The State of Journal Production and Access 2022

Report on survey of independent academic publishers
About Scholastica

_Modernize your journal publishing process. Further your mission._

Scholastica is a scholarly publishing technology solutions provider with easy-to-integrate software and services for every aspect of publishing academic journals — from peer review to production to hosting and discovery support. Our mission is to empower journal publishers of any size to make quality research available more efficiently and affordably in order to facilitate a sustainable research future. Over 1,100 journals across disciplines use Scholastica.

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Scholastica ran its second "State of Journal Production and Access" survey between June and October 2022. The survey received 82 responses, a 30% increase compared to the inaugural survey conducted in 2020. Like the 2020 survey, the target respondent pool was individuals working with academic organizations that publish one or more peer-reviewed journals independently (i.e., do not outsource to a separate publisher).

The survey encompassed questions in two key areas: 1) journal production, including publishers' article formatting and metadata tagging practices and future priorities; and 2) journal access, including the access and funding models publishers were implementing and respondents' perceptions of the viability of those and alternate options.

Among the main findings on the topic of journal production were:

- **Compared to 2020**, there was apparent growth in journals producing HTML articles.
- Full-text XML article production remained flat since 2020 (38% in 2020 and 2022).
- 50%+ respondents included ORCIDs and DOIs in metadata, but other PIDs like author/contributor roles, funder IDs, and organizational IDs had lower adoption rates. That said, some PIDs increased across the two surveys, including Funder ID (20% in 2022 versus 16% in 2020) and CRediT (22% in 2022 versus 16% in 2020).
- Most respondents said PDF and HTML are the most important article formats for their readers, as well as reaching publishing program goals.
- When asked to rate their publishers' primary production goals, most respondents chose "journal/article search engine optimization" (86% reported that this was “very” or “somewhat” important).

Among the main findings on the topic of journal access were:

- 95% of respondents said at least one of their publisher's journals offered OA options.
- 80% of respondents said their organization utilizes fully-OA publishing models.
- When asked to rate their publishers' primary funding/revenue priorities, most respondents chose "identifying viable funding model(s) for publishing one or more fully-OA journals" (68% reported it's "very" or "somewhat" important).
- Institutional subsidies and grants were seen as having the highest OA funding potential.
The survey representation was wide-reaching, with responses from members of scholarly publishing organizations in 28 countries working in various roles, ranging from publishing and editorial directors to managing editors and editorial board members. The 2022 survey also received more varied responses in terms of publisher size as compared to 2020, including more representation among publishers with six or more titles. Most responses were from individuals working with scholarly society publishers (34%) and university presses (27%).

All questions and analyses on the two survey topics, 1) production and 2) access, were kept separate in the survey and this report to avoid conflating information within those distinct publishing areas. The subsequent sections of this report provide a demographic summary of survey respondents, followed by data analysis of the production and access areas of the survey.

Note: Some responses have been omitted to remove spam/bots. For certain graphs, we also removed “n/a” or “I don’t know” responses when we felt it improved clarity. All original responses are available in the full data set linked here.
Welcome to Scholastica's second report on "The State of Journal Production and Access" among independent academic publishers, based on a global cross-disciplinary survey conducted from June through October 2022.

Like our inaugural 2020 survey, the target respondent pool was individuals working with learned societies, university presses, research institutions, libraries, and campus publishing programs that independently manage and produce scholarly journals (i.e., do not outsource to a separate publisher). Scholastica's goal in running this survey is to help stakeholders gain insight into the journal production practices and access models that publishers are currently implementing (many with the help of vendors) and their future priorities. The survey looks at production and access as discrete but related aspects of publishing.

The 2022 survey, which yielded 82 responses, spanned:

- Article production processes and formats
- Metadata tagging standards and priorities
- Open Access (OA) journal development approaches and funding models

This report includes graphs and analysis of the aggregated anonymized survey data as well as insights into responses by publisher size, where relevant and notable.

As discussed in the 2020 survey report, while matters of journal production (i.e., metadata creation) and access models (i.e., subscription vs. OA) have traditionally remained separate, they are increasingly intersecting due to new digital publishing expectations among researchers and OA initiatives. The latest "UNESCO Recommendation on Open Science," which aims to provide an international framework for open science policy, is a prime example of this convergence. The Recommendation defines "open science" in broad terms beyond making research free to access but also easy to discover, connect, and build upon "to increase scientific collaborations and sharing of information for the benefits of science and society, and to open the processes of scientific knowledge creation [...]."

