



Digitization and Digital Preservation of Library Resources in the Contemporary Era: A Study with Reference to the Selected Special Libraries in Mizoram

^aLalduhzuali, ^bDr. Lallawmawmi, ^cBhaigyashree Boro and ^dDr. F. Chanchinmawia*

^aPh. D Research Scholar, DLIS, Mizoram University, DLIS, Mizoram University

Email:maduhipachuu82@gmail.com

^bGuest Faculty, Department of Library and Information Science, Mizoram University, DLIS, Mizoram University

Email: lallawmawmi243@gmail.com

^cPh. D Research Scholar, Department of Library and Information Science, Mizoram University, DLIS, Mizoram University

Email:bhaigyashreeboro24@gmail.com

^dAssistant Professor, Department of Library and Information Science, Mizoram University, DLIS, Mizoram University

Email:mzut294@mzu.edu.in

Received: 23 October 2023; Accepted: 05 December 2023

The library is a non-profit organization that earns minimal money and is a spending institution compared to other organizations. Due to tight budgets, rising book prices, etc., library materials can be considered valuable resources that must be conserved at all costs. The study tries to examine the special libraries' digitalization and preservation practices comprehensively. A structured questionnaire was developed and distributed to the staff of the special libraries; the population sample size for the study was selected using a simple random sampling method. SPSS and MS Excel have been used to analyse the data. The significant findings revealed that most respondents, i.e., 11 (73.3%), followed the proper preservation strategies, and only 4 (26.7%) libraries were not using any preservation technique. The study's findings demonstrate that none of the special libraries under investigation are fully digitalized, and the library staff believes that digitizing the collection is necessary to ensure its long-term preservation. The study results will assist librarians in maintaining and preserving library books, documents, and other items in the digital environment.

Keywords: Special library, Library Professionals, Digitalization, Digital Preservation, Library Resources

1. Introduction

The two missionaries of Arthington Aborigines Mission Rev. James Herbert Lorrain and Dr. Frederick W. Savidge arrived in Mizoram on January 11, 1894, their exceptional efforts and contributions helped to enhance the state's educational system and library foundation in several ways. In 1958, the first college Aijal College, now known as Pachhunga University College, was established at Aizawl. The first public library, the Aijal District Library, was founded in Aizawl in 1969 (Lianzama; 1993)¹. In the late 1960, after the missionaries and church organizations established private colleges and hospitals in Mizoram, a new era for establishing special libraries was seen. Since then, more institutions and departments have emerged, although there is no formal record of the setting up of the first

special library, which was founded at the Aizawl Theological College known as the first special library in Mizoram. Currently, 15 special libraries in Aizawl are undertaken by their parent organization in offices, institutions, NGOs, and so on.

Harrods Librarian Glossary (1997)² defined a special library as a library or information centre run by a person, business, organization, government department, or any other entity. It may also refer to a departmental or specialized collection housed within a library. According to Aina (2004)³, a library is unique if it provides a particular user group, specialized collection, unique subject, or even the kind of parent organization. Unlike other libraries, special libraries are very specialized in their library collection, function, and services, they provide technical information resources on a particular subject to their special users. The Special libraries receive financial support from their parent institution and government

*Correspondent author

organizations to develop the library collection, resources, services building infrastructure, etc. In the special libraries, most resources are unique and different from other libraries, such as documents, Government administration files, archives reports and minutes, audio and video, microfilm documents, e-resources, research and projects, etc. Due to various factors, library resources are vulnerable to damage or deterioration, and how they are handled will affect how long they last. Making proper digitalization and preservation of library material has been playing an essential role in the field of libraries, for this reason, the most necessary step is to find out what kinds of problems can affect conducting digitalization and preservation methods in the library. Libraries must therefore preserve or maintain library items for future usage to prevent them from being harmed in terms of both content and physical quality.

2. Review of literature

Angadi (2021)⁴ studied library digitization, and due to the tremendous growth of ICT and the high demand for information, the library has to practice digitalization activities in their libraries. The study's findings showed that every library experiences financial difficulties and a shortage of resources, including staff, technical expertise, hardware, software, and infrastructure. To meet user demand, libraries must develop digital information sources and services.

