New Kid on the Block: An Evaluation of Web-Scale Discovery Services

Anita Winger and Blair Booker

Abstract

Web-scale discovery systems emerged in 2007 as a new product in library search and retrieval. Libraries have different platforms to choose from and do so based on how well they integrate with the existing Integrated Library System. Each platform offers features, such as relevancy ranking systems, citation trails, and link resolvers, to enhance the search experience and manage electronic resources effectively.

Keywords: web-scale discovery systems, usability, document retrieval, open access, catalog

Web-scale discovery systems work with database vendors to harvest and index the collections to make the search process more efficient than searching resources individually. These indexed collections contain the metadata at the article level, which would not be possible in the online catalog system.[1] The advantages of the web-scale discovery system became evident as these systems and search engines were able to include local catalog holdings, links to full-text access, and a way to increase the relevancy and limit the number of search results.[2]

Libraries may choose the web-scale discovery service that is most closely tied to their integrated library system (ILS). This choice is possibly made to obtain the best integration between the ILS and the

https://doi.org/10.3998/nasig.7743

discovery service, which can improve the user experience. This paper presents an evaluation of each web-scale discovery system through a series of searches to determine on the relevancy of the search results returned for the institution's implementation. Web-scale discovery services are the bridge that brings the library's holdings, physical and electronic, together in one search interface.

Web-scale discovery services were introduced in 2007. When they were first implemented, libraries gave mixed reviews of how effectively the services delivered search results that were relevant to the patron's needs. There are currently four platforms implemented by libraries: EBSCO Discovery Service (2010), Ex Libris Primo (2009–2010), ProQuest Summons (2009), and WorldCat Local (2007), which later became WorldCat Discovery (2019).[3] These platforms have matured since their release and increased the speed at which results are returned. The platforms have also improved the relevancy of results over time.

Early adopters helped shape the maturation process of the web-scale discovery services through beta testing and the enhancement process. Collaboration between early-adopting libraries and vendors has helped transform the products into what is currently being used. As libraries evaluated the products available, some were quick to offer this service to their patrons while other libraries opted to wait until the relevancy ranking improved. Library staff and patrons have been waiting for their search to "include quick retrieval, relevant results, and full text in one click."[4] Web-scale discovery services are closer to meeting this expectation. During the early years, library staff presumed that the web-scale discovery services would eventually replace the online catalog that is delivered by the ILS.[5] A study was performed in 2009/2010, within a few years of these services being made available, that evaluated 260 catalogs in the use and adoption of the discovery interface. This study was repeated in 2012 and found that the use of web-scale discovery services had doubled in the same 260 catalogs that were evaluated, but 96 percent of the libraries evaluated were still offering the local online catalog in addition to the discovery service.[6] According to Wang et al., "web-scale discovery services are considered a primary

trend in academic libraries."[7] Although a major trend and widely adopted, the library needs vendors to continue development to fulfill the needs of researchers at all educational levels.

Ex Libris Primo

Let us take a look at what each product claims they can offer the library. On their website, Ex Libris Primo claims to have over 5.2 billion records in their central discovery index and that the results are 100 percent content neutral.[8] Searches contain both Open Access (OA) content and local library resources. As shown in figure 1, the Ex Libris Team aggregates the content and treats all sources equally, meaning they do not promote one source over another, and results are by content only. Metadata is enhanced by teams of librarians with expertise in metadata management to continuously aggregate, enrich, and update resources. The records include details like subject terms, controlled vocabularies, author-provided keywords, metadata from Abstract and Index (A&I) sources, CrossRef Direct Object Identifiers (DOIs), Ulrich's peer-reviewed indicators, and more.

Regarding the relevancy ranking system, "Primo® ScholarRank® technology, several criteria are used to rank results: the degree to which an item matches a query, a value score representing an item's academic significance, and the publication date of an item. Greater relevance is attributed to an item if the query terms occur in specific metadata fields of the item's record, such as the author, title, and subject fields. Primo also evaluates other parameters such as proximity of search terms and search type (known item or topic search)."[10] Patrons can give a "boost" to a specific discipline which will adjust the results, and ranking of local collection can also be adjusted.

