

# Performance Analysis of Content Management Systems- Joomla, Drupal and WordPress

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## ABSTRACT

At Present there are lots of open source content management systems (CMS) available in the market. As open source CMS has its own advantages but out of so many only few like Joomla, Drupal, WordPress are popular in the market because of good functionality and support. It is the obvious question for everyone that, what are the basic reasons that only these CMS are mostly acceptable? Lots of surveys have been done to know which is the best and why? But still it is unanswered. By certain comparison on data we want to show that why mentioned CMS are best in their areas? We also want discover ranking for these three CMS that out of these which one is preferable in which condition. In this paper we are comparing above mentioned CMS by Goggle page rank, their documentation support, their popularity, installation survey and many more.

## General Terms

Open source Content Management System

## Keywords

Open Source, Joomla, Drupal, WordPress, CMS Comparison

## 1. INTRODUCTION

Content Management System (WCMS) is a server program that stores web page text and publishing details in a database, instead of as HTML pages.<sup>[1]</sup> The pages cannot be loaded until it is requested by client browser and it is built on demand. With the use of WCMS many types of content can be organized and published, and the layout, appearance and structure of the site can be changed easily and quickly, as it is based on templates and therefore content is separate from presentation - unlike a normal hard-coded site. If you want to change your content, it can be edited online and goes live immediately. Plug-ins can be used to add Functions and features as and when you need. Different content can be served to different visitors, according to their language or location. Visitor interaction can be increased compare to static or HTML site.

A CMS can be extended, it means that you can add new features and functions as and when your requirement changes unlike static and HTML site. It means CMS is a dynamic system.

This dynamic system clearly has numerous advantages over the more usual static website. A CMS is now the preferred choice for those who want easy content changes, simplified control of large amounts of content, a choice of plug-ins to accomplish a wide variety of tasks; and above all, the ability to do a lot more, a lot easier, and a lot faster than with any other system. There are lots of CMS available in the market; out of that we have to select most 3 or 4 efficient CMS. As there are no fix criteria to

select any CMS because all CMS is worked on specific criteria and you have to select which is fit as per your need. But still as per the functionality and general features required by any CMS we have finalized below CMSS.

## 2. OVERVIEW

### 2.1 JOOMLA

Joomla is one of the most powerful Open Source Content Management Systems. It is a free open source and content publishing system designed for creating highly interactive multi-language Web sites in short time like online communities, media, portals, blogs and E-commerce applications. Joomla is a universal free open source content management system. Universality means you can customize it as you wish. In many cases Bloggers used WordPress blogging platform. This is a natural choice, but you can also blog with Joomla. You can set page by selecting appropriate template. You can choose from thousands of free templates or select paid one for professional design. You can add additional functionality using add-ons. There are lots of extensions available at Joomla for free and for some you have to pay. And if for any reason you cannot find appropriate you can build it from scratch according to your requirements. As Joomla is open source you can also change code of the page layout according to your need by hiring web developer and enjoy the freedom.<sup>[4]</sup>

#### 2.1.1 Core Features:

1. User Management
2. Media Manager
3. Banner Management
4. Contact Management
5. Polls
6. Search
7. Web Link Management
8. Content Management
9. Syndication and Newsfeed Management
10. Template Management
11. Integrated Help System
12. System Features
13. Web Services
14. Powerful Extensibility<sup>[5]</sup>

Apart from above Joomla has nice Community. The most active members provide you faster response to your queries. You can ask anything about your problem and be sure that you will get an answer in short time. The community is strong and helpful. Joomla also have strong Developers that worked to make Joomla better and better every time. Always ready to find out the problem and its solutions. Add-ons make Joomla more efficient, you can find lots of free add-ons, components, modules, templates on the new developers' site on Joomla.org. You can also find commercial or ask for custom add-ons, modules, components or templates. Joomla is very easy to use and update. Even a novice can work with Joomla. It's simple to use, but has a lots of features if you need. Installing Joomla is on single click. You can configure in a few minutes.

