

A Study on Digitization Initiatives of Sri Lanka with Special Reference to Library Materials

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要 旨

本稿の目標は、スリランカの図書館の内、大学図書館と特殊図書館に焦点をしばり、そのデジタル化への取り組みの現状を示すことにある。本稿は、スリランカの中で選ばれた大学図書館と特殊図書館にアンケートをとる方法で行った予備的調査に基づいている。スリランカの図書館はそのリソースに対するより多くのアクセスを提供するためにデジタル化のプロジェクトを進めつつある。図書館資料のデジタル化は現在のスリランカの発展に貢献している。この研究は、デジタル化のガイドラインポリシー、資料の種類、人員配置、図書館同士の協力体制、諸問題と達成目標などの観点から、図書館が取り組む様々なプロジェクトの詳細を記述する。本稿は、成長するスリランカのデジタル化とその取り組みに貢献し、現在取り組むべき問題と達成目標を気づかせるものである。

Keywords: Digitization, Digital Collections, University Libraries, Special Libraries, Sri Lanka

1. Introduction

By today, it has become quite difficult to cope up with the changes and challenges that have been caused by the fast-moving Information Technology. Information activities have undergone rapid revolution from conventional methods, consequent upon introduction of new technologies. The advanced application of information technology has touched each and every activity of libraries and information centers. To meet the fabulous information explosion and high demand of information, libraries are now taking the advantage of digital technology. Currently, information being an intellectual resource has the capacity and power to transform the image of society and changing the very direction of human life by way of preserving and sharing the essence of knowledge passed down by innumerable wise men to the future generations for peering and use.¹ The Librarians in present scenario find themselves in the difficult position of having to maintain and external traditional library services and develop and implement an upgrade electronic and

networked based information services. Thus, there is a high demand on library services and provision of electronic resources in the libraries. With the rapid explosion of information and communication technology, the task of library has expanded and it is necessary to incorporate with technology to modernize the library services with utmost care and diligence in order to attract the society and justify its existence.²

Library and information services system in Sri Lanka includes the national library at the apex of the library system. Government libraries include public libraries, school and *pirivena*³ libraries, departmental libraries, corporations and bank libraries. The academic library component mostly consists of libraries in universities, postgraduate institutes and other academic institutions where higher education courses are conducted. Special libraries which are established under various government organizations and research institutions mainly cater to specialized groups of users who belong to the parent body of the library. As a whole, most of these libraries being non-profit organizations provide wide and various ranges of information services to various user groups using traditional and new library materials. Libraries have spent a large proportion of their budget on acquisitions, library automations and on various information providing services.⁴

As a new advent of information technology, digital libraries and digitization of library materials are now of more concern and have become involving factors of Sri Lankan libraries. Several libraries in Sri Lanka have taken steps to digitize their library materials as one of preservation strategy and to increase user access to their library collections. Though, the digitization programs have been started from the libraries, there has been no proper investigation done in Sri Lankan libraries up to now. This article presents the overview of digitization initiatives available in Sri Lankan libraries and further provides the current state of digitization activities in Sri Lankan libraries in this technological era.

Although there have been advancements in digital technology, digitization and digital libraries, the focus has been mostly on creating institutional digital repositories and those are limited to the case studies. The current status of digitization activities in Libraries from the viewpoint of management and challenges are not been addressed or assessed from the viewpoint of management, in the Sri Lankan scenario. The aim of this paper is to fill in the gap of knowledge about current status of Sri Lanka library digitization initiatives and mainly to focused on the managerial point of view about the issues & challenges in libraries. Specifically when starting as a mass scale project, there are some basic planning elements. In the field of digital library, planning policies for digitization, material selection, institutional corporation, staffing, technology, access and

preservation are important topics in the this field. Therefore, to get an overview picture of Sri Lankan digitization programs, following research questions would be addressed in this study.

1. To identify the types of digitization programs available in Sri Lanka
2. To find out the current status of digitization activities addressed by libraries in Sri Lanka in terms of planning, policies, material selection, staffing, institutional corporation.
3. Issues and challenges encountered by libraries in relation to digitization activities in Sri Lanka

2. Related Literature

Research activities associated with digitization initiatives in Sri Lankan libraries can be classified in to case studies, surveys and general reviews. There are cases studies in relation to digitization activities, among them; Gangabadarchchi & Amarasiri⁵ have discussed the project of Digitization of National Library collection in Sri Lanka. The project has been commenced in the year 2005. The main objectives of the project were:

“ to enable users regardless of location to directly access and use digitized materials relating to Sri Lanka and Sri Lankans;

To increase access to help and to preserve rare and fragile collection by providing digital surrogates and

To facilitate exchange of information with other institutions and collaboratively build a critical mass of digital items in particular subjects”.⁶

National Library of Sri Lanka (NLS) developed policy to digitize their collection covered with main principles. The principles including material to be digitized, selection criteria, techniques, methods of accessibility to digitized material and standards to be used have been discussed. According to the policy of NLS highest priority has given to manuscripts relating to Sri Lanka and created by Sri Lankans and they are unique to Sri Lanka. In the first phase of the digitization, folklore collection which contains books, journals, news paper articles, manuscripts, CDs and audio tapes had been selected for the digitizations which are unique and rare and they reveals the Sinhalese culture and indigenous knowledge. However palm leaf manuscripts and old gazette collections are to be digitized in future. Digitized collection can be accessed via NLS intranet and bibliographic records can be accessed via NLS webpage. NLS is planning to have a database for digitized collection and will be connect some items to the web according to the copyright law of Sri Lanka.⁷

Royal Asiatic Society of Sri Lanka (RASSL) has started to showcase Sri Lanka's epigraphic heritage on the world wide web.⁸ Case study described the project phases carried by the RASSL and approach and construction of web page have been discussed. Mainly, Irugalbandara⁹ identified the challenges during the project workout. The main challenges were technical obsolescence such as OCR (Optical Character Recognition) processing of text with diacritical marks and indexing the inscription pages based on search criteria. Lack of computer literate of subject experts was a challenge of the project.