Nilesh and Verma (2021)⁵ studied digital preservation, issues, and strategies for libraries in the modern era. The study provides an overview of the key digital preservation activities, the definition, concept, procedure, media types, problems, and methods of digital preservation, and highlights the framework for planning and managing protection through digital standards. The finding shows that a suitable plan and policy are necessary to maintain a digital collection throughout time.

Ravat and Parmar (2021)⁶ conducted a study to identify how to deal with digital preservation and gave recommendations for the best approach. The findings show that technology experts and library professionals are critical in creating strategies for these sustainability concerns.

Sharma (2021)⁷ carried out research on preservation and digitization in contemporary and historic libraries in the province of Jammu., the study investigates their library digitalization status and the types of library services offered to users. The data were collected from the respective institute librarian through

interviews. The finding reveals that the majority of these libraries have a special collection of historical significance in the form of manuscripts and rare papers that must be maintained for future generations. Some libraries have started digitalization initiatives to preserve the unique collection of documents. The study also suggested that in order to efficiently serve their users and preserve knowledge for future generations, libraries should continue to work to develop the digitization process.

Sawant (2014)⁸ studied preservation and conservation practices in academic libraries in Mumbai. A uniform questionnaire was adopted to collect data for the study that used a survey method. The finding revealed that almost all libraries needed a formal preservation and conservation policy, and lack of trained workers and funds were the main constraints to preservation and conservation practices. It is necessary to persuade higher authorities and policymakers to allocate staff and funds for the long-term existence of libraries and preservation.

Lyishu, Nkanu and Ogar (2013)⁹ carried out a study on the preservation and conservation of library materials in the digital environment, they studied the factors that contribute to library resources deteriorating, electronic preservation methods, issues, and preservation plans for digital materials. Due to a lack of resources and the state of preservation in the majority of libraries, the author discovered that it is only possible to preserve some documents or recorded materials in their original format or even transfer the intellectual contents to other media. Priorities and selection are therefore crucial. The success of preservation activities depends on cooperation as well.

Chadha (2009)¹⁰ examined numerous digital preservation strategies for Indian libraries, the study finding shows that we can estimate the costs of retaining information using existing technology. There are no standard procedures for calculating long-term digital information preservation expenses. There are many obstacles to overcome, but there are also a lot of chances to help build a national infrastructure that promotes the long-term preservation of digital information. Such an infrastructure is an ideal outcome that will benefit future generations.

3. Objectives

- To identify the digitalization techniques of print and electronic materials practices by the selected special libraries of Mizoram

- To find out about the availability of staff for managing and carrying out the digitalization program and preservation activities
- To identify the different types of barriers the libraries face in taking up digital preservation of library materials.
- To suggest proper measures for preserving the material available in the special library of Mizoram.

4. Scope, Methodology, and Limitation

The present study was carried out to know the preservation and digitalization method adopted and also the problems faced by the special library professionals in Mizoram. The study's focus is limited to the 15 selected special libraries. Although there are several special libraries in Mizoram, however the majority of this study's attention is on the ones with the most user bases, holdings, and collections.

List of Selected Special Libraries

S.N	Name of Library	Estd.	Address
1.	Aizawl Theological College	1965	Durtlang Leitan Aizawl Mizoram
2.	Academy of Integrated Christian Studies	2000	Tanhriil Aizawl Mizoram
3.	Administrative Training Institute	2006	New Capital Complex, Khatla Aizawl Mizoram
4.	College of Veterinary Science and Animal Husbandry Central Agriculture University	1999	Selesih Mizoram
5.	State Medical Library, Civil Hospital	2017	Dawrpui Aizawl, Mizoram
6.	District Institute of Education and Training	1953	Chaltlang Aizawl Mizoram
7.	Doordarshan	1994	Durtlang Leitan Aizawl Mizoram
8.	Health and Family Welfare Department	1894	Dinthar Aizawl Mizoram
9.	Law and Judicial Department	1988	Khatla Aizawl Mizoram
10.	Mizoram Law College	1983	Luangmual Aizawl Mizoram
11.	Mizoram College of Nursing	1980	Falkawn Mizoram
12.	Synod Hospital Durtlang	1977	Durtlang Leitan Mizoram
13.	Regional Institute of paramedical and Nursing Science	1997	Zemabawk Aizawl Mizoram
14.	State Council of Educational Research and Training	1981	Chaltlang Aizawl Mizoram
15.	Women Polytechnique	1999	Durtlang Aizawl Mizoram

