# Evaluation of six news aggregator databases: A comparison for researchers and librarians

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# Evaluation of six news aggregator databases: A comparison for researchers and librarians

News aggregator databases offer different content and features, but there is little guidance on how these databases compare. This article compares the coverage scope, availability of 35 U.S. newspaper titles, and features of six news aggregators available to U.S. academic libraries: Newspaper Source Plus (EBSCO), Factiva, News (Gale OneFile), Nexis Uni (LexisNexis), Access World News (NewsBank), and U.S. Newsstream (ProQuest). Factiva and U.S. Newsstream have most of the titles examined, but others offer multimedia content and batch downloads. Librarians and researchers can use this guide to understand the content and features of databases for research projects, consultations, or collection development.

Keywords: News aggregator databases, news databases, news content analysis, database review, digital news archives

The authors report there are no competing interests to declare.

#### Introduction

Libraries have played an invaluable role in news analysis research by providing the researchers access to news content through their newspaper collections. Online archives, news databases, and computer software have made it easier for researchers to access and analyze news content (Neuendorf, 2017). The advent of news aggregator databases, which collect news content from a wide range of sources and provide access to a large archive of content through a single point of entry in a user-friendly interface, has made it even easier to access and retrieve news content. At the same time, these aggregator databases have also created unique challenges for researchers and librarians. Aggregator vendors frequently change contracts with news sources, which results in providing unsteady coverage of content available in the database. Additionally, each vendor provides its own search interface and features. This can make it confusing for researchers to select an aggregator for their news analysis research and to contextualize

their database choice. It can also be overwhelming for librarians to make subscription recommendations or advise researchers on the strengths and weaknesses of each database. This article will detail how one group of librarians analyzed six newspaper aggregator databases with the purpose of informing librarians and researchers of the coverage and features of each database.

#### **Literature Review**

News analysis is a popular area of study across disciplines (Nicholson, 2013; Riffe & Freitag, 1997; Takashi et al., 2021). For over 20 years, academic libraries have provided access to news aggregator databases to support news research. Lexis-Nexis Academic Universe (now Nexis Uni) has been widely available to academic libraries since 1998 (Kmetz, 2002), and Factiva entered the academic library market in 2002 (Matesic. 2004). Vendors like ProQuest, NewsBank, and Gale offer news aggregators as well. Researchers have also used publicly available aggregators such as Google News or Chronicling America for their news research. While a comprehensive list of the most subscribed databases across academic libraries could not be found, business librarians have studied business database subscriptions at academic libraries affiliated with business schools. Three studies conducted over two decades found that the number of news databases has increased over time, from three databases in 2001 to five in 2023 (Schnedeker, 2008; Kim & Wyckoff, 2016; Tully, 2023). The studies reported that Nexis Uni and Factiva are two of the most subscribed databases since 2021, and Global Newsstream (ProQuest), NewsBank, Newspaper Source (EBSCO), Newspapers.com, and InfoTrac Newsstand (Gale) are some of the newer aggregators that business libraries have added to their collections.

The popularity of news aggregators as a data collection source and tool has been well documented in various disciplines. For example, in the Journalism and Mass Media field, Riffe and Freitag (1997) found that one-fourth of the articles published in *Journalism and Mass Communication Quarterly* from 1971 to 1995 used content analysis methodology, and of those articles, 46.7% studied newspapers. They surmised that the easy access to content in databases or archives contributed to the rise in content analysis methodology (p. 521). In the Political Science field, scholars use news aggregator databases to find articles for "media-based event count" studies, such as counting how many stories or the number of column inches in a time frame (per month or year) was given to a specific topic, or counting the frequency of events (e.g., strikes, protests, riots, etc.) (Karstens et al., 2023; Woolley, 2000). In the Public Health field, Miller and colleagues (2012) used the *LexisNexis* database to analyze U.S. newspapers' framing of nursing-home coverage, while Wackowski et al. (2018) used the *Access World News* (NewsBank) and *Factiva* databases to conduct a content analysis of ecigarettes in U.S. newspapers, newswires, and online news sources.

The search system researchers choose is critical for accessing, collecting, analyzing data, and replicating study results. Each database varies in the number of stories, geographic reach, media type, and coverage of a specific news event (Buntain et al., 2023). As an illustration, Gilbert and Watkins (2020) found that most born-digital news content is inaccessible through major news databases. Only 30% of born-digital news outlets, or 14 out of 47, have content in one of the four major news aggregators: *Access World News* (NewsBank), *Factiva*, *Nexis Uni*, and *U.S. Newsstream* (ProQuest). Karstens et al. (2023) compared *Nexis Uni* and *Factiva* and found that changes to the terms of use under the news database licensing agreement could affect the quality and replicability of data collection. They suggested best practices for the replicability of data

gathering, including specifying which databases are used, listing the sources used, justifying the sources chosen, presenting the exact search string(s) in replication material, stating information on how articles are processed, and the dates of access. Driedger and Weimer (2015) found that *Factiva*'s academic model allows users to make administrator changes that affect the search results of all users at the same institution. They question *Factiva*'s reliability across multiple institutions. Given the range of content and features across databases, researchers should compare news databases' content and, if using more than one database, compare the indexing and archiving software across the databases to see if they are equivalent. They should also test and record databases' comparability and completeness, an important aspect when reporting transparency for news content analysis studies (Blatchford, 2019; Lacy et al., 2015).

However, less documented is the researcher's justification of their database selection or acknowledgment of database limitations in their content analyses of news. We can only speculate that the scarcity of the justification or acknowledgement is due partially to a dearth of guidance on which newspaper aggregators to choose for content analysis projects. Researchers likely rely on the databases that their institutions have access to and may not be keenly aware of the different content and functionality of the other databases.