Dissanayake & Rajapaksha¹⁰ discuss the case study of University of Peradeniya digital repository. Creating institutional digital repositories are the current trend in Sri Lankan University libraries, because universities in Sri Lanka are in a competitive stage to upgrade their national university rank on web metrics. Therefore Universities are paying attention to create their institutional repositories to enhance their services as well as wider user access. According Dissanayake et als Peradeniya University library had started to create their institutional repository as a project of Information Technology unit. Initially the person who is in charge and other staff members in Information Communication Technology division received training in the field of digital repositories. After the pilot tests, database was created using D-space in Linux platform. According to the permission given by the University authorities, university copyrighted documents were put in to the repository. Some challenges were encountered while doing the project such as locating time to work on the project during normal duties, absence of additional staff to enter metadata and to digitize the material. The academic staff was reluctant to submit their papers to the digital repository were a problem too.¹¹

Gamage et als¹² described the case study carried out by the University of Moratuwa Sri Lanka creating a digital repository of Moratuwa University thesis collection. Initially Moratuwa University has planned a set of guidelines before implement the project and the library started the project with the collaboration of library staff and the university with the funding support of outside organization. Repository of University of Moratuwa Thesis and Dissertations was made available online from 2011.¹³

Pushpakumara¹⁴ reported in his survey that 53.8% university libraries and 42.9% of special libraries in Sri Lanka have involved in some kind of digitization activity. Further, 26.9% of university libraries were planning to involve in digitization practices in year 2008 and 7.7% of others are planning to be involved in future. 28.6% of special libraries are willing involve in digitization practices in year 2008 and 21.4% beyond 2008. Survey findings revealed that libraries need to have some kind of necessary technology and trained staff members to start digitization practices. The significant obstacle for digitizing library material in Sri Lanka is lack of funds. As Sri Lanka has vast and rich collection of indigenous knowledge, authorities

should pay attention to digitize such a national heritage and sustain the present efforts and continue digitization activities.¹⁵

Alahakoon¹⁶ discussed problems identified in digitization of palm leaf manuscripts in Sri Lanka. Sri Lanka has thousands of palm leaves which contain indigenous knowledge of customs, culture, beliefs, medicine, values, and the way of life of the people who lived in the medieval society of the country. As palm leaves are organic pieces they are prone to natural deteriorations. Although palm leaf manuscripts are preserved by using conservation methods, still libraries are struggling work against the physical destruction of this indigenous knowledge. Although it is right time to cultural heritage by using technology there are some obstacles when digitizing Palm leaf manuscripts.¹⁷ Author pointed out no legal and national framework in Sri Lanka to collect, preserve and digitize palm leaf manuscript has been formulated. Technical obsolescence, non availability of cost beneficial technology, lack of trained staff and none of regional or national coordinating centers are major issues to preserve palm leaf manuscripts of Sri Lanka.¹⁸

The reviewed literature shows that many of them are focused on case studies and discussed their project relating issues. Most importantly, one study has been done on the use of digitization in university libraries and special libraries. The lack of surveys is surprising and considering the increasing interest in digitization of library materials in Sri Lanka.

3. Research Design

The study has employed the survey research method. As the study was pilot study the target group was 15 University and 15 special library person who in charge of digitization projects. The basis of selecting university libraries and the special libraries for this study were:

1. According to the published literature many digitization programs are handled by university libraries and special libraries
2. Though universities and special libraries are two different types, those two have some homogeneous characters. Such as, user clientele is research oriented, resources are more subjects specific and subject stream depth is similar in both library sector compared to other libraries of Sri Lanka. Therefore, Private and Public libraries were excluded from this study.

Random sampling method was applied to determine the sample. The questionnaire was the major research instrument used to collect information for the study. The questionnaire contains 65 questions that were

divided in to 15 different sections. The sections cover the important aspects of Library digitization. In this article selected themes were analyzed. The frequency charts and simple percentages were used to analyze the data obtained from the respondents.

4. Results and Discussion

In this research primarily e-mail has been used primarily to collect data from the sample. The response rate of the study was 83%. Out of 30 libraries 25 libraries were responded.

4.1 Availability of Digitization Programs in Libraries

According to the data about 85% of university libraries reported that they are currently having digitization programs while it is 83% in special libraries. (See Annexure Table 01)

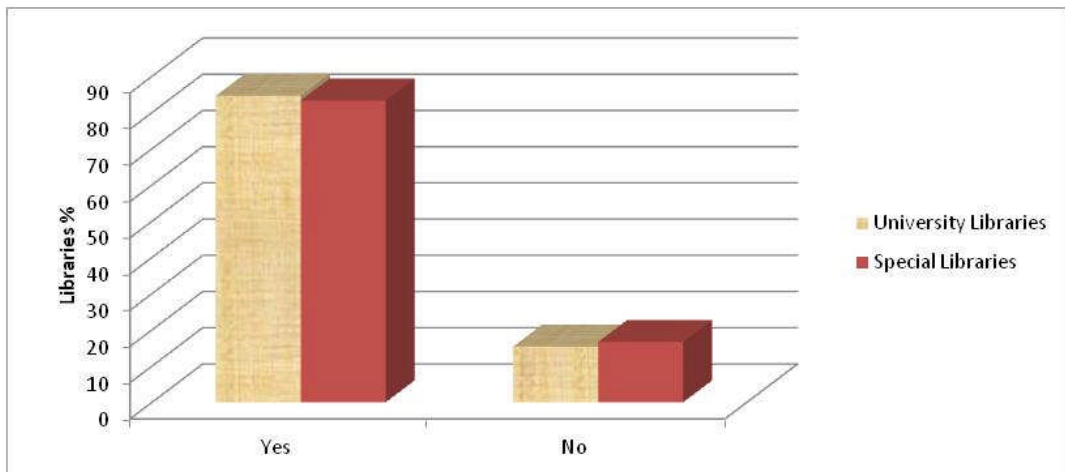


Figure 01: Digitization programs available in the Library

Figure 02, shows that the types of programs conduct by the libraries to create their digitized collections. According to the data all university libraries have started digitization programs to digitize their university research publications, Currently Sri Lanka has a trend of building their institutional repositories for their universities. Therefore, there is a target to digitize their university publications to host in the repository. Similarly, there is no any university library which is digitizing its government publications. But, 60% of special libraries are digitizing collected government publications and 80% of special libraries also maintain their

