

Evolving Trends: A Bibliometric Analysis of Academic Librarians' Publications at Twelve AAU Member Universities

Pete E. Pascuzzi, Jason B. Reed, and Greenley Goedde Creech*

The goal of this bibliometric study was to explore the broader publication patterns of academic librarians in both information and library science (ISLS) and interdisciplinary research for the years 2009 to 2023. Web of Science data were collected for 12 academic libraries. The results showed that while the number of ISLS publications has dropped, interdisciplinary publications have increased dramatically with a broad range of disciplines represented, and that collaborations in the medical sciences were a major contributor to this increase. The study suggests that some academic libraries have shifted their priorities over the past 15 years and that the assessment of libraries' scholarly publications must evolve to capture this shift.

Introduction

Academic units are often under pressure to demonstrate their impact on the mission of their parent institution. The Association of American Universities (AAU) includes 71 leading research universities with membership indicators that include funded federal research, faculty awards, research citations, and book publications (Association of American Universities, 2025). Importantly, AAU uses only the Clarivate InCites Benchmarking and Analytics (Association of American Universities, 2025), and this database includes only publications that are indexed in Web of Science (WoS).

Academic libraries are no stranger to pressure, and academic libraries continually seek ways to communicate their value (*ACRL Plan for Excellence*, 2006; Evidence Base, 2021; Oakleaf, 2010). Many academic librarians are expected to engage in research, regardless of their employment category. When librarians are tenure-track faculty, their research efforts may be under increased scrutiny to achieve promotion. Librarians may initiate research related to their role with a library or collaborate on projects that leverage the librarian's expertise with researchers in other disciplines.

Academic libraries are well-poised to contribute to the research mission of their parent institution. Library faculty and staff are steeped in the culture and resources of research, have a broad range of expertise, and actively seek collaboration (Evidence Base, 2021; Oakleaf, 2010).

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Despite this, many studies that focused on the research publications of academic librarians examined only publications in specific information science and library science (ISLS) journals (Blecic et al., 2017; Weller et al., 1999; Wiberley et al., 2023; Wiberley et al., 2006). To minimize confusion, the term *information science and library science* (ISLS) will be used rather than library and information science (LIS) because ISLS is a Web of Science (WoS) journal research category. A few studies examined publications without targeting specific ISLS journals (Borrego et al., 2018; Chang, 2018) searching the databases more broadly. While these studies are valuable, they each had inherent limitations.

Studies that focused only on ISLS journals limited the target journals because the data were manually coded. This approach must necessarily exclude interdisciplinary research because there are far too many non-ISLS journals to screen. For studies that considered interdisciplinary research, the authors had to impose other limitations due to the difficulty of attributing a publication to a library and a librarian.

Two of the authors of this study are tenure-track library faculty at Purdue University, an AAU member university, and sought to get a more detailed picture of the research publications of librarians at similar academic research libraries. There were four principal research questions:

1. What is the productivity of academic librarians across all document types and disciplines at a sample of AAU institutions?
2. Is there a change in ISLS publications for academic librarians over the last 15 years?
3. If there is a decline in ISLS publications, are academic librarians engaging in more interdisciplinary research?
4. How do the citation rates vary between ISLS and interdisciplinary research and between articles and reviews?

Literature Review

A series of four studies published from 1999 to 2023 specifically focused on the publishing patterns of U.S. academic librarians in important ISLS journals (Blecic et al., 2017; Weller et al., 1999; Wiberley et al., 2023; Wiberley et al., 2006). In each of these studies, articles were manually examined to determine whether the author was an academic librarian. This required the authors to limit the number of target journals. These seminal and invaluable studies provide a wealth of information on the productivity of librarians, co-authorship patterns, the importance of librarian tenure status and the characteristics of their parent institution.

The first of this series (Weller et al., 1999) examined the articles in 32 North American ISLS journals for the years 1993–1997. This study found that 1,515 academic librarians produced a total of 1,579 articles in the journals during the analyzed time. Most authors (78.35%) produced a single article in the period under consideration, and most (55.03%) of these articles had a single author. This study also produced a list of the 20 most productive academic libraries. Librarians had faculty status at nine of the institutions, eight of which were AAU members. Four additional institutions also belonged to the AAU. The authors of the study speculated that institution prestige and faculty status both contribute to productivity of librarians.

The second of this series (Wiberley et al., 2006) covered the years 1998–2002. The results of this study are comparable to the first, with 77.67% of academic librarians publishing a single article in five years, 58.91% of which had a single author. The authors did note a small

decline in articles by academic librarians from 43.57% in 1993–1997 dropping to 39.56% in 1998–2002, but the cause and significance was not clear. In the top 20 libraries, librarians had faculty status at 12 with nine in the AAU. Six additional institutions were also AAU members.

The third in the series (Blecic et al., 2017) covered 10 years of data (2003–2012), although the authors also analyzed the data in two five-year chunks. While most academic librarians still produced a single article in each of the five-year periods (73.56% for 2003–2007 and 73.37% for 2008–2012), there was an increase in the percentage of authors who produced multiple articles. This study also noted a decline in the number of articles by academic librarians. The authors suggested that this decline could be the result of the decline in sole-authored articles with an increase in co-authored articles with two or more librarian authors. The number of institutions with tenure-track librarians increased to 19, with 10 in the AAU. One additional institution was an AAU member.

The fourth and most recent in the series (Wiberley et al., 2023) covered the years 2013–2017. Again, the percentage of academic librarians with a single article dropped slightly to 72.02%; however, more authors had multiple articles. This study noted an increase in the incident of academic librarians as co-authors. This helps to explain both the overall decline in the number of articles and the increase in number of articles for authors. The 2013–2017 top academic libraries list contains 23 institutions because of ties in position 20. Librarians had faculty status at 19 of the institutions, 10 of which were AAU members. Three additional institutions were also AAU members. Like previous studies, the authors noted that prestige of an institution and faculty status for academic librarians correlated with productivity.

Wiberley et al. (2023) suggested that future research into academic librarian publishing should broaden the scope to include other types of scholarly output, noting that it would entail focusing on a subset of academic librarians. Although they did not explicitly mention publications in non-ISLS journals, they speculated that traditional ISLS journals may not meet all the needs of academic librarians. Two previous studies (Borrego et al., 2018; Chang, 2018) pointed to the importance of interdisciplinary research for academic libraries.

