PKP Public Knowledge Project

PKP Enables Diamond Open Access

The OA Diamond Journals Study

John Willinsky & Juan Pablo Alperin

May 2021

PKP Enables Diamond Open Access: The OA Diamond Journals Study

Introduction

The Public Knowledge Project (PKP), has been, by design and since its inception over two decades ago, developing software that enables scholars from around the world to professionally peer-review and publish their colleagues' work without charging them or the public to read this work. By creating open source (free) software that distributes the power to participate in scholarly publishing by organizing and supporting academic journal editing – including the management of peer review and and production processes – thousands of scholars, many operating in low-resource environments, have been able to produce professional-quality academic journals that are free to both authors and readers. As such, PKP has long been aware of its essential role in supporting OA diamond journals (Open Access journals without an Article Processing Charges), but *The OA Diamond Journals Study*[1] published on March 9, 2021, with 971 OJS users among those surveyed, offers us a rare level of insight into our community, and a clearer sense of the extent to which PKP has made OA diamond possible for thousands of journals around the world.

The OA Diamond Journal Study, sponsored by Science Europe and cOAlition S, was able to survey 1,619 journals in 2020, finding that 60% (971) of these journals use OJS. OA diamond journals are said to represent "a wide archipelago of relatively small journals serving diverse communities" (p. 7) that are collectively estimated to make up "at least 17,000, but likely up to 29,000, OA diamond journals" (p. 47) from four regions of world (45% in Europe, 25% in Latin America, 16% in Asia, 5% in the US/Canada) and from across the disciplines (60% HSS, 22% science, 17% medicine). If the respondents of the survey are seen to be representative of the estimated minimum 17,000 diamond journals, then the 60 percent use level for OJS roughly corresponds to PKP's own count of more than 10,000 active OJS journals. The study points, as well, to the type and location of the publishers: "Most OA diamond journals are the sole journal of their publisher or are with a publisher having just a few journals. Most of these publishers are university-based" (p. 48). These are the characteristics of PKP's principal community of users and further highlight the close relationship between OA diamond journals and journals using OJS[2].

1 Jeroen Bosman, Jan Erik Frantsvåg, Bianca Kramer, Pierre-Carl Langlais, Vanessa Proudman, The OA Diamond Journals Study: Exploring Collaborative Community-driven Publishing Models for Open Access (March 2021) Sponsored by cOAlition S and Science Europe.

2 Brian D. Edgar and John Willinsky, "A survey of scholarly journals using Open Journal Systems," *Scholarly and Research Communication 1*, no. 2 (2010).

While those who know PKP and the OJS community may have been aware of this connection, the close to one thousand survey responses from OJS users along with the report's unbiased analysis of the context in which they operate has made three things abundantly clear:

- With 60% of the journals using OJS, PKP has been instrumental in making OA diamond journals a reality.[3]
- No other platform or tool, with the exception of email in some contexts, is as widely used as OJS by OA diamond journals for their operations, especially as they grow in size.[4]
- No other system has contributed as much to supporting the linguistic or geographic diversity of scholarly publishing as OJS.[5]
- As OA diamond journals are APC-free, they can be trusted not to include the so-called predatory journals.

That is, given this role as a key enabler of OA diamond journals, and given other study findings about the characteristics of this group of journals, the report makes it clear, in our reading, how PKP, with its multilingual OJS, is contributing to the healthy intellectual enterprise of OA diamond journals and, as direct consequence, to greater global participation in research.

In analyzing some of the characteristics of OA diamond journals, the report indirectly highlights some of the strengths of PKP and OJS that have led to its popularity among this community, as well as some of the areas where there are opportunities for PKP to improve its offerings, or to otherwise better communicate their value to the community. The remainder of this response will therefore focus on summarizing and responding to various indicators of PKP's success found in the study, and subsequently to engaging with the misconceptions and missed opportunities that we will seek to address as a result of what we've learned.

3 "OJS… has become increasingly widespread during the past decade. A study done five or six years ago would have yielded a completely different landscape" (p. 78).

