Investments in Open

Association of Research Libraries US University Member Expenditures on Services, Collections, Staff, and Infrastructure in Support of Open Scholarship

Cynthia Hudson Vitale and Judy Ruttenberg

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ASSOCIATION OF RESEARCH LIBRARIES

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Executive Summary

Open access (OA) and the broad sharing of research outputs has been empirically shown to accelerate scientific progress and benefit society and individuals at scale through improved health outcomes, socioeconomic mobility, and environmental well-being, to name a few. Academic research libraries, for their part, have made significant investments in opening up research and scholarship—particularly research conducted on their campuses and made available through journal subscriptions. Yet these investments are difficult to collect given their distribution across many budget lines, the lack of standardized reporting categories, and inconsistent data collection practices.

Over the last two decades there have been a small handful of organizations that have completed in-depth data collection efforts for these expenses. In 2019, the Canadian Association of Research Libraries (CARL) undertook a comprehensive survey of CARL member libraries' investments in open scholarship in order to have a better understanding of what is being spent by Canadian academic libraries on open services, platforms, content, and infrastructures. Relatedly, in August 2017, a paper entitled "The 2.5% Commitment" was distributed across the North American library community. The paper proposed that every academic library should commit to invest 2.5% of its total budget to support the common infrastructure needed to create the open scholarly commons.

In May–June 2022 the Association of Research Libraries (ARL) undertook a survey of its US-based academic research libraries to better understand OA expenses. The survey found that the total, aggregate spending on open content and infrastructure for all 46 responding libraries in 2020–2021 was US$32 million, with an average expenditure per institution of $785,940. This represents an average of 2.26% of the total library budget spent on open scholarship, ranging from 0.19% to 11.02% across responding libraries.

Introduction

With the notable exception of a 2020 report published by the Canadian Association of Research Libraries (CARL), there isn't a strong evidence base of open access content and infrastructure costs and investments by research libraries and their institutions. Such costs tend to be distributed across complex organizational budgets, inclusive of technology, services, and people, and are often inter-institutional in nature, particularly consortial journal licensing.

Externally, it's critical to understand these costs and levels of investment in order to understand the sustainability of a key access point—research libraries—to publicly funded research. Internally, strategy and planning are critically important to research libraries to create, host, and preserve increasingly open and equitable scholarship.

ARL is a membership organization with the mission to advance an equitable, enduring research information environment. This is a time of intense change in scholarship, teaching, and learning—indeed, in the very nature of information. In the midst of this volatility, it is clear that relevant, high-value, and sustainable information, services, and supporting infrastructure are essential for research libraries.

As a mechanism to support members in this rapidly evolving scholarly communications landscape and to pilot an OA collections and infrastructure data collection tool, ARL designed this survey in consultation with the ARL Scholars and Scholarship Committee and others in the North American research library community. This report provides a summary and analysis of the aggregate data from the survey, provides charts on institutional responses and averages, and discusses some outcomes and next steps.

Methods and Scope

From May 17 to June 13, 2022 the Association of Research Libraries surveyed its 102 US-based members on their investments in OA content and infrastructure using the SurveyMonkey platform.

The survey asked the following 16 questions:

1. Does your library have any read-and-publish or transitional[1] agreements in place?
2. With which publishers have you negotiated an agreement? Please select all that apply.
3. How much did the library pay for these agreements in FY 2021–2022 (in $USD)?
4. Does your library maintain APC or other OA funds, outside of a read-and-publish agreement?
5. How much did the library (not the broader institution) spend on APC's in FY 2021–2022 (in $USD)?
6. Does your library participate in non-APC-based OA models through memberships, sponsorships, community-action publishing agreements (e.g., PLoS CAP, eLIFE, SCOAP3, Open Library of the Humanities, Subscribe to Open)?
7. How much did the library spend on memberships and partnerships with OA publishers (such as PLoS CAP, Subscribe to Open, SCOAP3, eLife, etc.) in FY 2021–2022 (in $USD)?
8. How many full-time equivalents (FTEs) manage, develop, or support your institutional repository (IR)?
9. Are you actively populating your IR with manuscripts or articles for public access?
10. Is your IR content discoverable through Google Scholar or another search platform?

1. These agreements are known as read-and-publish; publish-and-read, transformative agreements, and transitional agreements. ARL is using "transitional" to reflect that many in the community see these agreements as a transition to open access publishing.

