

Use and Application of Open Sources Software dor Digital Assets Management And Library Services in Biju Patnaik Central Library of NIT, Rourkela : A Study

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***Abstract** - Open source software is, software that users can run, copy, modifiable, share and improve for as your required .Library Staffs should be awareness about the open source software and should engaging in their Marketing library Service. They should have knowledge of the selection of library software , installation and some technical knowledge use of open source software for enhancing library services. The paper details about the various open source software like Koha, D-Space, E-Print GreenStone, JoomlaWordpress used for digital asset Management and enhancing library services in Biju Patnaik Central Library (BPCL) of NIT, Rourkela . It also describes comparative features of technical related issues faced in use of open source software for digital resources Management .*

Keywords: Open Source Software, Library Management System, Digital Library, Library Technology

Introduction

Digital libraries are complex information systems. With the arrival of Digitization , the concept centered on large databases, the now familiar online public access systems. After forming the internet, the concept evolved again and turned to creating digital libraries. Phrases like, 'virtual library', 'electronic library', 'library without walls' and most recently 'digital library' are used time to time. Digital Libraries have received much attention, allowing access to digital information from anywhere across the world. They have become widely accepted and even preferred information sources in different fields of study. Libraries are now more focusing on collection development of electronic resources like e-journals, e-books, e-databases, CD/DVD etc. as these resources gives more satisfaction to users and they can carry/transfer them very easily in electronic devices like, mobile, laptop etc. The libraries are also facing challenges for proper organization and dissemination of Digital assets. Various tools and technology, including open source software has been discovered by libraries to overcome the above situation and these solutions has been accepted as most reliable and cost effective to manage the digital resources word wide.

Statement of the problem:

The Biju Patnaik Central Library (BPCL) of NIT, Rourkela Different Digital Asset management through OSS there is need for a study to understand and analysis the use and application of OSS in library. This study deals with different Perspectives such as awareness, Purposes, which type of technical knowledge are required for manage and problem face while use and application of OSS in BPCL of NIT Rourkela.

Objectives of the study:

- To find out which type of Digital Asset available in Biju Patnaik Central Library.
- To find out the different Open Source Software being used and which Purpose of use and application of Open Source Software at Biju Patnaik Central Library of NIT, Rourkela
- To identify the features of Open Source Software those are used in Biju Patnaik Central Library (BPCL) for digital assets Management.
- To find out the problems Face in the use and application of OSS at Biju Patnaik Central Library
- To study of the awareness among the library staff for use and application of OSS in BPCL of NIT, Rourkela.
- To Find out Satisfaction level of library staff use of Open Source Software.

Scope of the study :

This study covers Open Source Software that is being used at Biju Patnaik Central Library of NIT, Rourkela. It identifies all the possible function and requirements of computerization library management. It is observed that Biju Patnaik Central Library use and application of open source software for digital asset management. The study deals with entire Open Source Software (OSS) models presently being used in Biju Patnaik Central Library of NIT, Rourkela . The selected open source software is:

- KOHA
- D-Space
- E-Print
- GreenStone
- Joomla
- Wordpress

Limitations of the study:

This study is limited in Biju Patnaik Central Library of NIT; Rourkela. The following Open Source Software (OSS) are Introduced and used for digital asset management in Biju Patnaik Central Library.

- KOHA- features and benefits for Library Automation
- D-Space-features and benefit for Institutional Repository
- E-Print-Features and benefit for Electronic Thesis and Dissertations and Open Access Odia Books
- GreenStone –Features and benefit for Digital Library
- Joomla-Features and benefit for Library Web site.
- Wordpress-Features and benefit for Library Services Blog and Subject guide

Methodology:

Primary and Secondary data has been collected, Qualitative and Quantitative research has been applied as the Research design of the Study. The below mentioned methodology is incorporated to collect the relevant data. 1) Interviews with the Library Staff 2) Questionnaires for the Library staff. 3) Field Observation of the Libraries. 4) Review of the Websites of Biju Patnaik Central Library of NIT, Rourkela