Chang (2018) examined the interdisciplinary publications of librarian authors in non-ISLS journals indexed in WoS for the years 2005–2014. ISLS authors were defined in part by the occurrence of “library” or “information” in the address field of their publications. The search retrieved 4,567 articles, which was reduced to 1,270 after manual review. Further review created a subset of 479 articles by ISLS authors with verified ISLS educational backgrounds. This study showed that ISLS authors publish articles on diverse topics such as computer science, medicine, history, music, law, business, and education in non-ISLS journals. Most of the authors were affiliated with libraries and not ISLS departments. Strikingly, 41.3% of the ISLS authors had non-ISLS educational backgrounds which may be a contributing factor to the breadth of research.

Borrego, et al. (2018) took a similar approach, searching Scopus for the pattern “librar*” in the affiliation field for the years 2006–2015. This study included articles and reviews in all Scopus-indexed journals and retrieved more than 26,000 publications from 4,283 journals. The study revealed that the number of publications in ISLS journals was stable across the 10-year period but that there was a consistent increase in the publications in non-ISLS journals, starting at ~750 in 2006 and reaching nearly 1,400 in 2015. A detailed analysis of the affiliation data for 2015 revealed limitations on data interpretation (at least from the perspective of academic librarians) as 9% of the 2015 papers were false hits to nonlibrarians, 11% were

attributable to library schools, and 13% were authors affiliated with the National Library of Medicine. Regardless of this limitation, this study revealed that librarian authors participate in a broad range of research, noting the prevalence of systematic reviews and meta-analyses.

Methods

Terminology

For the sake of clarity, the terminology in this paper conforms to the terminology used in WoS bibliometric records as much as possible, which will be indicated by quoting and capitalization. Thus, library and information science will be referred to as “Information Science and Library Science” (ISLS). In WoS, “Publication” refers to the “Source” publication (i.e., “Book,” “Journal” or “Conference”). WoS “Document Types” include “Articles,” “Reviews,” “Proceedings Papers,” “Meeting Abstracts,” “Letters” and more. In this paper, “Articles” and “Reviews” rely solely on the classification by WoS, which uses not only publisher information but also the occurrence of keywords in the title, abstract or introduction of the article (Clarivate, 2025a). WoS uses several schemes to classify “Publications,” not individual “Documents,” including “WoS Category” and “Research Area.” The present study uses “WoS Category” as a starting point for a simplified research area classification based on Milosevic (2020). Finally, interdisciplinary will be used broadly to refer to any publication with a library-affiliated author that is not published in an ISLS journal. The rationale for this is that it is more descriptive than non-ISLS and reflects the likelihood that a library-affiliated author brings their expertise to research in another discipline.

Library Selection Criteria

Twelve academic libraries were selected for this study. Selection criteria included the following:

1. Membership in the Association of American Universities (AAU).
2. Librarians may have faculty status with tenure.
3. Public university.

These criteria were adopted to focus on libraries with similar pressures to publish and to have a manageable sample size. The selected libraries include Indiana University, The Ohio State University, The Pennsylvania State University (Penn State), Purdue University (Purdue), Rutgers University (Rutgers), Stony Brook University, University at Buffalo, The University of Arizona (Arizona), University of Colorado–Boulder (UC-Boulder), University of Illinois at Urbana-Champaign (UIUC), University of Maryland (Maryland), and The University of Utah.

AAU can be specific as to which campuses are AAU members, but there are exceptions in terms of reporting. For example, data for Indiana University School of Medicine in Indianapolis are reported through Indiana University Bloomington. A similar situation exists for University of Maryland for the College Park and Baltimore campuses (Association of American Universities, 2025). Accordingly, this study used an inclusive strategy with respect to campuses, especially when there was evidence that the libraries’ organization spanned multiple campuses. For example, Rutgers included three campuses as this reflects the organization of the library. For Penn State, the study was limited to the State College and Hershey campuses because there are more than 20 regional campuses that could skew the results for Penn State. Of the libraries selected, only Purdue, UC-Boulder, and UIUC do not have a medical school. The goal of our selection strategy was to choose a sample that was representative of academic librarians that are most likely to engage in a broad range of research.

Database Search

The Web of Science Core Collection All Editions (SCI-EXPANDED, SSCI, AHCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, and IC) was searched in June of 2024 for “Publication Date” of 1/1/2009 to 12/31/2023. WoS was selected because this data is used by InCites and AAU to measure research productivity and quality. The time span of 15 years was chosen so that the study would have enough data to reveal trends over time, while also maintaining a manageable sample size. Additional details for the bibliometric data are available from WoS (Clarivate, 2025b).

The search strategy included three search types: by address, by author, and by ORCID iD each also linked to the general address for the parent university, including campus or city, as necessary. The first search was based on “Address” to discover publications from specific libraries, using a search string the included “library” or “libraries,” university name and location such as city or campus (see Table 1). Full bibliometric records were downloaded as tab-delimited text files and imported into R. The addresses for all documents were extracted from the “Author Address” field of the records and analyzed to refine the address pattern. For some libraries, it was necessary to include other patterns (e.g., Purdue University Library includes a School of Information Studies). For other libraries, especially those where the parent institution has a separate library science unit, it was necessary to develop patterns that would remove specific addresses (e.g., Indiana University has a Department of Information and Library Science).

TABLE 1 Web of Science Search Strings			
Search Type ^a	Search Component		
	Address	Author/Identifier	Date
Address	(AD=(university SAME (library OR libraries) SAME (location)))	Not applicable	DOP=(2009-01-01/2023-12-31)
Author	(AD=(university) SAME (location))	(AU=last 1 first 1 OR AU=last 2 first 2 OR AU=last 3 first 3 OR ...)	DOP=(2009-01-01/2023-12-31)
ORCID	(AD=(university) SAME (location))	(AI=ORCID ID 1 OR AI=ORCID ID 2 OR AI=ORCID ID 3 OR ...)	DOP=(2009-01-01/2023-12-31)

^aSearch components for each search type were joined with the Boolean AND.