11. How much did the library spend on institutional repository (hardware, software, and salaries) in FY 2021–2022 (in $USD)?
12. Does your library publish or host OA journals (such as OJS, Janeway, or BePress) or offer OA journal services (directly or via a press)?
13. How many full-time equivalents (FTEs) manage, develop, or support your OA journal publishing and/or hosting services?
14. Does your library subscribe to or provide funds towards open monographs (e.g., Fund to Mission, TOME, Direct to Open, Punctum Books)?
15. How much did the library spend on OA monograph subscriptions or funding in FY 2021–2022 (in $USD)?
16. What other OA expenses did your library have in 2021–2022 not captured elsewhere in this survey (in $USD)?

Summary Results

In total, 46 of the 102 institutions provided full or partial results. Summary results are divided into the following categories: read-and-publish or transitional agreements, article processing charges (APC) or OA funds, non-APC-based OA publishing models, institutional repository services, OA journal hosting and publishing services, and open monographs.

The survey found that the total aggregate spending on open access for all 46 responding libraries was $32 million USD, with an average expenditure per institution of $785,940. This represents an average of 2.26% of the total library budget spent on open, ranging from 0.19% to 11.02% across respondent libraries. As a portion of the total amount of expenses spent on OA infrastructure, the majority of funds are invested in read-and-publish agreements (~$20 million) followed by institutional repository infrastructure with investments of 17% of total OA expenses (~$5 million) across the 46 institutions.

Category of Investment	Portion
Read-and-publish or transitional agreeements	64%
Institutional repository services	18%
Non-APC-based OA publishing models	10%
Article processing charges (APCs) or OA funds	4%
OA journal hosting and publishing services, and open monographs	4%

Read-and-Publish or Transitional Agreements

The first set of questions involved read-and-publish or transitional agreements. Thirty-eight institutions indicated they had such an agreement, while seven did not.

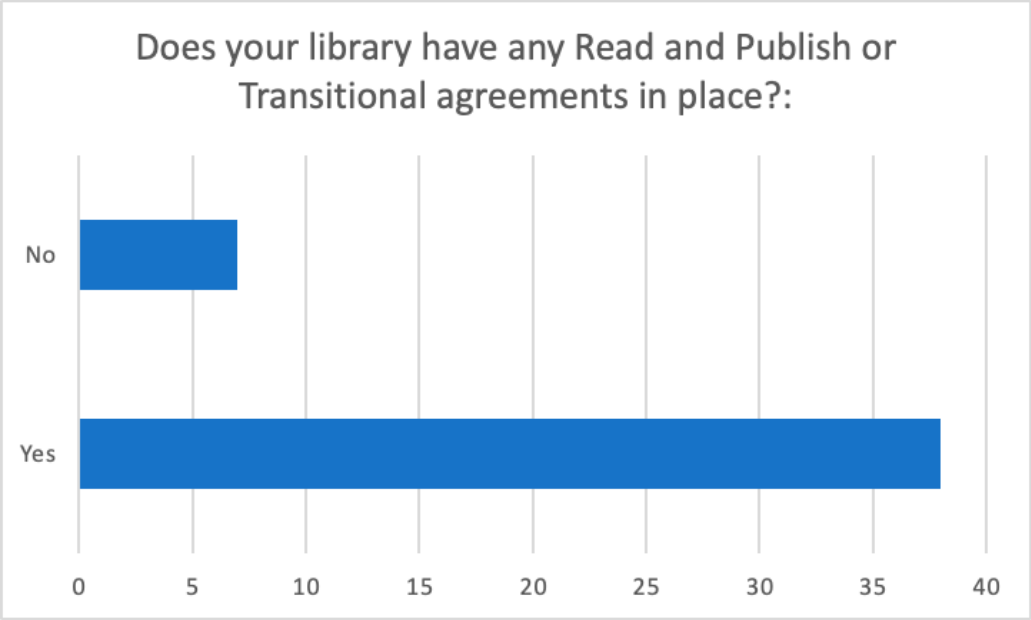

Figure 1: Count of respondents with read-and-publish agreements

Fourteen different publishers were identified as having negotiated read-and-publish or transitional agreements across the ARL membership. The top 10 publishers are below.