The UNESCO Recommendation calls for "international and multi-stakeholder cooperation in the context of open science and with a view to reducing digital, technological and knowledge gaps" to accelerate responses to global challenges like the COVID-19 pandemic (which began during our 2020 survey) and to facilitate knowledge sharing worldwide.
Integral to achieving these goals are advancing shared infrastructures for accessing information and developing standards for rich/interoperable metadata, both of which are relevant to journal production. Additionally, virtually all of the latest OA funder mandates have introduced requirements or strong recommendations around digital production best practices. Examples include the OSTP memo on "Ensuring Free, Immediate, and Equitable Access to Federally Funded Research" (a.k.a. "The Nelson Memo") published in August 2022, the new UK Research and Innovation open access policy published in August 2021, and the developing Plan S mandate launched in January 2021.

As David Crotty, Senior Consultant at Clarke & Esposito, discussed in his Scholarly Kitchen article “Market Consolidation and the Demise of the Independently Publishing Research Society,” complying with such initiatives presents new challenges for small and medium academic publishers. He cited developing sustainable new business models and producing machine-readable metadata with persistent identifiers (PIDs) for indexing and archiving as primary challenges for publishers of this size.

Crotty’s points were mirrored in Part 1 of "The OA Diamond Journals Study" commissioned by cOAlition S, based on a survey of 1,619 fully-OA (i.e., free to read and free to publish in) journals. The report found that most participants were not fully compliant with Plan S guidelines, particularly concerning PIDs, copyright licenses, and content preservation. Respondents also reported mixed degrees of publishing program sustainability, with a little over 40% breaking even and 25% operating at a loss.

However, while recognizing the inherent challenges presented by recent fully-OA publishing initiatives, many scholarly organizations also see these expectations and requirements as a chance to innovate and promote more widespread content dissemination, access, and research equity. For example, Robert Harington, Associate Executive Director of the American Mathematical Society, recently discussed AMS' OA publishing efforts and their hopes for the future in a Scholarly Kitchen commentary on the 2022 OSTP memo.

Building off the findings from Scholastica’s first "State of Journal Production and Access" survey, this report aims to provide valuable insights into how scholarly organizations independently publishing journals are approaching article formatting, metadata production, business model development, and more. We hope it will help small and medium academic publishers benchmark themselves against their peers and provide a snapshot of the evolution of academy-led publishing programs up to this point for all stakeholders, including publishers, editors, researchers, libraries, and funders.

While Scholastica recognizes that the survey response pool is limited in size and respondents might not be wholly representative of the scholarly society, research institution, and university publishing community, we hope that the results will nevertheless be a valuable contribution to publishers and stakeholders working to navigate the changing research landscape.
Summary of Responses: Demographic Data

Which publisher type best describes your organization?

As in the 2020 survey, most responses were from individuals working with scholarly society publishers (34.1%) and university presses (26.8%). Like the inaugural survey, the 2022 response pool also includes individuals working with university library, department, and faculty publishing programs, as well as independent research and government institutions. New to the 2022 survey were responses from individuals working with independent nonprofit presses (11%).
Number of journals your organization publishes

The latest survey received more varied responses in terms of publisher size compared to 2020, with more representation among individuals working with publishers with six or more journals. 50% of survey responses were from individuals working with publishers with six or more journals in 2022 versus 36% in 2020.

Disciplinary area of majority of journals your organization publishes

New to the 2022 survey was insight into the primary disciplinary areas of survey respondents' publishers (i.e., the discipline more than half of the respondent's publisher's journals fit within). There was the option to select "interdisciplinary" in cases where most of a publisher's journals pertained to more than one disciplinary area. As seen above, roughly half of respondents' publishers were in the Humanities and Social Sciences (HSS) (45.1%), while another third were in Science, Technology, Engineering, and Mathematics (STEM) (34.1%).
Which of the following best describes your primary role within your publishing organization

The 2022 survey also included insight into the primary role of respondents within their publishing organization. This latest survey included more granular options than the previous one, which was broken into the broad categories "leadership," "editorial," "technology," "production," and "unspecified." Respondents were instructed to select the role that "best matches your title as a staff member or volunteer," acknowledging that individuals may work across multiple functions.