Once refined, author names were extracted from the “Author Address” field of the bibliometric record. Many authors have multiple name variants (bylines) depending on the use of middle name, initials, nicknames, or variations in the last name. Bylines were tagged as having full author status if the last name and either the first or middle name is spelled out. Bylines that only included first or middle initials were excluded from later searches because they were too ambiguous and retrieved off-target results.

The author bylines were used to extract ORCID iDs from the records. Names with multiple matches to ORCID iDs were checked on the ORCID website and incorrect matches were dropped. If all matches to ORCID were incorrect, the author’s name was still retained for the “author” search.

Separate “Author” and “Author Identifier” searches were created with custom R scripts, with the general forms shown in Table 1. Importantly, the pattern “library OR libraries” was

dropped from the searches so that documents by a librarian that lacked specificity in the published address could be discovered.

The “Address,” “Author” and “Author Identifier” results were imported into R and combined. Many documents were retrieved by all three searches, but it was also common for documents to be retrieved by only one or two searches. These documents were subjected to two levels of manual curation, the first to reveal nonlibrarian authors and the second to reveal publications by a librarian author that was not affiliated with the library at the time of publication.

Nonlibrarian authors can accidentally receive a library address when collaborating with librarians on published research. To identify this issue, all addresses for each author were extracted and tabulated. When an author frequently (more than one-third of the time) used addresses lacking “library” or “libraries,” the author affiliations were confirmed by searching library websites, ORCID, LinkedIn, Facebook, and other websites. Authors not affiliated with the institution’s library were removed from the author list. This removed all papers for that author that do not also have a librarian author.

The second level of manual curation was to discover publications by confirmed librarian authors published when they were not affiliated with a library. This can happen, for example, when an author receives their degree from their parent institution prior to joining the library, or when a graduate student collaborates with a librarian. Each publication that lacks a “library” address pattern was manually examined to determine the author affiliation, and publications with only affiliations to a nonlibrary department were removed.

Data Analysis

All data manipulation, statistical analyses and figures were generated with the R language for statistical computing (R Core Team, 2023) with tidyverse (Wickham, 2017) packages installed. Color palettes from the package ggsci (Xiao, 2023) were used in the figures.

Results and Discussion

Addresses and Authors

The searches discovered 1,040 library-associated authors using 1,275 author name variations. The complete data for authors are shared on Open Science Framework (OSF) as Supplemental File 1 (<https://osf.io/8u6bz/files/r4nxxm>). Bylines often varied not only in the use of middle initials, but also due to other issues, such as misspellings, hyphenations, or the use of nicknames. This result showed one advantage of searching by address rather than author name as it would be difficult to create all bylines for an author given the possible variations and misspellings that can occur.

For 798 authors, no ORCID iD was extracted from the WoS records. While this appears to indicate that less than a third of library authors use or have an ORCID iD, this low adoption of ORCID may also reflect the fact that ORCID was only established in 2012, and that some journals still do not require authors to use it.

No attempt was made to determine if authors had faculty status because the purpose of this study was to include publications for all authors affiliated with the library. Observed employee categories include faculty, professional staff, undergraduate and graduate students, and postdoctoral associates.

Academic Librarians Scholarly Output Encompasses Many Document Types

The searches discovered more than 3,500 documents for the 12 libraries. Select bibliometric data are shared on OSF as Supplemental File 2 (<https://osf.io/8u6bz/files/fuvwm>). WoS indexes

many “Publication” and “Document Types” including “Journals,” “Books,” “Conferences,” “Articles,” “Reviews,” and “Proceeding Papers” (Clarivate, 2025a). In addition, “Editorial Material,” “Letters,” “Book Reviews,” “Database Reviews,” “Software Reviews” and similar documents are indexed. In general, research documents, such as “Articles,” “Reviews,” or “Proceeding Papers,” are peer-reviewed while the other material is not. No attempt was made to determine peer review status of individual documents because a broad overview of academic librarians’ scholarly output necessitates including all documents.

To reveal patterns across the libraries, we developed a simplified “Document Type” scheme (see Table 2). The simplified “Document Types” were tabulated for each library and visualized as a proportional bar plot to make it easier to discern how each library balances its scholarly efforts (see Figure 1). The actual document count is shown as a number when space permits. Six of the 12 libraries had articles as the majority (50% or greater) of their scholarly output. Libraries at institutions that have a medical school tended to have a higher percentage of reviews with both Arizona and Maryland leading the libraries. Rutgers, UIUC, Ohio State, University at Buffalo, and Penn State have 25% or more of their scholarly output as resource reviews.

The observed patterns may reflect the priorities of the libraries or choices of individual librarians. Libraries with a high percentage of articles and reviews likely place stronger emphasis on research for the purposes of librarian tenure and promotion. Other factors that might contribute to this include collaboration with students or faculty in other disciplines and increased support by area specialists within the library. Libraries with a higher percentage of resource reviews may place more emphasis on service and engagement with librarianship.

Number of Authors for a Library Is a Predictor Variable for Number of Documents

The libraries differed in terms of the total number of publications indexed in WoS. An obvious explanation is that the staffing levels of the libraries differed. Rather than rely on external data to normalize the results, the hypothesis that the number of authors for a library was a predictor variable for the number of publications was tested. Both the author count and publication count relied only on WoS data. Two simple linear regressions were performed.

TABLE 2
Simplified Document Type Scheme

Web of Science	Simplified
Article	Article
Article; Book Chapter	Article
Article; Data Paper	Article
Article; Early Access	Article
Article; Proceedings Paper	Article
Biographical-Item	Other
Book Review	Resource Review
Correction	Other
Database Review	Resource Review
Editorial Material	Other
Editorial Material; Book Chapter	Other
Film Review	Resource Review
Letter	Other
Meeting	Meeting
Meeting Abstract	Meeting
Music Performance Review	Resource Review
Music Score Review	Resource Review
News Item	Other
Proceedings Paper	Proceedings Paper
Record Review	Resource Review
Reprint	Other
Review	Review
Review; Book Chapter	Review
Review; Early Access	Review
Software Review	Resource Review
TV Review, Radio Review	Resource Review