There are lots of extensions available in Joomla like Shopping Carts, Forums, Calendars & Events, Ad serving tools, Search, Google Maps, Business & People, Directories, Classified Ads, Community Portal Tools, Reservations, Automated Backup, Newsletters, Polls Quizzes, Blogs & News, Image Galleries & Portfolio Tools, and Project Management & Groupware & Many More.<sup>[6]</sup>

## 2.2 DRUPAL

Drupal is an open source platform for building robust, flexible websites. It is used by all over the world here are some of the reasons why it is best: Drupal is a CMS which allows user to update their web pages without technical knowledge and ensure that it fits your organization's workflow. Unlike printed materials, web site should be dynamic. Drupal is a dynamic platform that will grow as your need expands. By adding features like advanced search, auto-tagging, and internationalization, you'll allow users to explore your web content in different ways. Drupal can be installed in multiple languages, allowing both administrators and users to view a site in their own language. You can customize Drupal according to your content, user and features of organization that make shine in front of others. You do not have to relying on vendors, Drupal have large developer community which provides support, security, testing, documentation for your web site. Whenever you hear about next big enhancement in web design, Drupal is always there. Drupal community member makes Drupal better and better.<sup>[7]</sup>

### 2.2.1 Core Features:

1. Administer
2. Build
3. Collaborate
4. Connect
5. Create
6. Design & Display
7. Extend
8. Organize & Find<sup>[8]</sup>

## 2.3 WORDPRESS

WordPress is initially designed as a blogging platform, in the last several years WordPress has changed itself as a useful content management system. One of the main advantages of WordPress is the large number of plug-ins released by

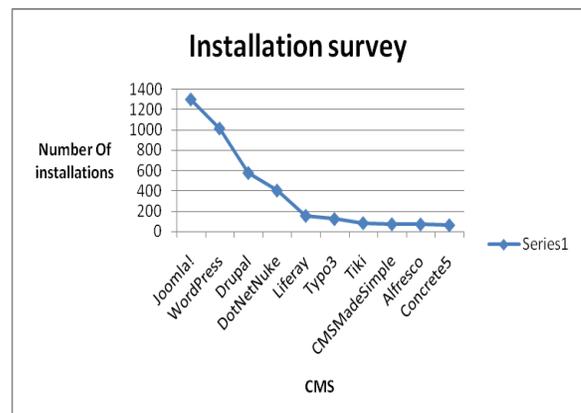
independent developers. In fact, every aspect of web site regarding the creation, organization and search engine optimization can be now handled with the use of WordPress plug-ins. Actually these plug-ins are add-ons and improve the functionality of the user interface. With lots of WordPress plug-ins available it becomes popular in the public. Lots of people confused in selecting plug-ins to simplify a particular task. For them, there is a large WordPress community ready to advice how to use them with WordPress content management system.<sup>[9]</sup>

### 2.3.1 Core Features:

1. Full standards compliance
2. No rebuilding
3. WordPress Pages
4. WordPress Themes
5. Cross-blog communication tools
6. Spam protection
7. Full user registration
8. Password Protected Posts
9. Easy Importing
10. XML-RPC interface
11. Workflow
12. Intelligent text formatting
13. Multiple authors<sup>[10]</sup>

## 3. ANALYSIS

There are lots of CMS available; first we have to do analysis regarding which are the most popular CMS? Below graph shows some comparison of CMS.



**Fig 1: Installation survey [3]**

In one survey 4000 people responded regarding which CMS they are using and above graph shows that more than 70% of users use Joomla, Drupal and WordPress. This shows that these are the top 3 CMS in the market. But by just considering the installation point we can not say these are the best one. Below graph shows which CMS provide better documentation?

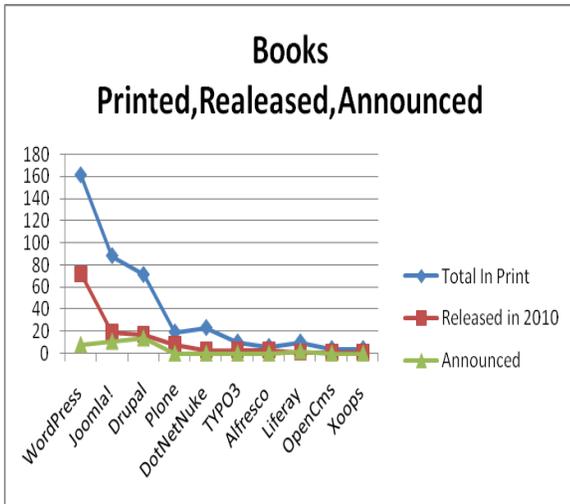


Fig 2: Documentation survey<sup>[3]</sup>

Above graph show that WordPress is on top with more than 160 books in print, more than 70 they have released in 2010 and also announced 8 books. Joomla and Drupal got 2nd and 3rd position with also good documentatoin support as well.

