A Comparison of Capabilities and Features on Drupal, Joomla! And Wordpress

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Disclaimers and Warnings

Drupal, Joomla! and Wordpress are currently the three most popular PHP-based, free, open source web applications for online publishing and CMS-based website development. That does not mean they are necessarily the best applications of their kind or the best choice for a particular project. This document profiles and compares each without reference to other systems.

Feature criteria generally should not be your sole selection criteria, and the information in this document is not intended as a substitute for hands-on trials and personal research, especially considering the rapid pace of Drupal, Joomla! and Wordpress software development. This chart should be used as a basis for further research and planning for specific site building projects, but take not of its creation/revision date.

In particular, extensions can emerge, change, die, and be reborn rapidly. Their number increases all the time, so the full details of their functionality, features, compatibility, ongoing support, current state or quality is an ever-moving target of which no single person can have comprehensive knowledge. Little attempt has been made here to indicate current extension compatibility status relative to the official Wordpress, Joomla! and Drupal releases.

If you are scouting out a potential publishing platform for a website building project, be on guard against extension solution fever. It is almost always possible to find a way to do almost anything you want with Joomla, Wordpress or Drupal with an extension. That doesn't mean you should do this. *See the note on* **Security** *on the next page.*

Notes in the following charts have attempted to indicate where common capabilities differ. Just because Joomla, Drupal and Wordpress can deliver the same feature, that doesn't mean they do it the same way or do it equally well, and these considerations may matter a great deal to different people for different reasons. Do your own investigations.

Most of all, each platform has its own unique character in terms of its interface design, organizational logic, and the conceptual framework it imposes (or leaves open to you to impose) on "content." Different people will respond differently to each software environment. To be a good fit for users, how things get done in a particular software environment is what users need to grasp to appreciate and then master the software. The initial "grasping" and "appreciating" steps are critical—if you don't "get" how the software works (and wants you to work) or you get it and don't like it, then you probably need to use a different piece of software.

To determine a good fit, you need to engage in some hands-on trials, but here are some quick "character profiles" that help understand why each system works as it does.

▸ **Drupal** is a unique publishing system with blog and wiki-like traits, the ability to run many sites and manage many users with variable roles and permissions. Drupal has tended to be built for and by programmers. Functionality, scalability, and customizability at every level has been prized over usability and aesthetics. Its extreme flexibility and scalability requires a steep learning curve and a lot of time to realize as benefits. For that reason, initially Drupal can seem too amorphous and lacking in definition. Due to its use by the Howard Dean campaign and Civicspace, Drupal acquired and has retained a cachet with NGOs and advocacy groups as a medium for "online democracy."

▸ **Joomla**! was initially developed as a commercial, enterprise content management system. Its attractive, intuitive user interface is simple to operate and use to rapidly set up large websites with a professional appearance based on a wide variety of free and inexpensive templates. A large number of powerful extensions make it easy to add powerful new levels of functionality for news, community, ecommerce sites, etc. Joomla's extensions often compensate for core weaknesses, limitations, and quirks. Joomla is uniquely geared toward development of commercial, monetized sites and stands out from Drupal and Wordpress as having a well-established commercial template and extension market. A mix of free and fee-based products appears to offer more and better choices to users. Joomla is the most internationalized and internationally used of the three platforms considered here.

▸ **Wordpress** is a blog engine that is simpler, more accessible, and more flexible in its core content management, templating, and publishing functions than Drupal and Joomla are. Beyond basic CMS functions it is far more limited than Joomla and Drupal. Like Drupal, it takes considerable knowledge, learning, and time to develop a sizable, professional site with Wordpress.

Update 01/2009: *Responses to this document in the [Joomla (1.5) vs. Drupal (6.x) for Newbies](#) thread in the joomla.org forum emphasize the caveat that some of these comparisons are not quite apples to oranges, but things like Drupal's taxonomy module versus sections and categories or tagging extensions in Joomla are way, way different although they are roughly used, most of the time, to do many of the same things. I also noted in the discussion, "A major problem with this kind of comparison is that it may suggest to readers that it is easier to do Function X with a core extension or feature than a third party extension, or (for example) that all voting/rating systems are created equal." That is not necessarily the case, and advice of that kind is beyond the scope of this comparison which was dated the minute it was written, given the pace of ongoing software development. The point and value of this comparison is for people who do not have hundreds and thousands of hours of experience with Wordpress, or Drupal, or Joomla. This is an effort to help them crack the nut of the sheer volume of extensions and ways to skin a cat with each CMS.*

The answer to the big, pernennial question "What is the best way to do X?" is always, "It depends!" But it still helps to know some things like, "Joomla has a voting system built in--but by itself it's rather weak."