(Source: Research Questionnaire, collected on 3.10.2023)

For this study, a simple random sampling method was used to select the population size, and a structured questionnaire was developed and distributed among the 15 librarians of the special

library through the Google form, questionnaire method where 15 (100%) filled questionnaires were received back. The data received were analyzed and interpreted with the help of Microsoft Word and Excel, SPSS software.

5 Analysis of data

The data received from the respondents are analyzed and interpreted into 4 parts according to the research objectives:

5.1 Library staff and total no of library collection

The total number of employees in libraries and the number of collections held by the 15 Special Libraries are depicted in Table 1. The finding indicates that out of the selected special libraries, Aizawl Theological College has occupied the highest number of staff i.e., 10 (21.73%), followed by Regional Institute of Paramedical and Nursing Science has 7 (15.21%) library staff, and the finding shows that most of the special libraries have only one staff. From the data analysis, it is clear that most of the library's holdings are books, newspapers, periodicals, Government reports, magnetic tapes, movies, cassettes, CDs/DVDs, digital records, etc., Out of the selected 15 special libraries, Aizawl Theological College has a vast library collection followed by Law and Judicial Department and Regional Institute of Paramedical and Nursing Science.

5.2 Software Used for Library Automation

Table 2 highlights the library automation software used in the selected special libraries in Aizawl Mizoram. Out of the 15 selected special libraries, 10 have done library automation in their library while 5 have done it manually. From the findings, it can be seen that the majority of the 7 selected special libraries were using SOUL software for their library automation, whereas out of 15 libraries, two libraries used KOHA, one library used libsys software, and the rest five libraries had not used library automation software.

5.3 Responsible for Digitalization and Preservation in Library

The majority of the special library staff, 12 (80%), were doing digitalization in their library, whereas only 3 (20%) were doing digitalization work by library staff and qualified technicians (Table 3). This study found that all the libraries have dedicated staff and manage digitalization and preservation activities.

5.4 Digitalized Library Materials

Special libraries have a very particular focus in terms of their own library collection, purpose, services, and users.

Table 1 — Library staff and No. of Collection

S. No	Name of Library	No. of Staff	Percent	No. of Collection
1.	Aizawl Theological College	10	21.73%	78774
2.	Academy of Integrated Christian Studies	4	8.69%	24646
3.	Administrative Training Institute	2	4.34%	6000
4.	College of Veterinary Science and Animal Husbandry Central Agriculture University	5	10.86%	11105
5.	State Medical Library, Civil Hospital	2	4.34%	2250
6.	District Institute of Education and Training	1	2.17%	8000
7.	Doordarshan	1	2.17%	1028
8.	Health and Family Welfare Department	1	2.17%	33733
9.	Law and Judicial Department	2	4.34%	50000
10.	Mizoram Law College	3	6.52%	11300
11.	Mizoram College of Nursing	1	2.17%	3200
12.	Synod Hospital Durtlang	3	6.52%	19293
13.	Regional Institute of Paramedical and Nursing Science	7	15.21%	37847
14.	State Council of Educational Research and Training	1	2.17%	20400
15.	Women Polytechnique	3	6.52%	8107
	Total	46		