institutional publication too. While university libraries are hosting their university research publications on their repository, special libraries are also hosting institutional and government publication into their web. However, over 90% of university libraries have program of digitization of institutional publications while valuable cultural & historical collections are maintained by both university libraries and special libraries. But percentage is relatively low compared to other library resources in both library sectors. Learning & teaching materials are conducting over 70% of university libraries, comparatively it shows higher rate than special libraries. (See Annexure Table 02)

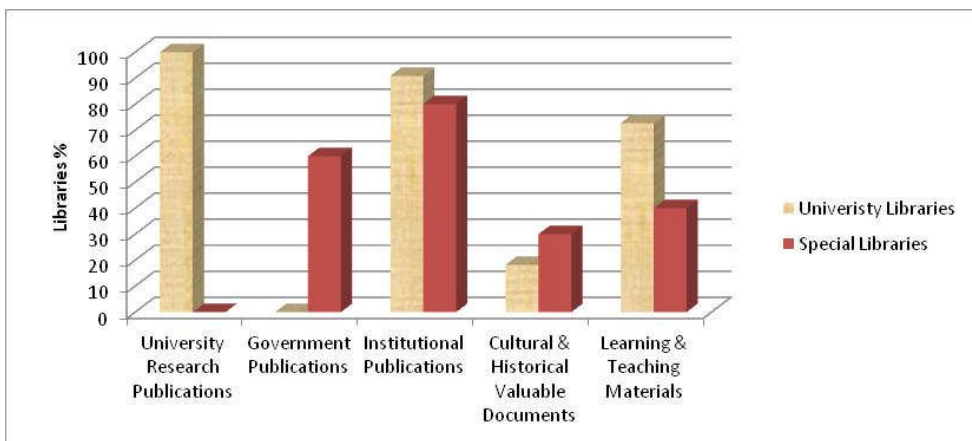


Figure 02: Types of Program available in the Library

It can be said that types of digitization programs are vary in Sri Lankan libraries. It is clear that digitization of library materials is of rising importance in Sri Lanka. However, only a few numbers of libraries are engaged in cultural and historical documents digitization. As mentioned earlier though Sri Lanka has been a cradle of indigenous knowledge in thousands of years, but only a very few libraries have taken steps to digitized indigenous culturally valued documents and make them available for research community. But literature shows that today there is felt need that to preserve and determinate culturally valued information to the world research community by using digital technology.

4.2 Policy Guidelines

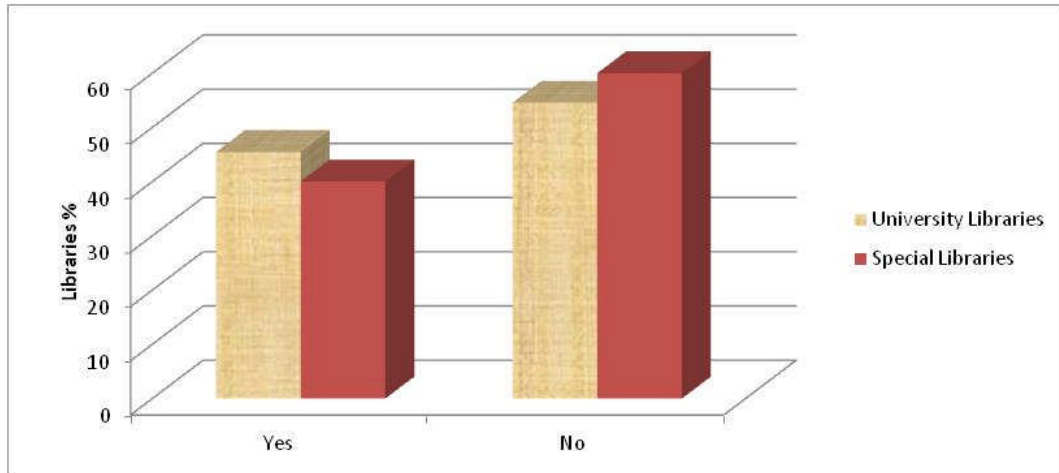


Figure 03: Institutional policy for digitization of library materials

This study investigated the availability of digitization policy of library materials, According to the responses given by the respondents there is no national policy for library material digitization. But individual libraries or institutes have their own policies. Figure 03 shows the institutional policy for digitization of library materials. About 45% of university libraries have their own policies. Only 40% of special libraries have their institutional policy but the majority does not have. It is clear that majority of university libraries and special libraries do not have a digitization policy in currently and also they have no plan to develop one. (See Annexure Table 03)