As in 2020, most respondents worked in a manager or director-level leadership role (53.7%), followed by individuals working in the following staff or volunteer editorial roles: "managing editor/peer review coordinator," "editorial board member," "editorial assistant," and "production editor" (37.8% combined). There was also some representation among individuals in "administrative" and "technology" staff/support roles.
The survey results represented a diverse global audience, with respondents from 28 countries. As in the 2020 survey, the most represented regions were North America and Europe. The top-three most represented countries were the United States, the United Kingdom, and Canada.
The State of Journal Production

What formats are your journal articles produced in?

Less than half of publishers surveyed produced full-text XML articles

Responses to the question "what formats are your journal articles produced in?" mirrored those in 2020, with PDF being the most common file type produced by publishers (94% in 2022 and 98% in 2020), followed by HTML and then print.
Of note, the 2022 survey saw a 14% increase in the percentage of respondents working with publishers that produced articles in HTML (62% in 2022 vs. 48% in 2020). This perhaps comes as little surprise since, as stated in the latest "STM Global Brief," released in 2021, "digital continues to dominate the global market as a format, now accounting for as much as 89% of the scientific and technical segment in 2020."

Like in 2020, less than half of those surveyed reported their publishers produced articles in full-text XML (38% in 2022 and 38% in 2020).

### What formats are your journal articles produced in? (by publisher size)

![Graph showing formats by publisher size](image)

**Likelihood of full-text XML article production appears to correlate with publisher size**

Breaking out responses to the question "what formats are your journal articles produced in?" by publisher size, we see some notable findings, including that full-text XML production appears to correlate with publisher size. Publishers with 11+ journals were more likely to produce full-text XML than those with under ten journals, with a noticeable spike among publishers with 26-50 and 101+ journals. This reflects the analysis of DOAJ journal data included in Part 1 of "The OA Diamond Journals Study" commissioned by cOAlition S.
That study found that XML was used by "a total of 11.7% for all DOAJ journals." The report noted, "Numbers are slightly better when we look at articles, since 10% are XML in DOAJ OA diamond journals and 29.8% in APC-based journals. This indicates larger journals are more likely to offer full-text in XML."

As in the cOAlitionS report, we don't know which or if any of the journals with XML had JATS-compliant full-text XML. Scholastica's survey also did not break out responses by journal publishing model, so we can't comment on differences based on that (e.g., the proportion of Diamond vs. APC OA journals with full-text XML).

Other notable findings include:

- There did not appear to be a correlation between HTML production and publisher size, with 50% or more of publishing programs of all sizes producing HTML.
- "Print (mailed to subscribers)" was more common among publishers with 3+ journals.
- Those from publishers with 26+ journals were more likely to report having a "print on demand" option, with a noticeable spike among those with 51-75 and 101+ journals.
- Overall, "Print (mailed to subscribers)" was the more common printing format, as has historically been the case.
- As in [the 2020 survey](#), ePub was the least commonly produced article format.

With the introduction of recent OA publishing mandates encouraging publishers to produce articles in machine-readable formats to support discovery, including Plan S and the 2022 [OSTP memo](#), it seems likely that we'll see an increase in publishers producing HTML and full-text XML articles in the near future. As discussed by Senior Consultant at Clarke & Esposito David Crotty in [The Scholarly Kitchen](#), meeting such new technical standards has proven challenging for small and medium publishers, so time will tell how the landscape evolves. However, the introduction of affordable digital production solutions could open new pathways.
Which of the following elements are included in your machine-readable article-level metadata?

50%+ respondents included ORCIDs and DOIs in metadata, but other PIDs had lower uptake

As in 2020, the survey results show that most publishers are producing machine-readable article-level metadata with basic information (e.g., abstract, author affiliations/institutions). Like in 2020, more than half of survey respondents said their publisher included copyright licenses and citations/references in metadata with similar stats. 54% of respondents reported including copyright licenses in 2022 vs. 62% in 2020, and 61% reported including citations/references in 2022 vs. 54% in 2020.
In terms of other rich metadata elements, the survey results show that:

- DOIs and ORCIDs were the most common PIDs in metadata, included by 50% or more of publishers surveyed.
- After DOIs and ORCIDs, as in 2020, funder name was the next most common PID.
- Organizational/institutional identifiers had the lowest uptake versus other PIDs at only 10%.
- After organizational/institutional identifiers, the PIDs with the lowest uptake were author/contributor roles (22% in 2022 and 16% in 2020) and funder ID (20% in 2022 and 16% in 2020).