Although published about two decades ago, Hansen's (2003) advice on fundamental questions researchers need to ask before using news databases is still valid for today's researchers who consider using newspaper aggregators for their content analysis:

What do I have access to? What do I not have access to? Who controls that access?

Will I be able to conduct the appropriate types of searches with the necessary level of

specificity, to generate the information I need? Am I going to have to design my study and draw my sample based on someone else's decisions about the access I have to the content I need? Will anyone else be able to reproduce my results if they study the same publications but use a different vendor for access to the content? (p. 223)

In conclusion, researchers should carefully consider the different databases available to them when conducting research, and there is a clear need for detailed information about news aggregators. Detailed and recent information can help researchers, especially those using multiple databases for large content analysis projects, be more transparent about their data collection methods and ensure that they use the most appropriate database for their needs.

This article discusses the process and outcome of an Association of College & Research Libraries (ACRL) committee's efforts to create such a news aggregator comparison guide. The article seeks to answer the question, "How are the attributes of six news aggregator databases, including the content scope, availability of U.S. newspaper titles, and database features similar and different?" This information can help librarians understand different databases' content and usability features to inform collection development, consultation, and teaching practices. Researchers can use this information to decide which databases to use for a project or suggest database subscriptions at their institution's library.

# The Project

In 2020, five members of the Education and Behavioral Sciences Section (EBSS)

Electronic Resources in Communication Studies Committee (ERCSC), a committee within Association of College & Research Libraries (ACRL), created a newspaper aggregator guide for librarians and researchers. The goal of the project was, "To

compare a selection of news aggregator databases to inform/educate librarians who work with researchers conducting content analysis studies of the news" (ERCSC, personal communication, January 2021). While other newspaper guides like one from the Council of Chief Librarians, Electronic Access and Resources Committee (CCL-EAR) (2006) are available, it is focused on California, and over 15 years old. The ERCSC wanted to create a guide that was recent, national and regional in scope, easy to access, and adaptable by other librarians to fit their needs. We selected common news aggregator databases and had each member select at least one database to review based on access at their institution. We coordinated our database selection to ensure various vendors were represented. The databases we reviewed were *Newspaper Source Plus* (EBSCO), *Factiva*, *News* (Gale OneFile), *Nexis Uni*, *Access World News* (NewsBank), and *U.S. Newsstream* (ProQuest). The guide was updated in 2022 by the members of the ERCSC, and in 2023 by the lead authors for publication.

# **Methodology and Results**

To compare the selected news aggregators, we first created a list of attributes to examine in each database, such as content and features (Brown, 2021). The attributes were selected based on our experience consulting with researchers on projects that used content analysis methods to examine the news content. We analyzed both the format (e.g., text, scanned newspaper pages, photos, etc.) and publication coverage for each database, highlighting date coverage of some popular U.S. newspaper titles in each aggregator. Lastly, we focused on analyzing the databases for the ability to save searches, download articles and citations, and conduct advanced searches.

# The scope

To determine the scope of materials covered by the aggregators, we reviewed the product homepages, pamphlets, flyers, title lists, and other vendor sales information. We also consulted database review media such as *The Charleston Advisor* and *Library Journal infoDOCKET* for additional information on the aggregators, if available. We considered the following attributes:

- Geographic coverage: Are international, U.S. national, regional, and local titles indexed in the aggregator?
- Title list: Is a title list available?
- Content size: How many sources does the aggregator cover?
- Record types: What types of sources does the aggregator include?
- Date coverage: How far back does the aggregator go?

As summarized in Appendix A, we found the number of sources indexed by the aggregators from their title lists and the information provided by the vendors. Vendors such as ProQuest and EBSCO display their title lists on the database product homepage, but the *Nexis Uni* title list is only discoverable through a web search. Additionally, the date coverage information is not included on the *Access World News* (NewsBank) title list and is only available through a title search within the system. *Factiva* has the highest number of indexed sources (30,000), followed by *Nexis Uni* (17,000) and *Access World News* (NewsBank) (13,000). It is important to note that the availability of a title does not always imply the availability of the full text. All six aggregators index various types of records, including newspapers, websites, blogs, transcripts, and more.

The exact date range covered by news aggregators is difficult to determine because their contracts with content providers are frequently changing. This means that

titles are often added or removed from their collections without notice. Additionally, title lists are not always up to date, even if they indicate that they are. Some titles are available with embargoes, and this information may be found on the title list or through a search within the system. Most news aggregators' records date back to the 1980s.

# Availability of current U.S. newspaper titles

We conducted a comparative analysis of the availability of select current newspaper titles and their date coverage. Using circulation data from Alliance for Audited Media's (AAM) Media Intelligence Center database, we identified the top 10 circulating U.S. newspapers based on weekday circulation numbers from AAM's March 2023 survey period. We also purposely selected five U.S. regional newspapers for the Midwest, Northeast, Southeast, Southwest, and West, based on circulation numbers, geographic representation, and the prestige of the paper. We did not select two papers from the same city.

Reviewing the databases' availability of a selection of current U.S. newspaper titles, yielded some interesting results (see Appendix B). Of the top 10 most circulating newspapers, only *Factiva* provides access to the full text of all 10 titles. Second runner-up is *U.S. Newsstream* (ProQuest) providing full text coverage of nine titles and one title indexed only, followed by *Newspaper Source Plus* (EBSCO) providing five full text titles. Interestingly, *Philadelphia Inquirer* was available in all six aggregators, and *Honolulu Star-Advertisers* is in five aggregators each. *The Wall Street Journal, New York Post, The Boston Globe, and Chicago Tribune* are available only in two aggregators. *The Los Angeles Times* is available in *Nexis Uni*, but the coverage goes back only to the past six months of the archives. Thus, if an institution is looking for a news aggregator focusing mainly on the top circulating U.S. newspapers, *Factiva* or *U.S. Newsstream* (ProQuest) would meet the needs.

