

The evolution towards aggregated content and the history behind its growth

Across institutions of every size, aggregated databases form the strategic anchor for library collections

A new analysis from ProQuest, from Clarivate, of the holdings data of 171 U.S. libraries reveals that libraries consistently allocate the largest share of their content investments to aggregation, curated collections of content hosted within a single interface, regardless of budget tier. From small colleges to major research universities, aggregated content offers scalable value, predictable spend and broad coverage. Other formats like Abstracting & Indexing (A&I), reference materials and primary sources show strong representation, but none

match the universal prioritization of aggregation. For academic librarians, this trend underscores aggregation's enduring role as a foundation in collection development.

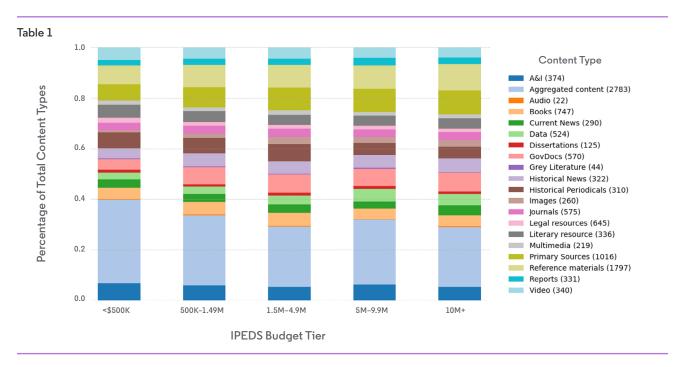
In this paper we explore:

- The holdings of academic libraries, analyzing their make-up by content type based on budget spend
- Reasons behind aggregated content's dominance in collections
- The **evolution** of aggregated content in academic libraries
- The **future** of aggregated content



How different content types scale across institutional budgets

With the permission of participating libraries, ProQuest analyzed the content types held in their A to Z list, organizing the data in five budget tiers, from under US\$500,000 to over US\$10 million. Twenty different content types appear in collections, from Abstracts & Indexes (A&I) to video. The chart below shows the percentage of content types (by items) that libraries have in their collections.

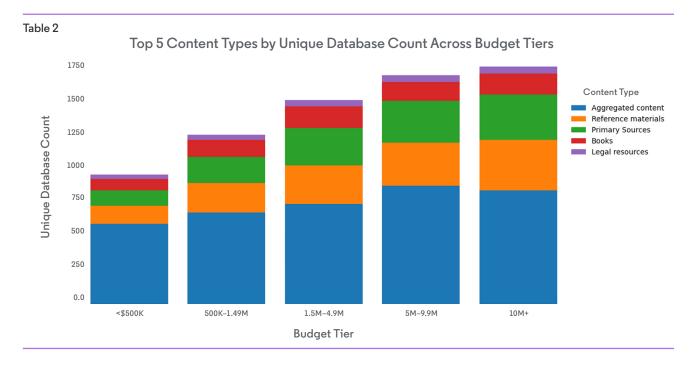


Key takeaways

- Aggregated content is universally dominant, consistently ranking as the top content type across all budget tiers. It is a foundational investment, offering scalable value regardless of budget size.
 - They represent:
 - 33.0% of content in <\$500k institutions
 - **27.7%** in \$500k-\$1.49M
 - **23.9**% in \$1.5M-\$4.9M
 - 25.6% in \$5M-\$9.9M
 - · 23.8% in \$10M+
- Reference materials and primary sources rise with budget, with larger institutions able to invest more in depth and archival richness.
 - ° These content types show **increasing representation** in higher tiers:
 - Reference materials peak at 10.4% in \$10M+ institutions.
 - Primary sources reach 9.5% in \$10M+ and 8.9% in \$1.5M–\$4.9M.
- **Historical content is strong across mid-to-high tiers.** Libraries with broader mandates prioritize historical depth.
 - Historical News and Historical Periodicals consistently appear in the top 5 for mid and high tiers.
 - Their share ranges from 4.8% to 6.8%.
- **A&I databases show consistent representation,** a stable priority, supporting discovery and indexing needs across institutions.
- Its share ranges from **5.2% to 6.7%**, with minimal variation.
- · Multimedia and video are present, providing important content in most collection strategies.
 - $^{\circ}~$ Their share hovers around 1.4% to 4.8%, with video peaking in <\$500k institutions.

A closer look at the top five content types

By total unique database count across budget tiers



Key takeaways

- Aggregated content makes up the largest segment in every budget tier, especially for institutions with smaller budgets.
- Reference materials are consistently high across all budget tiers, highlighting their foundational role in academic libraries.
- The number of **primary source databases** rises as budget size grows, highlighting a need for models that enable more access for libraries with smaller budgets.
- Books and journals remain a core part of collections in all budget tiers.
- As budgets increase, libraries diversify their collections, adding more primary sources and reference materials while maintaining strong coverage of books and journals.