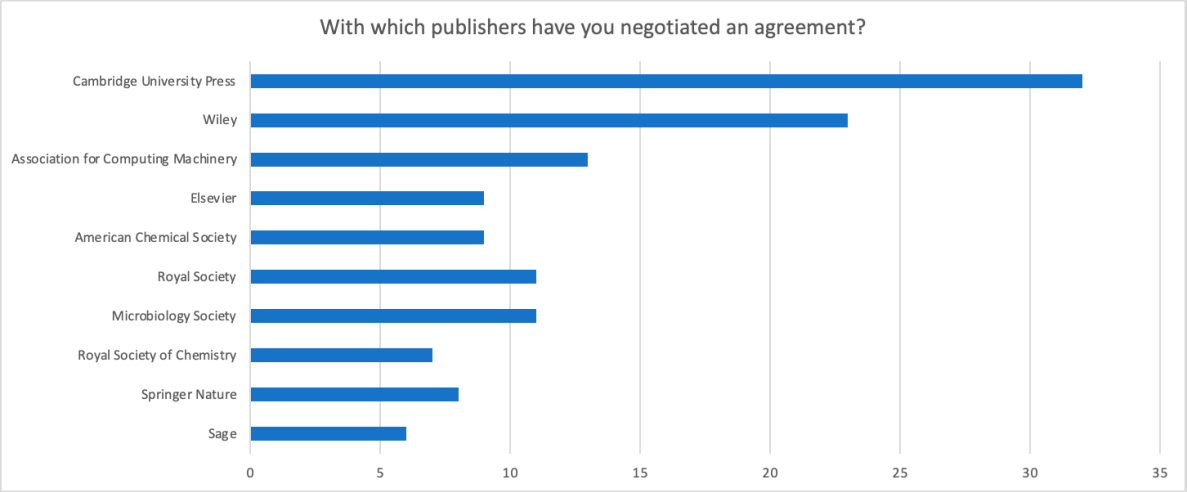

Figure 2: Count of top 10 publisher read-and-publish agreements

The ARL OA survey asked US-based academic research libraries to report on aggregate how much the library paid for read-and-publish and transitional agreements in FY 2021–2022 (in US dollars). Each blue dot on the line below is one institutional response; the orange triangle is the average across all responses. The range of expenditures for read-and-publish or transitional agreements among US-based ARL academic research libraries varied from $16,000 to $2,125,791 for 2021–2022.

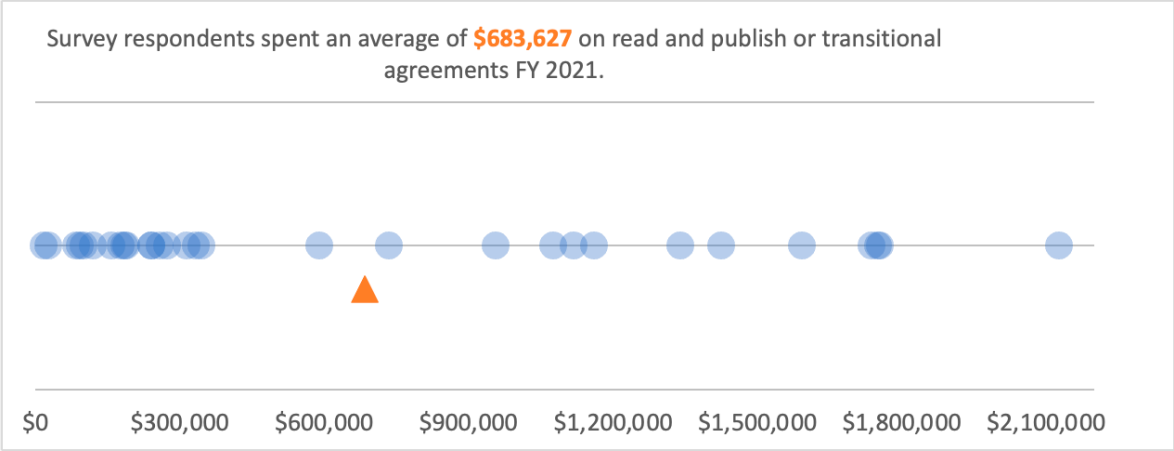

Figure 3: Range of 2021 expenses for read-and-publish agreements

Article Processing Charge (APC) or OA Funds

Across US-based ARL academic research libraries the use of APC or other OA funds varied significantly—with 24 responding that they do maintain funds within the library while 21 do not.