Primo offers libraries an option to recommend articles or resources based on the article being viewed. This can extend to LibGuides,

Title Metadata	Identifier Metadata	Publication Information Metadata	Additional Metadata	Metadata Schema & Structure
• Article Titles • Book Titles • Chapter Titles • Publication Titles • Subtitles	• Unique IDs for Specific Articles, Chapters, etc. • Publication-level Unique Identifiers (e.g., ISSN, ISBN- 10/13) • Additional Identifiers (OCLC Number, LCCN, DOI, etc.)	• Publisher • Author(s) • Corporate Author(s) • Volume Numbers • Issue Numbers • Start Pages • Publication Date(s) • Publication Series or Imprints • Publication Place	• Subject Headings • Keywords • Language • Classification • Abstracts • Open Access Flags • Full-Text Available Flags	• MARC21 • MODS • Dublin Core • NLM/JATS • ONIX • Well-structured, and labeled, homegrown schemas

Figure 1. Primo Metadata[9]

databases, and other local resources. A citation trail allows users to follow a chain of articles, and book covers are supplied through Syndetics Unbound. Also available in Ex Libris Primo is the SFX Link Resolver which allows patrons to obtain a direct link to full Text and open URL linking which is connected to a comprehensive knowledge base. There are also configuration options to enable A to Z journal lists, e-book integration, and citation management.

EBSCO Discovery Service

The EBSCO Discovery Service (EDS) webpage claims that they leverage several thesauri such as native MeSH, CINAHL, APA.[11] They also state there is no bias toward content from any provider and state that their relevancy priorities have additional priorities of recency, document type, and document length. EDS offers OpenAthens for single sign on options as well as access to their knowledge base and their own link resolver, Full Text Finder (FTF), which links to the EBSCO knowledge base and has direct links to articles when purchased through the EBSCO subscription service. They offer custom links for e-book platforms, and GOBI e-book purchases are automatically loaded into the FTF.

The User Experience offers one interface for all electronic resources with did-you-mean suggestions to correct search terms, hyperlinked database names for easy access, options to export citations, and accessibility features. EDS seamlessly integrates with many workflow tools and familiar interfaces, including:

- ILS or library services platform (LSP) to make local holdings visible in EDS
- LibGuides
- Open-source front-end interfaces, including Blacklight and VuFind
- Learning management systems (LMS), including Blackboard and Canvas

SirsiDynix CloudSource and CloudSource+

CloudSource+ (CS+) is breaking into the scene with a new product that markets the aggregation and indexing of OA materials. According to their website, "CloudSource (CS) is a new content and discovery services platform that enables libraries to change their whole approach to managing electronic resources."[12] CS offers OA and Open Educational Resources (OER) aggregations and direct access to over sixty million OA articles from over one hundred thousand journals, e-books, e-textbooks, and OER in a single comprehensive database.

Upgrading from CS to CS+ adds additional aggregated peer review sources that should exceed the one billion item mark before the end of 2024. CS+ integrates paid subscriptions with OA content into one search with an additional option to incorporate a subscription to the Copyright Clearance Center (CCC) for article delivery services. The index includes metadata from major academic journal publishers, both OA and closed access as well as enhanced metadata being added to the records. CS+ also offers an interface where libraries can manage the content available to their patrons.

The CS+ index currently incorporates metadata from every major academic journal publisher. It includes a global aggregation of all known open and closed access scholarly articles, e-books, e-textbooks and other OER. Some of the metadata enhancement include DOIs, field-of-study guides, author affiliations, abstracts, citation information and links, reviews, and other related sources (See figure 2). CS+ incorporates a comprehensive knowledge base of electronic titles and packages from a wide variety of providers and can be expanded to include custom coverage. Title lists are uploaded on a regular basis to reflect changes in journal titles and coverage dates.

CS+ provides an integrated OpenURL resolver and the discovery service can be integrated with third party resolvers if the library prefers. The incorporated OpenURL link resolver complies with current

Figure 2. CloudSource Metadata Enhancement[13]

NISO standards, giving the library a wide variety of options that control how the link resolver behaves in different situations. The library can set display settings and configure parameters for Google Scholar.