**Number of elements included in article-level metadata (by publisher size)**

![Bar chart showing the number of elements included in article-level metadata by publisher size.](chart)

**Larger publishers appear to have richer metadata, for the most part**

Looking at the average number of elements included in article-level metadata broken out by publisher size, the numbers increase for the most part as publishing programs get larger. Publishers with 3-5 journals reported more metadata elements than those with two or fewer, and publishers with 101+ journals reported the most metadata elements. While fewer metadata elements were reported among publishers with 76-100 journals than all of the other size groupings, we hypothesize this is due to the small number of respondents in that segment and that the correlation between the number of metadata elements and publishing program size would hold in a larger survey.
Which of the following elements are included in your machine readable article-level metadata? (by publisher size)

PID uptake increases as publishers get larger, for the most part

Breaking out responses to the question “Which of the following elements are included in your machine readable article-level metadata?” by publisher size, it appears PID uptake also increases as publishers get larger, for the most part. This is apparent with author/contributor roles and DOIs, though there are some discrepancies (e.g., organizational/institutional PIDs were more common among publishers with 3-5 journals than 11-25 and 26-50).
To the best of your knowledge, how many of your publishing organization's journals have JATS-compliant XML metadata?

![Pie chart](image)

- **None**: 20.7%
- **I don't know**: 11.0%
- **At least 1, but not all**: 29.3%
- **All of them**: 39.0%

Less than half of respondents reported producing JATS-compliant XML metadata for articles

New to the 2022 survey was insight into the proportion of respondents' publishers producing JATS-compliant XML metadata. The findings suggest many publishers are still yet to meet this industry standard. Only 40.3% of respondents reported their publisher produced JATS-compliant XML metadata for at least one of its journals.
Who most commonly completes each of the following steps in the article production process for your organization’s journals?

Technical production steps are often outsourced, while editing is primarily done in house

As in 2020, this latest survey also looked at who most commonly completes the different stages of article production to determine how publishers allocate production work internally and what they outsource. Overall, the responses show that editorial functions (e.g., copyediting and proof review) were primarily done in-house. On the other hand, 50% or more of respondents reported that technical production steps, including typesetting/layout, XML creation, and printing/binding, were outsourced. HTML production appears to also be outsourced often, with 40% of respondents reporting it was completed by external service providers. These findings are similar to 2020.
Of note, most respondents said depositing metadata and/or full articles into indexes and archives was an in-house function (60.3%), while DOI registration was almost split evenly in terms of in-housing versus outsourcing. It’s unclear whether the publishers surveyed automate these functions or handle them manually. Those working with vendors are likely automating processes to some extent.

Most respondents also reported handling citation normalization in-house, as has traditionally been the case, which is another production function many may be able to automate in the future by adopting tools/services. For example, Scholastica's Production Service uses machine learning to automate citation normalization.
Are any of your publishing organization's journal articles produced via a digital-first single-source production process? (by publisher type)

There is evidence of publishers utilizing single-source production approaches

The 2022 survey provided new insight into if and to what extent independent publishers are implementing single-source production processes (i.e., where ALL article outputs, such as PDFs, are generated from a single code source, such as an XML file), whether in-house or outsourced.
Visualizing the data by publisher type, we see that, interestingly, single-source production process uptake appears to be most common among university department publishing programs and those in the "none of the above" category, followed by research institution publishers, society publishers, and university presses. Some library publishers also reported using a single-source production process for some of their journals. However, those from a faculty-run program did not use single-source production, and all government institution respondents chose "I don't know." There wasn't enough statistical power to compare data percentages by publisher type in the survey analysis.