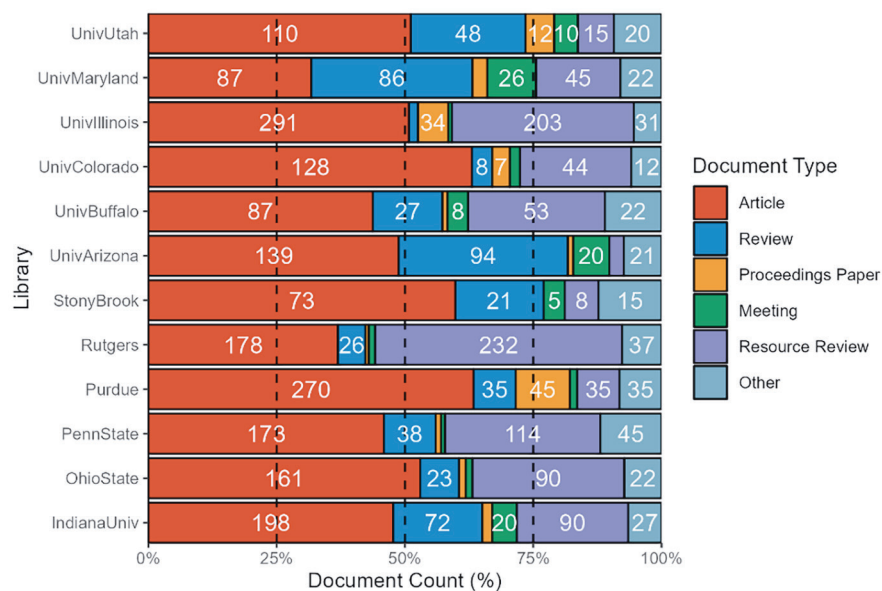


Figure 1. Distribution of Document Types by Library.

In the first, publication count included all “Document Types.” In the second, only “Articles,” “Reviews,” and “Proceedings Papers” were included and designated as research publications.

For the first regression (see Table 3), author count was a statistically significant predictor for all publications ($F(1,10) = 15.32$, $p = .003$). The adjusted R^2 of .566 indicates that author count explains over 56% of the variability for publication count. The results are also visualized as a scatterplot with the linear model included (see Figure 2). In the second regression (see Table 3), author count was a statistically significant predictor for research publications ($F(1,10) = 13.37$, $p = .004$), and the adjusted R^2 of .529 indicates that author count explains nearly 53% of the variability for publication count. The second model is visualized in Figure 3.

The correlation between publication count and author count is not surprising, but the result should be interpreted with caution. Libraries above the fitted model (see Figure 2 or Figure 3) appear to be more productive than libraries below the fitted model. However, the publication count is based solely on WoS indexing, and the publication count could be biased against certain libraries whose authors choose to publish in journals not indexed in WoS. In addition, certain types of research take longer to complete from study design to publication. Systematic reviews and meta-analyses, for example, often take a year or more.

Academic Libraries Are Engaging in More Interdisciplinary Research

Previous research noted a decline in the number of articles by academic librarians in ISLS journals during the period 1993–2017 (Wiberley et al., 2023). In addition, other studies noted a surprising number of non-ISLS research publications with library-affiliated authors (Borrego et al., 2018; Chang, 2018). Another important trend to consider is the increasing importance of systematic and other review types to many research disciplines and the increasing demand for librarians on these research projects (Slebochnik et al., 2022).

One explanation for the decline in ISLS publications might be the increase in interdisciplinary research, especially “Reviews.” To test this hypothesis, “Articles,” “Reviews,” and “Proceedings Papers” were classified as ISLS or interdisciplinary based on the WoS

TABLE 3							
Linear Regression Analysis of Author Count as a Predictor of Publication Count							
Model	Term	Coefficient	SE ^a	t Value	p-value	CI ^b	
						Lower	Upper
All Publications ~ Authors	Intercept	-13.31	89.56	-0.15	.884	-212.87	186.25
	Authors	3.12	0.80	3.92	.003**	1.34	4.89
Research Publications ~ Authors	Intercept	13.60	55.85	0.24	.813	-110.84	138.05
	Authors	1.81	0.50	3.66	.004**	0.71	2.92

^aStandard error

^b95% Confidence interval

** $p < .01$

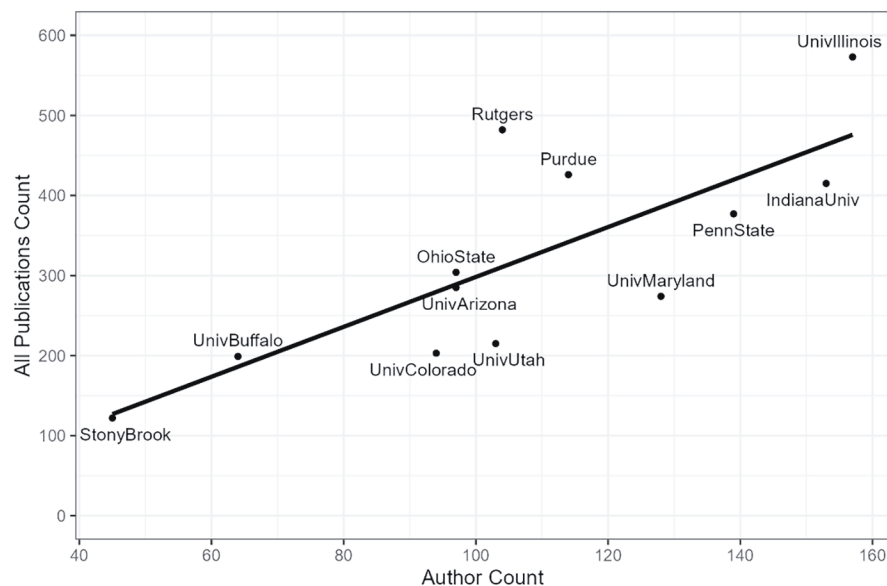


Figure 2. Visualization of Author Count as a Predictor Variable for All Publication Count.

subject category for the document. Any document tagged with “Information Science & Library Science” was classified as ISLS and all others were tagged as interdisciplinary. The number of publications by “Document Type,” ISLS versus interdisciplinary, and “Publication Year” were tabulated. The search strategy limited publications to 2009–2023; however, when the bibliometric data were updated on June 20, 2024 (to normalize citation counts) 20 previous 2023 publications now had a 2024 “Publication Year.” These publications were included as 2023.

