

**Open Journal Systems. The Public Knowledge Project. 2010. <http://pkp.sfu.ca/>. Open Source Freeware.**

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In the interest of better accessibility, being “green,” and saving “green,” scholarly publication, and perhaps all publication, has been becoming increasingly digital. What gets lost in the evolution towards electronic publication is that there is more than one way to publish online. As an alternative to the proprietary, fee-based model of publishing, the open access journal model is gaining a foothold in academia. And the Open Journal Systems is one installable web application that provides a web interface for organizing and publishing scholarly journals, especially OAJs.

Open Journal Systems is software developed by The Public Knowledge Project, or PKP, which exists for the benefit of scholarly publication, as its website explains, and is the result of cooperation between Simon Fraser University, Stanford, and the University of British Columbia. The effort is also sponsored by such prestigious entities as the Canadian government, the Carnegie Corporation of New York, and the Fulbright Scholar Program (among others). OJS is not the only software that PKP is responsible for, as it also makes Open Conference Systems, which is similar to OJS but is meant for creating and organizing conferences, from handling registration to publishing conference papers.

The primary components of OJS are PHP and MySQL. Simplified, PHP is a language that allows web pages to execute commands, and MySQL is database software, analogous to how an online public access (online catalog) program reads MARC records containing data about objects in a library and makes them searchable and viewable. Since the MySQL based

database is where the information that makes up the electronic journal and conference program sites are stored, the database file can easily be backed up or moved.

OJS itself is an open-source project and has borrowed from many other open-source projects, which is appropriate, as expanding collective knowledge and collaborating for the benefit of all is the ideal usage of open-source. Also, expanding collective knowledge and collaborating for the benefit of all is what scholarly publication itself is ideally meant to do. Some may be surprised to discover that OJS has some kinship relations to Drupal, another web publishing application. Drupal too runs on PHP and MySQL and also places its site management options in the interface of the site itself (it too could probably be used to create an online journal).

For comparison's sake, I would like to note that there are many other ways in which one could create an Internet-based scholarly journal.

One could build an online scholarly journal as a more traditional Web 1.0 static site that relies on someone's editing and creating individual files and creating links to them. *The Electronic Journal of Human Sexuality* (ISSN: 1545-5556) for example, is published in this manner. Site administrators will find that this seems easy, but may actually be hard to do: site management is easy in that there is nothing to install, and the process would ensure the journal's administrator and editor very strict control over what appears on the site--because they write the source of the HTML pages. The process is hard, however, if the skill sets of the available administrators do not include HTML or CSS (Cascading Style Sheets), and can be tedious even if they do, because such files do not interact with other pages. For instance, if a website changes its URL, and this URL appears on 35 pages, someone must change it on each of those individual pages, and upload the new pages to the server. Such problems can be alleviated by using web

authoring software that can search for and change markup in multiple files. Using Adobe PDF (Portable Document Format) for articles themselves eliminates HTML formatting issues, and it is also familiar to users, having been well-established through JSTOR, EBSCO, and others. Creating a heading for an issue and making hyperlinks below it to the PDFs articles it contains would be both simple and effective.

Simplicity has its merits and drawbacks, however. What a Web 1.0 web site generally cannot allow for is the dynamic sharing of information between a site and its users or other websites. Multiple people cannot collaborate on publishing the journal within the site itself, which would be an ideal feature, as the process of publishing a journal often requires more than one person. Users cannot use RSS (for live updates of content), and a static web site would also not have its own search option unless provided by a separate search engine. A web application, however, would make these things possible.

Drupal is an example of such a site-building application. It allows for the creation of user accounts, customizable interfaces, and more. What is problematic about Drupal is not that it can do too little, but that it can do so much. With minimal effort it can create a blog website, but with more effort it can be used to power a large website, such as the official web site of The White House. Drupal is a framework which can be used to build various kinds of websites, much like how a shipment of lumber can be made into a square-shaped building with a roof that could become a home or a barber shop or a dentist's office. In short, the problem with such comprehensive functionality is that adjustments must be made if a dentist actually wants to be able to work.