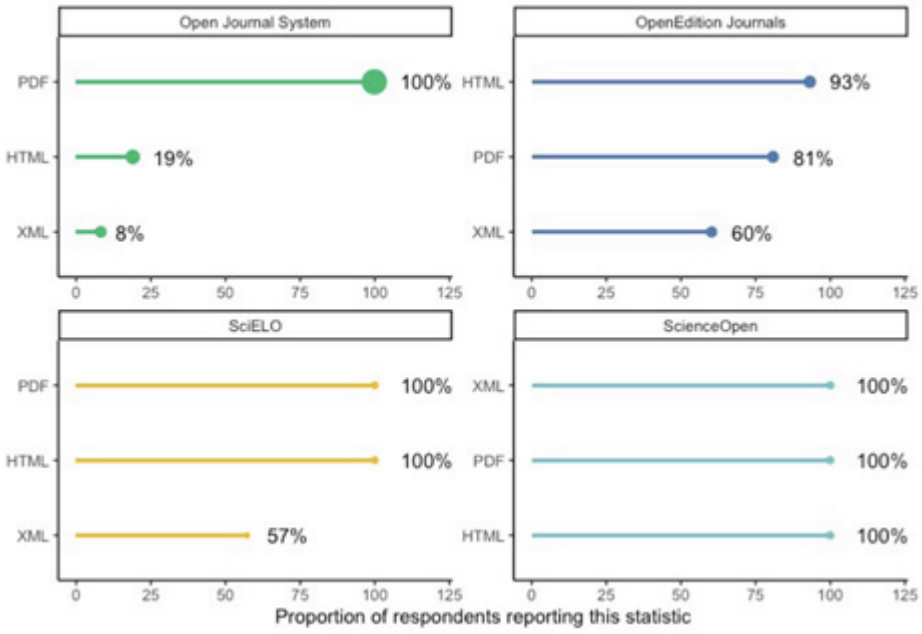
4 "The two main alternatives to OJS are far behind: 8.5% of the respondents use a generic CMS, Wordpress, and 8% use Lodel" (p. 94). For peer review, email edges us out, with some using OJS preferring email: "Email and OJS are the most used systems for managing peer reviewing, as they are mentioned respectively by 53% and 45% of the respondents" (p. 86). OJS is the only peer review system that is strongly correlated with the size of the journal… Additionally, OJS is a widespread solution in the peer review management of journals with staff larger than 6 FTE (76% of mentions versus only 15% for email) (p. 86).

5 "OA diamond journals are much more multilingual (publishing in several languages) than APC-based ones (38% compared to 14%)" (p. 7).

Indicators of PKP's Success

OJS Journals are Largely Plan S Compliant

Although it is not yet clear whether or how Plan S will support diamond journals, it is telling that OJS is capable of supporting a journal to be Plan S compliant from day one. For example, the system defaults to machine readable licences, to author copyright retention, and journals are automatically eligible for the PKP Preservation Network (more on this in the next section). While some requirements or recommendations may require additional work on behalf of the journal, such as becoming a Crossref member to be able to assign DOIs, or the creation of content in "a machine-readable community standard format such as JATS XML" (p. 62), OJS has the technical capabilities to assign permanent IDs (DOIs and others) as well as to publish content in multiple formats, including XML and HTML. The study points to limited use of XML and HTML among these journals – "75% of journals are unable to format their content either in XML or HTML, providing only PDF in most cases" (p. 8) – and PKP continues to make progress towards supporting journals' ability to create and edit JATS XML versions of their articles.



