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## OJS as a Tool for Information Technology Integration and Cultural Change: A Case Study in Colombia

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Scholarly and Research  
Communication

VOLUME 1 / ISSUE 1 / 2010

### Abstract

This paper describes the implementation of an editorial process for a leading Colombian psychology journal, *Universitas Psychologica*, based on Open Journal Systems and its integration with a custom-made front end. It also describes the attempt to make a cultural change in the journal's submission, reviewing, and editing processes within the open-access tradition.

### Keywords

Information and communication technologies; Scientific communication

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CCSP Press

*Scholarly and Research Communication*

Volume 1, Issue 1, Article ID 010202, 5 pages

Journal URL: [www.src-online.ca](http://www.src-online.ca)

Received November 30, 2009, Accepted January 13, 2010, Published March 31, 2010

López, Wilson López & Silva, Luis Manuel. (2010). OJS as a Tool for Information Technology Integration and Cultural Change: A Case Study in Colombia. *Scholarly and Research Communication*, 1(1): 010202, 5 pp.

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Despite the large number and population of Iberoamerica (Latin America, Spain, and the Caribbean), its scientific knowledge has international visibility problems due to several factors. These include, among others, languages issues (since the largest knowledge-producing communities use English, which has not changed even with the increasing participation of very productive emergent communities such as those of India and China), access to international databases (whose high subscription fees are prohibitive for most Iberoamerican institutions), and the local nature of the contributions. These factors end up creating deep gaps in the visibility of the knowledge produced in the region (Gómez, Sancho, Moreno, & Fernández, 1999; López López, 2009).

Several groups have undertaken efforts to make Iberoamerican science more visible in the international context, such as the Latindex, CLASE, LILACS, and PERIÓDICA databases and, more recently, SciELO and Redalyc. Their work has helped build a stronger presence for Iberoamerican science by providing coverage and search engines. In spite of that, Iberoamerican journals continue to be born amid the great efforts that must be undertaken in order to launch them and still stand relatively poor chances of getting coverage by international indexes (Santillán-Aldana, 2008).

### ***Universitas Psychologica: A commitment to the solution***

In the context described above, striving for high-quality, open-access contents, *Universitas Psychologica* was born, with the goal of publishing original papers in all fields of psychology and enhancing visibility by using several communication channels in order to favour social appropriation of knowledge. After only 8 years, *Universitas Psychologica* has become one of the most important psychology journals in Latin America, and it is currently covered by indexes and databases such as ISI's Social Science Citation Index and Journal Citation Reports, Scopus, Index Copernicus, the American Psychological Association's PsycINFO database, SciELO, and Redalyc. The recognition that the journal has gained has translated into a significant increase in submissions, which rapidly rendered inadequate the formerly used editorial management process, which was based on a simple Microsoft Excel spreadsheet.

After exploring some alternatives, the journal's editorial staff (consisting mainly of two full-time professors with editorial responsibilities, plus the university publishing house) found Open Journal Systems (OJS). OJS is open source software licensed under the GNU General Public License. It is intended to provide editors, both beginners and experts, with an easy way to manage and publish their journals from a local Web server. It was created by the Public Knowledge Project, an initiative designed to explore alternative models for scholarly publishing with an emphasis on open access (Willinsky & Mendis, 2007).

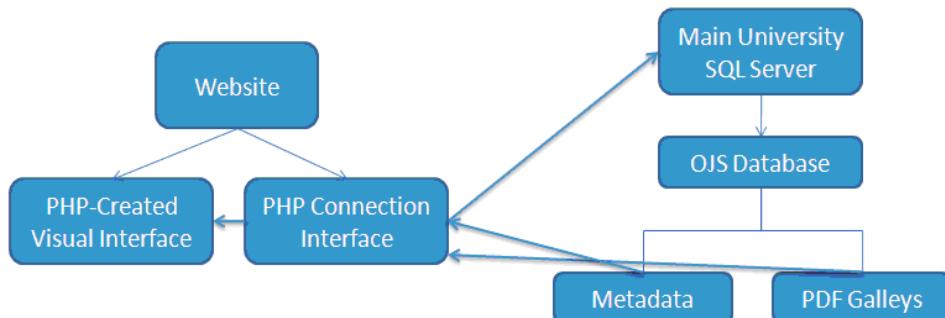
At first, the Information Technologies Directorate (ITD) at our university provided a test installation of OJS on an old server. The results were excellent and provided much-needed relief in the job of maintaining an article database. The entire submission, editing, and reviewing process was therefore moved to the new installation, which was upgraded to a full OJS 2.2 main site and given its own server with 99% up-time.

In spite of the comfort given by OJS in the editorial process, authors continued to submit papers by e-mail and in physical formats, sometimes even sending diskettes, and visits to the website remained relatively low. The editorial staff decided that a

cultural change should be attempted by integrating several Internet services and using the website as an interactive portal to enable authors, reviewers, and readers to see different types of content. Despite OJS' flexibility, the desired customization was beyond what its Cascading Style Sheets (CSS) front end had to offer, since a whole new approach was intended, which required a highly modifiable interface.