What differentiates Open Journal Systems is that it is made specifically for publishing journals, as its name implies. Once installed, OJS is ready to start the process of publishing a

journal. There are technical system requirements for installing and running OJS, such as having FTP access to the site is not enough. OJS (like Drupal) requires proper access rights to the server, specifically those that allow programs on the site to read and write on their own. If one cannot do this, then one will need to find another host or use a regular Web 1.0 site, as previously mentioned. Fortunately, the download page on the OJS website makes it clear what is needed:

- [PHP](#) 4.2.x or later (including PHP 5.x) with MySQL or PostgreSQL support
- A database server: [MySQL](#) 3.23 or later OR [PostgreSQL](#) 7.1 or later
- UNIX-like OS recommended (such as [Linux](#), [FreeBSD](#), [Solaris](#), [Mac OS X](#), etc.). OJS 2.0.2 and above supports Windows servers (including IIS).

The requirements page then states, “If you do not understand these system requirements, consult your department's technical administrator.” This statement is important for anyone considering OJS. An institution may look at the low cost of open-source software alone and conclude that it will be a good choice for running a digital project. This is not unwise, but it could be ill-advised if one is not prepared to make investments in the physical technology and personnel that would be needed to maintain it. PKP does provide clear and helpful directions for the installation process, but they are not for beginners.

It is helpful that there is some free support for OJS, but it is not the kind that the average person is used to, based on previous experiences with proprietary software. PKP has a forum on its site where users may ask and answer questions about the software. Open-source software is often constantly being developed, and the product improves through the combined efforts of its users. This also means that if there is a problem with one's installation, it is not guaranteed that the problem can be resolved or that a given users advice *should* be followed, as different servers

behave differently. In addition, “bugs” have appeared in the software and will continue to. When they do appear, administrators of OJS installations must apply bug fixes themselves and upgrade the software frequently. Plug ins can also be applied to expand the capabilities of an OJS installation.

As conventional wisdom teaches, one gets what one pays for. PKP’s partner, Simon Fraser University Library, does offer some hosting and support packages. Currently the cost for a year of hosting is about \$750.00. This could be an attractive option to organizations that do not have the ability to administer a journal site on their own. However, investing person-hours in learning how to administer an OJS installation or even building a Web 1.0 site instead could prove more valuable as the years increase.

Once installed OJS is installed, it is ready to be used, although it is not too easy to publish right away, and due care and attention is required each step in the site-building and publishing processes. This lack of ease is tedious--but appropriate for a scholarly journal. Users can create accounts, but they cannot alter the journal. They get further permissions only after they are assigned roles in the journal, and these roles can be managed and revoked. For end-users, OJS behaves like most sites with which they may be familiar, as the links in the navigation bar lead to places they need to go, such as *Archives*, and viewing articles is as simple as clicking on hyperlinks. Documents can be made available to readers in a variety of formats.

The options needed to run the journal are in the interface of the website, and the persons who do not administer the OJS installation but work in the publishing aspect do not need to be Information Technology experts, although they do need to be rather information literate. Most links in the control panels do what they say they will. Options are organized under headings. For example, links for running the journal are found under *Management Pages*, and links for user

accounts are found under *Users*. Even viewing the journal can be restricted to certain people, and if a publisher wishes to do so, subscription fees can be charged.

There is a main *Site Administration* panel for OJS, which can be used to manage the site as well as create and manage multiple journals, and each individual journal can have its own settings. It is possible to use OJS more than once, with respective editors and members kept separate, and none of them would necessarily need to use the *Site Administration* panel. This means that the value of an OJS installation can be increased several times.

When a document is submitted by a user for consideration using the OJS interface (if this ability has been enabled), it can be viewed by all persons given permissions to view submissions, such as editors. It may be apparent that this is a good example of a Web 2.0 kind of system, allowing collaboration between different people on one document through the web. Because it is a 2.0 entity, the form, or appearance, of an OJS site is separate from its content, and customizing its appearance is very safe, though not easy. Assessing the customizability of the interface, or the general look of the journal, is dependent on what one wishes to accomplish and what one is capable of. The default appearance works well enough, but it is the same default for all OJS sites. Design templates can be downloaded from the PKP website and installed, but most of these are identical, with the exception of swapped colors and typefaces. If an administrator wants to do something original, such as change the cover and layout, knowledge of CSS will be. The process will still be tedious, although not unexpectedly so. As is true of every part of the OJS experience, an organization choosing to use OJS should have realistic expectations of the design, relative to what time and effort can be invested in it.

If one does wish to publish a journal electronically, The Public Knowledge Project's Open Journal Systems is an excellent modern alternative to a simple web page, and is also

favorable to other popular site-building applications in that it is made specifically for the purpose of scholarly publishing. The viability of an OJS-based publication, however, depends on what the potential publisher is willing to offer in terms of equipment, personnel, time, or alternatively, capital.

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