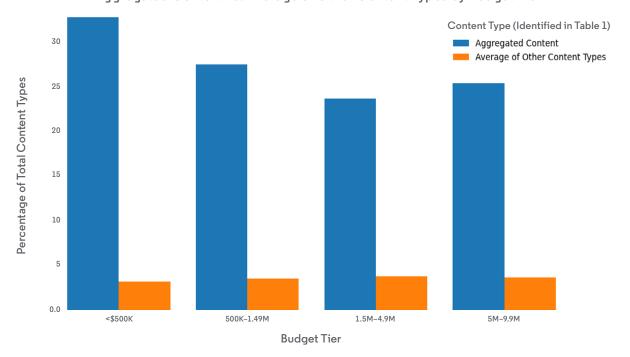


Aggregated content: A scalable solution across budget tiers

Comparing the presence of aggregated content versus the average number of items of all other content types shows its dominance across all institutional budget tiers. Libraries with the smallest budgets (<\\$500k) devote the largest share of their holdings to aggregated content. This trend continues across all tiers, underscoring aggregation's role as a cost-effective, high-impact investment.

Table 3

Aggregated Content vs. Average of Other Content Types by Budget Tier



Key takeaways

- Aggregated content consistently represents a much larger share of total content types across all budget tiers.
- Its dominance is most pronounced in the **lowest budget tier (<\\$500k)**, where it accounts for about **33%** of holdings, compared to an average of just **5%** for other content types.
- This reinforces the idea that aggregation is not only foundational but also financially strategic, especially
 for institutions with limited resources.

"Users are no longer satisfied searching separate databases. They want to search substantial collections of databases through one interface and with one search."

Carol Tenopir, The Database Universe, Library Journal, 2010

Why aggregated content matters

Aggregated content has become a cornerstone of academic library collections – not just because of their breadth, but because of the strategic value they offer to both librarians and users. Their **consistent prioritization** across institutions of all sizes and spending levels **speaks to their enduring utility**.

Benefits for librarians

- Efficiency and time savings: Aggregated platforms simplify discovery and access, reducing the need to manage multiple subscriptions or interfaces.
- Collection gaps bridged: Aggregation helps fill subject and format gaps, especially in interdisciplinary areas.
- Currency: Continuous updates ensure collections remain relevant and comprehensive.
- Predictable spend: Subscription models offer financial clarity and stability.

Benefits for users

- Comprehensive access: Aggregated content provides richer, fuller stories by combining journals, news, reports and multimedia.
- Improved discovery: Enhanced search tools and metadata make it easier to find relevant content.
- Equity of access: Aggregation supports inclusive learning by offering broad coverage across disciplines and formats.

Improving the value of a single search: How aggregated content has evolved

Aggregation in academic libraries began in the 1970s with **Dialog**, an early online search service that unified access to multiple databases. Searching was complicated and time-consuming, with queries that could run dozens of lines. Nevertheless, long before the advent of the internet, Dialog allowed researchers to search multiple sources through a single interface and laid the groundwork for **continual improvements in the value of a single search**.

The 1980s and 90s saw **CD-ROM technology** further simplify access with curated content collections on disc, making research **faster and more convenient** for libraries and users.

With the advent of the internet in the mid-1990s, aggregated content transitioned to web-based platforms. This shift enabled:

- Real-time updates to content collections.
- Improved search interfaces, including Boolean logic, faceted filtering and fulltext search.
- Integration with library systems, allowing seamless linking from catalogs and, eventually, course management platforms.

Platforms like **ProQuest expanded their offerings** beyond journals to include news, reports, dissertations, videos and primary sources, creating rich, interdisciplinary collections, offering unified access to thousands of sources.

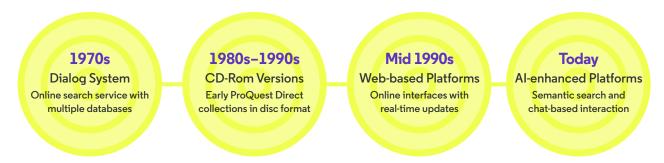
Aggregation today: Evolving with purpose

Modern aggregated content has evolved far beyond their origins as technical conveniences. Today, they are strategic platforms that support teaching, learning and research across disciplines and formats.

An example is the creation of **ProQuest One Academic Premium**, which combines four foundational aggregated databases to create a single, interdisciplinary solution spanning news, scholarly journals, video, dissertations and ebooks. With an interface designed to help users navigate the extraordinary breadth of information, ProQuest One Academic Premium set a new standard in the type and variety of content that's available to users and **showcases what aggregated content can do** at its best:

- Bridge collection gaps so that users can explore the breadth of a topic in one place
- Advance research and learning journeys
- Help libraries meet users all users where they are.

History of Aggregated Content



Bridging gaps across time, perspectives and formats

ProQuest has been preserving and archiving a vast array of content for more than 80 years — including scholarly journals, news, magazines, dissertations, working papers, market reports, videos and even audio. That content — which spans more than 600 years — has been organized into increasingly rich research solutions that enable users to access it in a single, searchable resource. This diversity allows users to explore topics from multiple angles, whether they're undergraduates grounding themselves in a subject or researchers seeking cutting-edge insights.