Are any of your publishing organization's journal articles produced via a digital-first single-source production process? (by publisher size)

Use of single-source production processes varies across publisher sizes

Looking at the same question as the previous graph but broken out by publisher size, we see that responses are varied. There was no apparent correlation between publisher size and the likelihood of implementing a single-source production process. Interestingly, more respondents from publishers with two journals reported using single-source production than those at publishers with between three and 100 journals. However, all respondents from publishers with 101+ journals reported using a single-source production process for at least some of their journals.
On a scale of 1-5, how important do you think the following formats are to your readers?

*Responses to the above question broken out by individual ratings and average Likert scale ratings (1 being least important and 5 most important)

Most respondents said PDF and HTML are the most important formats for their readers

Respondents overwhelmingly rated PDF as the most important file type for their readers, followed by HTML. 94% of respondents rated PDF “very” or “somewhat” important, with an average rating of 4.46 out of 5, and 81% rated mobile-friendly HTML “very” or “somewhat”
important, with an average rating of 3.65 out of 5. These findings closely resemble the 2020 survey, when PDF was rated 4.57 on average, and HTML was rated 3.97 on average.

As noted in 2020, it's perhaps unsurprising that PDF ranked so highly because it's the canonical print article format readers have come to expect. However, it appears the importance of the PDF has become more linked to its traditional nature, and perhaps a corresponding perception of professionalism, than its printability. Only 40% of respondents said "print (mailed to subscribers)" was "very" or "somewhat" important to their readers, and 24% rated "print on demand" as "very" or "somewhat" important. On the other hand, the fact that more than three-quarters of respondents rated HTML "very" or "somewhat" important suggests publishers see a need for responsive articles that readers can easily access from different digital devices.

These findings mirror "The Market by Format" section of the 2021 STM Global Brief, which states, "digital formats continue to increase market share, accounting for 77% of the total market in 2019, according to Outsell, Inc. [...] Outsell, Inc. data for the Sci Tech segment in 2020 shows an increase of 10% for digital formats."

"The STM Global Brief"notes COVID-19 may have accelerated the transition to digital, stating, "the pandemic served to exacerbate the decline of print by increasing the demand for digital resources that can be shared online."

As in 2020, respondents had mixed opinions about the importance of full-text XML to readers, with 44% rating it “very” or “somewhat” important. Respondents might be reflecting that most readers do not directly interact with XML or do not realize the indirect benefits of XML (e.g., XML enabling indexing deposits).
On a scale of 1-5, how important do you think each of the following content and metadata formats will be in terms of reaching your publishing program’s goals in the next 3 years?

*Responses to the above question broken out by individual ratings and average Likert scale ratings (1 being least important and 5 most important)

PDF and HTML were the most important file types for reaching publishing goals, followed by JATS-compliant XML metadata

When asked to rate how important different article formats will be to reaching their publishing program’s goals in the next three years, as was the case when rating file types for
readers, survey respondents said PDF was most important, followed by HTML. 91% of respondents rated PDF “very” or “somewhat” important, with an average rating of 4.39 out of 5, and 84% rated mobile-friendly HTML “very” or “somewhat” important, with an average rating of 4.03 out of 5. Print format options were among the least important, as was the case when rating file types for readers.

The question on the importance of file types for publishing program goals included more granular responses with "JATS-compliant" and "not JATS-compliant" options. "JATS-compliant" XML was consistently rated more important to publishing program goals than "not JATS-compliant" XML. "XML article-level metadata (JATS-compliant)" also received a slightly higher average importance rating than "full-text XML (JATS-compliant)" (3.20 out of 5 versus 2.91), suggesting the primary driver for XML production is likely for archiving and indexing deposits.
Comparison: Respondent opinions on the importance of different article formats for their readers and their journal program goals

The following graph shows a combined view of average responses to the previous two questions. This graph aims to provide a clearer picture of where publishers’ views on the importance of file types for readers and their publishing program goals converged and differed.

Respondents had similar perspectives on the most important file types for readers and their publishing program goals

When directly comparing ratings of the importance of different article formats for readers and publishing program goals, the similarity in responses is immediately apparent. Interestingly, respondents rated HTML as slightly more important for reaching their publishing program goals than for readers. Also, compared to the 2020 survey, the average importance rating of ePub for readers and publishing program goals dropped noticeably. ePub received a 2.10 average importance rating for readers and a 2.34 average importance rating for publishers in 2022 versus 3.03 for readers and 3.38 for publishers in 2020. The XML options were left out of this comparison because they did not match across questions.
On a scale of 1-5, how important do you think each of the following possible journal production priorities will be for your publishing organization in the next 3 years?