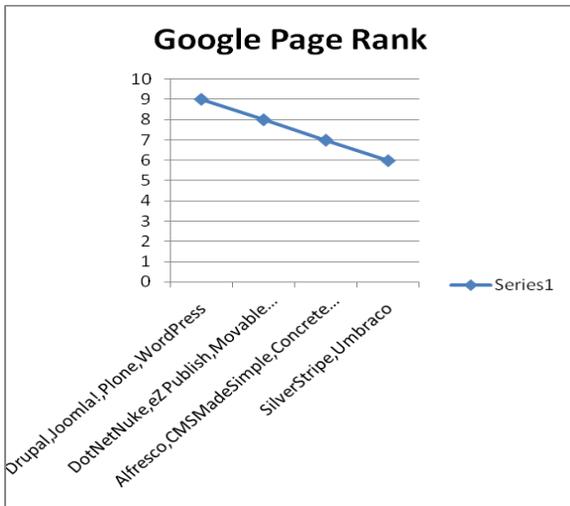


Fig 3: page rank [3]

Page rank is uses to determine the importance of a web page. It's one of many factors used to determine which pages appear in search results.<sup>[2]</sup> From above figs we can see that those site uses WordPress, Joomla, Drupal get the highest page rank in search engine. As this is the much unanswered question that which CMS is best? Because, it is highly based on user requirements and its future need. It's also based on users' technical support to handle and manage web site operation. Now, its clearly mentioned from the above figures that WordPress, Joomla and Drupal are most prominent CMS in their services but lets see some mre comparison to determine out of these three which one is best in which condition.

## 4. COMPARISION

Now, as it is clear that Joomla, Drupal and WordPres are most Popular CMS for users, we have to now judge among this three, which is the best one?

### 4.1 Popularity Comparison

In this we will see which CMS are most popular among users as well as provide more documentation for their user quries. It means that those CMS provide better documentation have more users and have good communities.

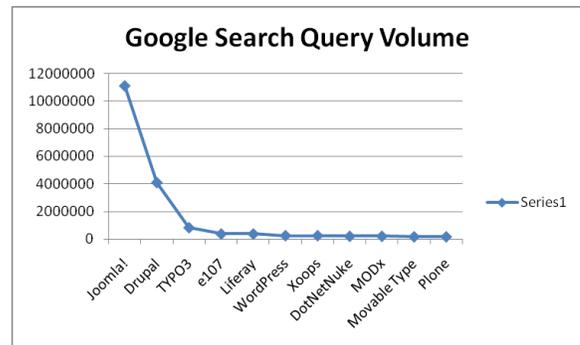


Fig 4: Number of Search in Google [3]

Above fig shows Google search data of particular CMS. Fig shows that Joomla gets full popularity in Google search gets above 90 lacks search while Drupal having above 20 lacks. There is no drought that popularity wise Joomla gets first rank. But that is not enough to tell it best for all. There are several things to consider when you are comparing CMS to select the best one.

### 4.2 Average Budget Comparison

One survey has been conducted by webology for CMS professionals to compare their opinion regarding Joomla and Drupal. Out of 196 respondents 84 said that they are fine with Joomla, 70 with Drupal and 42 with other CMS. Another survey has taken regarding average budget of website built on each platform. Below table shows some of the survey data.

Table1. Budget Comparison [11]

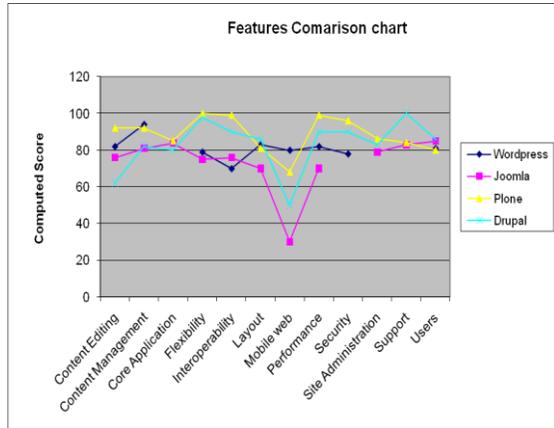
CMS	Respondents	Average Budget
Drupal	61	\$45,184
Joomla	81	\$19,847
Other	40	\$31,063

As Drupal is offering more functionality of large site handling for multi user, also provide in multi language and many more, it's also provide complex site management comparing to Joomla. That is why its average cost is almost 250% higher than Joomla.

Joomla is for simple site which didn't require much complex facility. If you have small business, didn't require more complex facility and if there is less chance to extend your site in future then Joomla is best choice for you as far as budget is concern.

Joomla is also very user friendly. Joomla also provide such environment that novice can also handle its work.