Significance of the study

With the growth ICT, the number of sophisticated Open Source Software is developed for library automation, Institutional Repository, Electronic Thesis and Dissertations, Library Website, Creating Blog to fulfill the user need. Open source software is, software that users have the ability to run, copy, distribute, study, change, share and improve for any purpose. Open source library software's does not need the initial cost of commercial software and enables libraries to have greater control over their working environment. Library professionals should be aware of the advantages of open source software and should involve in their development. They should have basic knowledge about the selection, installation and maintenance. It is very important for library professionals to acquire knowledge and awareness of feature and functionality of different Open source software. Presently , there is great demand, Challenges and opportunities for the worldwide access not only of the bibliographic but also the full text.

Therefore, this study will help to library Professional to guide in selection, evaluation and development Open source software for digital Assets management, Library Management system and better services. As the Open source software represents in existing opportunity for libraries and major shift in software design it allows the library to participate directly in the development of its systems and innovate services in a manner consistent with the value of librarianship according to the best know license agreement for Open source software the General Public License (GNU).

Review of literature

The researcher must have an adequate knowledge about the work that has already been done in the area of research. A number of the existing works have been surveyed with a view to assessing the work already done. The literature survey has been done with the help of primary and secondary sources.

Mishra and Mishra (2016) study of “*Application of Open source solutions for digital asset management: a case study of NIT Rourkela*”.”This paper attempt to highlight some of the most popular open source solutions used in Biju Patnaik Central Library (BPCL) of National Institute of Technology Rourkela (NITR), Odisha, India for digitization, preservation and dissemination of digital assets. The management and technical challenges faced in the organization and dissemination of such digital resources has been also described. The paper discusses about the various open source solutions like EPrint, DSpace, Joomla, Koha etc. used for digital preservation and dissemination of knowledge worldwide. It also describes some of the technical and policy related issues faced in the entire management of digital resources and their probable solutions”.

Tripathi et al. (2017) In this study of “*Open Source Solutions for creation of ETD archives/repository: A case study of Central Library @NIT Rourkela*”This paper deals with open source software (OSS) solutions for establishing institutional repository (IR) especially DSpace, EPrints, Greenstone, Fedora projects and others. . This paper covers the implementation of IR with special reference to Electronic Theses and Dissertations (ETDs) in Central Library of National Institute of Technology Rourkela using various OSS tools such as DSpace, e-Prints and Greenstone to acquire, organize and disseminate information in effective way to support the academic and research needs of its fraternity. By reading this paper, one

will be able to understand the basics of OSS and its implementation and how these can be used for managing intellectual outputs in their institutions.

Inferences

In the literature reviews of the topic “Use and Application of Open Sources Software for Digital Assets Management in Biju Patnaik Central Library of NIT, Rourkela : a study ” there were many literature searched and many journals, both national and International. This review gives us brief discussions on what others think about the current topic of study. The literature review gives us a basic idea of the important views of many ideal people, who have already dealt with the areas related to this topic. This review discovers the key aspects of open source software and its comparison to proprietary software’s, which were already discussed in some other studies. In addition to the software comparatively it also comprises studies on platform independency of open source software. This review includes an analytical study done on open source software’s before they were actually in to the market and competition. Furthermore includes reviews of their scope in future. Moreover, there are reviews related to the librarians, who find open sources more flexible then proprietary softwares, and its contribution towards libraries and other educational institutes. However, I found there has been no studies undertaken taking a national level institute NIT Rourkela Biju Patnik Central Library So to fill up this gap, this study has been undertaken.

Finding and Data Analysis

Finding and data analysis of the data collected through questionnaire method. The collected data organized and tabulated by using statistical method, tables and percentages, which was distributed to a sample size of 21 library staff, out of which 1were Librarian, 4 were Asst. Librarian, 3 were technical Asst. and 13 were Library Trainee’. So the researcher took all the 21 questionnaires for the data analysis and interpretation.