Important Note on Security!

Selective, minimized use of 3rd party extensions is recommended since each one represents a potential breaking point subject to exploitation, failure, or abandonment by developers. Extensions with complicated interdependencies with the core CMS and/or other extensions can be challenging to upgrade.

More importantly, extensions are overwhelmingly the #1 source of the high volume of publicly disclosed vulnerabilities in Drupal, Joomla, and Wordpress. Successfully exploited vulnerabilities are most often enabled by site owners who fail to take basic security precautions and upgrade their software in a timely fashion. Combined with the open source community's practice of publicizing rather than suppressing information about vulnerabilities, unabated vulnerabilities rapidly become very simple to exploit. Additionally, popular open source web applications like Wordpress, Drupal, and Joomla are built on relatively easy to learn and accessible, open source systems (PHP, mySQL) that are most commonly used by individuals and relatively small organizations. This leads to the proliferation of attackers and targets that are least likely to be able to retaliate against attackers, further emboldening the attackers.

*Every extension you use should be monitored for upgrades which should be installed to minimize the risk of security breaches. If you fail to do this, you can reasonably assume the only reason you have not been attacked is because you are simply lucky no one has exploited vulnerabilities that likely exist. Or, your server may actually be under the control of malicious individuals without your knowledge. This is frequently how criminals send spam, engage in phishing and other fraud, or raid any sensitive data you have on or coming into your site. **Learn more at http://www.newlocalmedia.org/learn/17-dont-be-the-dumb-cow***

Using this Chart

Yes = this is possible with the official distribution itself.
No = this is not a possible with the official distribution by itself.
<u>Extensible</u> = the official distribution can be extended with 3rd party software to provide the feature.

Multi-User Publishing	Drupal	Joomla!	Wordpress
Content Nomenclature	A Node is any content item. The following are specific types of nodes: Story (article with intro/teaser and main body text fields), Page (static content), and Book (a collection of related pages geared toward collaborative authoring). Books are deprecated	Static Content (Pages) in 1.0 and Articles (Can have an intro text and paginated divisions with an automatically generated table of contents.)	Pages and Posts (Articles). Excerpts and custom fields for posts. Custom fields for pages. Pages can be nested in parent-child relations.
Customizable content types, categories, and organizational logic	**Yes**, extensible. Content types can be endlessly created and customized. The core Taxonomy module allows customization of the ways content types can be classified according to vocabularies (categories) and terms (subcategories). Further possibilities with tagging modules. Content ordering has improved in 6 but remains janky.	**Limited**. A fixed section/category structure requires tagging extensions for greater flexibility. A few new commercial extensions exist for creating custom content types. You can have an unlimited number of sections and categories, but every category must have a section. Every content item that is not static must have a section and category or (in 1.5) be uncategorized. In 1.5 uncategorized content replaces static content. Content cannot be assigned to more than one section or category. Content hierarchies three levels deep or greater are created by parent-child item relations in menus. It's relatively simple to exercise great control over content ordering on the front end and how it appears or is filered in the back end.	**Yes**, extensible. Page ordering is admittedly "janky" in 2.6 with improvements promised.
WYSIWYG rich text editors

[A necessary convenience that will create code that won't validate according to W3C standards if you let it.] | **No**, extensible. No rich text editor packaged in basic installation, but you can install several options, including TinyMCE and FCKeditor. | **Yes**, extensible. Packaged with TinyMCE and a simpler editor. JCE is the most popular editor extension for Joomla similar too but more powerful than tinyMCE. JCE can upload and manage files, resize and crop graphics, create thumbnails, galleries, slideshows, lightbox style effects, etc. JCE's layout and features can be customized and vary depending on user/group permissions. | **Yes**, extensible. Packaged with a basic rich text editor. TinyMCE and FCKeditor can be installed. |
| Text filters and lightweight markup

