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OPEN SOURCE SOFTWARE – A REVOLUTIONARY TOOL IN LIBRARY ENVIRONMENT: A SPECIAL REFERENCE TO IMPLEMENTATION OF LIBRARY AUTOMATION IN TELANGANA STATE.

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ABSTRACT: -

The main objective of this study was that to know the significance role of open source softwares in library automation in private and government college libraries of Telangana state. The survey had been done for two months for taking valuable information on



open source software from LIS professionals of various sectors. For the data collection hundred questionnaires were distributed to various college library professionals and only seventy five questionnaires were chosen for data analyzing and interpreting. From this study few of the remarkable things have been

found on open source software, especially the library professionals are treated this OSS as a revolutionary tool in LIS field for implementing the automation and simultaneously it reflects their progress in terms of status and financial perks in salaries also.

KEYWORDS: OSS, Open Source Software, Open Source Movement, Revolutionary Tool, Library Automation, Library Environment.

1. INTRODUCTION :

Open Source Software is an application that users have the ability to run, copy, distribute, study, change, share and improve for any purpose. Now a day's open source software is very popular in society. Open Source Software was a progressive idea among computer developers and clients. It is the most noticeable case of open source development and regularly contrasted with user produced content. Open Source solutions could give an elective solution to costly commercial software. The open source software movement is one of the major alternatives for professionals who work with computer software.

It is also part of technological advancement with the collaborative efforts which is taking place 55 around the world. Open source software has two basic properties, the first one is 'Source Code' or programme and another is, it is illegal to convert an open source software into proprietary version or commercial version. Open source software is similar to a peer review, which is used to the progress of LMS.

According to Ukachi (2012) the advent and development of Open Source Software in the present age, has made the transition from "traditional" to "technology based" library services, which gives room for more efficient service provision, very easy and cost effective hence, libraries are now adopting them in their technical services,

digitization processes, and general library management. The organizations have to choose from the many available free open source software applications for library and information management, which fit to their requirements and operations. Even the librarians showing the great interest in using open source software in their libraries as it is easy to use and helps them keep update. Open source software requires a more noteworthy level of registering obligation than commercial software.

In 1998, a group of individuals advocated that the term free software be replaced by open source software (OSS) as an expression which is less ambiguous and more comfortable for the corporate world. Since then, the OSS movement has become a revolution in software development. Today, practically in all areas OSS solutions are available. In Library and Information Science also many Open Source Software applications are available and libraries have taken steps in using these tools for various library operations. OSS tools have made an insurgency in libraries. Software programmers might need to distribute their product with an open source software permit, so anyone may likewise build up similar software or see how it functions. However, the "revolution" in this quickly changing field can really follow its underlying foundations no less than 30 years.

Open source software by and large enables anyone to influence another adaptation of the software, to port it to new working frameworks and processor structures, share it with others or market it.

The 'open source' movement is generally thought to have begun with a strategy session held in Palo Alto in reaction to Netscape's January 1998 announcement of a source code release for Navigator (as Mozilla). Many people, nevertheless, claimed that the birth of the Internet, since 1969, started the open source movement, while others do not distinguish between open source and free software movements. The Free Software Foundation (FSF), started in 1985, intended the word 'free' to mean "free as in free speech" and not "free as in free beer." Since a great deal of free software already was (and still is) free of charge, such free software became associated with zero cost, which seemed anti-commercial. The point of open source is to give the item be more justifiable, modifiable, duplicatable, dependable or essentially available, while it is as yet attractive. Open Source software movement started by Richard Stallman in 1983 and the term —Open Source|| was given by Christine Peterson of Foresight Institute in 1997. Open source has covered its foot after the evolution of UNIX. Eric Raymond had grown wings in 1997 by publishing article —Open source software is not covered under individual Intellectual Property Rights|| (Mishra, 2010).

2. REVIEW OF LITERATURE:

There are a number of studies related to the Library automation and a revolution in the library environment. The related studies discuss the open source software. The present study is conducted in the light of the previous studies. The later articles give proof that there is more acknowledgement of open source software (OSS).