Table 4 shows that 44.9% of the research publications in the dataset were not published in ISLS journals and can be considered interdisciplinary with “Reviews” as large part of this research. Figure 4 shows that there was an overall increase in “Articles” and “Reviews” for the selected libraries, peaking in 2018 (“Proceedings Papers” were omitted to simplify the figure). Since then, total publications plateaued or declined slightly. There was a decline in ISLS publications after reaching a peak in 2017. In contrast, interdisciplinary publications showed a steady increase across most of the period with reviews displaying strong increases since 2015.

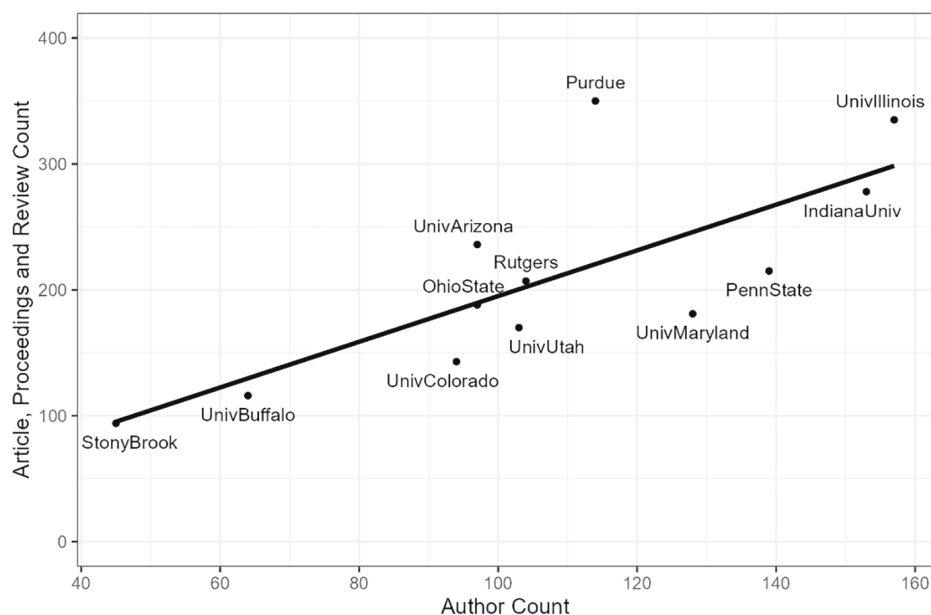


Figure 3. Visualization of Author Count as a Predictor Variable for Research Publication Count.

These results were striking but not entirely unexpected. What is surprising is that the current study showed ISLS publications fluctuating or trending upward from 2009 to 2017, a period in which earlier studies noted a decline (Wiberley et al., 2023). Other studies have noted an increase in interdisciplinary research (Borrego et al., 2018; Chang, 2018); however, these studies lacked the individual library-level resolution needed to link the increases in interdisciplinary research to decreases in ISLS research. Because the current study focused on specific institutions, the results suggested that the two phenomena are correlated. To understand this correlation, more details are needed about the nature of the interdisciplinary research.

TABLE 4
Publication Count by Document Type and Research Area

Document Type	Discipline	Count	Percentage
Article	ISLS	1,251	50.9
Article	Interdisciplinary	598	24.3
Review	Interdisciplinary	437	17.8
Proceedings Paper	Interdisciplinary	68	2.8
Proceedings Paper	ISLS	58	2.4
Review	ISLS	47	1.9

Academic Libraries Engage in a Broad Range of Interdisciplinary Research

To help understand the trends revealed above, we classified “Articles” and “Reviews” with a simplified version of the “WoS Categories” using a published scheme (Milojević, 2020) with some modifications. This simplification was required to group similar types of research and to minimize duplicate counting of articles that were published in journals categorized with two or more “WoS Categories.”

Details of the simplification scheme are included on OSF as Supplemental File 3 (<https://osf.io/8u6bz/overview>), but the major modification was to “professional fields” category of

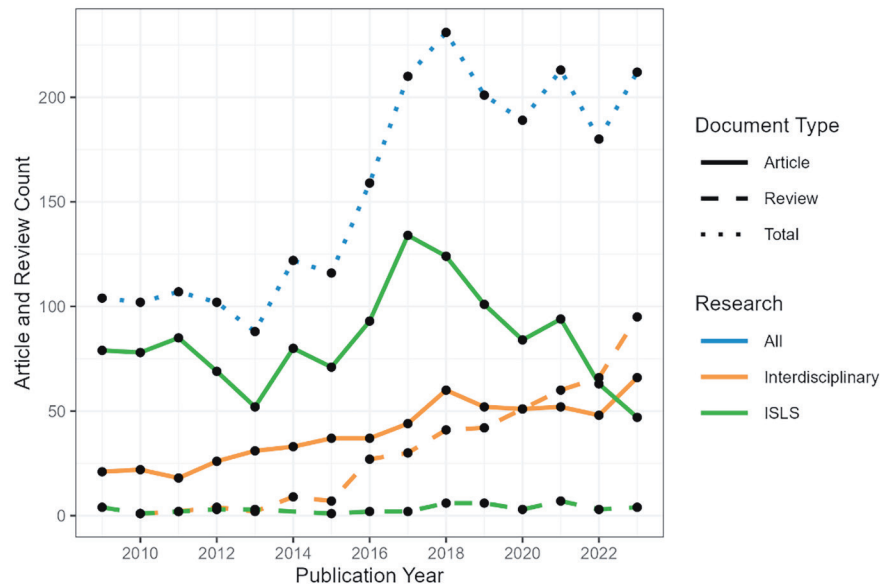


Figure 4. Interdisciplinary Research in Academic Libraries Has Increased Dramatically.

Milojević (2020) that included diverse professions such as “Information Science & Library Science,” “Education,” “Law,” and “Business.” Each of these examples was elevated to its own category in our scheme, while others were recategorized to other suitable existing categories. Some publications still have multiple categories, so they contributed to the count for more than one category, depending on how the data were analyzed.