Table 2 — Software Used

S. No	Name of Library	SOUL	KOHA	Libsys	Manual
1.	Aizawl Theological College	✓			
2.	Academy of Integrated Christian Studies	✓			
3.	Administrative Training Institute	✓			
4.	College of Veterinary Science and Animal Husbandry Central Agriculture University		✓		
5.	State Medical Library, Civil Hospital			✓	
6.	District Institute of Education and Training				✓
7.	Doordarshan				✓
8.	Health and Family Welfare Department				✓
9.	Law and Judicial Department	✓			
10.	Mizoram Law College	✓			
11.	Mizoram College of Nursing	✓			
12.	Synod Hospital Durtlang				✓
13.	Regional Institute of Paramedical and Nursing Science		✓		
14.	State Council of Educational Research and Training	✓			
15.	Women Polytechnique				✓

Table 3 — Responsibility of staff for digitalization and preservation

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
Library Staff	12	80.0	80.0	80.0
Library staff with technical staff	3	20.0	20.0	100.0
Total	15	100.0	100.0	

Building digital collections is the most basic requirement for any library for setting up a digital library. Therefore, the special library has a considerable collection apart from books. Some special libraries have vast collections of Audio and videos and, microfilm documents, digital media formats, while others have big collections of books, printed newspapers, and journals. Table 4 reveals that the majority of the libraries i.e., 8 (22.9%) digitalized library material such as printed newspapers and journals, likewise some libraries i.e., 7 (20.0%), also digitalized their Audio and video materials and microfilm documents. This study found that some of the special libraries running digitalization policies/methods believe that digitalized library material will reduce money, but some libraries need to be made aware of library digitalization.

Table 4 — Library material digitalized Frequencies

	Responses		Percent of Cases
	N	Percent	
Printed Book	5	14.3%	33.3%
Printed_ Newspaper and Journal	8	22.9%	53.3%
Archives reports and minutes	4	11.4%	26.7%
Thesis and Dissertation	7	20.0%	46.7%
Audio and video materials	7	20.0%	46.7%
Microfilm document	2	5.7%	13.3%
Others	2	5.7%	13.3%
Total	35	100.0%	233.3%

5.5 Digital Devices Used for Storage of Library Materials

The study revealed that the majority of the special libraries are doing digitalization in their library and use specific devices to store digitalized library materials. Table 5 indicates that most of the selected special libraries, i.e., 11 (47.8%), used local computers

Table 5 — Digital devices

	Responses		Percent of Cases
	N	Percent	
Local computer	11	47.8%	73.3%
CDROM or DVD	2	8.7%	13.3%
Server file	6	26.1%	40.0%
Tape device or hard disk of computer	3	13.0%	20.0%
Others	1	4.3%	6.7%
Total	23	100.0%	153.3%

Table 6 — Benefits of Digitalization in Library

	Responses		Percent of Cases
	N	Percent	
Preserve materials for future use	12	35.3%	80.0%
Provide easy access and encourage user	11	32.4%	73.3%
Reduce maintenance problems	5	14.7%	33.3%
Reduce space problems	6	17.6%	40.0%
Total	34	100.0%	226.7%

to store digitalized library documents, while some of the special libraries i.e., 3 (13.0%) used tape and hard disk devices. Therefore, 2 (8.7%) special libraries used CD-ROM and DVC disks for the storage of library materials digitalized.

5.6 Benefits of Performing Digitalization in Library

Digitization provides easy and wide information access to all library users. Table 6 revealed that the majority of the respondents i.e., 12 (35.3%) believed digitalization of library material is one of the best preservation methods of library collections, while some of the respondents i.e., 11 (32.4%), stated that digitalization provides easy and comprehensive access information to all library users in special libraries. Likewise, some respondents said it reduces space and maintenance problems in their library. The finding revealed that the digitalization of library material is one of the library's best preservation activities and the best practices for library management and development for the coming generation.

5.7 Preservation Method Used

The study observed that the majority of the selected special libraries i.e., 11 (73.3%), followed the proper preservation method in their respective libraries. In contrast, some special libraries i.e., 4 (26.7%), did not follow any preservation techniques and methods Table 7.

