

Open Source Content Management Software's Joomla and Drupal:

A Comparative Study

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Abstract: Content management is an effective tool for creating, collecting, organising and retrieving electronic document as well as web resources. Content management system can provide us various types' web-based information service. At present open source is a popular choice in the field of Library and Information science. This paper covers two open source content management software i.e. Joomla and Drupal with their technical requirements, features, functions, service, importance etc. This paper will also give a complete overview about content management system with its advantage and need in organisation and dissemination of information in the library.

Key Words: Content Management Software's, Joomla, Drupal, comparative study

Introduction: In today's world library users are became more web savvy for the availability of internet. For that user expectations have also changed from traditional document to web based or e-documents. Now user's wants training videos, presentations, white paper, scholarly article and much more. Blogs, wikis, social networking sites, twitter, RSS and other tools included as web 2.0 technologies have transformed the way content is created, developed, managed and shared. In recent time information in any form is typically referred to as content or digital content. Content management system is an effective tool for content or resource sharing. Libraries have also adopted these new technologies to provide services among all user groups. With the help of these content management systems libraries can collaboratively produce, share and disseminate information to the users. Along with that libraries can also create and develop a web site for their own. Open source software's are also a popular choice in the field of library and information science because of cost benefit and flexibility of use. With a content management system libraries can increasing their information resources and also can disseminate it into wider clientele.

Content Management Systems: A content management system is software that is used to support the creating, updating, publishing, translating, distributing, archiving, and retiring of digital information (1). It also included standard features, such as tracking the changes made to digital information. Content managements systems include image files, audio files, and electronic document and web resources. Content management systems have various forms like web content management, document management system, enterprise content management systems etc.

Components of Content Management Systems: A CMS has basically three Components. Those are:

- Content Creation
- Content management
- Content publishing
- Content presentation

Features of Content Management Systems:

Mainly there are three type of feature of Content Management Systems are available. These are:

Core Features	Design Features	Extra Feature
<ul style="list-style-type: none"> • Integrated and on line help • Modular and extensible • Easy user and group management • Group-based permission system • Full template support, for unlimited looks without changing a line of content • Easy to install and upgrade procedures • Administration panel with multiple language support • Hierarchy content with unlimited depth and size • Integrated file manager • Integrated audit log • Small footprint 	<ul style="list-style-type: none"> • XHTML and CSS compliant • Auto-generated menu • Every page can have different theme • Design protected from content editors • Multiple content areas on one page 	<ul style="list-style-type: none"> • Search • Polls • News • Blog • Newsletter • CGCalendar • File Uploading • Glossary • Forms • User Management • Guestbook • Google Sitemap

Advantage of using Content Management Systems in Libraries: CMS of any library can provide a new dimension of services (2). CMS can be used in libraries to:

- Create and develop library website.
- Manage digital content in various formats (like text, image, audio, video etc).
- Provide library users with an interactive interface.
- Increase user participation in library activities and services.
- Library authority can develop shared content for the library. Users can also participate in this process.
- Easy storage and retrieval or access of data.
- Reduce repetitive duplicate input.

Objective: The objectives of this paper are:

- To give an overview of content management systems (CMS) and its advantage in libraries.
- To highlight the technical requirements, features and functions of both software's i.e. Joomla and Drupal.
- To make a comparative study of Joomla and Drupal in respect of their library module and services.

Method used: This paper is based on literature available in internet. We have studied many article, CMS report etc for this paper. Along with that we have also go through Wikipedia and user manual guide of both software respectively.

About Joomla: Joomla is an award-winning content management system (CMS), which enables to build Web sites and powerful online applications (3). Many aspects like extensibility and ease of use have made Joomla the most popular content management software. Best of all, Joomla is open source software that is freely available to us.

About Drupal: Drupal is a free software package that allows us to easily publish content, organize and manage, with an endless variety of customization (4). Dries Buytaert was started Drupal software as a message board in 1999. Within a year, many people became interested using and contributing to Drupal, so the project was made as open source. Drupal.org available online from 2001 and the Drupal community gained momentum in 2005 with several code sprints and conferences.

Technical requirements and overview of Joomla (5) and Drupal (6):

Features	Description	
	Joomla	Drupal
Installation Time	Less than 30 minute	Less than 30 minutes
Operating System	Linux, Windows	Linux, Windows
Database	MySQL	MySQL, PostgreSQL, MS-SQL Server
Server	Apache Web Server	Apache Web Server
Language	PHP	PHP
Latest Version	3.2.2	7.26
Official URL	http://www.joomla.org/	https://drupal.org/
Download From	http://www.joomla.org/download.html	https://drupal.org/project/drupal

From this table we concluded that installation time, OS, server and languages are same for these systems. In case of database Joomla is based on only MySQL where Drupal can perform with MySQL as well as Postgresql and MS-SQL Server also. It has been also observed that Drupal is more updated than Joomla. The links of official website and downloading the both systems are also given in this table.

Comparison of extra modules of Joomla and Drupal:

Features	Joomla	Drupal
Mode of Installation	Easy	Easy
Multisite facility	Yes	Yes
Blogs	yes	Yes
Wikis	Yes	Yes
Social Networking	Yes	Yes
Polling	Yes	Yes
User Interfaces	Easy to use	Easy to use
Library specific modules	Yes	Yes
Online Documentation	Yes	Yes
Online support	Yes	Yes
Frequency of Update	Every 3 months	Every 3 months
Ease of Update	Easy	Easy

From this table we can see that all the extra features of Joomla and Drupal are almost same. Feature like social networking is not a core function of both Joomla and Drupal but we can add with the help of add-on module. Wikis is a core feature of Joomla but in Drupal we can add this module.

