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Thinking Open Source for Technical College Libraries

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ABSTRACT: Library is a storehouse of knowledge and it performs the several functions like collecting, processing, gathering, retrieving and disseminating of information. It has some boundaries but now it is possible to overcome the boundaries by using open source. In India, there are so many technical colleges where no person or commercial vendor will lock the library system, its open for all. Because open source software comes in the open market and any person can change code their won way and customize the whole software systems. This paper attempt to overview of open source and some challenges done by library professional which is thinking the way for technical college libraries over open source software environment.

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I. Introduction

Library is the most resourceful center for development of any community, not only educational purpose its uses are widely and its services reach a man to increase their knowledge. Now library is not stay on traditional services, it goes to open way and change its services for open accessing information very quickly. In case of technical college library it's reflect very faster than other general institution. Open source software which challenge to us professional to overcome this situation and keep in mind the financial condition of budget of the library. And professionals are required to show their skills and established the open source services in library which come out from the commercial locking system.

II. Open Source

There are number of pioneer opinion the following definition of open source but we observe the most common definition in the following [1]:

- Open source created and maintained by developers without wall of the institutional and national boundaries, collaborating with the help of internet-based communications.
- Open source products are certain kind of "free", often through a license that specifies that applications and source code are free to use, modify, and redistribute as long as all uses, modifications, and redistributions are similarly licensed.
- Open source developed more quickly and users can readily use and evaluate open source applications because they are free.
- Open source has quality, not profit, drives open developers who take personal pride in seeing their working solutions adopted.
- Intellectual property rights belong to everyone who build simply uses it.

More succinctly, from the definition at www.opensource.org:

"Open source promotes software reliability and quality by supporting independent peer review and rapid evolution of source code. To be certified as open source, the license of a program must guarantee the right to read, redistribute, modify, and use it freely." [OSS]

In open source software no single person or vendor or institution lock the product, it develop for community, it totally free accessible, its source code available for customization and develop the product by anyone. Another importance of open source product that licensed, it is totally 'General Licensed' means it has no cost for buying, using (at a time one too many user use this product), no maintenance cost, no vendor locking system etc.

2.1 Open Source Software for technical college libraries

Technical Education plays a vital role in human resource development of the country by creating skilled manpower, enhancing industrial productivity and improving the quality of life. Technical Education covers courses and programmes in engineering, technology, management, architecture, town planning, pharmacy and applied arts & crafts, hotel management and catering technology.

Technical Education in India has a history stretching back to the ancient urban centres of learning at Taxila and Nalanda. Western education became ingrained into Indian society with the establishment of the British Raj. Education in India falls under the control of both the Union Government and the states, with some responsibilities lying with the Union and the states having autonomy for others. The various articles of the Indian constitution provide for education as a fundamental right. Most universities/institutions in India are Union or State Government controlled.

Technical Education in this country is on a growth path. With more than 8000 institutes in the degree sector, 3500 in the polytechnic sector, and more than 1.5 million seats at the entry level in the degree stream, 1.0 million in the polytechnic stream, we have one of the largest technical education systems in the world. A host of ITI's in every State also cater to vocational education.

Chudnov (1999) identify the following factor using open source software in libraries [3]:

- Fund – it save the budget on software and it easily used in other areas where required more fund
- Freedom – the product not locked by a vendor. It easily handles or customize by in-house experts like librarian or other technical person
- Fraternity – the entire library community might share the responsibility of solving information systems accessibility issues

  If we fully implemented in library through open source software required operating system, pre-requisites software for implementation, integrated library management software, digital library software and content management software. All the above said open source software are available in our open tech-savvy society. Some of them listed below along with pre-requisites software:
- Operating system: Fedora, Ubuntu, Centos etc
- Library management software: KOHA (Apache, MySQL, Perl), NewGenlib (Java SDK, PostGreSQL, JBoss and JRE), Karuna (Apache, PHP, PostGreSQL) etc
- Institutional Repository/Digital Library Software: Green stone (Apache, Perl, J2RE, JDK an Image Magick), Dspace (PostgreSQL, Java, Apache Maven, Apache Tomcat, Apache Ant), E-print (Apache, Pearl, MySql) etc
- Content Management Software: Drupal (MySQL or PostgreSQL, Apache, PHP), Zoomela (PHP,MySql, Apache), Wordpress (Apache, PHP, MySql) etc

III. Some Challenges In Technical College Libraries:

Now most of the technical college libraries follow basically three angles of the library system i.e., Integrated library management system (Automated House Keeping System), Digital Library or Institutional Repository (DL/IR System), Content Management (Library Website or Blog) because if any technical college run under AICTE they must produce a full qualified library for their institution as well as accreditation of the Institution. So, it challenges to all librarian to build complete and qualified library for his/her institution.