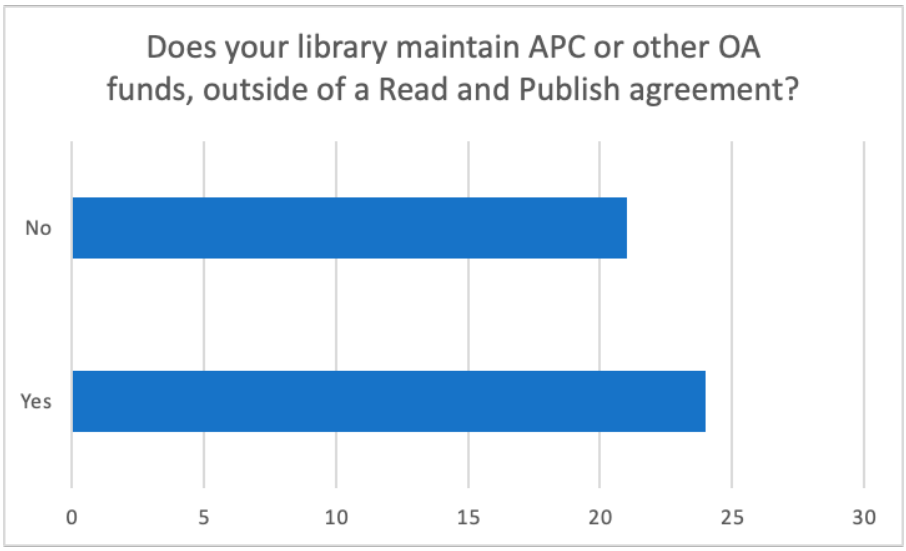

Figure 4: Count of respondents with APC or other OA funds

The ARL OA survey asked US-based academic research libraries to report on aggregate how much the library spent on APC's or other OA funds in FY 2021–2022 (in $USD). Each blue dot on the line below is one institutional response; the orange triangle is the average across all responses ($70,343). The range of expenditures among US-based ARL academic research libraries varied from $995 to $415,719 for 2021–2022.

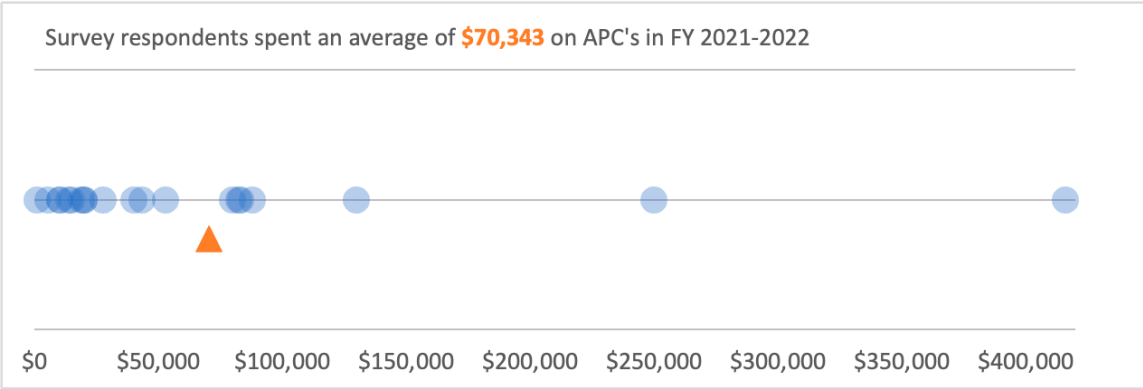

Figure 5: Range of 2021 expenses for APC or OA funds

Non-APC-based OA Models

Expenditures and agreements in non-APC-based OA models, such as through memberships, sponsorships, and community-action publishing agreements was also a question asked in this survey. Forty-two US-based ARL members have agreements such as PLoS CAP, eLIFE, SCOAP3, Open Library of the Humanities, and Subscribe to Open while three reported they did not.