Research Questions

Now that we know what these platforms offer, let us look at the research questions:

- R1. Which of the following features are available at each institution's web-scale discovery service and/or online catalog: A single search box; Advanced search options; Facets to limit search results; Boolean search capabilities; Link to full text; Citation information; Permalink; Open Access icon, Date range limiter?
- R2. How do the results of the test search terms compare by platform?
  - Three topical/subject terms include:
    - *autism OR asd OR autism spectrum disorder*
    - *oil AND gas investigations*
    - *Music AND (treatment OR therapy)*
  - Three known item searches:
    - *Library Hi Tech*
    - *Gone with the Wind*
    - *Acid Rain in Shenandoah Park, Virginia*

To get an idea of functionality differences in the discovery services, the authors investigated three catalogs for each vendor:

1. Primo
   a. University of Southern Mississippi (USM)
   b. Clemson University
   c. Kansas State University
2. EBSCO Discovery Service
   a. Delta State University
   b. Auburn University
   c. West Virgina University
3. CloudSource+
   a. Ganon University
   b. Houston Christian University
   c. Tarleton State University

When selecting which catalog to evaluate, one Mississippi-based institution was chosen for both EDS and Primo and the other institutions

were chosen from a previous project which was the inspiration for this project. The CS+ catalogs were chosen from a list sent by SirsiDynix as they are still in Pilot and wanted access to live instances of the catalog. General Availability (GA) for CS+ is coming later in 2024. There was a deliberate randomness to the selection. A 2015 article by Ciccone and Vickery evaluating Summon, EDS, and Google Scholar served as inspiration for the methodology.[14] I started by visiting the home page of the library and performed the first search term on autism from the search box on their main web page. Before looking at the actual results, I evaluated the features available and then copied the first ten search results for later reference and verified the relevancy and accuracy of the results given. For the three keyword results, I counted the number of relevant results and assigned each relevant result one point and each irrelevant results zero points. The higher the score, the more relevant the results. For the known items, I indicated when the desired title was on the hitlist and if it did not appear in the top ten results. I assigned a score of eleven when the known item did not appear in the top ten results and a zero when it was the first result; for known items, the lower the score the better. There are some inherent limitations that need to be considered which are variations in the collections (the reason we did not compare the number of items returned), how materials are cataloged, especially physical pieces, and how the discovery service is configured.

Reviewing Research Question 1, we see that there are only a couple of instances in which features were not available (See table 1). One is that EDS does not have notation if an article is OA. Both Primo and CS+ displayed the OA icon at the item level, and most of the instances also had a facet to include or exclude those items. CS+ is missing a sorting feature, but the vendor suggests it is on their roadmap.

Since all the products have advanced search building, I analyzed how the advanced search term was created by each platform. Primo and EDS both search using capitalized AND or OR between each phrase, such as the autism OR ASD OR Autism Spectrum Disorder.

Table 1. Features Available

	EDS	Primo	CloudSource+
Single Search Box	X	X	X
Advanced Search	X	X	X
Facets	X	X	X
Boolean	X	X	X
Open Access Icon	N	X	X
Link to Full Text	X	X	X
Citation	X	X	X
Permalink	X	X	X
Date Range	X	X	X
Sorting	X	X	N
Notes:			
EDS and Primo truncated search results displayed if user is not authenticated			

CS+ placed each search term in parenthesis, (Autism) OR (ASD) OR (Autism spectrum disorder). The same holds true for the AND statements. When creating the mixed AND/OR statements, neither generated a satisfactory statement as it was linear with Music AND treatment OR therapy. For a more precise search phrase, it would have been preferable to have Music AND (Treatment OR Therapy) as the intent is to combine Music Treatment OR Music Therapy.

Primo has a My Favorites feature, making it easy to select all results on the page and export to Excel or other bulk options. USM did not have OA or Peer-Reviewed facets available for their users. Of the platforms evaluated, Primo was also the only platform that did not have the option to limit to full text. EDS offers Research Starter to give patrons a place to start their research as well as a search history. The new interface offers a concept map, but it will not allow you to view additional information such as the article details without authentication. Also, export as a guest user was limited to one item at a time. CS+ has a My Favorites feature that is dependent on the library's version of Enterprise. The physical catalog is represented on

a different tab as CS+ is integrated into Enterprise as an additional resource and is only available as a tabbed display. Some instances of CS+ offers a Wikipedia Disambiguation option, collapsed facets by default, and OER as a facet in addition to the OA tab. The links show the user ways to either download the article or gain through other avenues. The link to the publisher's page is clearly displayed. One of the exciting features of CS+ is the ability to edit the citation before exporting it.