Table-1.Total Number of Respondents

S.No	Categories	No. of Respondents	Percentage
1	Librarian	1	5%
2	Assistant Librarian	4	19%
3	Technical Asst.	3	14%
4	Library Trainee	13	62%
5	Total	21	100%

Table- 1 Shows that out of 21 respondents, 1 i.e. (5%) are Librarian, 4 i.e. (19%) are Asst. Librarian, 3 i.e. (14%) Technical Asst., 13 i.e. (62%) Library Trainee. It is evident that most of the respondents are of Library Trainee.

Table-2 Digital Assets Collection Details of Biju Patnik Central library

Sl. No	Digital Asset	Total	Percent
1	E-Books	15940	39.37
2	Video Lectures	10027	24.77
3	E-Journals	6027	14.88
4	B.Tech Thesis	2566	6.33
5	Conference Paper	1590	3.92
6	Book Accompanying CDs	960	2.37
7	Journal Article	921	2.27
8	A/V Materials	688	1.69
9	MSC Thesis	538	1.32
10	Odia Books	533	1.31
11	Ph. D	363	0.89
12	M. Tech by research	214	0.52
13	M.A. Thesis	64	0.15
14	Full-text Databases	25	0.06
15	Book Chapter	11	0.02
16	Abstract/Citation Databases	6	0.01
17	Standards (Database)	2	0.004
18	Preprint	2	0.004
19	Indian Coal Database	1	0.002
Total		40478	100

The table-2 bar chart shows that most of the Biju Patnik Central Library E-books materials in bigger quantity (39.37%), then Video Lecture (24.77%) and e-Journal (14.88%) where as book chapter are fewer (0.02%) and digital materials like preprint, Ph.D Thesis and Indian Coal Database are in small proportion that makes only (0.002%).

**Table-3 Different type of Open Source Library Software and their
3. Propose of Use at Biju Patnaik Central Library**

Sl. No	Type of open source software	Software name	Purpose of use	Website
1	Library Management Software	KOHA	OPAC	http:// opac.nitrkl.ac.in
2	Digital Library Software	Dspace	Institutional Repository	http://dspace.nitrkl.ac.in
3		E-Print	ETD (Electronic Theses and Dissertations)	http://ethesis.nitrkl.ac.in
4		GreenStone	Software Vault	http://dlib.nitrkl.ac.in
5	Content Management Software	Joomla	Library Website	http:// library.nitrkl.ac.in
6		Wordpress	Library service Blog and Subject Guide	http://192.168.126/ blog

Table-3 shows that Biju Patnik Central Library are used Different type of Open Source Library Software like Library management software (KOHA) used for Online Public Access Catalogue ,Digital Library Software(Dspace)used for Institutional Repository,(E-Print) used for Electronic Thesis and Dissertation and Open Access Odia Books,(Greenstone)

Used for Sostware Voul, Content Management Software (Joomla)Used for Library Web Site and (Wordpress) used for Library service Blog and Subject Guide For Researcher.