Main Features of Joomla:

- Page caching to improve performance.
- RSS feeds.
- Printable versions of pages.
- News flashes.
- Blogs & Polls.
- Website Searching.
- Language internationalization.

Joomla: Modules for Libraries:

Collection: This module manages a collection of books as well as CDs, DVDs etc. Features include, categories and subcategories; use Amazon web services to fetch additional information; provide link to the Amazon product page with your partner-id; Joomla Fish support; users can manage their own lists of items; module to display lists.

Book-Library: This module provides a full-featured book library or book collection management environment on a Joomla-based website. It allows us to manage large number of book in a library. The component can also be used to easily set up a book selling shop using Amazon. With an Amazon Associates ID we can earn credits with book sales through Amazon, while Amazon takes care of the handing and shipping.

- Support of full category and subcategory.
- Book ID for internal administration.
- Blend/ return management, with fronted lend request possibility.
- Possibility of fronted book reviews by users, reviews management in the backend.
- Book information retrieved from Amazon through ISBN or entered manually.
- Import and export options (such as XML and MySQL).
- English included additional language files can be downloaded from the website.

Top listing module for Book Library: This module can be used to display the top books from Book-Library. This features include, show/hide cover; set cover height; choose how many books to display in the top list; choose if only published books or all books; choose sorting by hits, date, rating; choose if hits are displays; choose if ranking displayed.

“New Books Extended” module for Book-Library: The “New Books Extended” module for the Book-Library module is an improved version of the module to display the newest books from Book-Library component. Features include:

- Item count.
- Word count.
- Show or hide the book title.
- Show or hide the book authors.
- Show or hide the book cover.
- Set the cover height.
- Set the display orientation
- Sort by last added or last edited.

Jbook: This module is a component for books management.

- It allows splitting up the classification in categories and subcategories, with a tree structure, without limits in number of sub-children levels.
- For every book it is possible to insert details like the book cover. You can navigate even for author, editor.
- Registered users can see and comment every book reviewed. users can also ask for more information about the book by sending an email to the site administrator.
- There is a process to integrate the search in the entire site.
- It is presently available in latin, English and French.

Library-thing: Module which displays a library from library-thing.com. It uses JavaScript code, but allows changing of parameters, such as how many and covers size. From your Joomla! Site module admin.

Now Reading: Displays the cover image of the current article or book the site admin is reading.

Main Features of Drupal:

- **Multi-sites features:** one can create more than one website using one instance of Drupal installation.
- **Multi user content creation and editing:** This feature can be used by libraries to encourage and involve library users also to participate in content creation.
- Administrator can create authenticated users.
- User roles can be created and accorded relevant permissions.
- Drupal allows users to register and maintain user profiles.
- Open ID support.
- Access statistics and logging.
- Advanced search functions.
- Customization as per as library required for improved performance under load.
- Comments, forums and polls.
- Descriptive URLs.
- Multi-level Menu system.
- RSS feed and feed aggregator.
- Security or new release updates notification.

Drupal: Modules for Libraries:

Simple remote search module: This module allows users to search a remote database (like OPAC) from Drupal site.

Z39.50 search: This module implements the z39.50 protocol for information retrieval using PHP interface to the YAZ toolkit. This module can easily search or scan z39.50 servers in parallel using the standard Drupal search API and present the results.

Drupal scholar: This module allows users manage and display lists of scholarly publications. Features of this module include:

- End note tagged and XML import/export
- bibTex import/export
- In-line citing of references in “page” or “story” node types
- Selectable output styles (CSE, APA and IEEE)

OAI-PMH: This module provides an Open Archives Initiative Protocol for Metadata Harvesting, interface to the bibliography module. It exposes metadata from the biblio module.

MARC: This module allows you to import MARC records as nodes, to do things like pre-populating book review sites or even recreating library’s catalog in a rich social environment.

Library: This module helps to manage the availability of nodes as assets. This module supports multiple copies of a library item associated with one node and each copy may be individually made available. Library module allows authority to define their own library actions which may make an item available or not. This module includes a few built-in action like send an email, extend the due date of an item. This module is very flexible and comes with a number of options.

Islandora Fedora-Drupal module: Islandora project hosted by fedora commons which has released the Fedora-Drupal module as open source. The islandora module allows Drupal users to view and manage digital objects stored in fedora.

Book Post: This module makes thing easy to post information about books. Any ISBN number of 10 or 13 digit placed between curly braces {} is automatically converted into other bibliographical

details such as title, author etc. This data comes from Open Library Project. Here we can also include links to WorldCat, Library Thing and google books.

Biblio Facets: This module allows users to browse biblio types and fields as facets.

Faceted Search: This module provides a search interface for allowing users to browse content. It is a discovery and information navigation tool. The interface also included free-text search, fully leveraging Drupals search engine. It is a simple search forms and it never offers facets which lead to empty result sets. Function of faceted search included:

- Provides API and the search framework .
- Provides the search user interface.
- Allows users to refine the current search bases on the content type and content creation date.
- Users can search content through taxonomy.
- Allows user to perform keyword search restricted by field.

Conclusion: Selection of content management for library is based on a proper plan and study, type and format of material, provided services of the library, technology skills of library professional, user orientation program etc. This study have concluded some features of both software's like ease of installation, modules, services, functions etc. Drupal has more library module than Joomla. Search facility and user interface of Drupal is also easier than Joomla. With the help of Drupal any one can create and manage multi websites.

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References:

1. http://en.wikipedia.org/wiki/Content_management_system
2. Patel, Dimple. Free and open source software (FOSS) solutions for content management in librarries. BHU; 2006. p 92-113
3. <http://www.joomla.org/about-joomla.html>
4. <https://drupal.org/about>
5. <http://www.joomla.org/>
6. <https://drupal.org/>