We then selected five popular daily newspapers from five different regions in the U.S. Of the 25 daily newspapers, the full text and current coverage of the regional newspapers are most found in *Factiva* (24), followed by *Access World News* (NewBank) (20), *U.S. Newsstream* (ProQuest) (10), *Nexis Uni* (7), *Newspaper Source Plus* (EBSCO) (3), and *News* (Gale OneFile) (1). *Factiva* has the most titles, with all but the *Albuquerque Journal*. Of the 25 titles, no newspaper was available in all six aggregators. Full text and current coverage of the *Pittsburgh Post-Gazette* and *Atlanta Journal-Constitution* are available in five aggregators, but full text and current coverage of sixteen newspapers are available only in two databases.

The date coverage of the six aggregators for the selected regional newspapers begins as early as 1981, but it is often incomplete. For example, the full text of the *St. Louis Post-Dispatch* is available in *U.S. Newsstream* (ProQuest), but both full text and indexing are missing for 1991. Therefore, it is essential for researchers to check for missing issues in the content coverage. In conclusion, *News* (Gale OneFile), *Access World News* (NewsBank), and *U.S. Newsstream* (ProQuest) have a larger number of indexed titles and their coverage extends further back in time.

#### Database features

We examined five different types of database features that are important for researchers' ability to search and save articles for news content analysis projects.

Appendix C summarizes the findings.

# Content format

We reviewed the following attributes to evaluate content format, focusing on the current full-text availability:

- Does the aggregator provide HTML text only or scanned news pages?
- Are graphics, charts, photos, or multimedia files available?

All six news aggregators provide newspaper articles in HTML text, but not as scanned news pages. However, the presentation of graphics, charts, photos, or multimedia sources varied. If an original article included an image or video, *Factiva* or *Nexis Uni* provides the URL of the source, while *News* (Gale OneFile) or *U.S. Newsstream* (ProQuest) provides limited coverage. The availability of such material on *Access World News* (NewsBank) varied depending on the institution's subscription.

# Advanced search features

Advanced search features enable users to drill down and find documents related to the research quickly. The following attributes were reviewed:

- What types of search fields are available? Are there any unique search fields?
- What filters are available to refine the search?
- What options are available to display the results? Can users preview the record on the search results page?
- What are other notable search features?

All six news aggregators provide an advanced search mode, but with varying degrees of user-friendliness. Boolean operators and connectors, keyword search, and subject search are commonly found to allow users to build a query. Various fields are also offered to refine the search results in all of the databases. *Factiva* provides perhaps the most sophisticated search interface and some unique search fields, including adverse, negative, and positive news search. The negative news search feature is also available in *Nexis Uni*. Researchers may find *Newspaper Source Plus* (EBSCO) and *U.S.*Newsstream (ProQuest) easier to use as they use the same interface as other popular

academic databases from the respective vendors. *Access World News* (NewsBank) provides a map-based interface to help users search the sources available in it. *News* (Gale OneFile), *Access World News* (NewsBank), and *Factiva* offer value-added features such as "Suggested Topics" and "Topic Finder," which allow users to find relevant documents by browsing.

Account features and saving searches

A personal account in the database allows the users to organize their research into folders, save searches and set preferences that stay in effect when they return, and create and customize alerts. The following attributes were reviewed:

- Does the individual account let users save and organize results and searches?
- Do users need to login to save their search history?
- Does the account integrate with other online accounts such as Google or Microsoft?
- Can users create alerts or RSS feeds for new content that matches the search?
- Are annotation tools and notes available?

All of the databases except *Factiva* allow users to create individual accounts to save and organize search results, search history, and create alerts. The availability of these features in *Factiva* depends on the institution's subscription. *Newspaper Source Plus* (EBSCO), *News* (Gale OneFile), and *Nexis Uni* also offer accounts that integrate with other online accounts such as Microsoft or Google, as well as annotation tools and notes that allow users to add directly to the record.

Saving, downloading, and exporting results

When planning a content analysis project, it is critical for researchers to know the options for saving, downloading, and exporting results from an aggregator. We reviewed the following attributes:

- How many records can be downloaded at a time?
- Is it possible to export results in a variety of formats?
- How many records can be emailed?
- Is it possible to download citations?
- Can users export records to other sites?

Saving and exporting citations or full-text articles is a key feature for researchers studying the news. All databases allow users to download articles, but each database has limitations to how much can be downloaded. Both *Newspaper Source Plus* (EBSCO) and *News* (Gale OneFile) have no limitations, while both *Factiva* and *Nexis Uni* have a 100 article download limit. *Access World News* (NewsBank) allows users to download 20 articles at a time limited to insubstantial portions of the data. *U.S. Newsstream* (ProQuest) limits downloads to 180,000 words. All databases except *Newspaper Source Plus* (EBSCO) allow users to download articles in PDF format, plus some databases offer options for downloading in RTF, HTML, and Word. Other exporting options include exporting documents to Google Drive, a feature available on all databases except *Factiva*. OneDrive, Evernote, Dropbox, and Google Classroom are also available on various databases we examined. Additionally, some databases can download citations with various limitations, a helpful feature for researchers who do not need the entire article.