5.8 Maintain Digital Materials Preservation

Maintaining proper digital material preservation in the library is one of the most essential services (Table 8). The study identifies the respondents' opinion on maintaining digital preservation, majority of respondents i.e., 8 (53.3%) partially maintain digital

Table 7 — Preservation methods used

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	11	73.3	73.3	73.3
No	4	26.7	26.7	100.0
Total	15	100.0	100.0	

Table 8 — Maintain digital material preservation

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	5	33.3	33.3	33.3
No	2	13.3	13.3	46.7
Partially	8	53.3	53.3	100.0
Total	15	100.0	100.0	

Table 9 — Damaging factors for preservation

	Frequency	Percent	Valid Percent	Cumulative Percent
Insect Factor	2	13.3	13.3	13.3
Human Factor	6	40.0	40.0	53.3
Natural Factor	7	46.7	46.7	100.0
Total	15	100.0	100.0	

Table 10 — Problems faced by libraries

	Responses		Percent of Cases
	N	Percent	
Finance problems	8	17.8%	53.3%
Technical problems	6	13.3%	40.0%
Lack of skills	5	11.1%	33.3%
Lack of equipment and software	13	28.9%	86.7%
Inadequate knowledge of digitalization	10	22.2%	66.7%
Others	3	6.7%	20.0%
Total	45	100.0%	300.0%

preservation, whereas some respondents i.e., 5 (33.3%), regularly maintain digital preservation in their library. The finding observed that digital media can readily decay due to several circumstances requiring particular preservation measures. The conservation of traditional materials needs more consistent and continuing care of digital preservation.

5.9 Damaging Factors for Library Material Preservation

Library materials can easily deteriorate because of several groups of factors. In this study, some questions were asked to exceptional library staff about the most damaging factor of library material Table 9. The finding shows that most respondents, i.e., 7 (46.7%), stated natural element is the most cause of library material deterioration, followed by human factor 6 (40%), and insect factor 2 (13.3%).

5.10 Problems Faced by Libraries

New information technology technologies have entirely changed the duties as well as responsibilities of library staff. Due to the rapid development of ICT, library professionals must acquire ICT competencies and skills to provide their services (Table 10). The research study found that the majority of the respondents, i.e., 13 (28.9%), needed more suitable

Table 11 — Training required for library staff

	Frequency	Percent	Valid Percent	Cumulative Percent
Technical skills	8	53.3	53.3	53.3
Assistance in digitalization	3	20.0	20.0	73.3
Copyright advice	1	6.7	6.7	80.0
Ensuring material availability for long-term	3	20.0	20.0	100.0
Total	15	100.0	100.0	

equipment and software, while 10 (22.2%) needed better adequate knowledge of digitalization. There are also 8 (17.8%) respondents having financial problems in their libraries, while 6 (13.3%) also have technical skills problems. The finding revealed that many special libraries needed help building library preservation in the digital age. Furthermore, with some awareness programs/instruction, those barriers and problems greatly affected the consequence of the library development in the digital environment.

5.11 Preferred Area of Training in Digitalization and Digital Preservation

The respondents were asked to share their preferences for library digitalization and resource preservation training. It was found that the majority of the respondents i.e., 8 (53.3%), preferred training on technical skills for digitalization, followed by 3 (20.0%), chose training on assistance in digitalization; likewise, the respondents 3 (20.0%) recommended training on ensuring library material availability for long term (Table 11).

Findings

Study found that all of the Special Libraries under study performed digitalization programs in their own libraries and digitized library collections such as books, newspapers, Journals, Archives reports and minutes, thesis and dissertations, audio and video material, and microfilm documents. Therefore, the majority of the respondents of the library were using a local computer, hard disk devices, CD-ROM DVD, and server file storage for storage of digitalized library materials. The findings also revealed that most respondents believed digitalization of library material is one of the best preservation techniques and provides all library users easy and comprehensive access to information. Likewise, some respondents said it reduces space and maintenance problems in their library. The finding also shows that natural factor is the most common cause of library material deterioration, followed by human and insect factors. The majority of the special libraries were having financial problems as well as technical skills issues.

Further, respondents stated they needed suitable equipment and software. All the special libraries considered their problems and preferred to conduct some training regarding library material digitalization within their respective institution. In this regard, librarians should collaborate to develop a plan, policies, and measures for automating and digitizing libraries and enhancing library services. The finding also reveals that special libraries faced problems building up library preservation in the digital age.