To determine the percentage of ISLS and interdisciplinary research publications for each library, all publications were classified as in Figure 4 (i.e., any document with an “Information Science & Library Science” tag was classified as ISLS, and all other publications were classified as interdisciplinary). The data were tabulated for each library and visualized as a proportional bar plot (see Figure 5). This revealed striking differences among the libraries with Maryland at nearly 75% for interdisciplinary publications and UC-Boulder and UIUC both below 25%. Penn State and Purdue have had the median value for interdisciplinary publications at 42%. A contributing factor to the interdisciplinary research could be the relationship between the libraries and a medical school.

To reveal the types of interdisciplinary research, all publications with an ISLS tag were dropped, including ISLS journals with the following tags: “Information Science & Library Science; Computer Science,” “Information Science & Library Science; Law,” “Information Science & Library Science; Education,” and “Information Science & Library Science; Humanities,” which have 52, 33, 23, and 19 publications, respectively. Representative journals were *Information Technology and Libraries*, *Law Library Journal*, and *Journal of Scholarly Publishing*. These publications were considered only as ISLS because other important ISLS journals touching on other disciplines, such as *The Journal of the Medical Library Association* and *The Journal of Business & Finance Librarianship*, are categorized solely as “Information Science & Library Science” by WoS.

The simplified research categories for the remaining 606 “Articles” and 438 “Reviews” were tabulated for each library. Some publications still had multiple simplified research categories such as “Medical Sciences; Social Sciences,” “Humanities; Social Sciences,” “Medical Sciences; Education,” “Social Sciences; Education,” “Biological Sciences; Medical Sciences,”

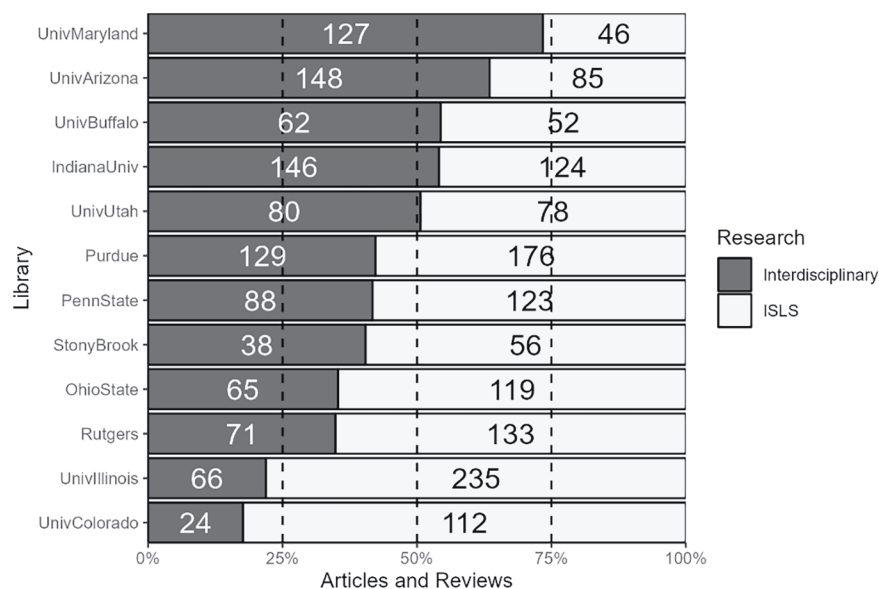


Figure 5. Interdisciplinary Research Can Be a Major Emphasis for Many Academic Libraries.

and “Medical Sciences; Psychology,” which contributed 52, 17, 16, 15, 14, and 12 counts, respectively, to their categories. Of the 1,044 interdisciplinary publications, there are were only 254 duplicate counts.

The majority (575) of the interdisciplinary publications were categorized as “Medical Sciences.” Of these, 347 were classified as “Reviews,” and 288 of these had the keywords “systematic,” “scoping,” “meta-analysis,” “umbrella,” or “integrative” in the “Title.” This is not unexpected given that nine of the 12 libraries are affiliated with institutions that have medical schools, and evidence synthesis research is prevalent in the medical sciences. The interdisciplinary research for other libraries focused on “Humanities,” “Education,” and the “Social Sciences;” this is especially true for libraries with a lower percentage of interdisciplinary research. However, many disciplines were represented and may reflect the presence of subject specialists with training in areas such as data management, geographic information systems and bioinformatics. Unlike publications in “Medical Sciences,” “Articles” were more abundant than “Reviews” with 370 and 90 publications, respectively (73 of the “Reviews” have keywords for high-level reviews).

Analysis of Citations

AAU considers citations as one of the Phase I Indicators for membership, and the data are derived from WoS (Association of American Universities, 2025). For AAU libraries with faculty on the tenure-track, the citation data can be particularly important for promotion decisions. To acquire detailed citation data for the libraries’ publications, we grouped the publications by research category (ISLS or interdisciplinary) and “Document Type” (“Articles” and “Reviews”) and extracted the WoS “Accession Numbers.” A citation analysis of these documents was performed at WoS on December 3, 2024, and the full records were retrieved. Unlike the bibliometric records, the citation records include annual citation numbers for each publication.

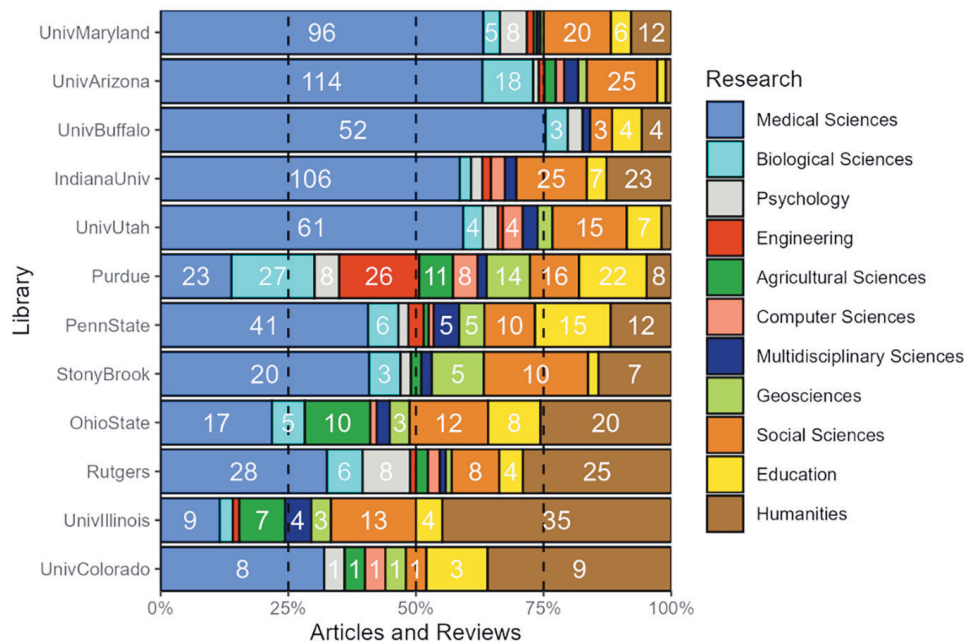


Figure 6. Academic Libraries Are Engaged in a Broad Range of Interdisciplinary Research.