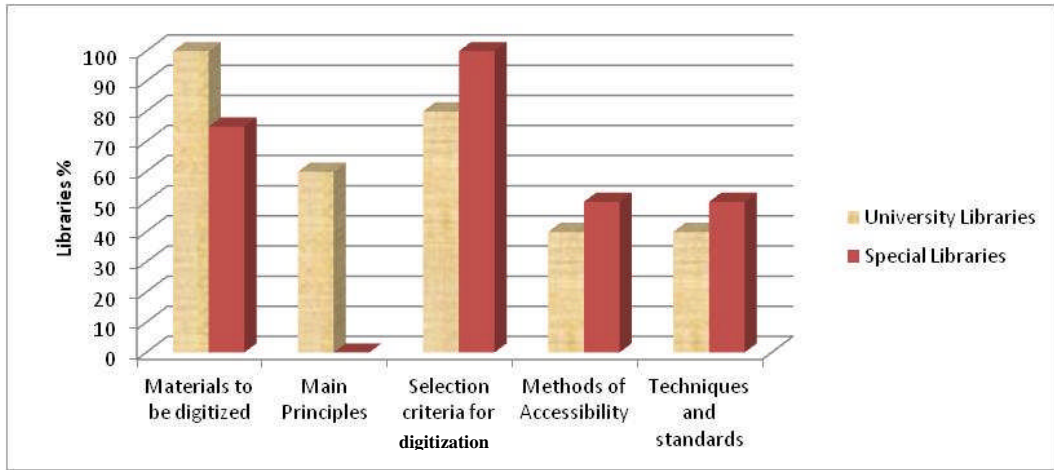


Figure 04: Key Themes addressed by Policy

Respondents who have digitization policy were asked to point out the key themes addressed in their policy. According to the data collected both library sectors policies includes what materials should be digitized, selection criteria, main objectives, techniques and methods of accessibility of the digitized materials. 100% of both libraries have considered about materials to be digitized and selection criteria. Both library sectors, have given less priority to the methods of accessibility of digitized materials and techniques & standards for digitization (See Annexure Table 04).

4.3 Selection Criteria of Digitization

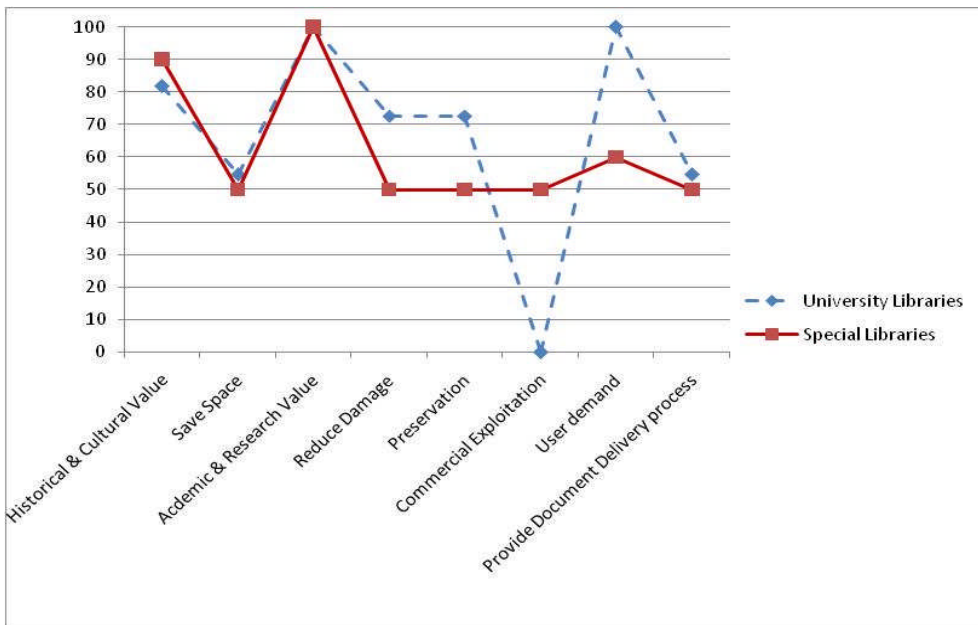


Figure 05: Criteria for Material Selection

Respondents who have digitization programs were asked whether they use any specific criteria for material selection when digitization activities are conducted in the library. Academic and research values were the most salient criteria for digitizing materials in both libraries. About 82% of university libraries consider historical and cultural value while 90% of special libraries also maintain that criteria. At the same time 100% of university libraries taking into consideration the user demand in the process of material selection. The significant point is the university libraries do not digitized their collections for commercial purposes, but 50 % of special libraries consider commercial exploitation towards their collections. (See Annexure Table 05)

The results of the survey show that libraries are taking advantage of these opportunities by digitizing a variety of information types, with thesis and dissertation are being the most common variety. Figure 06 indicates the percentages of the type of information digitized by the responded libraries.

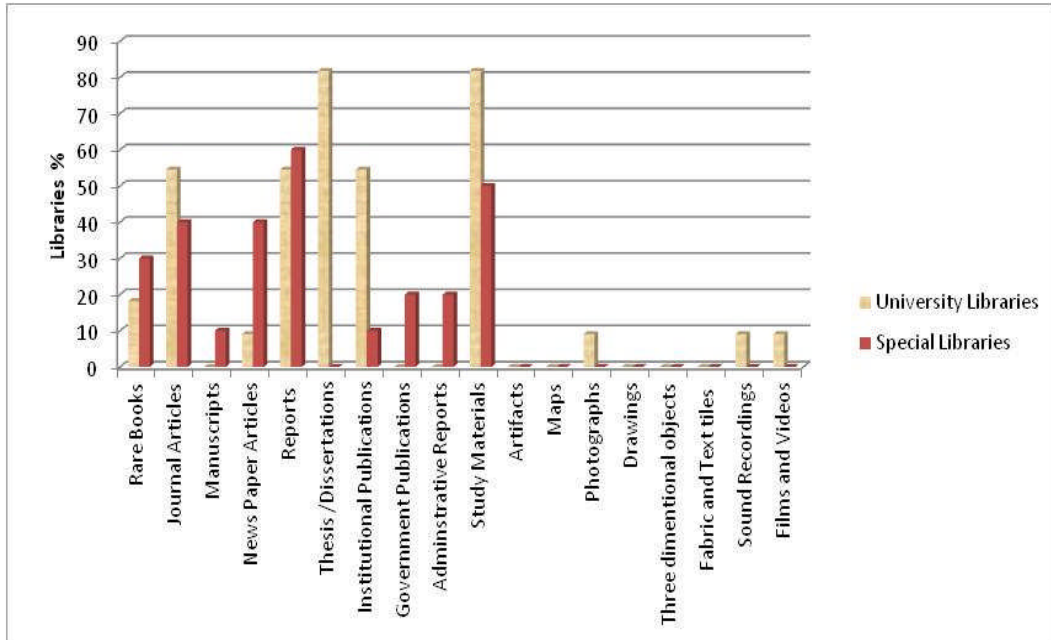


Figure 06: Materials Selected for Digitization.