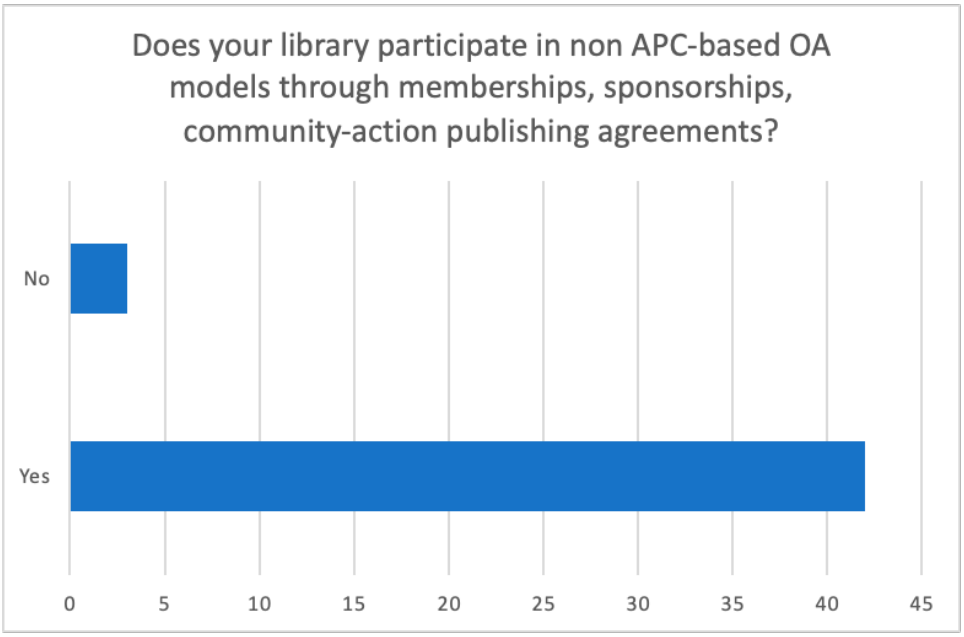

Figure 6: Count of respondents with non-APC-based OA publishing agreements

The ARL OA survey asked US-based academic research libraries to report on aggregate how much the library spent on memberships and partnerships with OA publishers in FY 2021–2022 (in $USD). Each blue dot on the line below is one institutional response; the orange triangle is the average across all responses ($85,865). The range of expenditures among US-based ARL academic research libraries ranged from $5,000 to $300,000 for 2021–2022.

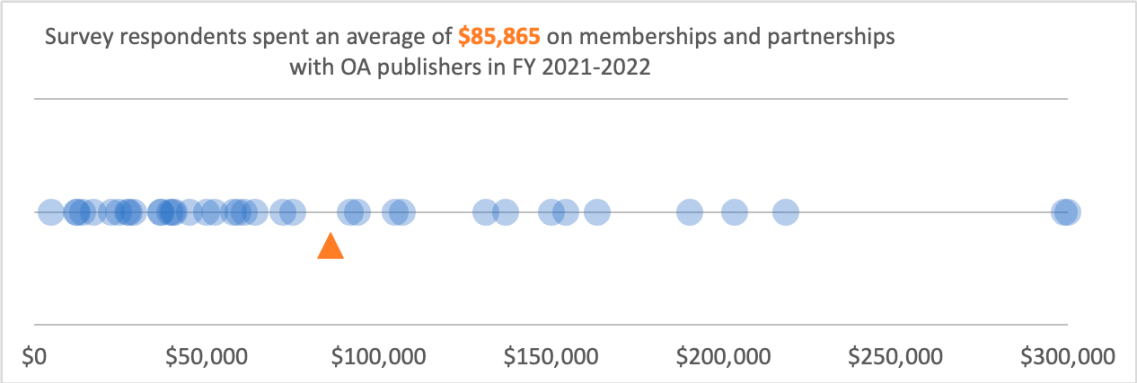

Figure 7: Range of 2021 expenses for non-APC-based OA publishing agreements

Institutional Repository Services

Institutional repositories (IRs) are one mechanism that US-based ARL members are using to support OA infrastructure. Overwhelming, US-based ARL members have IRs with 40 indicating "Yes," while 5 indicated "No." Twenty-eight respondents indicated that they are actively populating their IRs with manuscripts or articles for public access, while three responded "No" and 5 responded "Other."

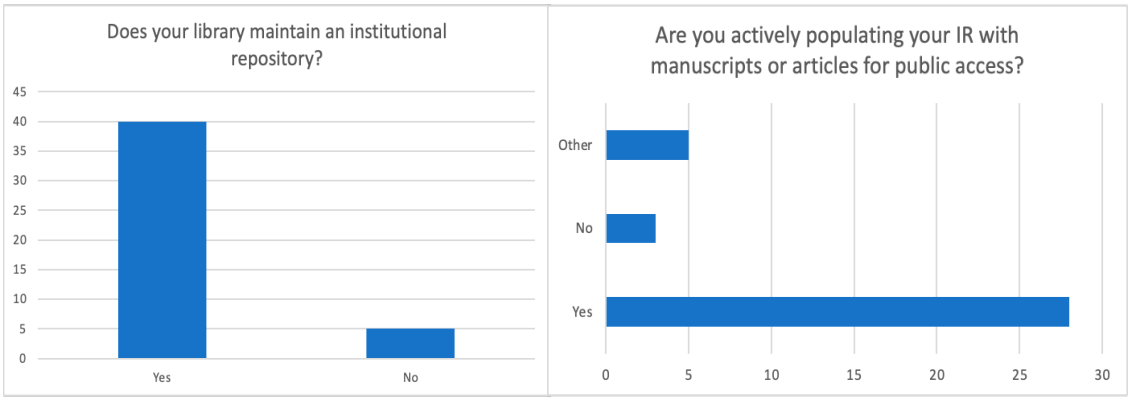

Figure 8: Count of respondents with an IR and count of respondents actively populating IR with public access manuscripts