To understand the overall citation numbers, the data were grouped as ISLS versus interdisciplinary and by “Document Type,” and summary statistics were calculated (see Table 5). The median citations were included because the median is robust to outliers in the data such as “Reviews” incorrectly classified as “Articles.” Given the research trends revealed in Figure 4, the annual citation trends were also visualized in Figure 7.

This analysis revealed that interdisciplinary publications received more citations than ISLS publications, with interdisciplinary “Reviews” as the publications with the highest total and median citations (see Table 5). However, the median citations for ISLS and interdisciplinary articles were similar. The average citations showed similar trends.

When visualized by year, the citation trends showed an increase in citations to interdisciplinary research that is even more dramatic than the increase in the number interdisciplinary publications (see Figure 7). Whereas interdisciplinary publications surpassed ISLS publications in 2020 (see Figure 4), citations to interdisciplinary research surpassed ISLS research in 2016. The impact or quality of research is often measured in terms of citations, and AAU explicitly uses WoS data. In this light, academic libraries research may have its most demonstrable impact through interdisciplinary research.

TABLE 5 Summary Table of Citation Data					
Research Category	Document Type	Count	Citations (Total)	Citations (Median)	Citations (Average)
Interdisciplinary	Review	437	11,358	10	26.0
	Article	598	9,758	4	16.3
ISLS	Article	1,251	8,415	4	6.7
	Review	47	255	2	5.4

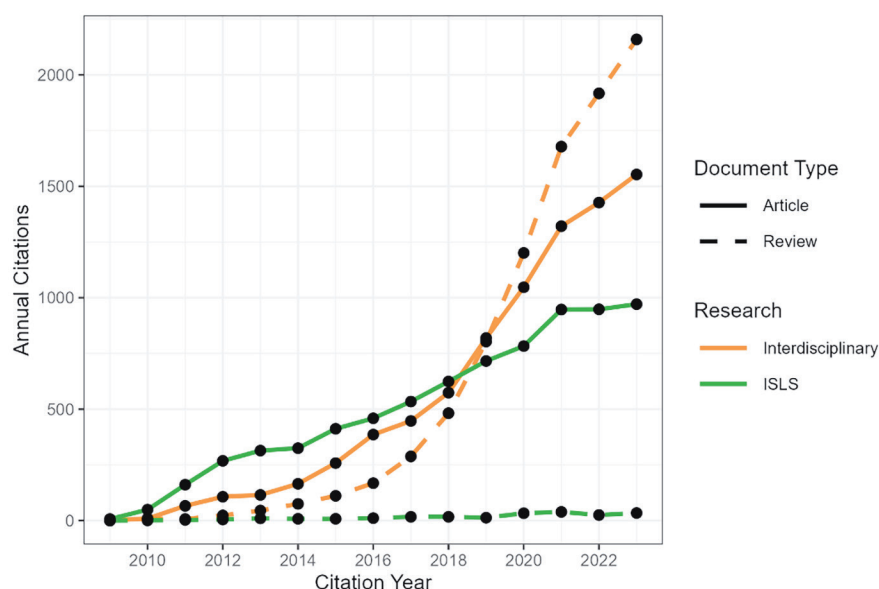


Figure 7. Citation Trends for Academic Libraries Research Publications.

Analysis of Journals

Choosing a journal for publication is a complicated decision for authors, and journal citation metrics can be helpful. Such metrics are available from many sources, including WoS. As an analysis of journal citation rates for this dataset will be valuable, citation data were grouped by journal, and summary statistics were determined. Unlike the overall citation data, “Articles” and “Reviews” were not separated because it was found that the incorrect classification of some “Reviews” as “Articles” distorted the results for some journals. The WoS quartile ranking is also included for ISLS journals. Table 5 shows the statistics for 35 journals that had 10 or more publications in the current dataset.

Most of the journals are ISLS journals, but six journals in other disciplines met the threshold of 10 or more publications. Given that the median citation rate for articles in ISLS journals is four (see Table 4), journals in Table 5 with median citation greater than four can be considered good publication platforms for academic librarian research. The WoS quartile ranking does not appear to be a strong predictor for journal citations, at least for the current dataset. This underscores the fact that quartile rankings apply to the journal and not to the individual articles.

Limitations

There are two major limitations on this study. First, the study was limited to 12 libraries that are not typical academic libraries. There are only 71 AAU member universities, and only a minority have librarians as tenure-track faculty. The sample was chosen to maximize the number of research publications from academic libraries while also maintaining a manageable sample size. The second limitation is the use of WoS as the only bibliometric database. This decision was made because WoS has good coverage of many disciplines and, critically, AAU publication metrics rely on WoS data. In terms of the study goals, the publication sample from WoS is sufficient to support the results. Including other databases, while informative, would complicate the study and would be unlikely to change the observed trends.