*User support and training* 

User support can provide assistance with troubleshooting issues, while training can teach users how to use the database's features and functionality effectively and efficiently. Both can help make the research project more productive for researchers and librarians. We considered the following attributes:

- Is there a Help document? Is a live customer chat available for instant assistance?
- Does the vendor offer a product LibGuide?
- Does the aggregator offer training through live webinars, webinar recordings,
   YouTube videos, or other tutorials?
- Does the aggregator offer an API?
- Does the aggregator present the Terms of Use to the end users?

All six databases provide help documents. Nexis Uni offers a "New to Nexis Uni?" link that allows users to watch a short video tutorial. Factiva offers a live help link. Factiva, Access World News (NewsBank), and U.S. Newsstream (ProQuest) have official LibGuides that can be used for user training. Newspaper Source Plus (EBSCO) and News (Gale OneFile) have general LibGuides for all their products, not for specific databases. Factiva offers ongoing webinars for user training. Newspaper Source Plus (EBSCO) does not offer user training specifically for the database, but for general EBSCO databases. All databases have Terms of Use that users should review before downloading large amounts of text. Users should also check the terms of use policies of any libraries through which they are accessing the databases. Application Programming Interfaces (APIs) allow users to easily download large amounts of text. Factiva, Nexis Uni, and U.S. Newsstream (ProQuest) offer APIs, but they come with an additional cost.

ProQuest's API requires a subscription to ProQuest TDM Studio. *Newspaper Source Plus* (EBSCO) also has an API, but it is unclear if it is for research purposes. *News* (Gale OneFile) and *Access World News* (NewsBank) do not appear to have an API.

# Discussion

The six databases unsurprisingly varied in its content and features. Factiva had the most current content out of all the titles analyzed and the most robust search features, but the ability to save and organize searches depended on the institution's license, and limited downloads to 100 articles. U.S. Newsstream (ProQuest) has current full text coverage of nine out of 10 top circulating newspaper titles and 20 out of 25 current full text coverage of regional papers. Newspaper Source Plus (EBSCO) provided five out of 10 current full text coverage of the top circulating titles and three out of 25 current full text coverage of regional papers. ProQuest and EBSCO's search interfaces are similar to their other products, and researchers may have some familiarity with using these databases. Their download limitations were more generous than Factiva, making it easier for researchers to save news content. Nexis Uni did not have access to a lot of current full text titles; however, the database had numerous options for users to save searches and could download more articles than Factiva, but not as much as Newspaper Source Plus (EBSCO) or U.S. Newsstream (ProQuest). Access World News (NewsBank) strength is in coverage of regional papers and had the ability to save searches but could only download 20 articles at a time. News (GaleOneFile) had a lot of papers indexed but lacked current full text to most titles analyzed. On the other hand, it had a photojournalism collection users could search. Podcasts and videos are also available in Access World News (NewsBank), while Factiva and Nexis Uni link to images published in the original news article.

The process of comparing six news aggregator databases was challenging for a number of reasons. First, the availability of information about the databases' content and features varies. For example, some title lists are available publicly on the database's website, while others require logging in to the database to view the title list. Information about features such as downloading and exporting limitations is often difficult to find, as it is often presented in fine print or in the Help Document, not featured on public websites, or unclear when using the database. Second, libraries subscribe to different databases, so this project required collaboration and coordination with committee members from different institutions who had subscription access to the six databases analyzed. Third, even if institutions subscribe to the same database, they may come across different content and features (Driedger & Weimer, 2015). We could only examine the databases to the best of our ability with the access we were provided. There may be some discrepancies between our findings and others' findings. Fourth, it is challenging to maintain the final comparison document because databases' features, source coverage, and terms of use change over time (Karstens et al, 2023). In our experience, database vendors do not always alert librarians to these changes. Maintaining this document would require frequent thorough reviews of each platform. The ERCSC also turns over on an annual basis, making it hard to maintain access to the databases we want to review.

The comparison provides a comprehensive overview of the different news aggregator databases including its features and content coverage, showing what news aggregators are available on the current market. Librarians can use the guide to make informed decisions about selecting news aggregator databases for their collections. One important factor librarians must consider for evaluating databases is the price, which is an area this article did not cover because pricing information is rarely public and shared

due to non-disclosure agreements. Yet, this guide allows librarians to compare different databases side-by-side. Librarians can also adapt the comparison for their institution by presenting only the news aggregator databases in their collection on research guides for user instruction or as an outreach tool. Additionally, the processes and methods used to develop the guide, including the set of the database attributes, can be used to select and evaluate other types of databases. The ability to examine and evaluate current and potential purchases is one of the key competencies for librarians. For example, when the institution needs to select a database platform for the same content such as *ERIC* (EBSCO) vs. *ERIC* (ProQuest), or one among similar databases such as *ABI/INFORM* (ProQuest) vs. *Business Source Complete* (EBSCO), the guide can be adapted to review the systems and make informed decisions for the institution.

The comparison guide presented in this article would primarily be useful for researchers working on large-scale content analysis projects to compare the databases' software and content coverage, a best practice for reporting transparency for news content analysis studies (Blatchford, 2019; Lacy et al., 2015). The comparison guide may help researchers to make informed decisions about which aggregators to choose based on their content needs, develop retrieval and exporting data strategies in more effective and efficient ways, identify sources for customer service and vender-provided user training, and report data collection strategies and limitations in a more transparent manner.

# Conclusion

News aggregator databases are widely subscribed resources in academic libraries, and many researchers utilize them for content analysis. Prior research on the several news aggregator databases available shows there is no such thing as one perfect database for

content analysis, and yet there is a dearth of guidance on which newspaper aggregators to choose for such projects.