Source: OA Diamond Journals Study. p. 96

Preservation

One criteria for Plan S compliance is the preservation of content. The study makes clear the greater risk of disappearing content faced among diamond journals and of the potential for the PKP Preservation Network (PKP PN) as a key element of maintaining the scholarly record. Specifically, the study notes:

> OJS has a significant potential to address the issue of preservation of OA diamond journals. While the Publication [sic] Knowledge Project Preservation Network (PKP PN) is only quoted by 6% of the respondents, OJS is already extensively used as a publication tool, although this mechanism only works for the latest versions. (p. 97)

The extent of OJS adoption and the already fully functional and OJS compatible PKP PN puts PKP in a good position to play a crucial role in preserving this vast and diverse literature. We believe this example showcases PKP's investment in responsible forms of open infrastructure for advancing scholarly communication.

It is worth adding here that, as part of that responsible investment, PKP is continuing to contribute further time and resources to extend preservation services, free of charge, to journals that are not able to utilize the PKP PN (e.g., because they have not been able to upgrade to a more recent version of OJS) by partnering with DOAJ, Keepers Registry, CLOCKSS, and the Internet Archive.[6]

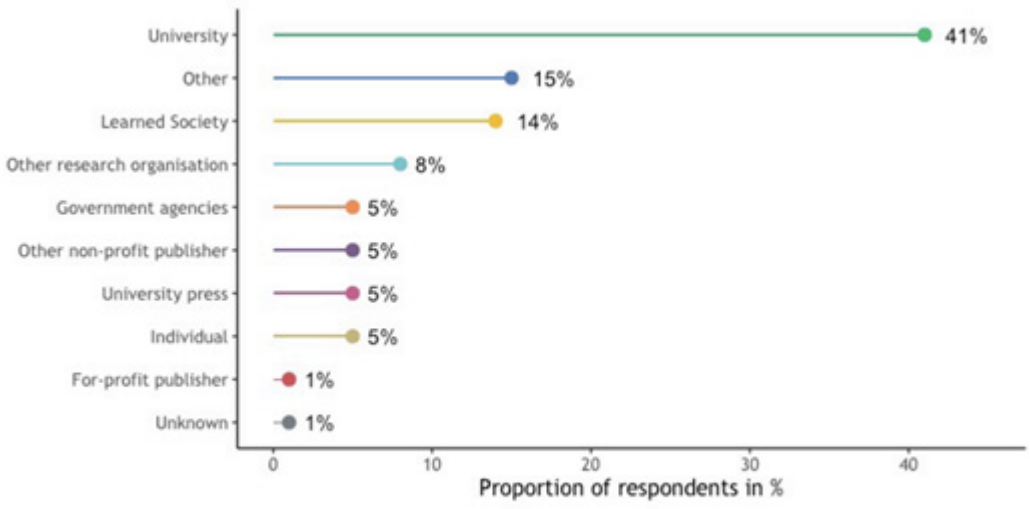


Figure 1. Who owns the journal in the survey? (Q34)

Source: OA Diamond Journals Study. p. 96

6 Craig Van Dyck et al. DOAJ to lead a collaboration to improve the preservation of open access journals. *DOAJ News Updates and Development*, May 11, 2020.

PKP as a Common Platform

The study comes back, in more than one place, to the value of journals taking collective action in areas such as hosting or finance, which PKP software supports by offering a software solution that can be used for multiple journals to be hosted by a single instance or provider, whether that be PKP's own Publishing Services or one of the many university hosts.

The study makes clear that "The OA diamond landscape is dominated by institutional platforms (40%), hosted by universities and other academic institutions. International platforms are the main alternative (25%), followed by national platforms (13%) and commercial hosts (11%)" (p. 45). We have previously noted the use of OJS to host groups of journals at institutions, and more recently we have seen the development of national portals, all of which highlight the potential for OJS to bring together what might otherwise be individual journals.[7] Of the OJS users who answered the survey, 50% of them are working with institutional hosts, followed by 21% on international platforms and 10% on national platforms. We see potential here for these multi-journal installations to act for the collective in the ways suggested by the report:

> For the majority of DOAJ journals, the annual fee can be a larger problem than the per DOI fee, as only 30% of journals belong to publishers that publish more than 250 articles per year. The annual fee is a fee paid by the publisher so that many journals could be covered by a single annual fee, if organised properly. (p. 57)
>
> Joining a platform can significantly contribute to solving the above-mentioned challenges. One shared platform can maintain the website and the software of dozens of journals at a fraction of the cost and resources that would be needed to maintain each journal individually. In some cases, the appropriate platform does not yet exist: "We have promoted the formation of collaborative work networks between institutions to begin to formalise this knowledge, so we proposed the creation of the Sara Network, a network of journal portals." (p. 103).