Table-4 Features of Different Open Source Software

Feature	D Space	E Prints	Greenstone	Koha	Joomla	Wordsp ress
Creation year	2002	2000	1997	2000	2005	2003
Developed by	Mit Libraries and Hewlett-Packard Lab	University of Southampton	University of waikato	Koha Community	Joomla project team	Wordspr ess Foundati on
Cost of license	Free	Free	Free	Free	Free	Free
Resource	CNRI	No	OAI Identifier	No	No	NO
OAI-PMH	Yes	Yes	Yes			
Storage and retrieves	Can storage and retrieve all type of content	Can storage and retrieve all type of content	Can storage and retrieve all type of content	Can storage and retrieve all type of content	Can storage And retrieve all type of content	Can storage And retrieve all type of content
Metadata formats	Dublin core, Qualified DC, METS	Dublin core, METS	Dublin core, Qualified DC, METS, ZGLS, AGLS	MARC 21 Format	NO	No
User interface functions	End user deposition, multilingual support	End user deposition, multilingual support	End user deposition, multilingual support	End user deposition, multilingual l support	End user deposition, multilingual support	End user deposition, multilingual support
Thumbnail preview	images	Images , Audio, Video	Images , Audio, Video	Meta Data Preview	Images , Audio, Video	Images , Audio, Video
Searching capabilities	Field specified, Boolean Logic, Sorting options	Field specified, Sorting options	Field specified, Boolean Logic	Field specified, Sorting options	Field specified , Sorting options	Field specified , Sorting options
Browsing options	By author, Subject and collection	Browsing can be done using any field	Browsing can be done using any field	By author, Subject, Title, ISBN and collection	Browsing can be done using any field	Browsing can be done Using any field
Syndication	RSS, ATOM	RSS, ATOM	-----	RSS, ATOM	-----	RSS, ATOM
User authentication	LDAP authentication, Siboleth authentication,	LDAP authentication	User groups	User groups	LDAP authentication	LDAP authentication
Statistical report	Count of full record	Count of full record	Count of full record	Count of full record	Count of full record	Count of full record
Software platforms	Linux or Unix, Windows, Solaris	Linux, Unix, Windows,	Linux, Unix, Windows, Mac-OS	Linux, Ubuntu, Windows	Linux, Window s	Linux, Window s
Databases	Oracle, Postgre SQL	MySQL, Oracle, Postgre SQL, Cloud	Its Own	MYSQL, Apache,	MYSQL, Apache	MYSQL, Apache
Programming language	Java, JSP	Perl	C++, Perl, Java	Perl	PHP	PHP
Web server	Apache and Tomcat	Apache	Apache/IIS	Apache	Apache	Apache
Machine-to-machine interoperability	OAI-MHP, OAI-ORE, SWORD, SWAP	OAI-MHP, OAI-ORE, SWORD, SWAP, RDI	Z39.50, OAI-MHP	Z39.50	-----	-----

License	GNU	BSD	GNU	GNU	GNU	GNU
Services	Services via 3rd part services providers	Training consultancy, Site visit	Training	Services via 3rd part services providers	Training consultancy, Site visit	Training consultancy, Site visit

Table-4 show that Biju Patnaik Central Library are used many Open Source Software use for Digital Assets Management Like Koha,Dspace ,GreenStone, Eprint, Joomla, Wordpress all software are International Standard, Protocol and technical Support by the Communities and all software are Support the PDF,A/V Materials, Image Format and Multimedia also support and all open source software are user friendly.

Table-5 Acceptance of multilingual script

S.No	Name of the software	Yes	No	Total	Percentage
1	Koha	4	1	5	23.80
2	Dspace	3	1	4	19.04
3	E-print	3	0	3	14.28
4	Greenstone	2	0	2	9.52
5	Joomla	5	1	6	28.57
6	Wordpress	1	0	1	4.76
Total		18	3	21	100
Percent		85.71	14.28	100	

Table -5 shows that multilingual support of the open source software for library operations, the 100% respondents view that any OSS must support the multilingual script.

Table-6 Digital Asset support of OSS

S.No	Name of the Software	PDF	A/V Materials	Image Format	Multimedia	Microsoft Word, PPT	Total	Percent
1	Koha	0	1	2	1	1	5	23.80
2	Dspace	1	1	1	1	1	5	23.80
3	E-print	0	0	1	0	1	2	9.52
4	Greenstone	0	1	1	1	1	4	19.04
5	Joomla	1	1	0	1	0	3	14.28
6	Wordpress	0	1	0	1	0	2	9.52
Total		2	5	5	5	4	21	100
Percent		9.52	23.80	23.80	23.80	19.04	100	

Table-6 show that Biju Patnaik Central Library are many Open source are used that is all Open source support PDF,A/V Materials, Image Format and Word and Ppt.