*Responses to the above question broken out by individual ratings and average Likert scale ratings (1 being least important and 5 most important)

Publishers appear to be focusing on journal indexing and discoverability

New to the 2022 survey were questions about the perceived importance of different journal production priorities for publishing programs. The top three priorities were:
• **Journal/article search engine optimization:** 86% of respondents rated this “very” or “somewhat” important, with an average rating of 4.47 out of 5

• **Expand article indexing:** 82% of respondents rated this “very” or “somewhat” important, with an average rating of 4.23 out of 5

• **Decrease production time:** 72% of respondents rated this “very” or “somewhat” important, with an average rating of 3.85 out of 5

Closely following “decrease production time” was “improve article formatting/appearance” with an average rating of 3.76 out of 5.

Based on these ratings, publishers appear to be focusing on making their content more discoverable online and improving production speed. These findings make sense in the context of the increasingly digitally-driven publishing landscape, as discussed in the 2021 "STM Global Brief." Publishers are likely becoming more concerned with ensuring their articles appear in online searches via mainstream browsers and academic databases. The focus on improving production speed could be due to a desire to get timely articles out sooner as well as to generally speed up journals' time to publication because that's becoming more important to authors. As discussed in a recent Perspectives article for Clarke & Esposito, one of the primary factors authors are rating publishers on is "speed of publication, and evidence of ongoing progress (with clear expectation-setting on timelines)."
Importance of journal/article search engine optimization by publisher size

SEO appears to be a somewhat higher priority for mid-sized and large publishers

For a more in-depth analysis, we broke out responses to the top-three highest-rated journal production priorities by publisher size. Starting with "journal/article search engine optimization," mid-sized publishers with between six and 25 journals and large publishers with between 26 and 75 journals rated SEO most highly, with 71% or more of respondents in those groups considering it to be “very” or “somewhat” important. However, small publishers appear to be focused on SEO as well, with 67% of respondents from publishers with one journal rating it “very” or “somewhat” important.
Expanding article indexing is also a high priority for mid-sized and large publishers

Looking at ratings for “expand article indexing” broken out by publisher size, the responses are similar to SEO. Upon reflection, this makes sense because SEO and indexing are closely related discovery goals.

Similar to SEO, mid-sized publishers with between three and 25 journals and large publishers with between 26 and 100 journals rated expanding indexing most highly, with 89% or more of respondents in those groups considering it to be “very” or “somewhat” important.
Importance of decreasing production time by publisher size

There was no correlation between publisher size and prioritizing decreasing production time

In terms of the goal “decrease production time,” prioritization ratings varied among respondents with no apparent connection to their publisher size. This goal was rated most highly among publishers, with 101+ journals (100% of respondents in that category rated it “very” or “somewhat important”) and 26-50 journals (100% of respondents in that category rated it “somewhat important”). This was closely followed by publishers with 3-5 journals (89% of respondents in that category rated it “very” or “somewhat important”).
The State of Journal Access

To the best of your knowledge, how many of your publishing organization's journals offer open access publishing options?

![Pie chart showing the percentage of publishers offering OA options: 76.5% All of them, 18.5% At least 1, but not all, 4.9% None, None.]

The majority of publishers are offering OA options

To get a window into the proportion of publishers that publish OA content via any model (e.g., Green OA, Gold OA, etc.), respondents were asked how many of their publishers’ journals offer OA publishing options to the best of their knowledge. The results show that publishers are overwhelmingly publishing OA content, with 95% of respondents saying all or at least one of their publisher's journals offered OA options.
Is your organization utilizing the following Open Access publishing models for any of its journals?