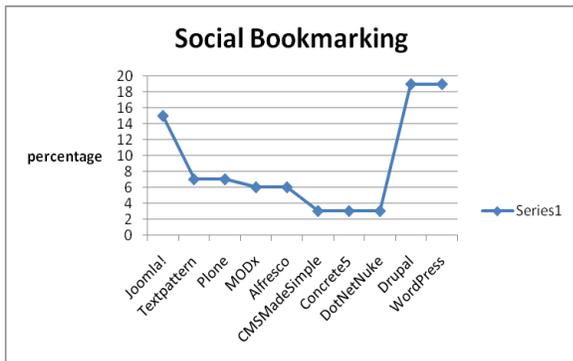
### 4.3 Features Comparison



**Fig 5: Features comparison [12]**

From the above fig we can say that Joomla and Drupal are on the same rating for content management features while WordPress and Plone get little higher rating for the same. If you see the flexibility then Joomla and WordPress are less flexible then Plone and Drupal. If you consider the layout of the CMS then as per the above figure WordPress, Plone and Drupal are almost on the same rating while Joomla get little low rating compare to others.

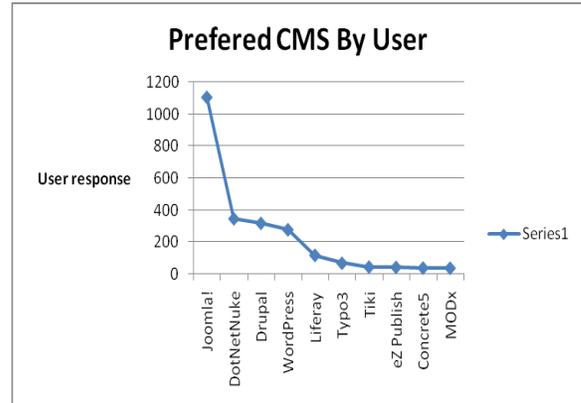
### 4.4 Social Bookmarking



**Fig 6: Social Bookmarking [3]**

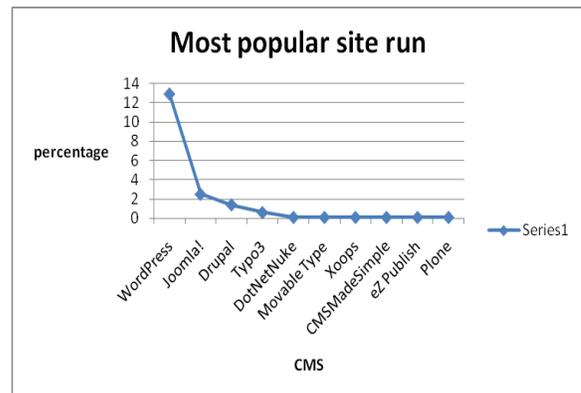
If you see the result of social bookmarking out of 100%, Drupal and WordPress covers almost 38%. Joomla is on 3rd position with 15%. Graph is not showing the result of CMS below 3%. There is a big gap between 3rd and 4th one for the same comparison.

### 4.5 Popularity Comparison



**Fig 7: CMS preference [3]**

According one survey from 1200 hundred responded regarding which CMs they preferred first. Joomla is on the 1st position with more than 1100 response. Drupal and WordPress are on 3rd and 4th position respectively with very big difference compare to Joomla.



**Fig 8: CMS usage ratio of popular site [3]**

According to Alexa’s rankings for the top one million websites run on which CMS in terms of the technologies used on those sites WordPress get over 12.5% of site under it. Joomla is on 2nd place with almost 2.5% share, and Drupal goes down to 3rd with 1.4%.

### 5. CONCLUSION

From the above analysis and with the reference of fig1 and fig2 it’s proved that Joomla, Drupal, and WordPress are most efficient CMS compare to others as it shows highest installations, better documentation support and highest page rank as per the graph of fig 3.

Many of the site owners doesn’t require complex facility they just want good layout, user friendly environment, and better page rank in search criteria to work with. With the reference of fig 3, fig 4 and fig 7, Joomla has shown everything in its favor. If you are novice in content management then Joomla is best for

you. Drupal is best for web developers to perform critical task and provide most facilities and flexibility in rich web site and also provide good documentation support as well. Now a day's WordPress is providing more add-ons for better site handling. Fig 8 shows that most popular sites are using it. Before 2009 WordPress is good for blogging platform but from last 2 years it has changed much and also providing good content management. With the reference of fig 2 we can see that it provides highest documentation support.

If you are running on a small business and doesn't have more complex requirement then we suggest you to use Joomla as it is the most cheaper than others. If you need multi- language, shopping cart kind of facility; use Drupal. As worpress has changed much it comes in between Joomla and Drupal. There are many things to consider while selecting a CMS. Some of them are listed here.

1. Requirement of your website
2. Future need
3. User's technical knowledge

## **6. ACKNOWLEDGMENTS**

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