Staffing for IRs varied significantly across the US-based ARL membership. Staffing ranged from 0.25 full time equivalents (FTEs) to 19 FTEs. The average staffing for IR support was approximately 1.5 FTEs. Across hardware, software, and salaries, US-based ARL members spent $179,776 on average for IR services. The range of expenditures among US-based ARL academic research libraries ranged from $16,000 to $1,330,000 for 2021–2022. Each blue dot on the line below is one institutional response; the orange triangle is the average across all responses.

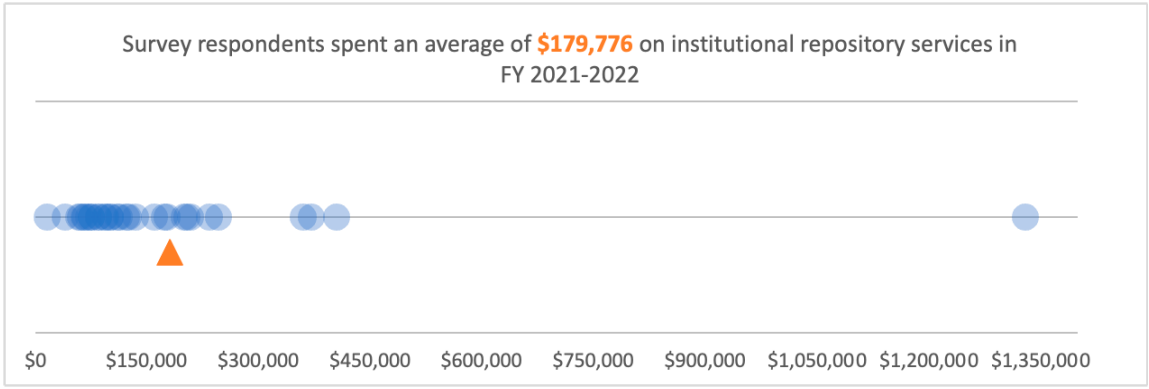

Figure 9: Range of 2021 expenses for institutional repository services (including hardware, software, and salaries)

OA Journal Hosting and Publishing Services

A number of US-based ARL members have developed or supported OA journal publishing or hosting services or offer OA journal services directly or through a press. Thirty-three respondents indicated they did provide services while ten indicated that they did not.

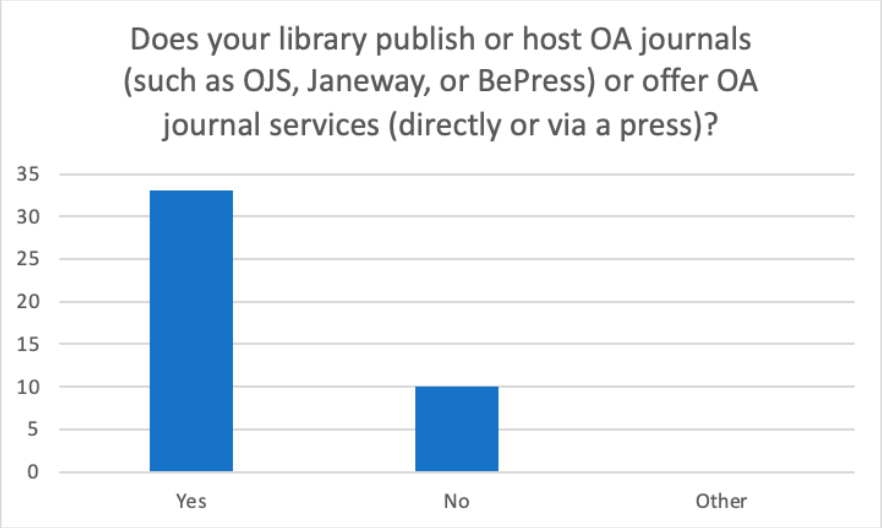

Figure 10: Count of respondents that provide OA journal hosting or publishing services

Staffing for OA journal hosting and publishing services varied significantly across the US-based ARL membership. Staffing ranged from 0.10 full time equivalents (FTEs) to 6 FTEs. The average staffing for OA journal support was approximately 1.32 FTEs. Across hardware, software, and salaries, US-based ARL members spent $70,412 on average for OA journal services. Expenditures among US-based ARL academic research libraries ranged from $6,341 to $398,130 for 2021-2022. Each blue dot on the line below is one institutional response; the orange triangle is the average across all responses.