Therefore, working with a website development firm, we decided to create a custom-made front end to OJS in PHP and PostgreSQL. This front end integrates OJS, a YouTube channel, a blog, links to Facebook and Twitter, a search engine, and RSS in the same page. The simplicity and accessibility of the OJS database structure made it possible for the website to access OJS databases and display metadata and papers' text in the same style provided by the front-end style sheets (see Figure 1). The custom front end also has links to the main OJS website, which provides users with a way of logging in to the system in order to complete registration, submit papers, and see reviewing and editing status. The interface was written from scratch based on the layout that the editorial team envisioned, but other journals may choose to use a popular content management system (CMS). The custom-made interface's code is minimal and fast compared with a CMS-based solution, since it is specifically tailored to the needs of the journal, but using a CMS would offer flexibility, extensions, and community-based support.

**Figure 1: Connection layout between the website elements and the OJS databases**

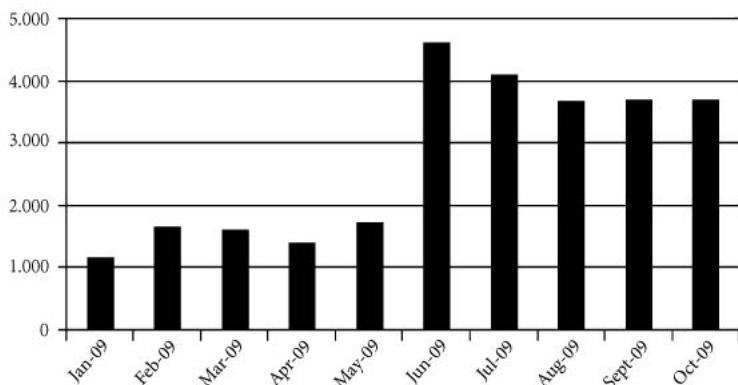


The main interface can be seen at <http://www.javeriana.edu.co/universitaspyschologica>. It includes a top banner with the name of the journal and its ISSN and E-ISSN codes, an RSS link, and the university's logo. There is a menu bar linking to an "About" section, a list of the editorial team members, subscription information, and past issues. A large space is devoted to a banner that can be changed periodically – it can be either a static image or an Adobe Flash animation. Easy access to the current issue's table of contents is offered through a linked image of its cover, and a search box is also provided. The top 10 most downloaded papers are shown in a large portion of the page. Links to the OJS page, submission guidelines, and any other information deemed important can be displayed on the right side of the page. Blogs are integrated through a small area on the left side, and a video feed from the journal's YouTube channel can also be accessed.

The new website was introduced at the end of May of 2009. The launch of the website was promoted with messages sent through the journal's Facebook account and to an e-mail list of previous authors and collaborators in June 2009. Figure 2 shows the large increase in total visitors per month after the website debut and the invitations.

**Figure 2: Visits per month, January-October 2009**

Source: Motigo webstats



Other statistics show that more than 50% of the site's visitors come from outside Colombia (especially from Mexico, Spain, the United States, Argentina, and Chile, but also from the rest of Latin America and from countries as distant as Turkey). Systems such as Psicoredalyc (<http://redalyc.uaemex.mx/portales/areas/indices/psicologia/IndexPsicologia.jsp>) report a trend toward more visits from outside Colombia in the journal's download statistics.

With so many tasks associated with the website and with the editorial process, including periodic changing of banners and videos, updating blog lists, and checking papers and galleys, some undergraduate psychology students have approached the editorial staff with the desire to contribute to the success of the journal. As of now, eight psychology-student volunteers provide help with these tasks. One of the important projects of the journal regarding social appropriation of knowledge is in their hands, since it involves the writing of "friendly" notes for the blog, in simple language, about several papers that have appeared in the journal. The students also record and upload interviews with authors, which can be accessed through the journal's YouTube channel (<http://www.youtube.com/UniversitasPsych>). Collaboration with the journal is expected to give the students extra credit, which may help them choose their desired practicum starting in their third year of studies, and their names are featured in each issue and on the website.

The website has also spawned some interest across the university as a whole, and the editorial staff has been invited by other departments to share their experience with this project. Even though the website source code probably will not be made available to other sectors of the university, since it was custom-tailored for the journal, the process itself has been presented in great detail to other editors and assistants, and the *Universitas Psychologica* editorial staff continues to advise other journals at the university on how to carry out similar processes.

The OJS and custom front end combination has succeeded in making life easier for the editorial team and in taking advantage of new ways of communicating with authors, reviewers, and readers. The staff is still enhancing the website and trying to change

practices to include copyeditors and proofreaders, as well as to get authors to use the site permanently (we are still getting some e-mail submissions and requests for paper status). We hope that our experience will guide other journals willing to take advantage of information and communication technologies to make an impact and help spread knowledge.

**Scholarly and Research**

**Communication**

VOLUME 1 / ISSUE 1 / 2010

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