Former President APJ Abdul Kalam expressed that "Open Source software offers developing nations such as India the best opportunity to modernize". According to him the open source software has become the backbone of the today's libraries.

Randhawa (2013) the research paper entitled, open source library management softwares, which was presented in e-Library Science Research Journal, researcher has discussed on advantages, limitations of open source softwares. Researcher has majorly focused open source softwares like, Koha, Evergreen, ABCD, SENAYEN, BiblioteQ. In the concluding remark of this paper researcher has suggested, library science professionals should always update at accept changing the scenarios in IT sector. Researcher has also focused on worldwide growth in using OSS technology as more economical and effective. Researcher suggested, librarians and programmers should work together in order to implement open source integrated library systems and at the same time, library professional are also required to acquire new skills for developing and managing the library by using open source LMS. For taking benefit from OSS additional training of advanced technology its education for the professionals is essentially required.

Dangi, Kumar & Verma (2010) this research paper namely "Applications of OSS in development of libraries and information centers" has provided definitions of OSS by different views to reflect a string of ideas in

OSS field. According to author, an OSS is typically created and maintained by developers crossing constitutional and national boundaries by collaborations by using internet based communication and development tools. Output is generally a certain kind of “free” often through a license that specifies that applications and source code are free to use, modify and redistribute it as long as all user, modifications are similarly licensed. Quality, not profit, drives OS developers who take personal pride in seeing their working solution adopted. This paper also focuses on ten commandments given by Open Source Initiatives (OSI) that is, free redistribution, source code, derived works, integrity of authors source code, no dissemination against fields of endeavor, distribution of licenses, licenses must not be specific to a producer, license must not restrict other software, and licenses must be technology-neutral. This paper also shows the benefits of OSS. According to authors view, the biggest advantage of OSS is, software can be converted into local languages to provide benefits for local peoples with the source code available. Author also says that, OSS saves time to provide distribute the software. This also brings down the cost of development and the time involved in upgrading the software. As in the concluding remark author writes, due to rising cost of automation of libraries and information centers OSS can be used as alternative to modernize the libraries.

Chavan (2007) this study entitled “The study of open source library management softwares” submitted for M.Phil. Course, in this research, researcher has focused on various open source software packages. Researcher has concluded NewGenLib and Kohasoftwares are good softwares for college libraries and both software fulfill maximum need of college libraries. Yet, NewGenLib software is better than Koha to use in Indian college libraries. Researcher has also given directions to the 33 future researches by expressing the areas like comparative study of open source and proprietary library softwares and the study of proprietary (commercial) library softwares

Singh & Barik (2010) in this research paper authors has focused on open source software concept with some definitions, given by free software foundation (FSF) and Open Source Initiative (OSI). Author has discussed benefits of open source software, difference between open source software and commercial software, future of open source software. Author has also focused on some library automation software packages like, Koha, NewGenLib, Evergreen, PMB, Athenaeum Light, Avanti, Firefly, Java Book cataloguing system, ITIL Library management system, My Librarian, My Library, OpenBiblio, Open Book Open Source Library System, Open-LIS, PhpMyLibrary, Sean Soft Library Loan Management System. In the concluding remark author says, though open source concept is of one or two decade’s origin, it has taken a special place in the field of library automation. Most of the small and financially weak libraries are taking steps to accommodate this software. He also says, like commercial software it is most users friendly and flexible.

Scerikar and Jang (2006) stated that Open Source Software evolved into a sophisticated movement during 1970’s to 2000’s which has produced very stable and useful software packages and after 1998, this movement has become a revolution in software development industry. This movement of twenty years or so has drawn increasing attention in organizations of all sizes – commercial, non commercial and governmental and even with individual consumers as high quality consumer-oriented OSS products have emerged (Carillo&Okoli, 2008)

3. OBJECTIVES:

1. To know the awareness of library software’s for implementation of automation.
2. To study the utilization of open source software’s in library automation.
3. To identify the benefits and problems with open source software’s.
4. To examine the support and encouragement for using the open source software.
5. To observe the satisfaction level with open source software’s.