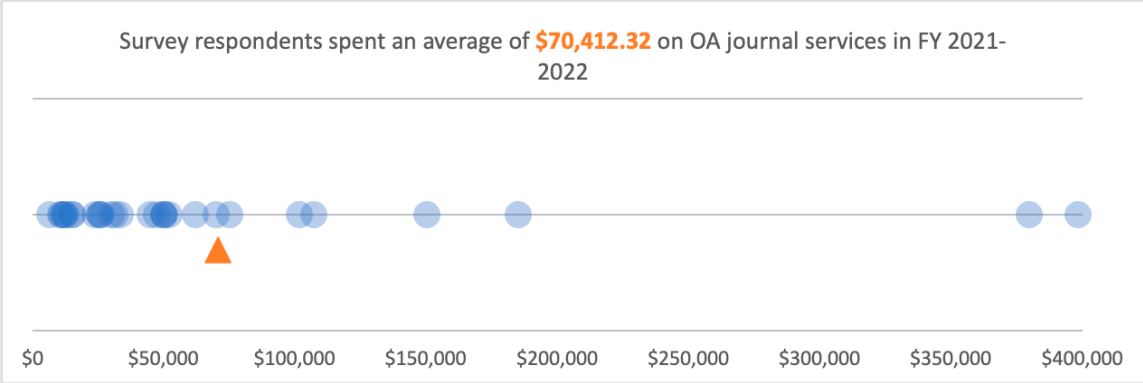

Figure 11: Range of 2021 expenses for OA journal services (including hardware, software, and salaries)

Open Monographs

Supporting open monographs continues to be significantly important for US-based ARL members. Thirty-seven respondents indicated they currently provide funds towards open monographs through such programs as Fund to Mission, TOME, Direct to Open, Punctum Books, etc.

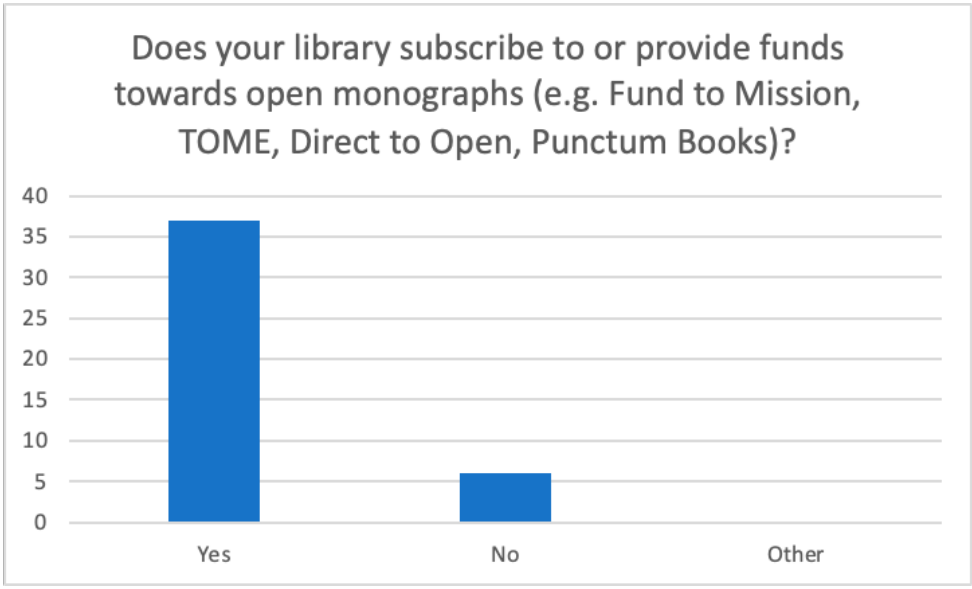

Figure 12: Count of respondents that subscribe to or provide funds towards open monographs

The ARL OA survey asked US-based academic research libraries to report on aggregate how much the library spent on open monographs in FY 2021–2022 (in $USD). Each blue dot on the line below is one institutional expense response; the orange triangle is the average across all responses ($42,026). Expenditures among US-based ARL academic research libraries ranged from $3,500 to $200,000 for 2021–2022.

