

Gathering the needles: evaluating the impact of gold open access content with traditional subscription journals

Utilizing the Project COUNTER Release 4 JR1-GOA report, two librarians explore these data in comparison to journal package subscriptions represented via the JR1 reports. This paper outlines the methodology and study undertaken at the Portland State University Library and the University of Nebraska Medical Center Library using these reports for the first time. The initial outcomes of the study are provided in various Tables for 2014 and 2015. The intent of the study was to provide both institutions with a baseline from which to do further study. In addition, some ideas are given for how these reports can be used in vendor negotiations going forward.

Introduction

Portland State University (PSU) Library and the University of Nebraska Medical Center (UNMC) Library recently reviewed their COUNTER JR1 usage data from 2014 and 2015 and compared it to the COUNTER JR1-GOA (gold open access) usage for the same time period in order to assess the overall picture regarding article usage at the two institutions. This COUNTER report shows the number of successful full-text downloads published under a GOA model. It is designed for hybrid journals, which include traditional subscription and GOA content. Articles published under GOA are freely available, with the publishing costs paid by the authors. The results are discussed below, along with future plans and opportunities arising from the study findings.



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Background

In 2013 Jill Emery, along with Robin Champieux and Kasia Stasik, engaged in a survey of eight publishers who had all been involved in the PEER research project.¹ The goal of the survey was to develop a better understanding of traditional subscription-based publishers regarding their development of hybrid OA publishing. Given this, the survey instrument was aimed at discovering basic information pertaining to hybrid journal publishing programs.² Two years on, all of these programs have seen expansion and further promotion by the respective publishers. In addition, there has been a greater call by funding agencies for more content to be published openly.



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By early 2015 many of these same publishers had fully adopted the Project COUNTER Release 4 Code of Practice. One of the new reports created by Project COUNTER is the JR1-GOA (Journal Report 1- gold open access),³ which allows subscribing institutions to gather information on GOA usage of articles within a given journal. Therefore many of the articles being reported on are from hybrid publications as well as fully GOA titles. It has always been extremely hard to identify what an institution's production of OA content was, and even more so to try and identify how much use of OA content was occurring at any given institution. The new COUNTER JR1-GOA report now allows the two universities to more easily evaluate their journal subscriptions for OA usage.

141 The results of this study reflect to an extent the differing specialisms of the two institutions concerned. PSU is a relatively young (post-World War II) academic institution in the Pacific Northwest of the US. It has grown into an urban research university offering 226 degree programs, and has 22,495 undergraduates and 5,581 graduate students (Fall 2015). PSU has also been providing community-based education since the late 1970s, and offers 400 courses in its community-based learning curriculum. The campus is composed of eight Schools: College of the Arts, College of Liberal Arts & Sciences, College of Urban and Public Affairs, Graduate School of Education, Maseeh College of Engineering and Computer Science, School of Business Administration, School of Social Work, and the Urban Honors College.

Founded in 1881 as the Omaha Medical College, UNMC became affiliated with the University of Nebraska in 1902. It is now one of four campuses in the university system and serves about 3,700 students. Programs in medicine, nursing, dentistry and dental hygiene, pharmacy, public health and ten allied health professions are offered. UNMC is Nebraska's only public academic health sciences center and has six Colleges and two Institutes: College of Medicine, College of Nursing, College of Pharmacy, College of Dentistry, College of Public Health, College of Allied Health Professions, Eppley Institute for Research in Cancer and Allied Diseases, and Munroe-Meyer Institute. UNMC also offers graduate studies as part of the university-wide Graduate College.

While many academic librarians have often run cost-per-use studies to aid in renewal decisions of packages and individual subscriptions, these are not usually the deciding factor or variable that feeds into renewal decisions.⁴ Inter-library lending of titles, journal metrics and the number of faculty members publishing or editing a given title are usually taken into account when deciding to maintain or cancel package deals or individual subscriptions. In addition to these rubrics used by academic librarians to assess their packages, GOA usage can now become a factor of consideration for negotiation and in retention of subscriptions.

'GOA usage can now become a factor of consideration for negotiation and in retention of subscriptions.'

Study performed

The authors chose to look specifically at five publishers: Elsevier, Nature Publishing Group (pre-merger with Springer), SAGE Publications and Springer were selected due to the overlap between the two institutions allowing consistent comparisons of GOA content. Wiley was also included because it was noted on the 2016 renewal invoice for PSU that a discount for OA publication was built in to the overall cost of the package. The University was interested in the initial tracking of use of this content given the discount being supplied so transparently from the publisher. However, UNMC does not take a subscription to the Wiley package. All the publishers chosen have hybrid journal publishing programs, which they promote to authors upon submission of their articles. Table 1 shows the number of hybrid OA journals in each package as of December 2015. It should be noted that these figures will, of course, change over time.