The majority of publishers currently utilize fully Open Access journal models

As in the 2020 survey, fully-OA publishing (where all articles are free to read immediately upon publication) was overwhelmingly the most common OA approach, with 80% of respondents saying their organization utilizes fully-OA publishing models. The other OA options listed had more mixed results, also similar to the 2020 findings:

• Over 56% of respondents reported that they do not utilize and do not want to utilize Green OA or Hybrid OA.
• Only 31% of respondents said their publisher currently utilizes the Hybrid OA model and 25% said their publisher uses the Green OA model.
• Delayed OA was the least popular model, with 65% of respondents saying they do not utilize it and do not want to.
The prevalence of fully-OA journals among publishers surveyed reflects industry-wide growth in the use of fully-OA publishing models over the last decade, as observed in recent reports, including the 2018 STM Report and the 2021 "STM Global Brief." Lower usage of hybrid and delayed OA models may be partly due to recent OA initiatives announced by governments and funding bodies that call for full and immediate open access to research, including Plan S and the "Nelson Memo." As noted in the 2020 report, publishers may also be less interested in delayed OA because, in that model, institutions/readers can wait for the free version to be released rather than subscribing to the journal.

**In the next 3 years, how do you think your journal publishing program’s usage of the following OA models will change?**

![Bar chart showing the percentage of publishers planning changes in OA models]

**Most publishers expect to maintain or expand fully-OA journal models**

As in 2020, fully-OA publishing was also a top future priority for those surveyed, with 93% reporting they planned to sustain their fully-OA models, “do a little more,” or “do much more.” Projections were lower for the other options, with 36% of respondents saying they planned to sustain their hybrid models, “do a little more,” or “do much more,” and 33% saying the same for Green OA. Additionally, only 31% of respondents anticipated maintaining delayed OA journal models or doing "a little more" or “much more” of that option.
On a scale of 1-5, how important will each of the following funding/revenue priorities be to your publishing organization in the next 3 years?

*Responses to the above question broken out by individual ratings and average Likert scale ratings (1 being least important and 5 most important)

Identifying viable fully-OA journal funding models was the top funding/revenue priority

In terms of funding/revenue priorities, respondents rated “identifying viable funding model(s) for publishing one or more fully-OA journals” highest for their publishing organization.
68% of respondents said it's “very” or “somewhat important” to their publisher, with an average rating of 3.85 out of 5. In close second was “reducing journal publishing costs.” 70% of respondents rated this “very” or “somewhat” important, with an average rating of 3.74 out of 5.

Increasing subscription fees for one or more journals and increasing APCs were rated the least important, suggesting that publishers are less interested in pursuing those funding routes.
On a scale of 1-5, what do you think the potential is for each of the options below to fund fully-OA journals at your organization within the next 3 years?

*Responses to the above question broken out by individual ratings and average Likert scale ratings (1 being least important and 5 most important)

Institutional subsidies and grants were seen as having the highest OA funding potential

Like in 2020, the majority of survey respondents rated institutional subsidies and grants as having high fully-OA journal funding potential over the next three years, with 66% of
respondents selecting "some" or "very high" potential for institutional subsidies and 55% selecting "some" or "very high" potential for grants.

As noted in the 2020 survey report, the higher perceived potential of institutional subsidies/grants appears to reflect the latest fully-OA journal funding norms. The 2018 STM Report finds that fully-OA journals without APCs "most commonly rely on sponsorships from institutions (research performing organisations, research funders, libraries, learned societies, museums, hospitals, for-profit or non-profit organisations, foundations, government agencies and so forth)."

Other findings of note include:

- The perceived potential of "cooperative infrastructure and funding model(s)" was lower in this survey compared to the last one. Less than half of respondents (47%) rated that option as having "some" or "very high" potential this time versus to 54% in 2020.
- As in 2020, opinions on the potential of APCs were pretty evenly split, with 48% of respondents rating APCs as having "low" or "no" potential and 42% rating APCs as having "some" or "high" potential.
- Transformative Agreements (TAs) were once again among the lower rated options, with a similar percentage of respondents rating TAs as having "some" or "very" high potential (31% in 2022 vs 32% in 2020).
- As in 2020, advertising and submission fees were mostly seen as having "low" or "no" potential.
Does your publishing organization have policies in any of the following open research/data sharing areas for one or more of its journals

Most respondents said their publisher did not have open research/data-sharing policies

New to the 2022 survey was insight into whether respondents' publishers were implementing open research and/or data-sharing policies. Overall, less than half of respondents said their publisher was implementing the open research/data sharing options listed in the survey.

The survey results show that “open data sharing requirements” were most common, with 40% of respondents saying they have requirements for 1+ journals, followed by preprint posting as an option and FAIR data principle adherence requirements.
On a scale of 1-5, how important will each of the following journal development priorities be to your publishing organization in the next 3 years?