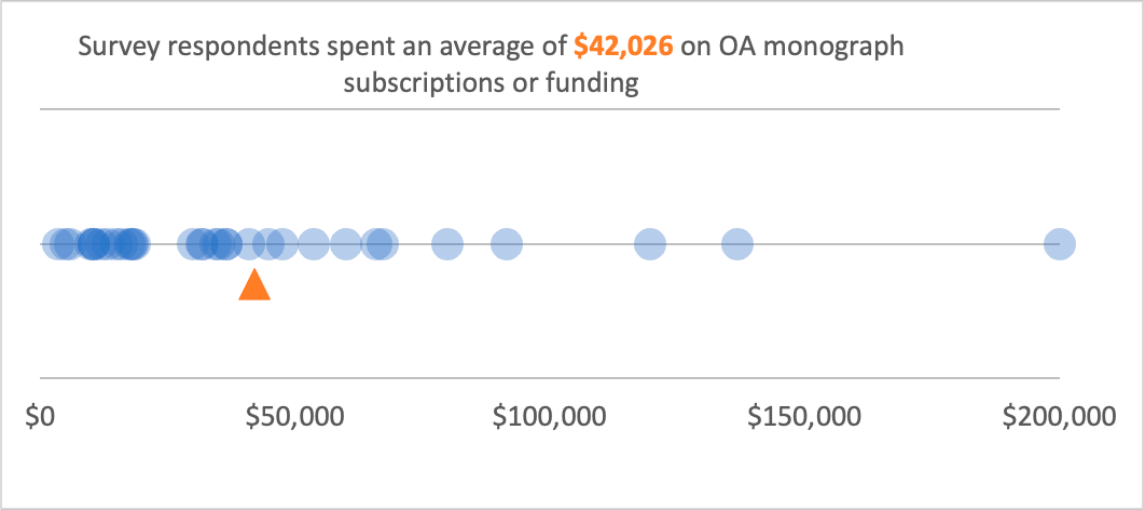

Figure 13: Range of 2021 expenses for open monographs

Discussion and Data Limitations

The results of this survey provided a much needed snapshot in time of the expenses that US-based ARL members have for OA infrastructure and collections. There are also limitations to this data, including:

- Common definitions and standard protocols for how the data should be collected and reported was not implemented. This means that each respondent was left to decide what information to report and it may not show the full investments or nuances of OA within an academic library.
- This survey did not ask about **all** OA investments, only selected investments. Additional OA investment areas include, but are not limited to, open educational resources, research data, and memberships in advocacy organizations such as SPARC, COAR, etc.

- The survey did not ask for itemized expenditures of each variable—only aggregated totals for one year. This means that the itemized expenses are unknown. For example, if a response indicated they had a transitional or read-and-publish agreement with Cambridge University Press, Oxford University Press, and Sage, and reported $376,000 in expenditures, we do not know how much each agreement cost.
- Many read-and-publish type agreements are multi-year and may vary significantly year to year. This survey only asked respondents to provide information for one year, providing just a snapshot of possible expenses.
- For many institutions this data and information is distributed throughout the budget. Respondents pulled together these numbers, which required tracking and specific analysis across the library organization. Specific variables asked by this survey may have been unintentionally omitted due to the distribution of data.
- Article processing charges (APCs) expenses are also paid for outside of the library, such as by a department, school, or through grant activities. This survey only asked about **library** expenses for APCs.

Conclusion

With the expansion of the public access commitment by the US federal agencies through the most recent OSTP memo, Ensuring Free, Immediate, and Equitable Access to Federally Funded Research, academic research libraries are further poised to partner with the research community and agencies to track open access costs and investments throughout higher education.

Open access, open science and open scholarship are critical components of accelerating scientific advancement and making progress on grand societal challenges that span disciplines and domains. The continued impact and growth of open scholarly communications on research, culture, politics, the economy, and society will only be fully realized in the coming decades. The results

of this survey demonstrate how US-based ARL academic research libraries have been key players in this movement by reorienting budgets toward support for open access collections and infrastructure.

In support of our mission and vision to advance an equitable and enduring research environment, ARL will work with the membership to understand the kind of data research libraries need in order to better plan and coordinate their investments in open content and infrastructure in a manner that aligns with their strategic framework and in coordination with higher education.

Acknowledgements

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Association of Research Libraries
21 Dupont Circle, NW
Suite 800
Washington, DC 20036
T 202.296.2296
F 202.872.0884

ARL.org
pubs@arl.org