7 Examples of OJS platforms offered by universities include University of Alberta and University of Pittsburgh and on a national level: Finnish Scholarly Journals Online.

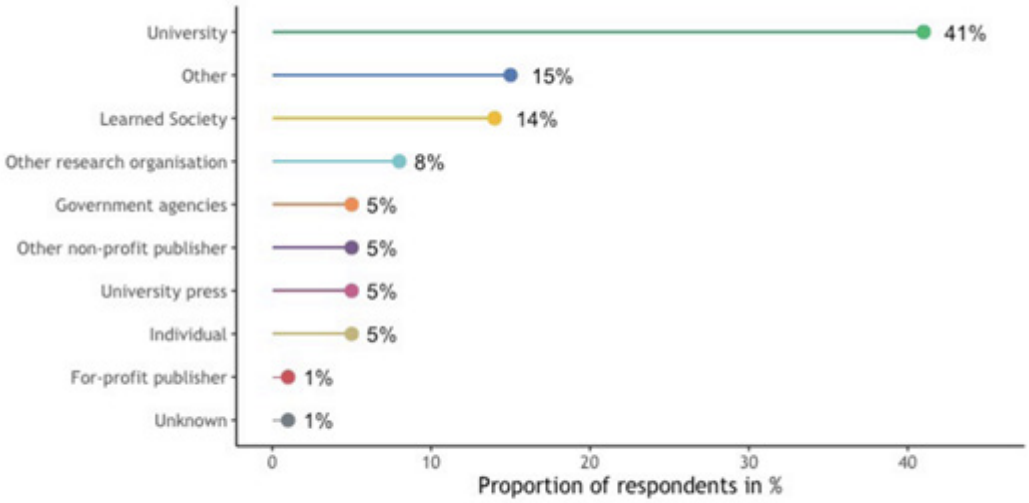


Figure 1. Who owns the journal in the survey? (Q34)

Source: OA Diamond Journals Study. p. 79

Indexing

Perhaps the clearest indicator of PKP's success in supporting OA diamond journals found in the report is the way in which the software automates journal indexing with services such as Google Scholar and DOAJ. The study notes that "the most challenging area for OA diamond journals is indexation and content visibility in the main international indexes" (p. 8). OJS has, since the earliest versions, made journal content harvestable through an OAI-PMH interface and has, for many years now, worked closely with Google Scholar and with DOAJ to ensure content can make its way on those platforms. Similarly, OJS journals are well represented among Latin American indexes (Latindex, Scielo and Redalyc). While indexing in commercial indexes (e.g., Scopus and WoS) requires selective application processes, the challenges there are socio-political and not technical, and in the meantime, journals using OJS are gaining a massive boom from being adequately indexed in places like Google Scholar and DOAJ.