[Fine-grained typographical control without full, direct HTML coding or the invalid hash | Markdown with SmartyPants module. Markdown, Tipogrify, Textile. | Textile, Markdown and SmartyPants plugins for 1.0. | Texturize and Textile plugins. Text Control plugin Text Control allows choice of Markdown, Textile1, Textile2, nl2br, WPautop, and "No Formatting" long with the choice of SmartyPants, WPTexturize or "No Encoding" for character encodings. |

WYSIWYG editors and the Windows-1252 character set often create.]			
Backend administrative interface	**No**, While it's possible to use an administrative template that will create a heightened appearance of a back end, there is no clear frontend/backend separation, which can be disorienting. While Drupal 6 has some convenience improvements (like AJAX) and maintains a clean, lightweight, non-graphical design, it's not well organized. It's hard to find your way around, even on a basic installation, and even if you learn to love Drupal's UI, it forces you to takes longer to do many tasks than it should, especially on a heavily extended installation. This is a major drawback to the common user and has been identified as such in recent usability studies, so Drupal is aiming to improve in this area.	**Yes**. The administrative interface is extremely attractive, uses space well, and is decently organized according to standard interface design principles. It's easy to find, alter, and move content and modules quickly even in a highly customized installation with many extensions. The UI is lot prettier than Drupal and Wordpress with a lot of icons, dropdown menus, and AJAX, but some of the global content settings are rather buried, and the template manager has an unnecessary extra level of depth.	**Yes**. A clean, lightweight, and well-organized interface with very few graphical elements based on standard interface design principles. In its default form it's not attractive or elegant, and wastes space more than Drupal.
Create and edit pages through front and back end	**Yes**--it's all one interface	**Yes**	**Depends on template.** To edit articles on the front end, you need a template coded to allow this.
Workflow system	**Basic**, <u>extensible</u>, improved in 6. Multiple extensions give you a lot of control over creating a largely automated workflow system to your specifications. Default configuration allows basic roles-based draft and publishing management.	**Basic**, <u>extensible</u>. Multiple workflow extensions. Default configuration allows basic roles-based draft and publishing management.	**Basic**, <u>extensible</u>. Simple workflow system by default with Zensor plugin. Default configuration allows basic roles-based draft and publishing management.
Revision tracking	**Basic**, <u>extensible</u>	**No**, <u>extensible</u> but limited options	**Yes**, new in Wordpress 2.6
Internal messaging for writers, editors, others, etc.	**No**, <u>extensible</u>	**Yes**, for backend users. Extensions for general PMS.	**No**

Layout & Design	Drupal	Joomla	Wordpress
Nomenclature	Themes and Templates. Templates are page-specific layouts within Themes that correspond to template overrides in Joomla 1.5.	Templates. The term refers to what Wordpress and Drupal users refer to as Themes. Template overrides in Joomla 1.5 correspond to templates and theme overrides in Drupal.	Themes and Templates. Same as Drupal, but Wordpress users seem to refer to templates and themes more interchangeably. Technically templates govern specific page layouts and bundled together constitute a theme.
Edit templates from within the administrative interface	**No**	**Yes.** Typically the master index and its associated stylesheets, though it should be possible to include any number of files. Cannot create new template files within the interface.	**Yes.** Master index, category indexes, and page templates. … XXX
Use multiple templates	**Limited**, <u>extensible</u> and <u>complicated</u>. You can install multiple themes, but only one can be active as an administrative theme (activates when an admin user is logged in) and one as a front end theme. Templates within a theme and overrides can be coded for more granular theming. Users can be allowed to pick and change active themes and select a theme that will be used on their pages.	**Yes.** Multiple administrative and front end templates can be installed through the administrative interface with one of each assigned as the default. Additional templates can be installed and assigned to designated pages within the administrative interface's template manager. Users can be allowed to pick and change active templates. With JCE content items templates can be selected within the content editor where they will then appear.	**Limited.** Categories, index pages, and static pages can have their own themes or templates, and these can be edited within the administrative interface. Page templates can be selected within the page editor where they will then appear.
Assign modules/blocks/widgets to any page from within the administrative interface	**Yes**, <u>but</u> managing these assignments on a large site can be extremely difficult. It requires typing the alias or node number of every page on which a block is/is not to appear. Drupal's blocks correspond to Joomla's modules.	**Yes**, <u>but</u> with a few limitations. Modules can be assigned to all pages or menu items very quickly by clicking a list of menu items on every module's page in the back end, but pages that are not directly associated with a menu item can't have modules assigned to them unless they are designated to appear on all pages. There is no option to make a module appear on all pages except designated pages.	**Yes**, but it's klunky and limited to being a collection of accessories for blog sidebars without a lot of adaptation. Widgets dimly correspond to blocks in Drupal and modules in Joomla, but they have a long way to go before they're as useful. Themes and plugins can be "widgetized."
Create and manage menus within the administrative interface	**Yes**	**Yes**	**No**, <u>extensible</u>. Several plugins give control over menus on the front end and/or administrative interface.
Customizable content page layouts and forms	This is done via template overrides, use of the Drupal API, CCK/Content Creation Kit and the Views modules aided by various developer tools and extensions.	This can be done in a limited way via multiple template assignments within the administrative interface. Template overrides in Joomla 1.5 allow more granular control, as do various commercial extensions for forms and content.	Requires direct coding of theme files, overrides, and use of the Wordpress API.
Template engines available	**Yes**. PHPTemplate has been adapted into Drupal, PHPTal, Smarty, Zen. A certain	**Limited.** Plugin for TBS/TinyButStrong in 1.5. Some basic web-based generators.	**No**. Basic template generators, WordPreciouss plugin, typical practice is to

