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Open Journal System: enabling student-led journals

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Abstract

Open Journal Systems (OJS) is an open access, online manuscript management system developed by the Public Knowledge Project (<https://pkp.sfu.ca/ojs/>) that underpins the University of Leicester's academic journal system. Initially released in 2001 OJS provides a complete and robust software solution that integrates and tracks all aspects of manuscript processing from the initial author paper submission, via dissemination of articles to peer reviewers, through to final online publication and indexing (Willinsky, 2005). This review will consider how OJS can be used to enhance teaching and learning through creating an authentic peer review process for students and will also offer some personal insights into the practicalities of using OJS from an Editor's perspective.

Keywords: Authentic learning, academic publishing, academic writing, open access, technical review

Review of Open Journal Systems function

OJS is by no means the only manuscript management system currently available but it has a number of strengths such as available support, management of editorial workflow, customisable features, and the indexing and archiving functions that are essential for journals.

Software support and online community

OJS has been regularly updated by PKP since its initial release and it has a good long-term sustainability outlook (<https://pkp.sfu.ca/ojs/>). There is also an active, multi-university community with a well-

resourced support forum. This is beneficial to not only the central management and longevity of the journals but is particularly useful in allowing individual journal users ready access to a broad and stable knowledge base (<https://pkp.sfu.ca/ojs/docs/userguide/2.3.1/>).

Management of editorial workflow

Users have to register with each journal so that they can be assigned one or more roles such as author, peer-reviewer, journal manager, section editor and editor, although readers do not need to be registered. This enables OJS to offer a sophisticated system that allows the full editorial workflow to be managed either by a single individual or by a verified team whilst maintaining a simplified user interface for authors and reviewers. The editorial workflow is separated into clearly defined sections, each of which has in-built tasks that facilitate email communication between editors, authors and reviewers at each step. The software also has in-built monitoring functions that allow editors to quickly identify if reviews are overdue or new iterations of papers have been uploaded by authors without having to individually monitor each submission.

Customisable

The public elements of the journals are highly customisable in terms of visual appearance and content. This enables information on editorial policies, author guideline information, and article templates and other information to be shared from a single journal website. Journal managers can make simple modification within OJS, or can completely change the look and feel of the Journal by modifying the CSS stylesheet (<https://www.w3schools.com/css/default.asp>).

Indexing and archiving

The contents of OJS journals are indexed by services such as Google Scholar without requiring any special interventions. It is also possible to install plugins that facilitate indexing via Web of Science and Scopus if individual journals meet the required criteria for these services. Furthermore, articles are preserved for the long-term using the LOCKSS system (<https://www.lockss.org/>) to create a distributed archiving system among participating libraries.

Practicalities of using OJS from an editor's perspective

OJS allows me to single-handedly run the journal 'New Directions in the Teaching of Physical Sciences' - processing tens of papers from their submission through to typesetting and final publication. The roles of 'editor' and 'journal manager' are straightforward and functional even during busy periods. All reviewers comments/reports, decisions and communications are archived on the system making it easy to respond to queries on papers or review the history of papers that appear to have stalled. The managerial aspects such as assigning and communicating with reviewers requires very little time overhead; the majority of time is spent in the typesetting stage. The open source journal software and the server it uses are managed by our Institution meaning there is no cost aside from staff and student time. It is therefore a very feasible option if you only have a very small team and limited budget.

Student-led Journals allow students to explore the processes of academic writing and peer review

In addition to using OJS to for traditional academic publishing (For example, the Journal of Learning and Teaching in Higher Education and New Directions in the Teaching of Physical Sciences), it can also

be used to implement student-led journals. At the University of Leicester we have several – including the postgraduate journal *For(e)dialogue* (<https://www108.lamp.le.ac.uk/ojs1/index.php/4edialog>); the *Journal of Interdisciplinary Science Topics* (<https://journals.le.ac.uk/ojs1/index.php/jist/index>) and *Physics Special Topics* (<https://journals.le.ac.uk/ojs1/index.php/pst/index>) that both form part of undergraduate and postgraduate teaching (University of Leicester Open Journals, 2017).

The *Journal of Interdisciplinary Science Topics* is the basis of an authentic learning activity within a credit bearing module. Students experience all aspects of the academic publishing process from paper writing and submission on novel/synoptic topics of their choosing, through peer reviewing and decision making on an editorial board. Experiencing academic publishing from the roles of author, peer-reviewer and editorial board member, students can develop a more nuanced understanding of the process. Of the 40 or so papers submitted each year around 70% are accepted, illustrating that that students are indeed reviewing, revising, resubmitting, and if necessary rejecting papers that are not of sufficient quality (Table 1). As authors, this develops students' writing skills in communicating complex information to a specific audience (Raine 2002; Hurkett, Raine & Roy 2014; Hurkett, Roy & Wynn 2016). An additional benefit of using an online journal is that it allows students to collaborate internationally – around a third of authors come from our partner Universities, McMaster University in Canada and Paris Descartes University. This provides our own students with the experience of maintaining professional communication and reviewing standards when interacting with an international cohort of their peers (Hurkett et al., 2018).

The open access and student-led nature of these publications often attract media attention (Hurkett, Raine & Roy 2014; Hurkett, Roy & Wynn 2016), which allows us to provide value-added media training and experience for those students that wish to engage in this. Volume 2 (2012-13), whilst not receiving notable media interest, generated 4,080 abstract views and 5,312 paper views from 17 published papers, which is a significant readership for a modest undergraduate journal. In contrast volume 3 (2013-14) generated 18,742 abstract views and 16,620 paper views from 24 papers. Llewellyn & McDonagh (2014) and Llewellyn (2014) in particular 'went viral' resulting in several articles (notably

Table 1: Author and paper submission/acceptance statistics for the Journal of Interdisciplinary Science Topics. Please note statistics are not provided for volume 1 as this was a 'seed' volume providing style and content guides for undergraduate students.

Academic year (volume of publication)	UK authors	International authors	Papers submitted	Papers accepted	Success rate (%)
2012-13 (vol 2)	12	0	20	17	85
2013-14 (vol 3)	12	10	36	24	67
2014-15 (vol 4)	15	7	48	36	75
2015-16 (vol 5)	13	6	46	29	63
2016-17 (vol 6)	9	7	25	18	72
2017-18 (vol 7)	25	10	60	47	78

from France, Italy, America, China and Russia), radio interviews (BBC Wales, BBC Warwickshire, ABC Melbourne) and were even featured on the BBC's Have I got News for You (2014) 'odd one out' round (Wheeler, 2014). The students who authored this paper were understandably pleased with this outcome and this achievement has acted as a spur to all subsequent cohorts who aim to replicate this success.

Overall the activity is viewed very positively by the student cohort (Hurkett, Raine & Roy 2014; Hurkett, Roy & Wynn 2016). In the module evaluation questionnaire, students reported that they enjoyed reviewing papers and that making revisions to improve their own manuscripts was an 'eye-opening' process. Other students described working on an original project as being 'fun', enjoyed being able to publish work, and appreciated knowing that other people might enjoy their articles.

This is a very engaging way to teach students. The administrative and marking time involved is a few hours per week whilst the module is running dependent on cohort size, and is comparable to other modules.

Conclusion

OJS, in my personal experience, enables and facilitates the smooth running of a journal by a single editor or editorial board, whilst not over complicating the interface for authors and reviewers. The processing and tracking options available mean that journals can be run with minimal operating costs and provide open-access to the indexed and archived academic papers. Importantly, OJS empowers an authentic and stimulating learning experience for students around academic writing, peer review and publication.

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