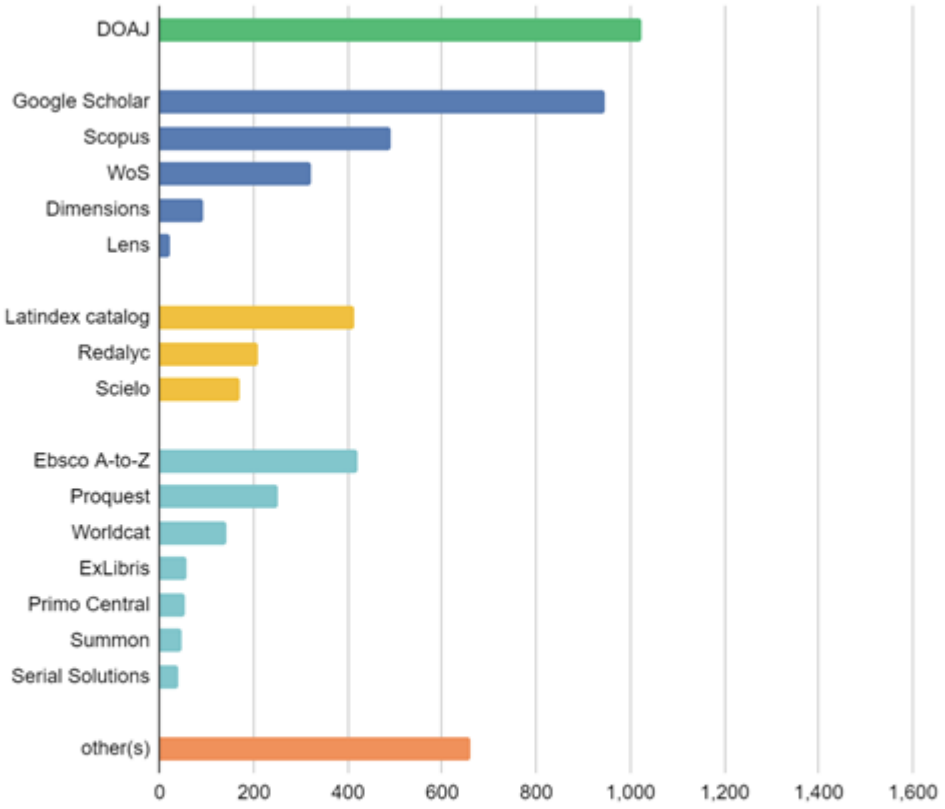


Figure 24. Databases that index their OA diamond journal, as reported by respondents: DOAJ (green), multidisciplinary bibliographic databases (blue), regional databases (yellow), library systems, including discovery systems (light blue), others (orange). Source: Survey (Q81, n=1,359)

Source: OA Diamond Journals Study. p. 45

Misperceptions Mean New Opportunities

The Software

While the study presents an overwhelmingly positive picture of PKP's role in both enabling and supporting OA diamond journals, it also reflects a certain vagueness, if not outright misperceptions, about OJS:

> The difference between publishing software and platforms is not well understood by the respondents: 623 respondents quote OJS as a platform or aggregator. The distinction has possibly become blurrier since OJS has increasingly endorsed features associated with platforms such as hosting by PKP or archiving. (p. 95)

Moreover, this misperception extends beyond the participants and reaches the study authors themselves, who state that "Open Journal Systems (OJS) is an academic content management system" (p. 78). In our view, OJS is not simply an academic CMS; it offers far more of a complete package of services.

This could be made more clear, on our part, by including a brief and oft-repeated description of OJS as "*the journal peer-review and editorial management system that operates within a publishing platform*." The plural "s" in Open Journal Systems is meant to indicate the plurality of functionality. By contrast, it is common for commercial publishers to have distinct third-party contracted software-as-a-services for peer review (e.g., ScholarOne), editorial management (e.g., Atypon) and a publishing platform (e.g., Highwire Press). OJS has combined the three into one workflow.

The study helpfully raises at least two other areas, in addition to the need to increase support for JATS XML and HTML publishing, for which we plan to more:

> Finding reviewers features highly on this list (with 108 occurrences), all the more as it is supplemented by numerous variants not shown in the visualisation, such as: "find evaluator," "recruit reviewer," "find referee," etc. (p. 91).
>
> The majority of OA diamond journals use anti-plagiarism software (55% responded 'Yes'). (p. 88)

In response, we will look to develop further support for reviewing (e.g., including ability to enable authors to suggest reviewers) and publicize features of great interest that might otherwise be overlooked in our software (e.g., our plagiarism plugin).