4. METHODOLOGY AND DATA COLLECTION:

The survey method has been utilized for this study. In Telangana State there are number of engineering, Management, Pharmacy, PG and Degree Colleges are available in private and government sectors. So, time and economic conditions, only 100 librarians were considered from across the state for this study.

The questionnaire tool was utilized for collecting the data from selected samples. The questionnaire was consisting with open ended and closed ended questions. Most of the data collected through phone and emails. Total 100 questionnaires were distributed to selected librarians in all districts. Among them only 76 questionnaires were received from the respondents in time. Finally, only 50 good and fully completed samples were chosen for data analyzing.

5. DATA INTERPRETATION:

Total 100 questionnaires were distributed to selected librarians in all districts. Among them only 76 questionnaires were received from the respondents in time. Finally, only 50 good and fully completed samples were chosen for data analyzing.

5.1 Respondents Category: To transparency in the survey report both male and female opinions has been included.

Table 1: Respondents Category

S. NO	Category	Resp.
1	Male	63
2	Female	12
Total		75

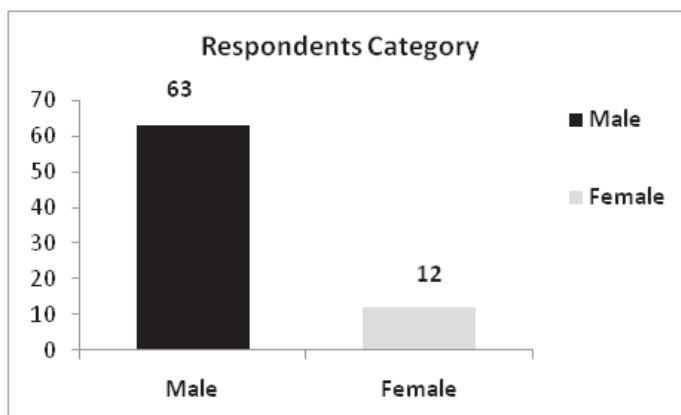


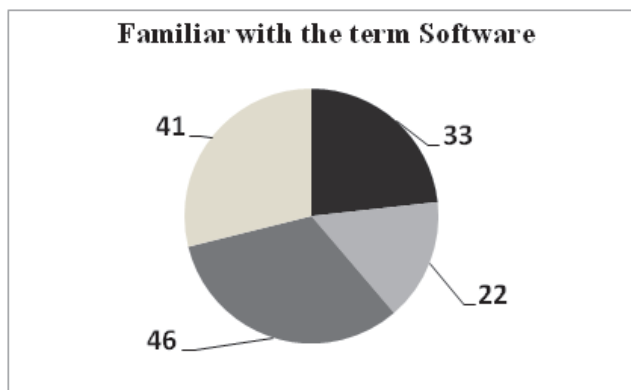
Figure 1: Respondents Category

The table 1 shows that the respondents' category for this study was 63 male and 12 female. Total 75 respondents were given their valuable opinion for this survey.

5.2 Familiar with the term Library Software: To know the awareness on software related information, this question was posed to respondents.

Table 2: Familiar with the term Software

S. NO	Type of Software	Resp.
1	Licensed Software	33
2	Institutional developed Software	22
3	Free Software	46
4	Open Source Software	41



The table 2 is describing that the most of the Librarians i.e. 61% (46) familiar with free software followed by open source software by 55% (41).

5.3 Presently using software: To identify which software using for library automation in their institutions, this query asked. They have given reply as below.

Table 3: Presently using software

S. N O	Software	Resp.
1	Licensed Software	9
2	Institutional developed Software	4
3	Free Software	0
4	Open Source Software	75

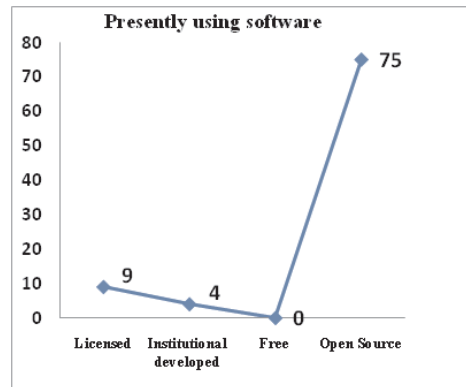


Figure 3: Work Experience

The table 3 & figure 3 has reveals the which type of software using in their colleges that huge librarians i.e.75 were using Open source software and only 4 librarians were using institutional developed software and no more using free software for development of library automation.