Table-7 Search strategy to be incorporated by OSS

S.No	Name of the Software	Basic	Advance d	Truncation/wildcard	Total	Percent
1	Koha	1	2	1	4	19.04
2	Dspace	2	3	0	5	23.80
3	E-print	2	2	2	6	28.57
4	Greenstone	1	1	1	3	14.28
5	Joomla	1	1	0	2	9.52
6	Wordpress	0	1	0	1	4.76
Total		7	10	4	21	100
Percent		33.33	47.61	19.04	100	

Table -7 “shows that the search strategy to be incorporated of the OSS. Their response shows that the most desire is Basic Search i.e. 33.33% followed by Advanced Search i.e. 47.61%. Very few desires (19.04%) want to use Truncation/Wildcard and no one desire in other option.”

Table-8 Export and Import facilities in OSS

S.No	Name of the Software	Yes	No.	Total	Percent
1	Koha	5	0		
2	Dspace	4	0	4	19.04
3	E-print	3	0	3	14.28
4	Greenstone	2	0	2	9.52
5	Joomla	6	0	6	28.57
6	Wordspress	1	0	1	4.76
Total		21	0	21	100
Percent		100	0	100	

Table -8 shows that the Library Professional has enquired the importance of export and import feature in the OSS from any proprietary and freeware software. The 100% respondents opined any OSS must have Import and Export feature to any software.

Table-9 Facility to check and modify the data

S.No	Name of the Software	Yes	No.	Total	Percent
1	Koha	5	0	5	23.80
2	Dspace	4	0	4	19.04
3	E-print	3	0	3	14.28
4	Greenstone	2	0	2	9.52
5	Joomla	6	0	6	28.57
6	Wordspress	1	0	1	4.76
Total		21	0	21	100
Percent		100	0	100	

Table -9 shows that the Library Professional has enquired the importance of Facility to check and modify the data feature in the OSS .The 100% respondents opined any OSS must have Facility to check and modify the data.

Table 10 Customer support of OSS

S.No	Name of the Software	Email discussion	Training	Forums	Total	Percent
1	Koha	1	2	2	5	23.80
2	Dspace	1	2	1	4	19.04
3	E-print	1	1	1	3	14.28
4	Greenstone	0	1	1	2	9.52
5	Joomla	1	4	2	6	28.57
6	Wordspress	0	1	0	1	4.76
Total		4	11	7	21	100
Percent		19.04	52.38	33.33	100	

Table-10 shows that most of the libraries respondent regarding customer support. Highest number of respondent 7 (33.33%) wants to train on OSS, 11(52.38%) wants from E-mail discussion, and 4 (19.04%) forums were ticked.

Table-11 Awareness of Open Source Software

S.No	Name of the Software	Yes	No	Total	Percent
1	Koha	5	0	5	23.80
2	Dspace	4	0	4	19.04
3	E-print	4	0	4	19.04
4	Greenstone	3	0	2	14.28
5	Joomla	3	0	3	14.28
6	Wordpress	2	0	2	9.52
Total		21	0	21	100
Percent		100	0	100	

Table-11 Shows that Awareness of Open Source Software , the respondents replied that the Aware open source Software 100 % and also individual Open Source awareness of open source software Koha more people Aware 29% and less aware Green stone(9%) and wordpress (5%).

Table-12 Satisfaction level of use and application of Open Source Software

SL. No	Name of the Software	Satisfaction level		Total	Percent
		Satisfied	Very satisfied		
1	Koha	2	3	5	23.80
2	Dspace	4	2	6	28.57
3	E-print	2	1	3	14.28
4	Greenstone	1	1	2	9.52
5	Joomla	2	1	3	14.28
6	Wordpress	1	1	2	9.52
Total		12	9	21	100
Percent		57.14%	42.85%	100%	

Table-12 show satisfaction level using OSS, their response shows most of them are satisfied (57.14%) with the use of OSS, 42.85% of total response were Very satisfied. Biju Patnik Central Library are very satisfied Dspace (29%) and less Satisfied Greenstone(9%).