Finances

A second area where the study reflects a misperception that may undermine trust in OA diamond journals is with the support for OA diamond infrastructure: "OJS… a CMS fit for managing academic content, but run on a wide variety of platforms and servers whose sustainability is unknown and technical limitations can be challenging" (p. 8). We interpret this unattributed sentiment to be an invitation to do more to promote the extent to which the infrastructure is largely distributed among universities (whose sustainability is relatively assured).

The decentralized and distributed basis of OJS as an open source software initiative represents a deliberate strategy on PKP's part to develop local capacities and sustainability efforts. Still, this apprehension is a reasonable concern among academic projects – "open source infrastructures require regular investment and maintenance" (p. 98) – especially in a world of limited-term, competitive grants that have no place for maintenance. That said, we continue to stand by our record, as presented in our Annual Reports.[8] They demonstrate how the academic community has continued to support PKP's efforts to open the world of scholarly communications. This record challenges the notion that our long-term future is unknown, while not relieving universities and funding agencies of the responsibilities to support these efforts.

We plan to do more to inspire confidence in our sustainability. In conveying this message, we need to be clear that what sustains us also grows and improves the part played by open infrastructure in scholarly communication. In fact, we need to do more to emphasize that OJS is the product of the organization the Public Knowledge Project, with a home at Simon Fraser University. The Public Knowledge Project is only mentioned twice in the study, with one of those mistating the name as the "Publication Knowledge Project" (p. 97).

8 See PKP Annual Reports, 2012-2020.

PKP is investing close to two million dollars a year to expand and improve the reach and quality of scholarly publishing.

Those who support PKP take the scholarly contribution of open access and open infrastructure very seriously.

In surveying financial concerns of the journals, the study did identify that "support for technical infrastructure is called for by numerous respondents, with hosting costs most commonly stated" (p. 119). This again speaks to the potential interest in hosting among these journals, even if the ability to pay for such services is limited. Having a non-profit service such as ours that develops open infrastructure might enable more journals to raise support for hosting. We need to keep the reasons for becoming a member of PKP and for turning to its services focused on the value it brings to scholarly communication.

In terms of funding: "The majority (53%) of journals run on less than 1 FTE for their operations and 70% declare less than $/€10,000 annual costs" (p. 8). On the other hand, 11 percent operate in the €10,000 to €100,000 range and are certainly in a position to consider hosting services (Fig. 4, p. 80). Journals publishing with OJS tended to have additional personnel when compared to the other journal respondents, with only 47% operating with 1 or less FTE and half working operating with 1-5 FTE. A similar proportion of OJS journals reported having budgets in the upper ranges.

PKP Publishing Services

Despite the sizable segment of Diamond OA journals with substantial budgets, the report conveys a relative absence of any awareness among the community of PKP Membership and PKP Publishing Services. The staffing and budget situation of many OJS journals along with the correlation found between size of journal and OJS adoption speaks dramatically to PKP's potential for growth in these two areas of our work. Our plans to have PKP Publishing Services further support our software development suggests that we can make more of this connection between hosting and supporting the large community of OA diamond journals.[9]

The growth potential of PKP Publishing Services is paralleled by a potential for growth in PKP Membership, where organizations, especially research libraries, come to appreciate that supporting PKP in turn supports the intellectual independence of journals everywhere.

9 See PKP's Reflections and Directions report

Conclusion

We hope that readers will allow that the *OA Diamond Journals Study* provides PKP with a strong point of pride over the work it has been doing and the difference that it is making to the evolution of open access for scholarly publishing over the last two decades. The study has come at a good time, as PKP seeks to expand its Publishing Services in support of this community. It offers us much to consider around the work that we are undertaking and planning at this point for the scholarly publishing software that we develop. The study, above all, reflects how critically important OA diamond publishing is creating a vibrant, diverse scholarly communications ecosystem for the intellectual life and research gains of this planet. That PKP, through OJS, has played a small but key part in the flourishing of the OA diamond journals is undoubtedly good news for the universities and funders that continue to support the work of open infrastructure projects such as PKP.

PKP Publishing Services for OJS not only provides great value, service, ease, and confidence, it supports PKP's open source software for everyone.

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