5.4 Presently using open source software: It is most important question for this study that to know which open source software using presently. Results are followed.

Table 4 : Presently using open source software

S. N O	Software	Resp.
1	KOHA	12
2	NewGenLib	63
3	Evergreen	0
4	ABCD Software	0
5	Emilda Software	0
6	WINI sis	0
7	If any Other OSS	0

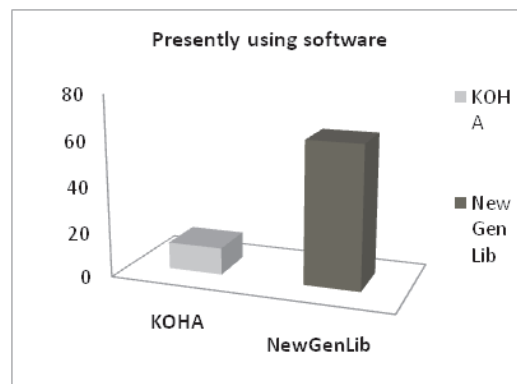


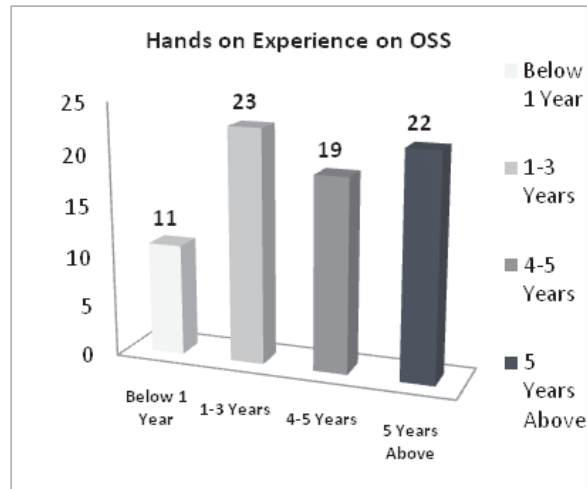
Table 4: Presently using open source software

The above table and figure disclosed that almost all (63 librarians) were using newgenlib open source software, then only 12% librarians were using KOHA OSS and no one using evergreen, ABCD, Emilda, WINI sis open source softwares in Telangana state.

5.5 How much Experience has you on OSS: The librarians who are using this OSS and how much experience is having on it essential.

Table 5 : Hands on Experience on OSS

S. NO	Years of Exp.	Resp.
1	Below 1 Year	11
2	1-3 Years	23
3	4-5 Years	19
4	5 Years Above	22



The table 5 and figure 5 shows the experience on OSS that 29%(22) librarians were having above years experience followed by 30% (23) librarians having 1-3 years of experience and 15% (11) having below 1 year.

5.6 Problems faced while using the OSS: It is backbone for all the softwares whether commercial or freeware/open source. Any open sources software must have with maximum features and minimum problems. It found from this query.

Table 6 : Problems faced while using the OSS

S.NO	Opinion	Resp.
1	Yes	23
2	No	52
Total		75

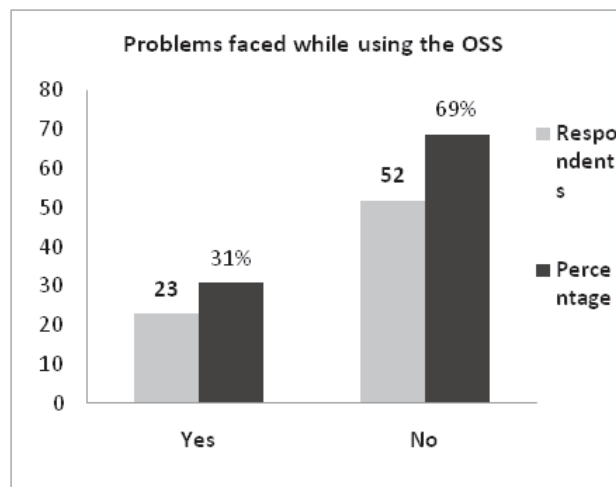


Figure 6: Problems faced while using the OSS

The above table and figure reveals that 69% librarian facing no problems with OSS followed by 31% librarians facing problems with OSS while using it.

