

# Status of Open Source Software for Digital Libraries in Telangana (A Study Conducted on Private Colleges)

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## Abstract

*The purpose of this paper is to highlight the importance of digital libraries and digital resources through open source software which is highly in demand in the private colleges of Telangana. This study was conducted in 123 private colleges of Telangana only. These colleges were divided subject-wise like Engineering, Pharmacy, and Management. This paper is based on survey methodology and a sampling technique was used for the collection of data. In this survey, we have found some problems faced by the management and librarians to develop digital libraries to access digital resources in their college with freely available software in markets like Dspace, Greenstone, and KOHA to install and access digital resources. The problems were faced due to the lack of soft skills in ICT techniques and IT technology of the present era. The finding/suggestion to overcome these problems is that training should be given to the librarians in soft skills in ICT, through workshops and training.*

**Keywords:** Digital library software, digital resources, institutional repositories, open source software, private colleges

## INTRODUCTION

Due to the information explosion, enormous information is produced around the world every day which has become a difficult task to handle by any single library and due to the escalation of costs of printed as well as electronic resources; resource sharing networks have been established to share the information among themselves with the help of some library management software. This software mediates between different geographically distributed information resources and different types of user communities from which the digital libraries concept has been established [1].

## OBJECTIVES

Some of the important objectives are as follows:

1. To know the need and status of open source software for implementation in private colleges.
2. To identify the library professionals' skills and abilities in developing digital libraries.
3. To understand the problems encountered in implementing the digital libraries.
4. To distinguish the private colleges' management towards a new development in libraries.

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## METHODOLOGY

Survey methodology has been applied for this study. The selected library professionals were taken for the survey. The simple random sampling technique was used for collecting the data. 123 library professionals have given their opinions for this study and 100 samples were taken into the count. The data has been collected by direct visiting and over the phone according to

convenience. Direct and open-ended questions were included in the structured questionnaire.

The study is restricted to selected private colleges in Telangana state due to time and economic concerns. This survey comprises the selected engineering, pharmacy, management colleges only [2].

### Data Interpretation

Frequency count and simple percentage have been employed for gathered data for a better explanation of results. Only the best hundred samples were chosen from one hundred and twenty-three samples.

### Development of Digital Library in Your Institution

To access the digital resources of the library, the development of digital library is essential.

Without the digital library, there is no access to digital resources. In this concern, we have included a vital question to know the development of digital libraries in various institutions [3].

The following tables and chart have been showing their opinions.

### Source of Primary Data Collection

Table 1 has revealed that 75% of respondents are yet to develop a digital library in their institutions. Only 14% of respondents have developed a digital library and 11% of respondents said digital library development is under process (Figure 1).

### Type of Software used for Developing the Digital Library [4, 1]

To develop the digital library, the software is an essential tool. At present, many software companies are providing digital library software at reasonable costs. But, many library professionals are interested in adopting open source software. Table 1 and chart disclose the responses of library professionals.

### Using Open Source Software for Digital Library [4]

Using the open source software digitizes the library resources depending on the library professionals' efficiency on ITC and hands-on experience on selected software. Here, the library professionals share their opinions.

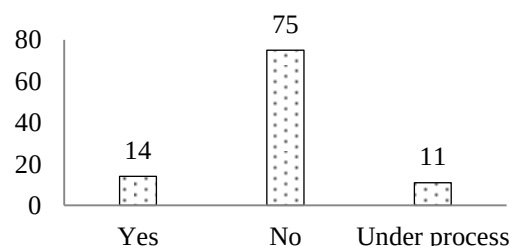
Table 2 disclosed that 11 respondents have adopted DSpace for implementing the digital library, 3 respondents have used Greenstone, and 4 utilized other open source software to digitize the library.

### Problems with Open Source Software

While installing or working with OSS, many problems will arrive (Figure 2).