The ACRL Electronic Resources in Communication Studies Committee (ERCSC) recognized the need amongst librarians and researchers for a comparison guide that details the attributes of the databases including content scope and coverage, downloading and exporting features, search facets, and more. This project confirmed that features and content vary across databases. We observed some similarities across databases, such as some overlap in content coverage, and the ability to export, but each database had overall a different content and different download and export limits that can affect how scholars conduct their research.

Future research could compare the API (Application Programming Interface) access, an important feature for large text and data mining studies. This study determined if databases offered such a product but did not closely examine it as the authors did not have access. In addition, librarians can build on this research to examine coverage of publications used by their local users, or examine content and features based on their own access. Continued review of the databases can be used to inform scholars' research decisions and librarians' collection development, instruction, and consultation practices.

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# Appendix

Appendix A. Scope of the newspaper aggregator databases

	Newspaper Source Plus (EBSCO)	Factiva	News (Gale OneFile)	Access World News (NewsBank)	Nexis Uni	U. S. Newsstream (ProQuest)
Product Homepage	https://www.ebsco. com/products/resea rch- databases/newspap er-source-plus	https://www.do wjones.com/prof essional/factiva/	https://www.dowjon es.com/professional/f activa/	https://www.newsbank. com/libraries/colleges- universities/solutions/to p-resources/access- world-news-research- collection-2023	https://www.le xisnexis.com/e n- us/professiona l/academic/ne xis-uni.page	https://www.lexis nexis.com/en- us/professional/a cademic/nexis- uni.page
Geographic Coverage	International and US national	International, US national, and regional	International, US national, regional, and local	International, US national, regional, and local	International, US national, regional, and local	U.S. national, regional, and local
Title List	https://www.ebsco. com/m/ee/Marketi ng/titleLists/n5h- coverage.htm Indication of cover-to-cover, all staff articles, or selective coverage presented	https://proquest.l ibguides.com/fa ctiva/content (In Excel)	om/tlist/products/	https://titlelist.newsbank.com/View?list=Access%20World%20NewsDate coverage information is available through title search in the system		http://tls.search.p roquest.com/titlel ist/ProductSearch ?productName= U.S.+newsstream &subject=0

Size	1,195 U.S. newspapers and international newspapers, 148 full-text newswires, and 2.3 million television and radio news transcripts	30,000 sources from 200 countries in 32 languages	Over 2,300 sources from 50 countries.	Includes current and archived news content (with backfiles beginning in the 1980s) from more than 13,800 sources spanning 200+ countries and territories	17,000 news, business, and legal sources	1,272 sources, including national dailies, over 80 Gannett regional newspapers, and other local, regional, and national titles from throughout the U.S
Record Types	Newspapers, newswires, television and radio transcripts, and ongoing daily updates from popular news sources	Newspapers, newswires, TV or radio podcasts, major news and business information websites, blogs, message boards, company reports, photo agencies, materials on the EUR-Lex website	Newspaper, newswire, video, newsletter, magazine/journal, transcript, images, blog, audio, report, books	Audio, blog, college/university newspaper, journal, magazine, newsletter, newspaper, newswire, transcript, video, web- only source	Print and online journals, television and radio broadcasts, newswires, and blogs. Newspapers with deep archives	Newspapers, newswires, news journals, television and radio transcripts, blogs, podcasts, and digital-only websites
Date Coverage	1980s - present	Varies by title, but mostly from	1980s - present	1980s - present	Varies by title, but mostly	1980s - present

the 1980s to	the from the	
present	1980s to the	
	present	

Caption: Scope of news aggregators' content based on information available by vendors and their title lists.

Appendix B. Selected titles and date coverage

Newspaper Titles	Newspaper Source Plus (EBSCO)	Factiva	News (Gale OneFile)	Access World News (NewsBank)	Nexis Uni	U. S. Newsstream (ProQuest)
		Top 10 (	Circulating U.S. New	wspapers		
The Washington Post	2/23/2003 - current	1/1/1977 - current	1/1/2014 - current	n/a	n/a	1/1/1987 - current
Newsday (Melville, NY)	5/25/2003 - current	7/15/1985 - current	5/22/2003 - 6/30/2016	n/a	n/a	8/15/1985 - current
The Wall Street Journal	3/3/2014 - current (indexed, no full text). Online edition only	6/13/1979 - current	1/19/2004 - 8/2/2023 (indexed, no full text). Eastern Edition, but other editions with various date coverage are also indexed	n/a	5/1/1973 - current (Abstracts only)	1/2/1984 - current
New York Post	n/a	9/15/1997 - current	n/a	1/15/1999 - current	n/a	8/13/1998 - 12/29/2019 (indexed, no full text)
Los Angeles Times	n/a	1/1/1985 - current	1/6/1982 - 11/29/2019 (indexed, no full text)	n/a	Limited to the previous 6 months	1/1/1985 - current