5.7 Type of Problems Facing with OSS: Mainly any OSS having few problems within it. Because there is no authenticate system for updating and rectifying the problems. The important aspect is that to know the problems / challenges are facing librarians with OSS. Here elaborated them.

Table 7: Type of Problems is in OSS

S. N O	Problems in	Respondents
1	Installation	46
2	Report Generation	66
3	Recovery of Backup Data	54
4	Old Features	49
5	Periodical Modules/Circulation Modules	37
6	Updating and Looking for New Version	71

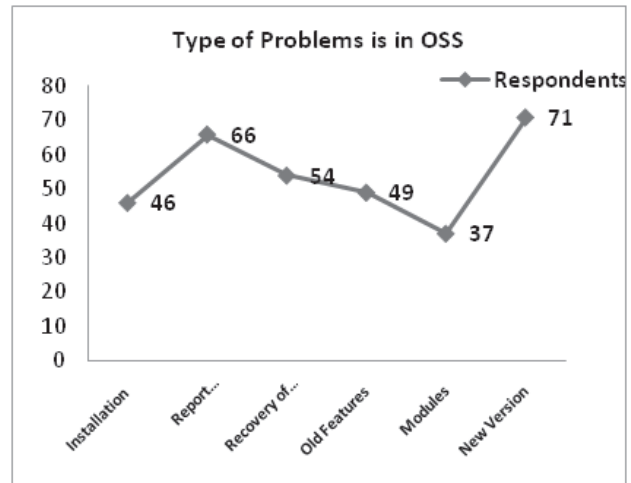


Figure 7: Type of Problems is in OSS

The above table and figure demonstrated that Most of the respondents i.e.71 respondents were looking for updated and new version at the same time 66 respondents were facing problems in report generation, followed them 54 respondents were facing recovery the backup of data.

5.8 Source of Installation of OSS: Present library professionals are having more ways to get any information; like that the present using OSS is got through following sources.

Table 8: Source of Installation of OSS

S. NO	Sources	Respondents
1	Internet	12
2	Websites / Blogs	21
3	DVDs	9
4	Colleagues/Other Sources	33

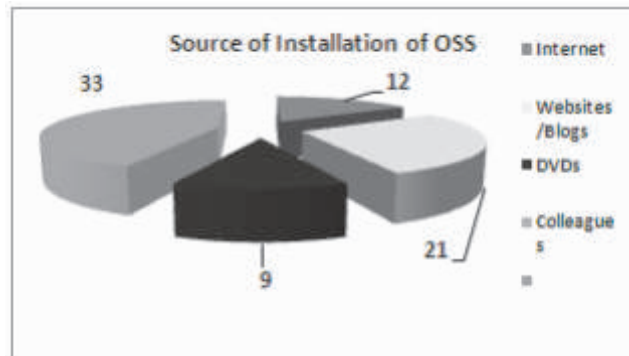


Figure 8: Source of Installation of OSS

As per the above table and figure 36 library professionals were got this OSS through websites/blogs, then 14 librarians installed by using DVDs and 12 and 13 librarians were got this OSS through Internet and colleagues.

5.9 Appreciated by concern authority after using OSS: Most of the library professionals who implemented library automation in their organization they appreciated by their concern authority. Here can see the appreciations of concern authority.