Mainly thesis / dissertations and study materials are the popular items used for digitization in university libraries. Similarly, 55% of university libraries are engaged in journal articles, reports and institutional publications digitization. According to the figure 06, there is no any university library which is digitizing its government publications, administrative reports. But, 20% of special libraries are digitizing collected government publications and administrative reports. There is no involvement of special libraries for digitizing artifacts, maps, photographs, drawings, three dimensional objects fabric, sound recordings and videos. Though over 80% of both libraries consider historical and cultural value documents when material selection process, currently both libraries have given limited focus to digitized rare materials. Figure 06 shows that low percentage of rare books, manuscripts, cultural items digitization in both library sectors. Though Sri Lanka has a rich culture of manuscripts and cultural valued information, libraries have ignored and less focus has been given to digitizing those national heritage and culturally unique items. (See Annexure Table 06)

4.4 Staff Involved in Digitization

Staff is a major concern in the digitization process. The staff undertaking a digitization project must have an understanding about library science as well as information technology such as imaging technology,

metadata, web design, and collection development, searching Internet, computer hardware, computer networking and archival principles. This study revealed availability of trained staff related to digitization. About 54 % of university libraries have trained staff while special libraries have 40% of trained staff for the digitization work (See Annexure Table: 07). The both libraries have mentioned that they don't have fulltime staff for work on the digitization activities. Majority of staff is engaged in digitization work while they perform their normal duties. Following figure 07 illustrated type of staff for digitization related activities.

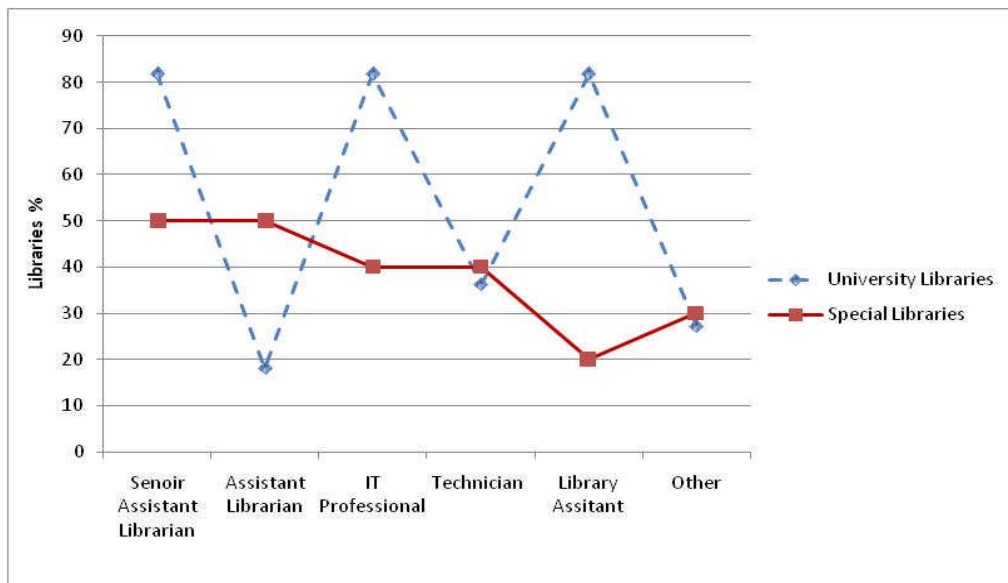


Figure 07: Staff involved in digitization activities

About 82 % of Senior Assistant Librarians, IT professionals and Library Assistants are involved in digitization activities in university libraries. But around 50% of Senior Assistant Librarians, Assistant Librarians and below 40% of IT professionals and technicians are engaging in digitization work in special libraries. According to this survey revealed data, it is very clear that all the university libraries and special libraries have all types of staff for engaged in digitization task. According to their comments, though there the staff that is engaged in digitization activities in libraries, they are not specialists for digitization or conservation and preservation in relation to library materials. However, the majority of university libraries have involved Library Assistants for digitizing task while special libraries (50%) involved Assistant Librarians for that. According to this, if university and special libraries have sufficient trained staff, they can

build digital collections as well as digital libraries more efficiently than before as they have staff related to the digitization. (See Annexure Table 08)

4.5. Co-operation

Resource sharing, collaboration, partnership with others are common words in the library field. As a developing country like Sri Lanka is need to have some kind of partnership with other institutions when introducing new technology and services to users. Because libraries in Sri Lanka find themselves in an environment of limited resources, libraries need to rely more and more upon partners and collaborators to realize their goals. Through successful partnerships, the libraries will be having great progress in digitization field. This study revealed the availability of partnership with other libraries for digitization in universities and special libraries in Sri Lanka.