	degree of confusion and lack of standardization prevails.	There seems to be little interest in these tools.	do all or most design coding from scratch.
Complexity and learning curve for original design	**Steepest** – If you're not content to make minimal changes to a stock template, the path to a good, unique template is complex and vexing. It may take a number of extensions, overrides, and understanding of the API to exercise very granular control over page layout and appearance. Drupal requires considerable forethought and work to create a template that doesn't look bloggy/has more than 2-3 basic page layouts.	**Least steep** – the major PHP/HTML/CSS coding can be done from within the administrative interface. The module and template managers let you alter page appearance very quickly in Joomla. This is far less so in Drupal and not at all the case in Wordpress. Like the others, advanced, granular page design requires use of template overrides. This is done via the Model View Controller (MVC), which is new in Joomla 1.5. so it's capabilities have not yet been widely realized.	**Steep** – The major coding can be done from within the administrative interface, but you'll need to get into the API to do anything advanced. The way is well-documented and arguably simpler to learn than with Drupal, but Wordpress lacks a system for automatic script includes whose position and appearance is controlled through the administrative interface. (E.g., Drupal's blocks or Joomla's modules.) Wordpress requires considerable forethought and work to create a template that doesn't look bloggy/has more than 2-3 basic page layouts.
Reception and use by designers and general users	Drupal seems to have had a hard time getting traction with HTML/CSS gurus, but there are a few. Drupal does not fully separate design and content, a major taboo, but it may not be as bad an offender as Joomla in this regard. Advanced design requires some use of Drupal's API and an advanced understanding of its inner workings. This results in most people using cookie-cutter templates on their Drupal sites. Most Drupal templates seem to include very few block positions, probably because of the greater complexity of creating these positions and managing blocks in Drupal's interface. The result is a common 3-column bloggy look.	Joomla does not seem to be popular with HTML/CSS gurus, possibly because it was not built as a blogging platform and does not fully separate design and content. Joomla actually uses tables for layout unless prevented by template overrides in Joomla 1.5. Despite this situation, high quality design is common in the popular commercial template market, but it tends to be heavy—thick with javascript eye candy, possibly at the expense of certain design fundamentals. Cookie-cutter Joomla sites with generic templates have become fairly uncommon, but this does not imply the existence of a user base that understands and values depth of quality in design.	Wordpress is probably the most popular CMS among HTML/CSS gurus—most likely because it covers all the bases of standards compliance, simplicity/low bandwidth, design/content separation, and SEO. The pack leaders in open source web design have produced widely used and imitated themes for Wordpress that typically have a minimalist design concept. Since Wordpress is fundamentally a blog engine without anything to compare to Drupal's blocks and Joomla's modules, most themes have the bloggy 2-3 column look.
Availability and quality of ready-made templates	Many free templates, some commercial providers, relatively few templates of high quality available by either means compared to Joomla and Wordpress. Most templates created before 2006-07 are junk. Most templates reflect a blog design concept.	Huge number of free and commercial templates, many of high quality and bundled with special scripts and extensions high on eye candy. Most templates created before 2006-07 are junk—narrow fixed width and frequently loaded with tables—but Joomla templates have always included a dozen module positions, creating great flexibility and a non-bloggy appearance. The best Joomla templates today are inexpensive but not free. They typically include documentation, support, .PSD source files, a dozen collapsible	Large quantity of mostly free templates, many high quality, focus on lightweight and standards compliant design. Junk templates seem to have been rare from the beginning. Since Wordpress is a blog engine and most of its users are bloggers, most Wordpress templates look like blogs, but this may be changing and there are a lot more options than Drupal has.