Table 9: Appreciations from Concern Authority

S.NO	Sources	Respondents
1	By Giving Increments	16
2	By Promotion	14
3	By Awards/Gifts	17
4	By other way	28

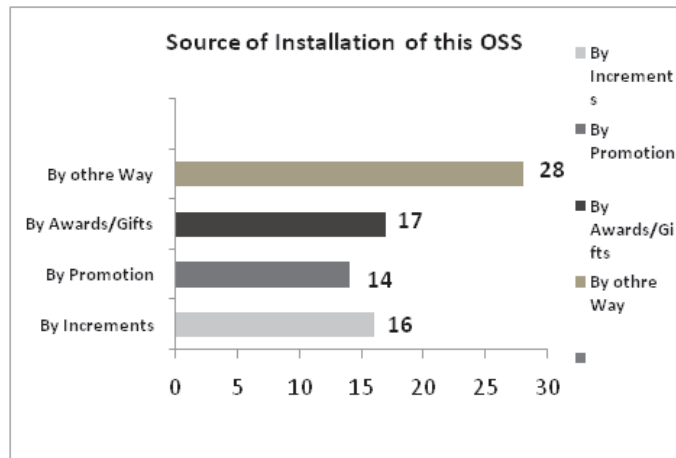


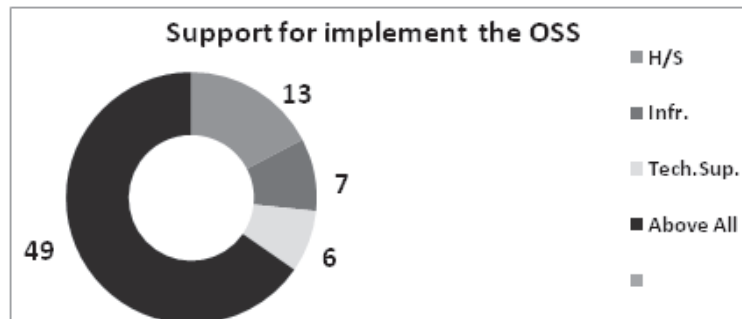
Figure 9: Appreciations from Concern Authority

The table 9 exposed the appreciation of concern authority to library professionals for their implementation of automation through OSS is that 16 (21%) librarians got increments followed by 14 (19%) librarians were promoted and 17 (23%) librarians were received awards/gifts and most of librarians i.e. 28 (37%) getting recognition by other way.

5.10 Support for implement the OSS: Most important aspect is support from mgt/concern for implement the OSS. From this query can know the mgt support/encouragement to librarians for implement OSS.

Table 10: Support for implement the OSS

S.No	Support	Resp.
1	Providing Hardware/Software	13
2	Infrastructure facilities	7
3	Technical Support	6
4	Above All	49



According to above table and figure, 65% (49) respondents were getting support in all aspects from their concern authority and 17% managements providing hardware / software facilities.

5.11 Updates and technical support in OSS: According to latest advancements in library environment, updating the modules and menus, support in technically aspects are vital for continuing the OSS.

Table 11: Updates and technical support in OSS

S.No	Support		
		Resp	%
1	Future Expansion in OSS	68	91%
2	Technical Support in OSS	69	92%

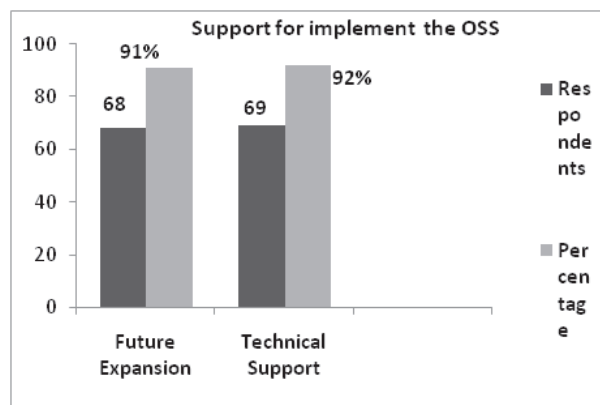


Table 11: Updates and technical support in OSS

The table 11 and figure 11 disclosing the huge respondents i.e. 92% and 91% were said that OSS having technical support and future expansions in this software for continuing the OSS.