Table-13 Rate of Knowledge Open source Software

SL. No	Name of the Software	Superficial	Adequate	Expert	Total	Percent
		1	2	1		
2	Dspace	1	3	1	5	23.80
3	E-print	2	1	1	4	19.04
4	Greenstone	1	0	1	2	9.52
5	Joomla	1	1	1	3	14.28
6	Wordpress	1	1	1	3	14.28
Total		7	8	6	21	100
Percent		33.33	38.09	28.57	100%	

Table-13 show that Rate of Knowledge Open source Software, their response shows most of them are superficial (33%) ,Adequate (38%),Expert (29%).over all Dspace are highest Rate of Knowledge (23.80%) and Lowest Rate of Knowledge Green Stone (9.52%).

Table-14 Problems faced use and application Open source Software

SL. No	Name of the Software	No technical persons	No administrative support	No Vendors Support	Difficult to use	Total	Percent
1	Koha	0	1	4	0	5	23.80
2	Dspace	1	0	0	2	3	14.28
3	E-print	1	1	1	1	4	19.04
4	Greenstone	1	1	0	0	2	9.52
5	Joomla	0	0	3	2	5	23.80
6	Wordpress	1	0	1	0	2	9.52
Total		4	3	9	5	21	100
Percent		19.4	14.28	42.85	23.80	100%	

Table-14 show that the Biju Patnik Central Library Professional has enquired with the respondents whether they are facing with the problems with the OSS. 43% showed the problem of Lack of Vendor Support and lack of technical human resources where as 19% expressed that their administrative support (14%) is poor. They also expressed that they have faced other problems such as software migration (up gradation), customer services, additional plug-ins and purchases, training, lack of user friendliness etc.”

Table-15 Advantages of Open Source Software Over Commercial Software

S. No	Name of the Software	Price	Source Code access	Ease to customize	Easier to Adopt in organization	security	Community/groups	Total	Percent
1	Koha	1	1	1	2	1	1		
2	Dspace	0	1	2	0	0	1	4	19.04
3	E-print	0	0	1	0	1	1	3	14.28
4	Greenstone	0	1	1	0	0	0	2	9.52
5	Joomla	0	0	1	1	1	0	3	14.28
6	Wordpress	0	0	1	1	0	0	2	9.52
Total		1	3	7	4	3	3	21	100
Percent		4.76	14.28	33.33	19.04	14.28	14.28	100%	

Table-15 shows that Advantages of Open Source Software over Commercial Software Ease to customize (34%) and Easier to adopt in Organization (19%) and Less Security of Database Management.

Table-16 How likely are to recommend open source software to other organization

S. No	Name of the Software	Very likely	Not very likely	Quite Likely	Total	Percent
1	Koha	4	1	0	6	28.57
2	Dspace	4	0	0	4	19.04
3	E-print	2	1	0	2	9.52
4	Greenstone	1	0	0	1	4.71
5	Joomla	5	0	0	5	23.80
6	Wordpress	2	1	0	3	14.28
Total		18	3	0	21	100
Percent		85.71	14.28	0	100	

Table-16 shows that How likely are to recommend open source software to other organization Very Likely recommend (85.71%) and not very likely recommend (14.28%).

Findings of the study:

The study has generated responses from varied range of respondents adequately representing the diversity of the total population of use of Open Source Software(OSS).

Objective 1: Biju Patnik Central Library are different type of Digital assets used like E-Books, E-Journal, Thesis, Conference Paper ,Lecture Video, CD-Rom, A/V Documents. E-books materials in bigger quantity (39.37%),then Video Lecture (24.77%) and e-Journal (14.88%)where as book chapter are fewer (0.02%) and digital materials like preprint, Ph.D Thesis and Indian Coal Database are in small proportion that makes only (0.002%).

