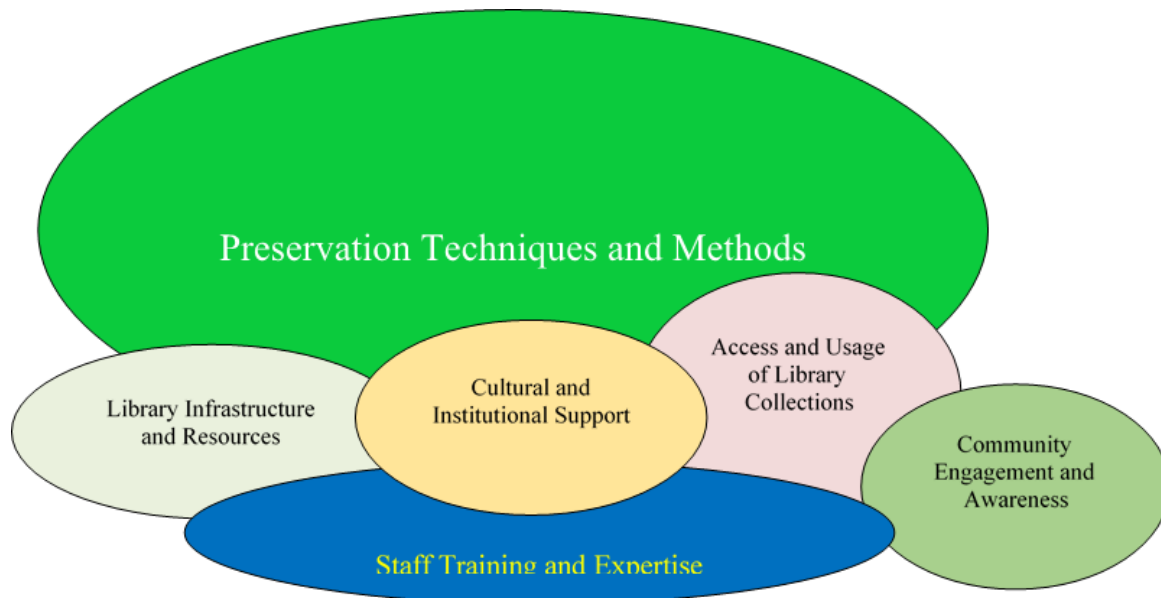

Figure 1. Conceptual Framework

Research Method

This study is based on the quantitative descriptive method, utilizing a survey approach to examine the preservation practices of books at Alama Habibi Library, Kandahar University. The research was conducted from January 1, 2024, to June 30, 2024. The total population for this study consists of 500 individuals, including 15 library staff, 5 administrative officials, and 480 library users (students, faculty, and researchers). A stratified random sampling method was applied, from which 180 individuals were selected to ensure representation from each group. A structured questionnaire was used to collect data, distributed via Google Forms. This questionnaire was developed by the research team based on previous reputable studies and its content validity was confirmed by 2 experts. For the assessment of reliability, a Cronbach's

Alpha test was conducted, with a value of 0.81, indicating high internal consistency. The questionnaire consists of 18 questions, divided into the following sections: Preservation practices (4 questions), Preservation challenges (3 questions), Impact of library usage on books (4 questions), Infrastructure and resources (4 questions), and Staff expertise (3 questions). The collected data were analyzed using SPSS software, where statistical tests such as T-Test were applied to assess the significance of differences between groups, and ANOVA and Regression Analysis were used to identify factors influencing the effectiveness of preservation practices. This study provides a detailed and quantitative analysis of the preservation methods at Alama Habibi Library, offering evidence-based recommendations for future improvements.

Table 1. Evaluation of Preservation Techniques at Alama Habibi Library: Distribution of Responses by Level of Agreement

Preservation Technique	SA (%)	A (%)	D (%)	SD (%)
Environmental Control	63 (35%)	85 (47.22%)	25 (13.88%)	7 (3.88%)
Digitization	65 (36.11%)	85 (47.22%)	8 (4.44%)	22 (12.22%)
Physical Repairs	87 (48.33%)	42 (23.33%)	38 (21.11%)	13 (7.22%)

No Preservation Techniques	17 (9.5%)	40 (22.4%)	47 (25.9%)	76 (42.2%)
Sum	146.14%	140.17%	65.33%	65.52%

Table 2 This table shows the Pearson correlation coefficients between the different preservation techniques, to identify relationships between them.