*Responses to the above question broken out by individual ratings and average Likert scale ratings (1 being least important and 5 most important)

Publishers appear to be most concerned with increasing the readership of their journals

Finally, from respondent ratings of different journal development priorities, it appears that publishers are most concerned with “increasing the readership of subscription and/or OA
articles for one or more journals” — 72% of respondents rated that option as “very” or “somewhat” important. This was followed by “Increasing the output of OA articles for one or more journals” — 57% of respondents rated that option as “very” or “somewhat” important.

“Launching one or more new subscription journals” was the least popular option, with only 18% of respondents rating that “very” or “somewhat” important. Whereas “transitioning existing journals to fully-OA models” and “launching one or more new fully-OA journals” were more highly rated, suggesting that most publishers are focused on OA journal development.

Publishers’ prioritization of increasing journal readership also makes sense within the context of expanding OA publishing initiatives. As noted in the Clarke & Esposito Perspectives article, “for most publishers, revenue growth is coming not from subscriptions and licensing but from OA publication — and OA requires a very different marketing approach.” In OA publishing, the coin of the realm is readership. To have staying power and, often, to secure funding, OA journals need to demonstrate that they are growing their reader base over time and reaching as broad an audience as possible, which, in turn, will help expand their research impact. It may be that publishers are focusing on growing their readership so they can maintain and expand their current OA publishing efforts.
Conclusion

As in 2020, the results of the latest “The State of Journal Production and Access” survey show independent academic publishers are prioritizing digital article production best practices as well as OA journal publishing initiatives. In terms of production, the fact that 86% of respondents reported “journal/article search engine optimization” as “very” or “somewhat important” to their publisher, coupled with the 14% increase in the percentage of respondents working with publishers that produced HTML articles versus 2020, suggests improving article discoverability is a primary driver of production initiatives. However, most publishers still appear to be working to fulfill article-level metadata best practices, like producing JATS XML metadata for archiving/indexing, suggesting that meeting technical standards is not without challenges. Affordable digital production solutions could open new pathways in these areas.

In terms of journal access models, the survey results show publishers are overwhelmingly offering OA options with plans to expand their current OA initiatives. As in 2020, fully-OA publishing appears to be publishers’ top priority, with 93% reporting their publisher planned to sustain its fully-OA models, "do a little more," or "do much more." Most respondents reported "identifying viable fully-OA journal funding models" was their publisher's top journal funding/revenue priority. And, as far as overall journal development priorities, most reported their publisher is primarily concerned with "increasing the readership of their journals." Prioritizing readership growth could, in turn, support OA journal revenue/funding development initiatives. Publishers often need to increase their readership over time to secure external funding for OA journals (e.g., subsidies/grants) or to earn adequate revenue from publication charges since authors tend to choose journals with the broadest reach and/or highest impact.

There are still many questions that remain in the areas of production and access, including:

- Are publishers not yet producing JATS-compliant XML metadata planning to do so in the near future (e.g., next 3-5 years)?
- Will more publishers expand their article-level-metadata in the coming years to include PIDs that had lower reported uptake, like organizational/institutional identifiers?
- Will the publishers be able to generate sustainable fully-OA journal funding from institutional subsidies and grants (the top-rated potential models)?
- Are independent academic publishers launching transformative agreements? Is this something publishers plan to prioritize in the future?
The list of remaining questions in the areas of journal production and access goes on, and we hope to continue exploring them in subsequent surveys.

As noted in the introduction, Scholastica recognizes that this survey might not be wholly representative of the scholarly society, research institution, and university publishing community. In subsequent surveys, we would aim to have a broader respondent pool and representation of publishers to enable more comprehensive and fine-grain analysis. While recognizing these limitations, we hope the outcomes of this survey will be of value to the scholarly community.

If you're interested in exploring other potential patterns and norms revealed by "The State of Journal Production and Access" survey, you can access the full raw data set here. The data set is anonymized, and geographic information has also been removed to further prevent the possibility of respondent identification.

Scholastica thanks everyone who took the time to respond to this survey!

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**Contact Us:**

We invite you to contact us with any questions about the “The State of Journal Production and Access” survey at support@scholasticahq.com. You can also find us on Twitter here and on LinkedIn here.
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