3.1 Integrated Library System and Service

Any Library can develop their bibliographic record and they required any Library Management Software, it may be commercial software like LibSys, SOUL etc or may be open source system like Koha, New Genlib, Avanti etc. But any library has challenges to reduce the annual budget, so they should be challenges that they would almost preferred any Open Source Software (OSS) where no buying cost and maintenance cost are required but in case of commercial software required lack of financial investment and required to depend on vendor or supplier who are lock the product for their security as well as business purpose. Where as in open source you may change and customize the product and if you have face any problem you can share your opinion through online forum without depend on any commercial vendor.

Any libraries why they need of integrated library management software if we look some common service or purpose of the libraries are as follows:

- Document record management
- User Record management
- Circulation management
- Acquisition management
- OPAC
- Report generation

Now if we examine above common goals of the commercial software we find all features are now available in open source software also. So, the basic goal is same in respect of two type said software though we depend on commercial software. But it is challenges to us professionals that today we can't depend on commercial software vendor. Using open source software any library can generate their full information about library can distributed. Here we have given example of KOHA open source library management systems where find the following:

- Document record management, in this case KOHA we can record any type of material by using MARC or create own tag for processing of document.
- User record management, in this feature also available in KOHA where we can create user, uploaded user picture, setting of user privilege etc.
- Circulation management, here we find document issue, return, renewal, fine collection etc
- Acquisition management, in this area we find purchasing, billing, receiving etc features
- OPAC, in this area we find searching of document.
- All type of library administrative Report generation possible through KOHA

3.2 Institutional Repository/Digital Library Software

Now-a-days there is another term will come in our modern digital educational environment i.e, Institutional Reprository (IR)/Digital Library (DL). Every institution is creating its own collection for IR/DL. They need several IR or DL software's which are available in commercially forms like Tech focouz and open source software like Dspace, Greenstone, and E-print etc.

This is the vision of institutional repositories that was addressed by Lynch (2003) in his article:

"a university-based institutional repository is a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members. It is most essentially an organizational commitment to the stewardship of these digital materials, including long-term preservation where appropriate, as well as organization and access or distribution."

Now a question is coming Institution can built IR/DL for why? Answer is very simple, if we look Ranganathans five laws of library science, the first law fulfill any type information can access through IR/DL. The second law any IR/DL document has its own reader. The third law comprise each category has required document. The fourth laws satisfy the quick access or view or download on document. The fifth law also represent IR/DL is a growing. So, IR/DL both are satisfied those laws.

Every library and information centre (LIC) and its user always want to search and retrieve the full text document. In IR/DL system it is possible to save both the time and space of user and library. In case of IR/DL system basic motto are search and retrieve the full text documents with the help of any commercial or open source IR/DL software. But if we cut down the library budget always preferred open sources IR/DL software for save our budget. Here we have given example of Dspace open source IR/DL systems.

3.3 Content Management System

Content management system is nothing but it is an website which developed by any library. Past we feel that content management system provide only one way communication but now content management system reach to both way communication system where any user can give his/her view on a particular posted documents and this is a good platform for an user to give their comments/view in open way. Any library can build its own way or with the help of many free domains. From the website they can get Current Awareness Service (CAS), link to OPAC, and IR for searching web OPAC and document search, retrieve etc. Here we have given example of Drupal open source content management systems. From this content management software library can get the following facilities:

- It has collaborative authoring environment
- Blog
- Podcasting
- Picture galleries
- Peer-to-peer networking
- Newsletters
- Forums
- Feedback
- File uploads and downloads
- Comments
- RSS Feeds

IV. Conclusion

Many libraries uses Open library system based on open code and content, open source software and open standard. From the above study impress our library professional to develop their own library in open source environment. Studies show that the way of thinking for fund management and freedom which is most important for any technical institute in the open digital era. Many of the open source software waiting for implementation in globally which may be required customizing and it is the great challenges for us professional.

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