The Boston Globe	9/1/1997 - 8/2/2007	7/1/1987 - current	4/23/2000 - 7/27/2007	n/a	n/a	1/1/1997 - current
The New York Times	1/1/1989 - current (indexed, no full text)	6/1/1980 - current	1/1/1985 - current	n/a	6/1/1980 - current	6/1/1980 - current
Honolulu Star- Advertiser	8/1/2010 - current	1/1/2002 - current	10/30/2010 - current	6/7/2010 - current	n/a	6/7/2010 - current
Chicago Tribune	n/a	1/1/1985 - current	3/23/2000 - 9/1/2009 (indexed, no full text)	n/a	n/a	1/1/1985 - current
Philadelphia Inquirer	2/27/1997 - current	10/28/1994 - current	3/27/2000 - current	1/1/1981 - current	1/1/1994 - current	1/1/1983 - current
		F	Regional Newspaper	rs		
Midwest						
Chicago Sun- Times	n/a	7/1/1985- current	n/a	1/1/1986 - current	n/a	7/1/1985 - 12/31/2007 (indexed, no full text)
Detroit Free Press	n/a	1/4/1994 - current	3/28/2000 - 7/30/2008 (indexed, no full text)	n/a	n/a	1/1/1999 - current
Indianapolis Star	n/a	1/1/2002 - current	3/30/2000 - 7/24/2008	n/a	n/a	5/21/1991 - current
Plain Dealer (Cleveland, OH)	n/a	3/1/1989 - current	n/a	1/5/1970 - current	n/a	3/27/1989 - 3/5/2018

						(indexed, no full text)
St. Louis Post- Dispatch	n/a	2/16/1981 - current	2/22/2010 - 10/17/2017	2/16/1981 - current	1/1/1989 - current	1/1/1988- current
Northeast						
Baltimore Sun	n/a	9/10/1990 - current	2/1/2003 - 9/29/2009 (indexed, no full text)	n/a	Limited to the previous 6 months	9/16/1990- current (Online edition only)
Burlington Free Press	n/a	1/1/2002 - current	1/1/1999 - 12/3/2003 (indexed, no full text)	n/a	n/a	1/1/1999 - current
The Hartford Courant	n/a	5/1/1991 - current	5/4/2003 - 9/29/2009 (indexed, no full text)	7/1/1991 - current	Limited to the previous 6 months	1/1/1992 - current
Pittsburgh Post- Gazette	9/3/1997 - current	7/30/1990 - current	4/25/2000 - 11/6/2017	1/2/1990 - current	6/11/1990 - current	1/18/1993 - current
Star-Ledger (Newark, NJ)	n/a	1/1/1991 - current	n/a	5/10/1989 - current	n/a	n/a
Southeast						
Arkansas Democrat-Gazette	10/27/2000 - 9/11/2002	10/1/1994 - current	11/27/2005 - 8/2/2009	1/3/1994 - current	n/a	n/a
Atlanta Journal- Constitution	n/a	1/1/1986 - current	7/20/1996 - current; 1997 missing	5/11/1983 - current	1/1/1991 - current	11/7/2001 - current

Charlotte Observer	n/a	1/1/1994 - current	3/29/2000 - 3/1/2011 (indexed, no full text)	1/3/1985 - current	n/a	n/a
Richmond Times- Dispatch	9/2/1997 - 9/30/2009	8/2/2011 - current	4/24/2000 - 1/5/2010 (indexed, no full text)	8/19/1985 - current	2/9/1986 - current	8/20/1985 - 4/15/2011 (indexed, no full text)
Tampa Bay Times (FL)	n/a	11/1/1986 - current	1/1/2012 - 11/20/2017	1/1/1987 - current	1/1/1987 - current	6/30/1986 - current
Southwest						
Albuquerque Journal	4/19/2001 - 9/12/2006	n/a	11/13/2000 - 9/12/2006	1/1/1995 - current	n/a	1/1/1995 - 2/28/2009, 1/1/2019 - current
The Arizona Republic	n/a	1/1/1999 - current	n/a	n/a	n/a	1/1/1999 - current
Daily Oklahoman, The	9/2/1997 - 2/4/2009	11/1/1981 - current	4/4/2000 - 10/19/2003	11/2/1981 - current	1/1/1992 - current	n/a
Houston Chronicle	n/a	4/19/2012 - current	7/1/1986 - 4/25/2012 (indexed, no full text)	4/41985 - current	n/a	2/13/1985 - 1/11/2012 (indexed, no full text)
San Antonio Express-News	n/a	2/2/1994 - current	n/a	8/28/1989 - current	n/a	8/28/1989 - 1/12/2012 (indexed, no full text)
West						

Denver Post	3/25/2020 - current	6/1/1989 - current	n/a	6/1/1989 - current	n/a	6/1/1989 - 12/3/1996, 8/21/1998 - 10/14/2016 (indexed, no full text)
Las Vegas Review-Journal	4/18/2001 - 8/9/2010	11/1/1990 - current	3/20/2001 - 7/20/2010	9/29/1996 - current	n/a	12/2/1990 - 12/29-2012
Omaha World- Herald	9/2/1997 - 8/31/2009	8/1/1983 - current	4/27/2000 - 8/31/2009 (indexed, no full text)	7/24/1983 - current	n/a	8/2/1983- 12/17/2010 (indexed, no full text)
The Oregonian	9/4/1997 - current	7/1/1989 - current	4/26/2000 - 7/24/2008 (indexed, no full text)	3/13/1987 - current	n/a	7/1/1989 - 9/12/2018 (indexed, no full text)
The San Diego Union-Tribune	3/28/2002 - 1/20/2011	1/1/2000 - current	3/14/2002 - 1/4/2011	11/15/1983 - current	n/a	12/11/1983 - 12/30/2010 (indexed, no full text)
Overall Summary of Coverage	Provides a search to a limited number of titles; many are not full text—a good source for undergraduate students because of the ease of use.	Provides comprehensive full-text news content from around the world. Includes all of the Top 10 circulating U.S. newspapers, most regional	Provides full-text coverage of 4 out of 10 top circulating U.S. newspapers and 1 out of 25 regional titles. Most likely be useful for researchers who	Provides the news content from only 3 out of the top 10 circulating U.S. newspapers. Its coverage of the regional newspapers is broad and mostly	Provides full-text coverage for 3 of the top 10 circulating U.S. newspapers. However, one of those three, The Los Angeles Times, includes	Provides full-text coverage for all but 1 of the top 10 circulating U.S. newspapers. Its coverage of the top-circulating regional newspapers is

*Note*. The dates are for full-text access to articles unless otherwise noted. Access to freelance articles and other features may not be available across databases.