**Table 1.** Development of digital library.

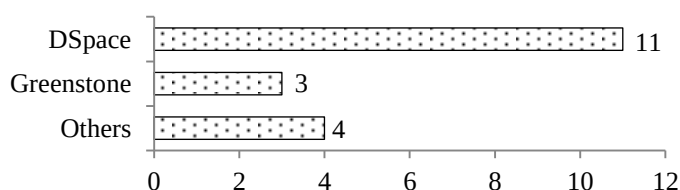
| S.N.  | Opinion       | Resp. | %    |
|-------|---------------|-------|------|
| 1.    | Yes           | 14    | 14%  |
| 2.    | No            | 75    | 75%  |
| 3.    | Under process | 11    | 11%  |
| Total |               | 100   | 100% |



**Figure 1.** Development of digital library.

**Table 2.** Name of the source software (OSS) [5].

| S.N. | Opinion    | Resp. |
|------|------------|-------|
| 1.   | DSpace     | 11    |
| 2.   | Greenstone | 3     |
| 3.   | Others     | 4     |



**Figure 2.** Name of the source software (OSS) [5].

**Examples:** Installation problems, runtime problems, database problems, updating problems, no authentic recourse person, etc. In this connection, library professionals' opinion has been taken into account for this survey.

### Source of Primary Data Collection

Table 3 and Figure 3 have shown that 80% of respondents are facing problems with OSS, and 16% of respondents said as no problem with open source software [5].

### Professionals' Problems to Develop Digital Library with Open Source Software [4]

Actually, working with open source software is not a huge difficulty. But many professionals are getting problems like improper knowledge of OSS, support from management, no infrastructure facilities, etc. to develop digital library [5].

### Source of Primary Data Collection

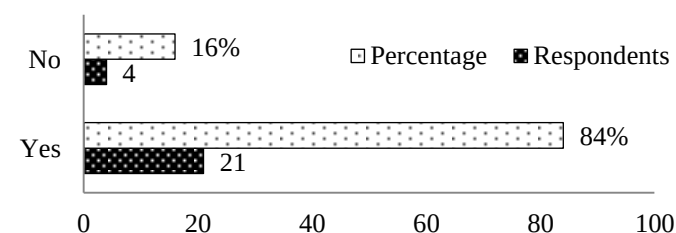
Table 4 has revealed that 78% of library professionals are not having ICT skills, 72% have no proper training on digital library development, 73% of institutions not having enough infrastructure facilities, and 68% opined as no support from management to develop digital library (Figure 4).

### Interest to Learn the Implementation Procedure of Digital Library

Library professionals' interest and initiation is the most important thing to implement the digital library. In this information era, library professionals must have the enthusiasm to take any challenge for providing quality services to users.

**Table 3.** Problems with open source software.

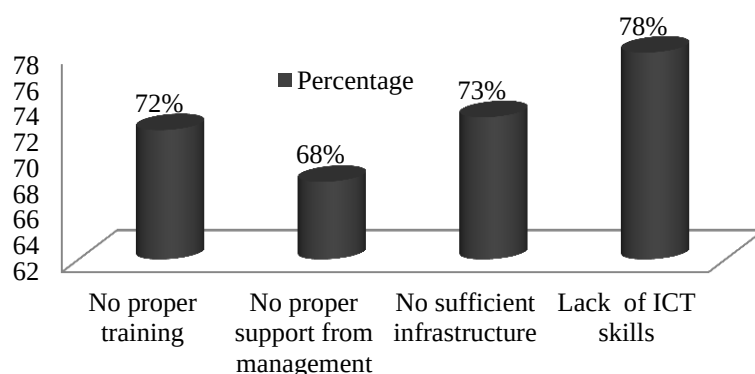
| S.N.  | Opinion | Resp. | %    |
|-------|---------|-------|------|
| 1.    | Yes     | 21    | 84%  |
| 2.    | No      | 4     | 16%  |
| Total |         | 25    | 100% |



**Figure 3.** Problems with OSS.

**Table 4.** Professional problems to develop digital library.

| S.N. | Opinion                           | %   |
|------|-----------------------------------|-----|
| 1.   | No proper training                | 72% |
| 2.   | No proper support from management | 68% |
| 3.   | No sufficient infrastructure      | 73% |
| 4.   | Lack of ICT skills                | 78% |



**Figure 4.** Professional problems to develop DL.

### Source of Primary Data Collection

Table 5 has exposed the interest of library professionals towards the implementation of digital library by using open source. In this concern, 94% of professionals are ready to learn the development techniques of digital library, at the same time, 6% of library professionals are not interested to learn the implementation of digital library (Figure 5).