5.12 Helping to friends/org in implementing the OSS: In the library society, resources sharing and knowledge disseminating are the main objectives. In this connection the library professionals must help to friends and others institutions for developing the OSS to reduce the economy.

Table 12: Helping to friends/org in implementing the OSS

S.No	Helping		
		Res	%
1	Yes	33	44%
2	No	42	56%

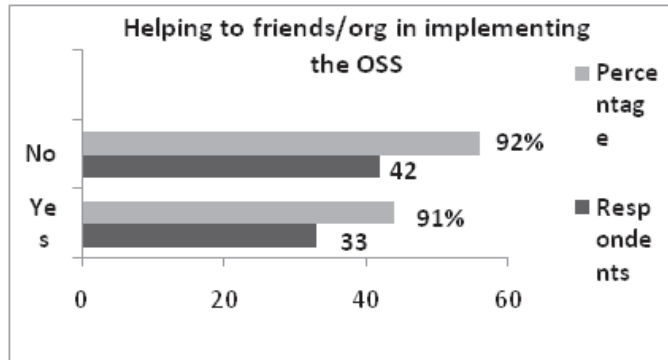


Figure12: Helping to friends/org in implementing the OSS

The table 12 has discloses the helping to friends in implementing the OSS for Library automation that 44% were helping and 56% were not helping.

5.13 Consideration of OSS in present library environment: After all the aspects and natures the OSS, it can be usable for implement the library automation in present library environment.

Table 13: Consideration of OSS in present library environment

S.No	Considerable	Resp.	%
1	Very Excellent	54	72%
2	Excellent	15	20%
3	Average	6	8%
4	Poor	0	0%

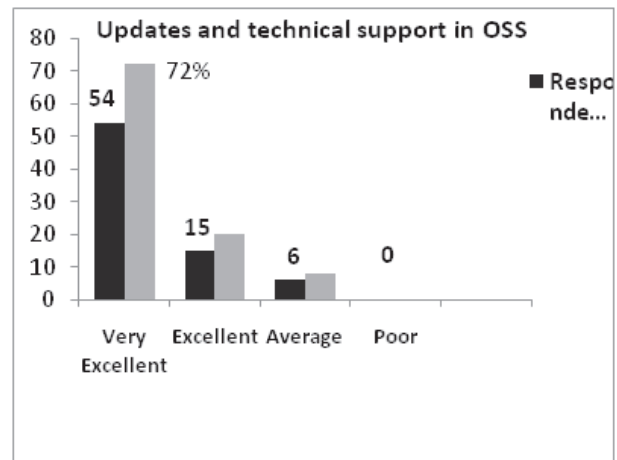


Figure 13: Consideration of OSS in present library environment

The above table says that huge percentage i.e 72% librarians were said very excellent of OSS followed by 20% with Excellent and no one said poor with OSS. It is great news.

5.14 Satisfaction with the present OSS: The satisfaction of librarians with OSS has been incorporated in this study. Here the librarians were given their opinion on OSS.

Table 14: Satisfaction with the present OSS

S.No	Helping		
		Res	%
1	Yes	73	97%
2	No	2	3%

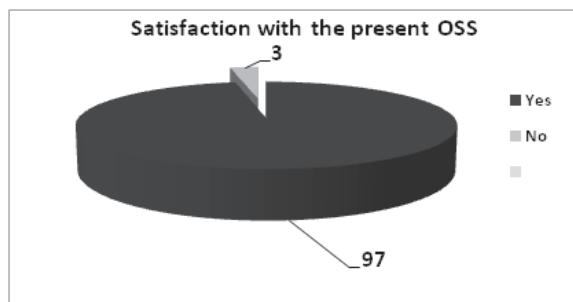


Figure 14: Satisfaction with the present OSS

The table 14 including figure reveals the satisfaction of library professionals that almost all i.e. 97% were satisfied with OSS and only 3% were not satisfied with OSS. It is good sign for future library professionals for adopting this OSS in library automation.

5.15 Overall satisfaction of Librarians with OSS: The main concept this study is that bring out the actual status and remarkable changes in library environment for implementing the OSS. The below table and figure has been shown the results.