Caption: Availability and date coverage of 35 U.S. newspaper titles in the news aggregator databases.

Appendix C. Analysis of the newspaper aggregator databases

	Newspaper Source Plus (EBSCO)	Factiva	News (Gale OneFile)	Access World News (NewsBank)	Nexis Uni (LexisNexis)	U. S. Newsstream (ProQuest)
				,		
Methodology &	Downloaded the	Searched the	Downloaded the	Evaluated the	Evaluated the	Evaluated the
Date Accessed:	title list from the	databases' "	title list from the	database via	database via	database via
	database product	Source: "All	vendor's product	sample searches	sample searches	sample searches
	homepage to check	Publications" on	homepage and	of their	of their	of their
	the title coverage	the main page for	used the	institution's	institution's	institution's
	and availability	each title to check	database's	licensed content	licensed content;	licensed content;
	and evaluated the	the availability	"Publication	and searched its	Searched "All	Searched "All
	database via	and the date	Search" feature to	"A-Z Source	Sources" for each	
	sample searches of	coverage. The	check the title	List" for each	title to check the	title to check the
	the institution's	"Search Source	availability and	title to check the	availability and	availability and
	licensed content.	Name/Alias only"	the date coverage	availability and	coverage dates	coverage dates
		and "Exclude		coverage dates.		
		Discontinued				
		Sources" boxes				
		were selected				
		before starting the				
		search.				
			Content Format			
HTML text only	HTML text, some	HTML text only	HTML text only	HTML text only	HTML text only	HTML text only
or scanned news pages	scanned PDFs of articles					
Graphics/ charts/	No images	If an original	If the original	No graphics,	No graphics,	No scanned
photos included	6	article has an	article had an	charts, or	charts, or photos.	pages. Some
1		image or video,	image (e.g., charts	photos.	The URLs for	photos, graphics,

		the URL to the source is provided	image; however, not all publications include the images to be published in Gale. There is a feature that allows users to browse the images from articles.	add-on content. Video and audio files are available.	some web-based publications are included.	and videos are available for blogs, podcasts, or websites.
		Adva	anced Search Featur	es		
Search modes	Boolean, keyword, subject, author, date, etc.	Free text search on "Search Builder." Boolean and other proximity connectors	Boolean, keyword, subject, author, date, etc.	Boolean, keyword, source location, date	Boolean, keyword (natural language), source, date	Boolean, keyword, command line, subject
Unique search fields	Company name, person, location	Industry, region, and language. Factiva Expert Search includes news sentiment (adverse, negative, and positive), reputation risks, competitive	Company name, person, location	Lead/First paragraph, author/byline, caption, added within (e.g., past 7 days), word count	Headline, byline, section, and TICKER symbol	NAICS code, company, person, location, image caption, dateline, product names

		intelligence, and more.				
Filters	Document type, date, periodical title, subject, full text, language, cover story	Executives, regions, industries, etc. Can exclude discontinued sources, republished news, obituaries, sports, and calendars.	Document type, date, periodical title, subject, full text	Date, source type, source name, source location, language	Date, source location, publication type, subject, industry, source name, "negative news," language, people, and exclusion (of obituaries, nonbusiness news, etc.)	Full text, source type, publication date and title, document type, company/organiza tion
Additional features or comments	Includes searches for images and charts, but the database has few relevant images and charts.	Keyword suggestion: DJID (Dow Jones Intelligent Identifiers) code that appears in the "Related Dow Jones Intelligent Identifiers" pane in the article view.	Includes images, charts, and cartoons. Subject Guide Search that searches indexed terms, Topic Finder to discover topics related to a search, highlight and save notes, source list	Map search is available to limit search to a geographic area(s). Depending on the institution's subscription, a "Suggested Topics" search may be available for finding relevant documents through quick browsing.	The default search is for "all" sources, which include legal, news, and business. The "Definitions & Help" section explains building an advanced search. (Note: the "News" tab must be used to build an advanced search of news content.)	Include US and UK spellings US and UK spellings; Include plurals, comparatives, and superlatives; Enable autocomplete

		Account I	Features & Saving S	earches		
An individual account with the ability to save and organize search results and searches?	Yes	Depends	Yes	Yes	Yes	Yes
Must log in to save search history?	Yes	Depends	No, but the search history is cleared out between sessions	Yes	Yes	Yes
Account integrates with other online accounts (e.g., Google, Microsoft)?	Yes	No	Yes	No	Yes	No
Offers alerts?	Yes	Depends	Yes	Yes	Yes	Yes
Offers annotation tools and notes?	Yes	No	Yes	No	Yes	No
		Dow	nloading & Exporti	ng		
Results display	Display up to 50 items per page. No previews of the articles	Display up to 100 items per page. Display Keyword in Context.	Display up to 20 items per page. The first two lines are available on the results page.	A preview of the item is available on the search results page	Display up to 10,000 items. Printer-friendly view. "Group Duplicates" allows you to group the same	Display up to 100 results per page. An autodeduplication feature is available.