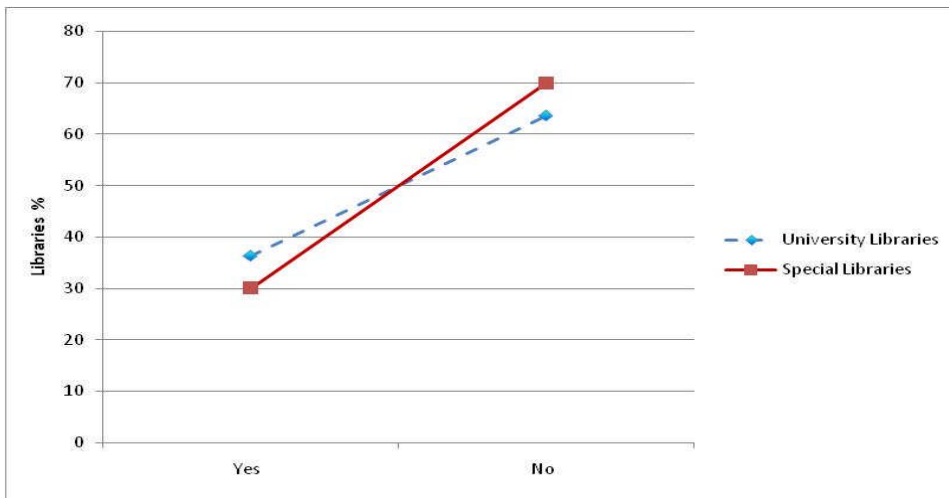


Figure 08: Co-operation with other Libraries

The figure 08 shows that only 36% of university libraries are involved in digitization partnership with other institutions while 30% special libraries are involved in digitization partnership agreements. Majority of both libraries are not involved in co- operation with other libraries. (See Annexure Table 09)

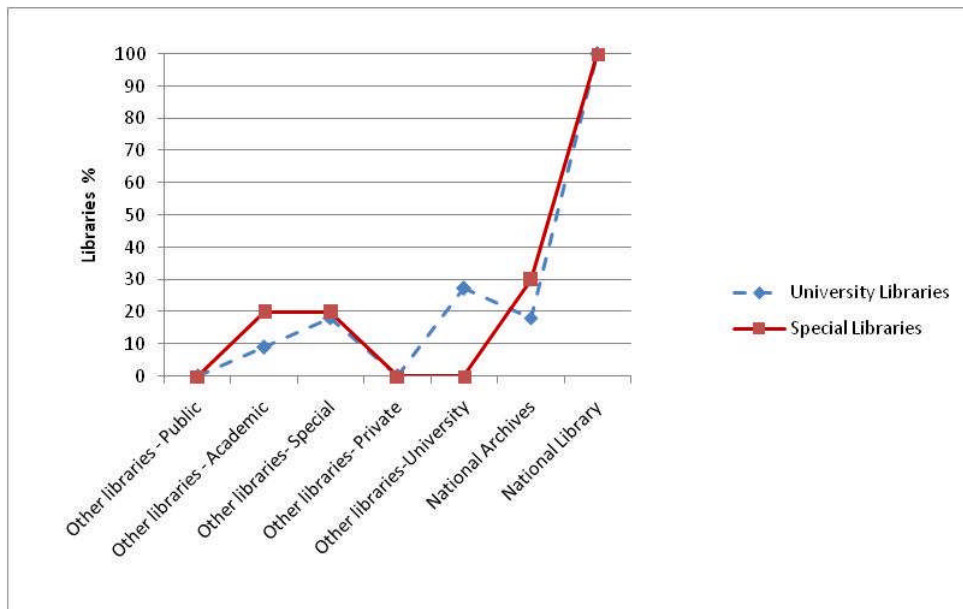


Figure 09: Types of libraries with Partnership

Both library sectors have 100% of partnership with national library of Sri Lanka, because national library of Sri Lanka is the foremost body of handling the union catalogue of Sri Lankan library information. Therefore, all the libraries of Sri Lanka have a fine relationship with the national library. University libraries have 27% of partnership with other university libraries. However, they have no partnership with other public, private libraries regarding digitization activities. Similarly, 20% of special libraries are partnering with the other academic and special libraries while 30% special libraries have a link with national archives in Sri Lanka. (See Annexure Table 10) According to this survey information, currently most of the university libraries are not trying to expand their links with other libraries to enhance digitization practices. Similarly, there is not any special library having links with university libraries for enhancing digitization practices. To develop a digital collection in a particular library, it has to find maximum possibilities to enhance its services and products by increasing number of partnerships with other institutions.

4.6 Issues & Challenges

Digitization has revolutionized the way the libraries store, preserve, disseminate the information and most importantly it has promoted efficient access to users. While digitizing the library collections issues and challenges are encountered by libraries. The planning and executing of digitization in libraries are not

without issues and challenges. The respondents were asked to mention their issues relating to the digitization works. According to the responses given by the responded libraries issues can be discussed as follows

4.6.1 Infrastructure

Libraries in Sri Lanka are experiencing constantly changing software and hardware while practicing the digitization activities. One of the issues faced is that the longevity of digital collections is not only the storage media deterioration, but the problem is also about the rapidly changing storage devices. Similarly inadequate technology infrastructure availability of Sri Lankan universities and special libraries may have an effect on the process of library digitization. About 82 % of university libraries have mentioned that they are experiencing in technological obsolescence such as finding digitization equipments, hardware, software, storage media etc...According to the comments given by the respondents it is proved that libraries are finding difficulties while engaging in their digitization projects. The following extracts taken from the responses prove that:

“Though we are an established library we undergo lack of hardware and equipments”.

“Annual allocation is focused on purchasing books and journals”.

“Buying equipment is difficult while using normal allocation”.

Similarly, 70% of special libraries also reported that one of major issue is that lack of technology and technological infrastructure.

4.6.2 Funds

Digitization projects are expensive; they require hardware and trained staff to perform such responsibilities as scanning, performing quality control and creating metadata. To process all these requires sufficient funds¹⁹. Study revealed that both libraries have funding difficulties to carry on digitization projects. Lack of funds for digitization was identified by this research as the largest obstacle.