### Training Period for Digital Library Development

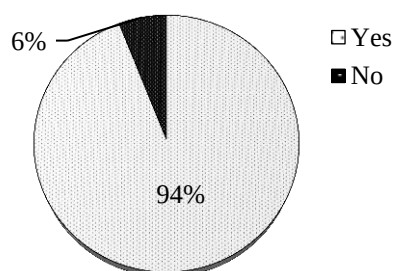
To develop the digital library, training is essential for library professionals. The training should be for a minimum of one week and maximum of a month. It must include software installation, customization and troubleshooting, etc.

### Source of Primary Data Collection

Table 6 has given opinion to library professionals on the training period for the development of digital library. About 2% of respondents said that they want one week training, 6% said that they need two weeks training, followed by them, 4% respondents needed three weeks training, and 88% of respondents said they want one-month training for the development of the digital library (Figure 6).

**Table 5.** Interest to learn the implementation of DL.

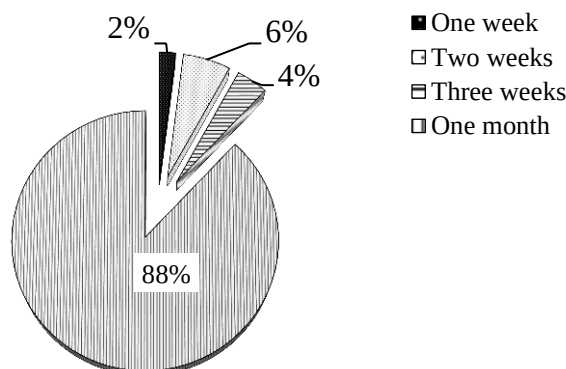
| S. N.        | Opinion | %    |
|--------------|---------|------|
| 1.           | Yes     | 94%  |
| 2.           | No      | 6%   |
| <b>Total</b> |         | 100% |



**Figure 5.** Interest to learn the implementation of DL.

**Table 6.** Training period for DL.

| S.N. | Problems    | %   |
|------|-------------|-----|
| 1.   | One week    | 2%  |
| 2.   | Two weeks   | 6%  |
| 3.   | Three weeks | 4%  |
| 4.   | One month   | 88% |



**Figure 6.** Training period for DL.

## Findings

The major findings of this study are as follows:

1. 75% of private colleges have not developed digital libraries, and only 25% of colleges have developed digital library. Most of the developed digital libraries are using open source software.
2. 73% of colleges are using DSpace software for digital library.
3. 84% of library professionals are facing many problems in operating digital libraries.
4. 78% of library professionals have no ICT skills, 73% of colleges do not have sufficient infrastructure facilities, and 68% of colleges' management is not supporting to develop the digital libraries.
5. Almost all library professionals (94%) are ready to take training on the implementation of open source software.
6. Training is very essential on open source software for library professionals and most of them (88%) wish to take one-month training on open source software for implementation.

## SUGGESTIONS

Access to digital resources is possible through digital libraries only. In this connection, the development of digital library is very crucial in the present information age. Hence, some of the suggestions have been made according to this study as follows [3].

1. Library professionals must improve their ICT skills from time to time.
2. Private colleges' management should support their library staff.
3. Library associations should try to organize library workshops in place of seminars/conferences on open source software.
4. Government/University colleges must conduct one-month workshops on open source software.
5. Practical sessions must be included on open source software for UG and PG students of Library and Information Science.

## CONCLUSION

This study exposed the present status of the development of digital library in Telangana State. It reveals the library professionals' drawbacks in the implementation of open source software also. The training on open source software is essential to library professionals for providing institutional repositories. The private colleges' management should have a positive approach towards the development of digital libraries. The State/central government must develop digital library software and provide it free of cost to all colleges [5]. Finally, library professionals also require to take initiation for providing digital resource access to their users.

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