					or similar news stories into groups	
Download articles en masse?	Yes	Yes	Yes*	Yes	Yes	Yes
Limitations (per download)	25,000 records, if enabled for your institution by EBSCO	100 articles	No limit	20 articles at a time-limited to insubstantial portions of the data	1000 results (250 results per time)	20,000 items (100 items per download) *
Downloading format options	HTML	PDF, RTF, HTML	PDF	PDF	PDF, Word, RTF	PDF, RTF, XLS, TXT
Export articles to other sites?	Google Drive	Evernote	Google Drive, OneDrive	Google Drive	Google Drive, Dropbox, OneDrive	Google Drive, Google Classroom, Microsoft OneDrive**
Email articles?	Yes	Yes. Can send to a maximum of 100 email addresses	Yes	Yes	Yes	Yes
Limitations (per email)	25,000 records, if enabled for your institution by EBSCO	100 articles	No*	20 articles at a time-limited to insubstantial portions of the data	1000 results (250 results per time)	20,000 items (100 items per download)*

Download citations only?	Yes	Yes, but no pre- formatted citations*	Yes*	No*	Yes	Yes
Limitations (per download)	n/a	100 articles	n/a	n/a	100 citations	20,000 items (100 items per download)*
Exceptions or other comments:	To export or email articles, add articles to a folder and then export.	Some libraries' licensing may allow more than 100 downloads per query. *Downloading citations to Endnote requires a series of manual steps.	*Articles or citations must be individually downloaded or emailed	Printing and downloading are limited to insubstantial portions of the data for temporary storage. Text and data mining is prohibited. *Citations are included in downloads.	downloaded but	* 20,000 results downloaded through the export results feature, the institution must have the export results feature enabled in the ProQuest administrator module, and the user must be logged into the "My Research" account.  ** Exporting to other sites (also called "cloud saving") is only available from the article record view and can not

						export more than one article at a time.
		User Tra	ining & Research S	upport		
Help Document	Help link in the database provides search tips.	A live help link in the database	Help link in the database provides search tips	Help link in the database provides search tips	Help link in the database provides search tips.	Help link in the database provides search tips.
Official LibGuide	https://ebsco.libgui des.com/home None for the product, but for all EBSCO products	https://proquest.li bguides.com/facti va/about	https://gale.libgui des.com/home None for the product, but for all Gale products	https://newsban k.libguides.com/ AccessWorldNe ws	None	https://proquest.li bguides.com/c.ph p?g=392217&p=8 230825#s-lg-box- wrapper- 30681943
User Training	General training is available, but not specifically for the Newspaper databases.	https://www.dowj ones.com/professi onal/dow-jones- learning- programs/	https://support.gal e.com/training/	https://www.ne wsbank.com/vid eos/demand- webinars/suppor ting-faculty- students-access- world-news- americas-news	https://www.lexis nexis.com/en- us/support/nexis- uni/default.page	https://proquest.li bguides.com/proq uestplatform
Terms of Use	https://www.ebsco. com/license- agreement	https://djlogin.do wjones.com/tou/d efault.aspx?fcpil= en	https://djlogin.do wjones.com/tou/d efault.aspx?fcpil= en	https://www.ne wsbank.com/ter ms-conditions- use	https://www.lexis nexis.com/en- us/terms/general/ default.page	https://about.proq uest.com/en/about /terms-and- conditions/

API availability	Yes, but it is unclear if it's for researchers	Yes, with additional cost	Cannot find an API	No	Yes, with additional cost	Through ProQuest TDM Studio
Other Notable Features	Create folders for saving articles and searches. Can batch download thousands of articles if enabled for your institution by EBSCO. Unique filters include searching by person and cover story.	Automatic term suggestions, Search Builder	Change interface language and translate articles' language; save articles to Google Drive, OneDrive, email, download, and print. Subject Guide Search that searches indexed terms, Topic Finder to discover topics related to a search, highlight and save notes, source list	Combines all formats—full-text articles, web-only content, PDF-image editions—in a single interface. Clipping images for printing or downloading is available. Share to Google Classroom, A-Z Source List, Read News Document,	Users can create individual profiles to customize their homepage to one of the discipline pages for more focused academic research, save searches, and bookmark documents for later viewing.	Detailed indexing. RSS/alerts, text- to-speech capability, cite, share, print, and export. Many citation formats are available, and articles can be. Includes editorial cartoons (some), obituary, and letter to the editor. Fully cross- searchable with other essential ProQuest products Translated into 13 languages.
Overall Pros/Cons	Easy to use and intuitive. Articles can be translated into many languages, and an audio reader is available.	Advanced searching skills are needed to search this database. The default is a command line	This database indexes many articles but does not have access to the full-text article. A search in the database	The "Suggested Topics" feature current events or frequently searched topics, pre-filled search terms, and auto-	The basic search box and the guided search sections are easy to use and intuitive for most users. However,	The My Research feature tends to be buggy. You will get the "We seem to have encountered a

search, and the	defaults to "full	generated search	since Nexis Uni	problem page"
database provides	text." There are a	results. It is easy	also includes	often.
various facets to	few limitations to	to browse the	legal and	
refine a search. It	downloading or	sources through	business sources,	
handles duplicates	exporting articles,	the A-Z Source	navigation of	
of the results and	but you must	List. Provides	news sources can	
has many unique	download articles	"Special	confuse novice	
features such as	individually.	Reports" series	researchers.	
"Translate Article		on timely topics.		
(translated by		It provides a		
Google		calendar view to		
Translate)" for		browse issues		
sources in non-		by date.		
English and "Add				
to Workspace" for				
the temporary				
saving of articles.				
Text mining is				
prohibited.				

Caption: Summary of database features available in news aggregator databases.