“University libraries are finding in difficulties with funds to run digitization projects”

“Priority is given to purchasing resources, limited funds allocated for digitization and library material preservation”

“According to the situation of the country finding a grants for digitization projects are difficult.”

Above comments are given by the both libraries in relation to finding funds.

Majority of libraries are funded by their parent institutions to carry on digitization work. But all

those funds include normal library allocation. Therefore, amount remitted for digitization work is few in many occasions, because digitization is not considered as the priority task of many libraries, therefore, libraries have to find partners for obtaining funds for their digitizing purposes. Similarly, libraries should not rely on their normal allocation to have an optional solution for to receiveing funds to carry on their digital library projects.

4.6.3 Trained Staff

Though university libraries have around 54% of trained staff, they perform digitization tasks while doing their normal duties. Further, some IT professionals are not aware of library related work such as basics of library science. That also affects the slowing down of digitization work. Specially, at the moment there are no national or regional coordinating or training centers to train staff for collecting, surveying, preserving and copying palm leaf manuscripts in Sri Lanka.²⁰ There is no responsible national center for training library staff and that is a great challenge too. Similarly, special libraries also facing lack of trained staff than university libraries. The main problem they faced is hunting skilled professional staff to work on digitization work. Professional and skilled staff is difficult to keep with middle level salary scheme. In special libraries experienced staff turnover in many times. At the same time, some subordinate staff members are having inadequate knowledge of computer literacy also main hindrance of the special libraries. Many traditional staff members have a phobia to use computers, because of the generation gap between new and old staff, they perceived computers as a threat to their status as experts. Thus, they find it difficult to cope up with the requirements of the new electronic era and are reluctant to jettison the old practices and resort to new ones. The responses given by the study sample are as follows,

“We are doing digitization work while doing normal duties”.

“No any special trained staff to perform digitization work, specific training is needed to develop this task”.

“Not having a national or provincial training center is a big issue to develop skills and no chances learn new technological improvements and trends”.

“Staff turnover is the major issue face by special libraries and hunting skilled staff and retain them in particular period is more difficult.”

Both library sectors has experienced in lack of trained staff and non availability of national training center regarding library digitization activities are one of main barriers in Sri Lankan library field.

4.6.4 Policy Guidelines

In the digitization process, it is highly recommended that libraries should have policies regarding the standards, preservation and selection of digital materials for digitization. Standards and protocols, systems and software, digitization techniques, quality control, catalogue, storage and copyright and ownership must be in place to ensure problems in digitization without any clearly defined policies.²¹ But unfortunately there is no national policy in Sri Lanka regarding the digitization. Individual institutions have their own policies and they differ from one to another. One main task and challenge is setting a national policy on digitization in Sri Lanka. As Alahakoon²² mentioned that there is no focal point to handle or coordinating institute to get the responsibility of preservation, digitization of national heritage documents. Similarly, there is an essential requirement of a focal institute to create, develop and handle library related policies. According to the responses given by the both university and special libraries, they mentioned that the policy guidelines have to review and revise to perform future digitization activities.

4.6.5 Copyright Issues

An important aspect of a digital project involves handling legal issues such as copyright. When libraries undertake a digitization project, they need to take into consideration, whether the material to be digitized is protected by copyright law or is in the public domain. Works in the public domain are not protected by copyright, and they can be used freely without paying royalties or fees or asking permissions.²³ 64% of university libraries mentioned that obtaining permission from authors and copyrighted journals is difficult task and also negotiate with authors. Coming to an agreement with them is difficult and time consuming process.

Conclusion

This paper has presented information on the current status of digitization of library materials in University and Special Libraries in Sri Lanka and analyzed the availability of digitization programs, how libraries working with policies, how they select materials and staff involving on digitization work, institutional corporation for the digital library projects.

The Study revealed that university and special libraries of Sri Lanka have started digitization programs to a certain extend. Digitization of library resources and building digital libraries are now raising

factor of library field in Sri Lanka. Though there is a trend to create digital collections, study shows that there is no national policy for library material digitization in Sri Lanka. It is a major barrier when digitization projects handling in national wide. Though individual libraries and institutions have their own policies but those are differing from one to one.

The item covered in those policies also different from each one and some sections are not clearly defined in those policies. Number of items has been selected for the digitization of the both libraries, mainly thesis and dissertations, journal articles, institutional publications, study materials are the main popular items digitized in university libraries. Similarly government publications, administrative reports, news paper articles, journal articles, reports, study materials are being digitized by the special libraries. The main factor is that no priority has given by the both libraries to the historical and cultural valued documents. Though both library sectors have numerous indigenous information, but they have neglected or not focused to that area for the digitization programs. But there may be some causes to have it and in further research might be able to find the causes.

Moreover the staff has been identified as the main factor of processing the digitization task of the respective libraries. Though both libraries have some staff to process the digitization programs they are not specialized for the digitization work and there is no national or regional training center to train library staff too. The lack of trained staff and lack of training opportunities has influenced the process of digitization work conduct in both libraries. None availability of a national or coordinating center to trained staff for digitization activities is also a main barrier to the both libraries.

Cooperation with other partner libraries or institutions is a common factor of the library field, study shows that having a partnership with other libraries and institutions in relation to the digitization activities is relatively low. Thus, the libraries having limited resources and in need some help from other libraries or institutes to develop their programs. Even though all the libraries have a sound relationship with a national library, currently most of the university libraries and special libraries are not having a significant cooperation with other libraries to enhance digitization practices.

According to the analysis following challenges can be identified in both library sectors regarding the status of library material digitization in Sri Lanka.

- Lack of national policy framework of library material digitization and absence of coordinated national initiatives and programs on digitization.