		(even draggable, minimizable) module positions, several fixed widths and a fluid/variable width option, multiple color options and light/dark sub-themes plus additional scripts--all of which can be controlled in the template manager within the administrative interface. As a result, Joomla produces sites out of the box whose appearance befits a robust enterprise CMS, not a blog. A lot can be done with a little knowledge, which might be regarded as dangerous in some respects.	

Search Engine Optimization	Drupal	Joomla	Wordpress
Tagging	**No**, extensible.	**No**, extensible.	**Yes**, extensible.
Control meta tag descriptions and keywords for articles and pages from within the administrative interface	**No**, extensible via MetaTags module and template customization.	**Yes**. Various extensions automate the process (not recommended) or help manage meta-data. There are some quirks and annoyances with how title and meta-data are put into pages, but there are common workarounds and extensions to improve these functions.	**No**, extensible. Wordpress leaves metadata handling to template designers and there are several plugins that offer ways to create and manage article metadata fields.
Site map	Extension	Extensions	Extension
RSS Syndication	**Yes**, extensible. Core feed creator creates RSS 2.0 feeds for any index page. (Front page, term or vocabulary page, etc.)	**Yes**, extensible. Syndicates front page articles. Joomla 1.5 creates a feed for section and category index pages also. Several extensions allow custom feed creation. Atom 0.3, RSS 0.91, 1.0, 2.0, OPML in Joomla 1.0. RSS 2.0 and Atom 1.0 in Joomla 1.5.	**Yes**. Must be coded into templates. RDF/RSS 1.0, RSS 0.92, RSS 2.0, and Atom article feeds. RSS 2.0 feed for comments.
Clean URLs Aliases, slugs, search engine friendly URLs or human-readable URLs.	**Yes**. Drupal does this very well.	**Yes**, extensible. Only Joomla 1.5 has done this fairly well without extensions, but the results are not as pretty without using Apache for URL rewriting and probably not as efficiently rendered as they are in Drupal or Wordpress.	**Yes**. Wordpress handles this quite well.
Mobile Device Support	**No**. Abandoned development module for mobile theme selection for Drupal 5.	**No**, extensible. Extension to autodetect mobile devices and present a suitable template.	**No**, extensible. Extension to autodetect mobile devices and present a simplified interface and presentation of your site.
Comment System [Having a core comment system has opened Drupal and especially Wordpress (along with other popular blogging platforms) to the labor-intensive annoyance of managing spammers and increased security risks. Now that advanced comment systems can be set up through 3rd party providers it's questionable whether a native comment system, particularly one that's not easy to disable, is a good core feature.]	**Yes**, extensible. Can be turned off or uninstalled.	**No**, extensible. Numerous extensions for comments.	**Yes**, extensible. There is no simple way to fully eliminate or shut down the comment system.

Internationalization and Localization	Drupal	Joomla!	Wordpress
UTF-8 Support	**Yes**. Can define mySQL character set and collation as UTF-8.	**Yes**. Can define mySQL character set and collation as UTF-8.	**Yes**. Allows you to define both the database character set and the collation in wp-config during installation. UTF-8 is the default.
RTL character support	**Yes**	**Yes**	**Yes**
Language packs/Translations for the user interface.	**Yes** (50)	**Yes** (93)	**Yes** (58)
Multilingual support (simultaneously use of multiple languages)	?	Extensions	Extensions
Autodetect visitor language and render interface text accordingly with the appropriate language pack/translation and/or allow user to select language	Extensions	Extensions	?
Autotranslate text content on the fly to match a visitor's detected or selected language. [Can be done with script from Google]	Extension based on Google Translate for Drupal 5 only.	Extensions	Extensions
Language-dependent design	?	Extension	?
URL and path alias translation	Extension	Extensions	?