Hybrid OA overview

Publisher	Hybrid program name	Year began	No of journals participating
Elsevier	Elsevier Open Access	2006	1,690 out of 3,696
Nature Publishing Group	NPG Open	2007	78 out of 136
SAGE Publications	SAGE Choice	2006	769 out of 800
Springer BV	Springer Open Choice	2004	1,657 out of 2,181
John Wiley & Sons	Wiley Open Access	2004	743 out of 1,500

Table 1. Hybrid OA overview by publisher (December 2015)

142 As part of the earlier survey, performed in 2013,⁵ an overview of hybrid article processing charges (APCs) was compiled for each of these publishers along with a note of whether the publisher mixed APC funding with subscriptions and, if so, how this was accomplished. Table 2 depicts the publisher, the hybrid APC costs and the intermixing with subscriptions as provided by the publisher. Again, this information was still current as of December 2015. It should be noted that at the time of our initial writing, Elsevier had just negotiated their first intermixed subscription/APC deal with the Netherlands for their academic libraries. The full details of this negotiation are not publicly available. However an agreement for the accommodation of costs between subscriptions and APCs has been noted.⁶ Elsevier's statement about the deal can be found on their web site [<https://www.elsevier.com/about/open-science/open-access/agreements/VSNUNL>].⁷

The study referred to the JR1-GOA reports for 2014 and 2015 for each institution and each publisher (see Table 3).

Cost of hybrid publishing		
Publisher	Average hybrid APCs	Intermixed with subscriptions?
Elsevier	US\$500-US\$5,000	No, completely separate
Nature Publishing Group	US\$1,350-US\$5,200	Discount given on subscriptions
SAGE Publications	US\$750-US\$3,000	Discounts given on subscriptions but not on packages
Springer BV	US\$3,000	Website notes they take OA into consideration re. subscription cost
John Wiley & Sons	US\$3,000	Discounts given on subscriptions

Table 2. Cost of hybrid publication by publisher (2016)

Downloads for 2014 and 2015					
Portland State University	2014		2015		University of Nebraska Medical Center
	2014	2015	2014	2015	
Elsevier total usage	190,658	192,618	Elsevier total usage	212,433	259,119
Elsevier GOA usage	4,010	7,570	Elsevier GOA usage	7,895	13,757
% of Elsevier GOA usage	2.1%	3.9%	% of Elsevier GOA usage	3.7%	5.3%
Nature PG total usage	16,978	18,635	Nature PG total usage	77,041	86,627
Nature PG GOA usage	1,353	2,136	Nature PG GOA usage	6,537	12,034
% of Nature PG GOA usage	8.0%	11.5%	% of Nature PG GOA usage	8.5%	13.9%
Sage total usage	92,730	62,199	Sage total usage	17,886	20,622
Sage GOA usage	279	254	Sage GOA usage	687	311
% of SAGE GOA usage	0.3%	0.4%	% of SAGE GOA usage	3.8%	1.5%
Springer total usage	45,248	39,966	Springer Total usage	23,484	35,696
Springer GOA usage	2,221	2,468	Springer GOA usage	2,445	2,681
% of Springer GOA usage	4.9%	6.2%	% of Springer GOA usage	10.4%	7.5%
Wiley total usage	90,644	71,512			
Wiley GOA usage	1,159	1,611			
% of Wiley GOA usage	1.3%	2.3%			

Table 3. Usage by year, percentage of GOA usage, publisher and institution

143 From the 2014 and 2015 downloads reports, it can be seen that both institutions had a somewhat similar profile for subscribed content and OA usage. Both institutions had very similar OA usage for Nature Publishing Group at around 8% in 2014, and a more than 3% growth in 2015. Overall, the usage of OA content at both institutions ranged from less than 1% to more than 13% of total usage. In Fall 2015 Nature Publishing Group promoted via social media⁸ that 60% of the articles published by the journal *Nature* are published as open access. This appears to explain the higher percentage of usage of OA articles for their content by both institutions.

The 2015 downloads reports show that both institutions generally saw an increase in overall usage with the exception of SAGE and Springer at PSU. PSU believes that the implementation of a new discovery system has had a negative impact on retrieval and overall use. However, PSU did experience a slight increase in OA usage for one of those two publishers. Interestingly, UNMC saw an increase in overall usage by SAGE and Springer, but OA usage decreased about 2.5% for each publisher. Both institutions saw a modest increase in use of OA content from Elsevier and saw the continued high percentage usage of Nature Publishing Group content.