Servation Technique	Environmental Control	Digitization	Physical Repairs	No Preservation Techniques
Environmental Control	1	0.65	0.71	-0.55
Digitization	0.65	1	0.58	-0.42
Physical Repairs	0.71	0.58	1	-0.39
No Preservation Techniques	-0.55	-0.42	-0.39	1

Table3. Factor Analysis for Preservation Techniques

Factor	Component 1 (Physical Preservation)	Component 2 (Environmental Control)
Environmental Control	0.35	0.75
Digitization	0.28	0.22
Physical Repairs	0.82	0.16
No Preservation Techniques	-0.61	-0.45

Discussion

In this study, the preservation practices at Alama Habibi Library, Kandahar University, were investigated, with a focus on various preservation techniques, challenges, and the role of library staff expertise. The results highlight a blend of traditional and modern preservation practices, as well as challenges related to infrastructure and resources, particularly in a conflict-affected region like Afghanistan. When comparing the findings of this study with existing literature, several parallels and distinctions emerge.

Adeleke, Aina, and Lateef (2011) conducted a study on the preservation and conservation of information materials in Nigerian special libraries, highlighting the importance of environmental control and the challenges posed by inadequate infrastructure. Their findings align with the results of this study, where environmental control and physical repairs were identified as crucial aspects of preservation. However, in Afghanistan, the lack of stable infrastructure and resources, particularly in conflict zones, further exacerbates these challenges. In comparison, Nigerian libraries, despite facing resource limitations, often benefit from relatively more stable environments, which may contribute to more consistent preservation efforts. Akande et al. (2009) explored the knowledge, perception, and attitudes of library personnel towards the preservation of resources in Nigerian federal university libraries. The study found a general awareness of preservation techniques among library staff but pointed out a gap in specialized knowledge and training. This mirrors the findings of the current study, where staff expertise in

preservation was considered a key factor, but limitations in training and specialized knowledge were also noted.

The study at Alama Habibi Library emphasized the need for more comprehensive training and knowledge development among library personnel to enhance preservation practices. Arthur, Brafi, and Kuranchie (2013) examined the role of staff attitudes and the application of preservation practices in educational institutions. Their research concluded that positive attitudes towards preservation were essential for successful implementation. In this study, a similar attitude towards preservation was observed, with library staff showing interest in preserving books despite the resource constraints. However, the study at Alama Habibi Library revealed that the practical application of preservation techniques was often hindered by financial and infrastructural limitations.

Beverungen, Matzner, and Janiesch (2017) discussed the role of information systems in modern preservation practices, particularly in the context of smart services. The use of technology such as RFID for tracking and managing books was also explored by Cheng et al. (2016). While these advancements are crucial for modern libraries, Alama Habibi Library faced challenges in adopting such technologies due to limited access to modern infrastructure and financial constraints. This disparity between the adoption of technology in more developed regions and the limitations in conflict-affected areas like Afghanistan reflects the unique challenges faced by libraries in such environments.

Diulio et al. (2019) focused on the preventive conservation of books and paper records, emphasizing

the importance of protective enclosures in maintaining materials. This study's findings resonate with the preservation challenges at Alama Habibi Library, where environmental factors such as humidity and temperature fluctuations were identified as significant threats to the preservation of books. While the Argentine case study highlighted the importance of protective packaging, the lack of similar resources in Afghanistan complicates the implementation of such strategies. Dorcas Bakare and Mutula (2017) highlighted the role of social media and modern communication technologies in library management. While social media can offer a platform for awareness and knowledge sharing, its role in preservation practices was less evident in this study. The focus at Alama Habibi Library remained on traditional preservation methods due to the region's infrastructural constraints.

The findings of Ekwelem, Okafor, and Ukwoma (2011) regarding the role of library professionals in preserving cultural heritage align with this study's conclusion that the preservation of books is intrinsically linked to the preservation of cultural heritage. The study emphasizes the need for libraries to play a strategic role in protecting the cultural legacy of their communities, a viewpoint shared by library professionals at Alama Habibi Library.In conclusion, while the preservation practices at Alama Habibi Library are informed by global best practices, they are heavily influenced by the specific socio-political and infrastructural challenges faced in Afghanistan. This study contributes to the growing body of literature on preservation in conflict-affected areas, offering insights that can help inform future preservation strategies in similar contexts.

Conclusion

To sum up, this study emphasizes how crucial preservation procedures are to preserving the holdings at Kandahar University's Alama Habibi Library. The results show that although library personnel and patrons place a high value on more conventional approaches like environmental management and physical repairs, there is also a rising awareness of the potential advantages of digitalization. But issues like scarce funding, a dearth of all-encompassing preservation plans, and infrastructure limitations continue to be major obstacles. The library must place a high priority on a comprehensive preservation strategy that incorporates both physical and digital techniques, backed by ongoing staff training and international cooperation, in order to increase the longevity and accessibility of its holdings. To guarantee that the library's holdings are safeguarded for upcoming generations, the report emphasizes the necessity of consistent investment in preservation techniques.

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