TABLE 6
Summary Statistics for the Top Journals

Journal	Research Category	Quartile^a	Count	Citations (Total)	Citations (Median)
<i>Journal of the Medical Library Association</i>	ISLS	Q1	102	1,354	5.0
<i>Portal-Libraries and the Academy</i>	ISLS	Q3	92	632	4.0
<i>College and Research Libraries</i>	ISLS	Q2	88	905	6.5
<i>Journal of Academic Librarianship</i>	ISLS	Q2	87	674	6.0
<i>Journal of Library Administration</i>	ISLS	Q3	59	484	6.0
<i>Reference Services Review</i>	ISLS	Q2	48	392	5.5
<i>College and Undergraduate Libraries</i>	ISLS	Q3	43	223	4.0
<i>Evidence Based Library and Information Practice</i>	ISLS	Q4	41	156	1.0
<i>Library Resources and Technical Services</i>	ISLS	Q3	41	220	3.0
<i>Cataloging and Classification Quarterly</i>	ISLS	Q3	38	123	2.0
<i>Journal of Consumer Health on the Internet</i>	Interdisciplinary	-	38	68	1.0
<i>Collection Management</i>	ISLS	Q4	35	281	5.0
<i>Reference and User Services Quarterly</i>	ISLS	-	35	266	3.0
<i>Information Technology and Libraries</i>	ISLS	Q2	34	322	8.5
<i>Law Library Journal</i>	ISLS	Q4	32	172	2.0
<i>Communications in Information Literacy</i>	ISLS	Q3	30	266	6.5
<i>Journal of Business and Finance Librarianship</i>	ISLS	Q3	30	140	4.0
<i>Technical Services Quarterly</i>	ISLS	Q3	25	53	1.0
<i>Journal of Agriculture and Food Information</i>	Interdisciplinary	-	23	100	2.0
<i>Library Trends</i>	ISLS	Q4	22	155	6.0
<i>BMJ Open</i>	Interdisciplinary	-	21	459	5.0
<i>Art Documentation</i>	Interdisciplinary	-	20	35	1.0
<i>PLOS One</i>	Interdisciplinary	-	20	380	13.0
<i>Journal of Map and Geography Libraries</i>	ISLS	Q4	19	70	2.0
<i>Journal of Web Librarianship</i>	ISLS	Q3	19	183	9.0
<i>Qualitative and Quantitative Methods in Libraries</i>	ISLS	Q4	17	10	0.0
<i>IFLA Journal-International Federation of Library Associations</i>	ISLS	Q3	14	102	4.0
<i>Library Journal</i>	ISLS	Q2	14	59	4.0
<i>Library Hi Tech</i>	ISLS	- ^b	13	116	3.0
<i>Journal of Scholarly Publishing</i>	ISLS	Q3	12	37	3.0
<i>Library Management</i>	ISLS	Q2	12	42	3.5
<i>Notes</i>	Interdisciplinary	-	11	24	1.0
<i>Publishing Research Quarterly</i>	ISLS	Q3	11	20	2.0
<i>Serials Review</i>	ISLS	Q3	11	33	1.0
<i>Bottom Line</i>	ISLS	Q1	10	28	1.0
<i>Interlending and Document Supply</i>	ISLS	-	10	81	8.0

^aQuartile rankings are only shown for ISLS journals.

^b*Library Hi Tech* was de-listed from the Web of Science Core Collection, so no quartile ranking is available.

In support of this decision, Borrego et al. (2018) utilized only Scopus data when they noted the decline in ISLS publications and an increase in interdisciplinary research. Similarly, the results of Chang (2018) are based only on WoS.

Conclusions and Future Directions

Previous studies have suggested that academic librarians are shifting their research publications from top tier ISLS journals to other publishing opportunities (Wiberley et al., 2023), whereas other studies have revealed an increased involvement of librarians in interdisciplinary research (Borrego et al., 2018; Chang, 2018). At the same time, ACRL has recommended that academic libraries should seek ways to impact faculty research productivity (Oakleaf, 2010), and evidence synthesis research has shown tremendous growth (Slebodnik et al., 2022). The current study provides data that links these phenomena. The 12 libraries examined show a clear decline of ISLS publications, starting in 2017, as well as an increase in interdisciplinary research, which started earlier. By 2020, interdisciplinary publications outnumbered ISLS publications. This interdisciplinary research encompassed a broad range of disciplines; however, research in the medical sciences, especially reviews, is a major contributor to the increase.

The decline in ISLS research from academic libraries might seem alarming, but, if viewed through the lens of the ACRL report titled “The Value of Academic Libraries” (Oakleaf, 2010), this result has a positive interpretation. The ACRL report, in addition to including recommendations, concludes that academic libraries should align with the priorities of their institutions. Several recommendations involve collaborating with faculty in other disciplines to increase their success in research, grant writing, and teaching. The present study provides strong evidence, through co-authorship on interdisciplinary research publications, that academic librarians have successfully implemented at least some of these recommendations. The obvious example is the sheer number of reviews in the medical sciences, and there are similar publications in other disciplines. Academic libraries often hire subject specialists with training in data management, geographic information systems, bioinformatics, instructional design, and other areas, and these specialists can collaborate on research in a broad range of disciplines. The publications in biological sciences, engineering, and geosciences appear to be outcomes of such collaborations. The publications in education are also likely the result of successful collaborations between librarians—who have expertise in information literacy—and other faculty. Thus, the decline in ISLS research may be caused by the increase in interdisciplinary research as academic libraries’ priorities evolve to align with their university. Academic libraries have a long history of evolving to meet new challenges such as digital libraries, open access publishing, research data management, and the COVID-19 pandemic. Each of these challenges ultimately strengthen academic libraries, and the evolving trend toward more interdisciplinary research is no different.

Oakleaf (2010) also recommends that academic libraries adopt systems to assess their progress in aligning with their institution. The present study’s assessment suggests that at least some academic libraries have succeeded in shifting their research priorities. Given the increase in interdisciplinary research by academic librarians, it is critical that research productivity assessment not be limited to a small subset of journals, but that it instead embraces a broad range of journals across disciplines; the present study provides an example of how this can be done. Future studies should embrace a wider range of academic libraries and databases

despite such studies being laborious and time-consuming, even with computational methods. If academic libraries are to flourish, assessments that follow the principles of evidence synthesis must be implemented.

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Data Sharing Statement

The data that supports the findings of this study are available at Open Science Framework (<https://osf.io/8u6bz/overview>). The following supplemental data files are shared:

Supplemental File 1. A tab-delimited text file with author names, bylines, ORCID iDs, university and campus (<https://osf.io/8u6bz/files/r4nxxm>).

Supplemental File 2. A tab-delimited text file with select bibliometric data for WoS documents analyzed for this research. Variables include university, WoS accession number, full authors, title, source, and publication year (<https://osf.io/8u6bz/files/fuvwm>).

Supplemental File 3. A tab-delimited text file with the scheme to simplify WoS research categories (<https://osf.io/8u6bz/files/a6q8p>).

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