The study also investigated GOA reports for all subscribed content and noted the top OA publication titles for both institutions (see Table 4). The publications that are readily missing from these lists are *PLOS* journals, because neither institution holds subscriptions to their content. Journal titles were included where there is a 12-month embargo before content becomes OA, since subscriptions are maintained for current access purposes. The top two titles at both institutions are the same, but then the difference in our disciplinary focus is represented by the journals having the highest use.

'The top two titles at both institutions are the same'

Top GOA titles 2014

Portland State University	University of Nebraska Medical Center
1. <i>PNAS</i> (National Academy of Sciences)	1. <i>PNAS</i> (National Academy of Sciences)
2. <i>Nature</i> (NPG)	2. <i>Nature</i> (NPG)
3. <i>Procedia-Social and Behavioral Sciences</i> (Elsevier)	3. <i>Journal of Biological Chemistry</i> (ASBMB)
4. <i>BioScience</i> (AIBS)	4. <i>British Journal of Cancer</i> (NPG)
5. <i>BMJ Quality & Safety</i> (BMJ)	5. <i>American Journal of Pathology</i> (Elsevier)
6. <i>Northwest Science</i> (NSA)	6. <i>Oncogene</i> (NPG)
7. <i>Proceedings of the Royal Society B: Biological Sciences</i> (Royal Society)	7. <i>Bioinformatics</i> (OUP)
8. <i>Energy Procedia</i> (Elsevier)	8. <i>The Lancet</i> (Elsevier)
9. <i>Climatic Change</i> (Springer)	9. <i>Genome Research</i> (Cold Springs Harbor Laboratory Press)
10. <i>Journal of Homosexuality</i> (Taylor & Francis)	10. <i>Journal of Hepatology</i> (Elsevier)

Table 4. Journals with the highest number of GOA full-text article requests ('top') by institution

Outcomes from the study

For both institutions, the main goal of this study was to develop a baseline of information from which to review subscribed content going forward. By analyzing two years of COUNTER JR1-GOA reports, comparing the OA usage to overall usage from several major publishers and tracking this OA usage across time, both institutions achieved this goal. A secondary goal was the promotion of OA content and the provision of a base from which advocacy could be achieved. Both librarians hope to highlight the

'a baseline of information from which to review subscribed content going forward'

144 most-used OA titles during the 2016 Open Access Week events. Lastly, both institutions were interested in seeing how to best apply or utilize the new COUNTER report and were interested in seeing what information we could gather from using it.

As noted above, Wiley has become very transparent in the way they display what subscription costs are being offset by APCs. This type of transparency should be encouraged across all publishers as it makes it very clear how subscription costs support the overall cost of publication. The White Rose University Consortium, comprised of the Universities of Leeds, Sheffield and York, noted in their white paper, 'The "total cost of publication" in a hybrid open-access environment: Institutional approaches to funding journal article processing charges in combination with subscriptions', that only a 'minority of publishers have also provided details of the resulting pricing...'.⁹ Tracking and understanding the usage of this content, in addition to this transparency, allows librarians to make more informed decisions regarding the ongoing costs of scholarly publishing.

'transparency should be encouraged across all publishers'

While this information may be readily known to scholarly communications librarians and digital initiative managers, these areas are often in a silo department separate from the standard acquisitions and collection management in North American academic libraries. The COUNTER JR1-GOA reports provide collection development managers and acquisitions librarians with the same overview of usage as the one held by what is considered the specialized areas in most academic libraries. When negotiation for a subscription package occurs, an element that can be explored now is not just how much of the content is produced as open access, but how much use at any given institution occurs from this OA content. In response to this query, most publisher representatives will respond that the average amount of content being produced as open access is approximately 1% to 2% of the overall content base for a given calendar year.

However, this small-scale study has found that GOA usage is much higher for many of the top publishers and their packages. For the first time, librarians have the ability to evaluate how much subscribed content is downloaded as open content from the Project COUNTER report. This will aid librarians during negotiation in order to argue for better pricing or to ensure that pricing on subscriptions is not duplicating the costs paid as APCs to make content open through research funding and APCs.

'the ability to evaluate how much subscribed content is downloaded as open content'

If the percentage point of GOA is under 5%, publishing sales representatives are less likely to want to negotiate any cost amelioration. However, if trends over two to three years indicate an upswing in GOA usage in relation to subscribed content, this will become a powerful negotiation tool for librarians, especially in relation to the negotiation of journal package deals from various publishers (due to the overall impact on the package as a whole). The COUNTER JR1-GOA reports also enable librarians to have a better understanding of the total cost of publication⁸ and how to best balance funding of APCs in relation to subscriptions.

Abbreviations and Acronyms

A list of the abbreviations and acronyms used in this and other *Insights* articles can be accessed here – click on the URL below and then select the 'Abbreviations and Acronyms' link at the top of the page it directs you to: <http://www.uksg.org/publications#aa>

Competing Interests

The authors have declared no competing interests.

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