Objective 2: It has been identified from the study that Open Source Software (OSS) is being used in Biju Patnik Central Library (BPCL) of NIT Rourkela. The following OSS software are being used and whis Purpose are used in BPCL:

- KOHA-Online Public Access Catalogue
- DSpace- Institutional Repository
- E-Print- Electronic Thesis and Dissertations and Open Access to Oriya Books
- GreenStone-Software Vault
- Joomla-Library Website
- Wordpress-Library Service Blog and Subject Guide for Research

Libraries and Open Source both faith that content should be freely accessible to everyone and make the world a better place. Open access is the main philosophy behind both libraries and OSS and sharing information freely with no restriction. Some of the OSS, software which are playing a great role for Digital Assets Management.

Objective 3:Findout the study Biju Patnaik Central Library are used many Open Source Software use for Digital Assets Management Like Koha, Dspace, GreenStone, Eprint, Joomla, Wordpress all software are International Standard, Protocol and technical Support by the Communities and all software are Support the PDF,A/V Materials, Image Format and Multimedia also support and all open source software are user friendly.

- All Open source software is supporting the multilingual support.
- The search strategy is to be adopted by library professionals for OSS Basic Search i.e. 33.33% followed by Advanced Search i.e. 47.61%. Very few desires (19.04%) want to useTruncation/Wildcard and no one desire in other option
- All the OSS are having the facility to modify, edit and Import /Export facility for the data.
- Customer supports are provided through e-mail discussions, training and by Forums.

Objective 4:”Biju Patnik Central Library Professional has enquired with the respondents whether they are facing with the problems with the OSS. 43% showed the problem of Lack of Vendor Support and lack of technical human resources where as 19% expressed that their administrative support (14%) is poor. They also expressed that they have faced other problems such as software migration (up gradation), customer services, additional plug-ins and purchases, training, lack of user friendliness etc”.

Objective 5: Awareness of Open Source Software , the respondents replied that the Aware open source Software 100 % and also individual Open Source awareness of open source software Koha more people Aware 29% and less aware Green stone(9%) and word press (5%).

Objective 6: Satisfaction level using OSS, their response shows most of them are satisfied (57.14%) with the use of OSS, 42.85% of total response were Very satisfied. Biju Patnik Central Library are very satisfied Dspace (29%) and less Satisfied Greenstone(9%).

- Advantages of Open Source Software over Commercial Software Ease to customize (34%) and Easier to adopt in Organization (19%) and Less Security of Database Management
- Rate of Knowledge Open source Software, their response shows most of them are superficial (33%) ,Adequate (38%),Expert (29%).over all Dspace are highest Rate of Knowledge (23.80%) and Lowest Rate of Knowledge Green Stone (9.52%).
- Recommend open source software to other organization Very Likely recommend (85.71%)and not very likely recommend (14.28%).

Conclusion

Lastly I conclude that open source solutions (OSS) available for management of digital resources in the Biju Pattnaik Central library. Digital assets available in any media like files, audio, video, etc can be managed, preserved and accessed globally with the help these freely available globally recognized OSS. The major challenge till date library faced is up-gradation of all software due to limitations of the technical skills among library professionals and work culture where a single staff has to perform multiple jobs of varying skills. Due to security reasons library has very limited access to servers, hence they have to approach for any modifications on software's to computer center's staffs. The motivations and some administrative policy are also lacking because of which the item count of a very old repository is less. The use of so many software like e-print, Koha, Joomla, DSpace, libsys etc. Again creating lot of confusion among users and its technical management. Library in-house manpower is regularly putting their best efforts for improvements and up-gradations of the system. Library staff is responsible for submission of digital items like e-theses, dissertation, projects, Articles, conference proceedings etc. Contradictory to submission by users hence there is lacking in proper policy and workflow in digital document collections, preservation and dissemination exist at present Proper administrative policy and technical manpower are very much needed in the library for overall development of digital resources and handling the technical difficulties in running the software's. Using many such solutions may be not good for its user and single point access of all such resources is badly needed under such type of environment.. Management of such resources by in-house human resources saves a huge amount of the institute and build very good professional image among the entire community. Hence authors would like to recommend the adoption of such solutions especially for the developing country-libraries with the help of community support so that cost of implementation can be reduced in overall digital asset management

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