Suggestions and Recommendations

The suggestions are based on the analysis of the data and the opinion given by the respondents to improve the digitalization and digital Preservation of library resources of special libraries in Mizoram, some of the important suggestions have been made for future development:

- The librarians of special libraries in Mizoram believe that integrating digital technology and digitizing library materials would enhance the library's operation and services, however, since a lack of funding is one of the obstacles preventing the library from expanding its services, the librarian felt that the authority should offer appropriate training for librarians in special libraries.
- Some medical special libraries suggested that students need an orientation program regarding using digital material in their library.
- The study also suggests that there should be more library staff and financial support from the parent's institution. Also, Preservation should be maintained in every library to save money and keep the library a knowledge centre.

Conclusion

The primary responsibilities of the library are the digitalization and preservation of library materials in order to maintain the integrity of the physical and electronic sources of informational values indefinitely. Due to a number of variables, library resources are susceptible to damage and deterioration, and how they

are managed can determine how long they last. So that they can be used correctly going forward, library items must be maintained and protected. Special libraries are among the most important types of libraries in Mizoram, and their importance cannot be understated because they meet a variety of client needs and are valued equally with academic and public libraries.

References

- 1 Lianzawna C, Mizoram Education Chanchin. Aizawl: H. Rokhumi. (1996).
- 2 L.M, Harrods Librarians Glossary of terms used in Librarianship, Documentation and the book crafts and Reference book. 6th Edition. Compiled by Ray Plytherch. England: Aldershot, Gower. (1997). 385
- 3 Angadi S.S, Digitization of library: a brief introduction. *International Research Journal of Education and Technology*, 1(5), (2021) 25-32. <https://www.irjweb.com/V115IRJET-6.pdf>
- 4 Sharma S, Preservation and digitalization in modern and heritage libraries of Jammu province (J&K): an analytical study. *Annals of Library and Information Studies*, 68(2), (2021) 119-126. doi: 10.56042/alis.v68i2.39819. <http://op.niscair.res.in/index.php/ALIS/article/view/39819/465479205>
- 5 Nilesh, S and Verma, S (2021). Digital preservation, issues and their strategies for libraries: a modern era. (2021) 1-10. https://www.academia.edu/28653621/Digital_Preservation_Issues_and_Their_Strategie
- 6 Parmar, R. D and Rawat, V. P. (2021). Digital preservation of library resources: strategic planning a management perspective. *Library Philosophy and Practice (e-journal)*.5905, (2021).<https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=10925&context=libphilprac>
- 7 Lyishu, V.A, Nkanu, W.O and Ogar, F.O. Preservation and conservation of library materials in the digital age. *Journal of Information and Knowledge Management*, 4(2), (2013) 36-45. <https://www.ajol.info/index.php/ijikm/article/view/144621>
- 8 Lianzama C, Status Report of Public Library Development in Mizoram. *Grantha*, IV(1&2) (1993).
- 9 Ngurtinkhuma R.K, College Library Scenario in Mizoram. 4th. Convention of Planner 2006 Souvenir. Aizawl: Department of Library & Information Science, Mizoram University. (2006).
- 10 Special Library of Aizawl. <http://www.cvsccauaizawl.edu.in/about-college> 3:30p.m475-493
- 11 SawantSarika, A Study on Preservation and Conservation Practices in Academic Libraries in Mumbai. *Annals of Library and Information Studies*, 61(2), (2014) 153- 159. doi: 10.56042/alis.v61i2.4114 <http://op.niscair.res.in/index.php/ALIS/article/view/4114/105>
- 12 Ana L.O, Library and Information Science Text for Africa. Ibadan. Third World Information Services L.T.D, (2004) 41 – 59
- 13 Chadha R.K, Digital preservation: strategies for Indian libraries. In *7th International CALIBER*, 2009. 25-27 February (2009)1-13. <https://caliber.inflipnet.ac.in/caliber2009/caliberPDF/1.pdf>
- 14 Witten, I. H. and David, B, How to Build a Digital Library. London: Morgan Kaufman, Publishers. (2003)