Extensions	Drupal	Joomla	Wordpress
Nomenclature	All extensions are referred to as modules.	Extensions are classified as components (major software applications with screen output to main content area), modules (small scripts with screen output to template module positions), and plugins or mambots (scripts that affect or run within page/article content.) Some extension packages include a component with several modules and plugins.	All extensions are referred to as plugins.
Quantity	4,500 modules	3,500 extensions	2,700 plugins
Installation and management of extensions	FTP install only. Extensions are listed and managed in the module section of the administrative interface.	Extensions and templates are installed through the back end by http or ftp, or they can be installed from a web directory or directly uploaded. Most extensions have their own settings page in the back end or extend the backend UI. Some developers build an auto-update function into their extensions.	FTP install only, but the unofficial one-click plugin updater will notify you of obsolete plugins and allow you to initiate automated updates. Extensions are listed and managed in the plugin section of the administrative interface.
Official extension directory	D+ (Not well organized.)	B + (Well-organized, informative, updated, and open to user ratings and reviews.)	B (Adequately organized, informative, updated, allows user ratings.)
Backward compatibility	Can't or shouldn't generally run modules for Drupal 5 on Drupal 6.	Can run most Joomla 1.0 extensions on Joomla 1.5 in legacy mode.	See compatibility notes on individual plugins.

Support/Services	Drupal	Joomla	Wordpress
Hosted service	Coming soon	No	Yes
Official installation and support services	Coming soon	No	?
Auto-upgrades for core	?	May be developed	Unofficial plugin performs auto updates

Media Sites	Drupal	Joomla	Wordpress
Paid subscriber access and billing management	?	Extensions (AEC, JoomSuite)	?
Restrict access to certain content but tease snippets and make full-text accessible to search engines	?	Extensions	?
Auto-email selected content updates to self-subscribed users	**No**, extensible	**No**, extensible (Vemod)	**No**, extensible
Newsletters	?	**No**, extensible (Several integrated mailer extensions or phpmail bridge)	?
Post articles by email	Limited support	**No**, extensible (CBM for 1.0)	**No**, extensible
Publish to/from print layout/design applications	**No**, extensible	?	?
Printer-friendly and PDF versions of article pages	**No**, extensible	**Yes**	
Use "issues" as an organizational schema (Volume-Issue-Number)	**Yes**, can do with taxonomy	**Yes**, extensible. Can do as section-category organization or use magazine extensions from iJoomla and jXtended.	**Yes**, with tags or categories
Archival system	**No**	**Yes**, but it's virtually meaningless	**No**
Internal search engine	**Yes**	**Yes**	?
Display year/month/week indexes	**No**, extensible	**Yes,** but limited, extensible	**Yes**
Timed publishing/unpublishing	**No**, extensible	**Yes**	
Peer support	groups.drupal.org/newspapers-on-drupal	**No**	?

Community Sites	Drupal	Joomla!	Wordpress
Customizable user roles, groups, permissions	**Yes**	**No**, fixed user roles. Extensions allow more flexibility, but this can add great complexity to the site.	**No**, fixed user roles.
Users select themes they and others see for their areas and content they create.	Extension (Blog Theme)	Limited profile page customization with extensions	?
Forum Extensions	**Yes**. One limited forum module with various contributed enhancements.	**Yes**, several options; one major integrated forum extension, Fireboard.	**Yes**, two plugins.
Bridges for standalone forum software	**Yes**: SMF	**Yes**: SMF, vBulletin, phpBB, Vanilla (1.0). jFusion universal user integration has the potential to bridge any other standalone software with user accounts.	**Yes**: IPB, SMF, Vanilla, bbPress, phpBB?, PunBB?
Peer support	Drupal.org?	Centers on Community Builder extension but nothing really focusing on development and management of online communities on a more than technical level.	?

eCommerce Sites			
eCommerce extension	In development	**Yes**; one major storefront extension, VirtueMart	**Yes**; shopping cart plugin
Integration with standalone eCommerce software	Magento, in development?	Magento, in development	Magento
Organized peer support	N/A	Centers on VirtueMart extension	**No**