For libraries, this breadth of content bridges gaps across time, perspectives and learning styles, enabling them to deliver a search experience far superior to general search engines — one that advances institutional research and learning missions.

"The largest and widest-ranging literature database on the market, ProQuest One Literature is a boon to academic libraries that support literary studies...libraries seeking an all-in-one literary studies resource cannot go wrong with ProQuest one Literature."

Advancing research and learning journeys

The enduring value of aggregated content lies not just in their breadth, but in how they've evolved to meet the changing needs of academic users. While aggregators like ProQuest have continually expanded the breadth and depth of content that's accessible in a single interface, just as notable is the delivery of the content, which is also evolving with users.

In 2019, ProQuest launched **ProQuest One Literature**, a milestone in discipline-focused aggregation. Built with input from librarians, faculty, and practitioners, it combined **multi-format content** (journals, videos, transcripts, ebooks, and more) with a **purpose-built interface** that mirrors how literature students and researchers approach their work. ProQuest One Literature was followed by additional discipline-specific aggregated resources, covering popular and emerging areas of concentration like business, psychology, education and sustainability.

In 2025, ProQuest expanded the ProQuest One concept further, organizing its massive digital archives of primary sources into nine aggregated resources. Solutions like ProQuest One History and ProQuest One Global Studies & International Relations enable libraries of all sizes to provide access to the type of content that was once only found in the world's most prestigious research libraries.

"ProQuest One Sustainability offers a remarkable amount of highquality, multi-formatted content that is easy to search and access, all in a convenient package. Moreover, the ProQuest Research Assistant is exceptionally helpful for the insights and research guidance it provides."

Rob Tench, Library Journal eReview, 2025

Designing for equity and access

In this era of digital transformation, prioritizing design strategies that promote inclusive and equitable access for all users is essential to the library mission. This includes:

- **Mobile-first design** optimizes access for smartphones and tablets, ensuring that students and researchers can discover and interact with content anytime, anywhere.
- Multilingual interfaces and support materials allow users to engage deeply with resources in the language they're most comfortable using, thereby eliminating barriers to entry.
- Accessibility features like screen reader compatibility, adjustable font sizes, highcontrast modes, and keyboard navigation. These innovations ensure that users with disabilities can navigate, search, and consume content independently and efficiently.

By embracing these user-centered design principles, aggregated content is expanding the reach of their content and fostering a more inclusive academic environment.

The next new thing: Advancing user engagement with content via Al

As technology advances, aggregated content is entering yet another new era that's transforming how users engage with content. Beyond speed and search breadth, this new era is defined by **responsible Al integration and personalized research journeys**.

Al-powered discovery and interaction

Academic Al is reshaping how users interact with aggregated content. Instead of relying solely on keyword searches and filters, users can now:

- Chat with documents: ProQuest is launching a feature that allows users to ask questions and receive answers based solely on the content of the document they're viewing. Chatting within a document allows users to query directly with a vetted source.
- Engage deeply: Engage more deeply with the content, exploring topics and sub-topics of their article and understanding important concepts efficiently without interruption to their workflow.
- Evaluate quickly: Quickly evaluate materials to decide if they are relevant, thanks to succinct key takeaways and short descriptions of key information such as findings and conclusions, tone, or themes based on the document types being viewed.
- **Discover more easily:** Find relevant content more easily through suggested search terms and recommended sources, as well as related research topics, inspiring further research through connected subjects.
- **Visualizations:** A graphical representation of topics and subtopics within a paper, making access to a range of related topics more apparent.

These capabilities make aggregated databases more accessible to novice researchers and more powerful for advanced scholars.

A note about Al

The AI tools available in ProQuest resources are built on the Clarivate Academic AI platform which is built in collaboration with librarians and educators. These tools are designed to support academic rigor, respect user privacy and enhance — not replace — critical thinking. By embedding AI within trusted, curated content, ProQuest ensures that aggregated content remains aligned with scholarly standards.

Personalized Research Journeys

While aggregated databases have grown in size and complexity, new features have made the content more navigable and accessible:

- Tailored recommendations: Based on user behavior and document content, platforms like ProQuest suggest relevant topics and sources.
- Smart alerts: Users can set up notifications for new publications or search results, helping them stay current in their field.
- Integrated search refinement: Academic Al suggests Boolean queries and indexing terms to deepen exploration.

A storied past and a bright future

Aggregated content has a rich history that's marked by consistent innovation. Librarians, working in tandem with vendors, have driven an evolution that's turned repositories of content into user-centered solutions that support diverse research needs and maximize institutional value. As libraries continue to adapt to evolving budgetary and scholarly landscapes, aggregation remains a reliable foundation for comprehensive and scalable content development.

<u>Request a free holdings review</u> to see how your collections align to your institution's needs.

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