- Increasing funds for digitization programs and co-operative financial support from national and international organizations
- To fill the gaps in the necessary human resources requirements in terms of knowledge, skills and competencies to drive library material digitization
- To overcome technological obsolescence in terms of hardware, software, storage media and metadata.
- Difficult to clearance of copyright issues and convincing to authors.

The paper has presented information on the current status of digitization of Sri Lankan libraries and the issues and challenges faced by the libraries. To reach the present national goals addressed in *Mahinda Chinthana* in Sri Lanka in terms of accessing e- information for all citizens in Sri Lanka, responsible bodies have to take appropriate measures and steps to implement and enhance digital library projects in Sri Lanka. Therefore following recommendations can be drawn from the study.

- It is better to take steps to establish a national center or a coordinating center for library digital projects, it will be more convenient to each library to exchange and share their experiences as well as resources and knowledge too.
- National policies on library material digitization should be formulated. The objectives of the national policy should cover institutions and should be responsible for driving digitization initiatives at national and regional levels and should stipulate the principles of digitization, preservation and accessibility of digital materials. Further, they also should stipulate national digitization standards in terms of hardware, software, process and procedures.
- Libraries should promote the documentation of indigenous knowledge, including rare books, manuscripts, historical cultural valued information and promote research on indigenous knowledge via digital collections. In addition, copyrights and intellectual property rights on indigenous knowledge should be addressed.
- Libraries should address the human resource gaps in relation to library digitization by recruiting skilled staff, trained existing staff and developing through various short term and long term training strategies as well as putting measures in place for the retention of personal capacities.

End Notes

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Annexure : Tables

Table 01: Digitization Programs Available in the Library

Category	Yes	Yes %	No	No %	Total %
University Libraries (n=13)	11	84.61	2	15.38	100
Special Libraries (n=12)	10	83.33	2	16.66	100
	21		4		25

Table 02: Types of program available in the Library

Types of program	University Libraries (n=11)				Special Libraries (n=10)			
	Yes	Yes %	No	No %	Yes	Yes %	No	No%
University Research Publications	11	100	-	0	0	0	0	0
Government Publications	0	0	11	100.00	6	60.00	4	40.00
Institutional Publications	10	90.9	1	09.01	8	80.00	2	20.00
Cultural & Historical Valuable documents	2	18.18	9	81.82	3	30.00	7	70.00
Learning and Teaching Materials	8	72.27	3	27.73	4	40.00	6	60.00

Table 03: Institutional level Policy for Digitization of Library Materials

Category	Yes	Yes %	No	No%	Total %
University Libraries (n=11)	5	45.45	6	54.54	100
Special Libraries (n=10)	4	40.00	6	60.00	100
	9		12		

Table 04: Key themes addressed by Policy

Themes	University Libraries (n=5)		Special Libraries (n=4)	
	Number	%	Number	%
Materials to be digitized	5	100.00	3	75.00
Main principles	3	60.00	0	0
Selection criteria for Digitization	4	80.00	4	100.00
Methods of Accessibility	2	40.00	2	50.00
Techniques and Standards	2	40.00	2	50.00

Table 05: Criteria used for material selection

Criteria	University Libraries (n=11)		Special Libraries (n=10)	
	Number	%	Number	%
Historical & Cultural Value	9	81.81	9	90.00
Save Space	6	54.54	5	50.00
Academic & Research Value	11	100.00	10	100.00
Reduce Damage	8	72.72	5	50.00
Preservation	8	72.72	5	50.00
Commercial Exploitation	0	0	5	50.00
User Demand	11	100.00	6	60.00
Provide Document Delivery	6	54.54	5	50.00

Table 06: Materials selected for Digitization

Type of Materials	University Libraries (n=11)		Special Libraries (n=10)	
	Number	%	Number	%
Rare Books	2	18.18	3	30.00
Journal Articles	6	54.54	4	40.00
Manuscripts	0	0	1	10.00
News Paper Articles	1	9.09	4	40.00
Reports	6	54.54	6	60.00
Thesis /Dissertations	9	81.81	0	0
Institutional Publications	6	54.54	1	10.00
Government Publications	0	0	2	20.00
Administrative Reports	0	0	2	20.00
Study Materials	9	81.81	5	50.00
Artifacts	0	0	0	0
Maps	0	0	0	0
Photographs	1	9.09	0	0
Drawings	0	0	0	0
Three dimensional objects	0	0	0	0
Fabric and Text tiles	0	0	0	0
Sound Recordings	1	9.09	0	0
Films and Videos	1	9.09	0	0

Table 07: Trained Staff in Libraries for digitization

Category	Yes	%	No	%
University Libraries (n=11)	6	54.54	5	45.45
Special Libraries (n=10)	4	40.00	6	60.00

Table 08: Type of Staff engaged in Digitization

Staff	University Libraries (n=11)		Special Libraries (n=10)	
	Number	%	Number	%
Senior Assistant Librarian	9	81.81	5	50.00
Assistant Librarian	2	18.18	5	50.00
IT Professional	9	81.81	4	40.00
Technician	4	36.36	4	40.00
Library Assistant	9	81.81	2	20.00
Other	3	27.27	3	30.00

Table 09: Co-operation with other organizations

Category	Yes	%	No	%	Total %
University Libraries (n=11)	4	36.36	7	63.63	100
Special Libraries (n=10)	3	30.00	7	70.00	100

Table 10: Type of partnership with other libraries

Libraries	University Libraries (n=11)		Special Libraries (n=10)	
	Number	%	Number	%
Other libraries - Public	0	0	0	0
Other Libraries - Academic	1	9.09	2	20.00
Other Libraries - Special	2	18.18	2	20.00
Other Libraries -Private	0	0	0	0
Other Libraries - University	3	27.27	0	0
National Archives	2	18.18	3	30.00
National Library	11	100.00	10	100.00

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