Table 15: Overall satisfaction of Librarians with OSS

S.No	Considerable	Resp.	%
1	Very Satisfied	51	67%
2	Satisfied	21	28%
3	Very Dissatisfied	3	4%
4	Dissatisfied	0	0%

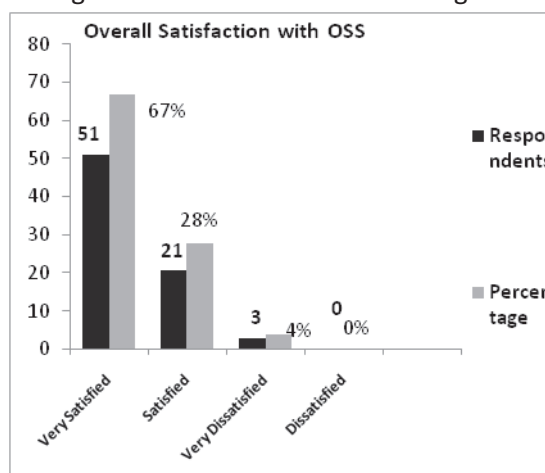


Table 15: Overall satisfaction of Librarians with OSS

From the above table and figure clearly knowing that 67% librarians very satisfied and 28% librarians satisfied along with only 4% librarians were Very Dissatisfied with OSS.

6. FINDINGS

Major findings are brought out according to opinions of the respondents from this study are as follows.

- Female librarians are very less in library field especially for library automation and using of OSS.
- All are librarians were known the term software, but very less in implementation the software.
- Most of the librarians (63) in the Telangana state were using the NewGenLib open source software.
- More than 51% librarians were having above 4 years experience and 49% librarians were having experience on using OSS.
- 69% library professionals were not getting major problems while using the OSS.
- 95% librarians were thought that they were looking for updated version and latest modules in OSS.
- 44% librarians were installed OSS with help of colleagues and 28% were installed by downloading directly from concern websites/blogs.
- All most all were getting appreciated by their concern authority after OSS implementation for saving the money.
- All the mgt/concern authority were provided all the all facilities including software, hardware, infrastructure

for implement the OSS, except few.

- 90% plus library professionals thought that there should be update versions and technical support in OSS.
- 44% librarians were helping to their friends in implementing the OSS for Library automation.
- Open source software is the very excellent (72%) in present environment.
- Huge i.e, 67% library professionals were very and 28% satisfied with OSS means 97% were satisfied after implementing the OSS.

7. SUGGESTIONS:

Important suggestions are made according to above findings and respondents opinions as follows.

- ✦ The female librarians should take initiative to develop latest trends in Libraries.
- ✦ The Library professionals must implement automation and digital libraries in their Libraries, for achieve this goal mgt/concern authorities should take responsibility.
- ✦ The librarians try to adopt the OSS in their libraries for reduce the budget.
- ✦ All the library professionals must co-operate each other for development of OSS.
- ✦ Better to download concern website for installation of OSS.
- ✦ Management/concern authority must provide all the infrastructure facilities and other technical support to librarians for implements the latest technologies.
- ✦ Techies in LIS fields, try to update the modules in OSS according to latest trends and user requirements.

8. CONCLUSION:

In the present information technology and web era, the implementations of open sources softwares are vital for any organization in LIS field for diminishing the financial burdens. The library professionals of Telangana state are very happy with the implementation of open source softwares which are available on free of cost. The present OSS in LIS field is having maximum features with fewer limitations. The concern authorities and management of colleges are encouraging the LIS professionals for developing OSS and they are giving recognition to exceptional professionals who are doing hard work.

Now, the government and library associations must take initiation for implementing the open source softwares in library automation and digitization. Few open consortia are supporting and rectifying the sudden problems arriving while utilizing the oss and most important that the techies in library field are must try to update the OSS according to users' needs and modernization.

Finally, the open source softwares are playing tremendous role in implementing the automation in libraries and information centers of government and private sectors. In present library scenario, the OSS is as a revolutionary tool for all the library professionals for enlarging their skills and abilities.

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