Let us compare our search results by looking at the percentage of materials returned rather than the actual number. The CS+ article percentages will be higher as they are only bringing in OA or subscription titles. EDS and Primo are interfiling physical materials as well, so the percentages will be lower for most of the entries. For the analysis, the decision was made to evaluate the total number retrieved from the search and calculate the number of articles, peer-reviewed, open access and full text features based on the number returned stated beside the facet.

autism OR asd OR autism spectrum disorder

This search was designed to test the OR capabilities of the Boolean search engine. Table 2 shows both Primo and EDS had percentages between mid-30s to mid-60s for articles and peer-reviewed titles. Assumptions being made about percentages include those for Clemson, Kansas State, and Auburn. It appears that they do not include their print holdings in their discovery service as 100 percent of their resources are online. Gannon University did not have a facet for OA, so the presumption is that they are only displaying the OA resources and have not integrated their other holdings. Table 2 shows that almost half of the results from Houston Christian and Tarleton State are OA, a higher percentage than what is tagged or returned by the Primo sites; this may be due to a lower overall number total items retrieved

Table 2. Boolean OR

autism OR asd OR autism spectrum disorder	Interface	Total Retrieved	Articles	Peer-Reviewed	Open Access	Full Text Online
University of Southern Mississippi	Primo	206,031	67%	0%	0%	0%
Clemson University	Primo	266,142	60%	52%	29%	100%
Kansas State University	Primo	917,419	44%	36%	24%	100%
Delta State University	EDS	2,123,472	38%	36%	0%	37%
Auburn University	EDS	981,537	52%	50%	0%	100%
West Virginia University	EDS	3,314,242	38%	37%	0%	72%
Gannon University	CloudSource+	48,913	97%	85%	0%	0%
Houston Christian University	CloudSource+	184,382	64%	53%	45%	100%
Tarleton State University	CloudSource+	198,348	67%	56%	42%	100%

or the fact that CS+ includes OA content from hybrid journals as well as other OA content.

Oil AND Gas Investigations

The search reported in table 3 was designed to determine the capabilities of the AND Boolean search engine. The article count, with the exception of Gannon University, is on the lower side. This may be how some of the resources are labeled or tagged in the collections and it may include some government documents that may be labeled as reports. Note that the percentage and counts of Houston

Table 3. Boolean AND

Oil AND Gas Investigations	Interface	Total Retrieved	Articles	Peer-Reviewed	Open Access	Full Text Online
University of Southern Mississippi	Primo	45,012	30%	0%	0%	0%
Clemson University	Primo	25,405	66%	55%	22%	100%
Kansas State University	Primo	827,828	43%	37%	25%	100%
Delta State University	EDS	14,937	25%	19%	0%	24%
Auburn University	EDS	49,176	56%	54%	0%	99%
West Virginia University	EDS	1,753,041	41%	40%	0%	81%
Gannon University	CloudSource+	4,687	100%	98%	0%	0%
Houston Christian University	CloudSource+	9,799	63%	60%	57%	100%
Tarleton State University	CloudSource+	9,938	63%	61%	57%	100%

Christian and Tarleton are very similar which reflects a consistency in the results.

music AND (treatment OR therapy) (See Table 4)

This search was designed to determine the capabilities of the combined/nested AND/OR search. CS+ brought back the highest percentage of articles, followed by Primo. EDS showed a small percentage of articles, but a higher full-text percentage. Outside of West Virginia, CS+ had a higher number of total items retrieved.

These next three searches are looking for specific titles/volumes. These searches were performed as both a keyword and title search for comparison to see which search type would be better to use.

Table 4. Boolean AND/OR

music AND (treatment OR therapy)	Interface	Total Retrieved	Articles	Peer-Reviewed	Open Access	Full Text Online
University of Southern Mississippi	Primo	50,846	50%	0%	0%	0%
Clemson University	Primo	46,696	61%	54%	20%	99%
Kansas State University	Primo	895,084	32%	27%	9%	100%
Delta State University	EDS	329,595	34%	25%	0%	37%
Auburn University	EDS	130,295	52%	48%	0%	99%
West Virginia University	EDS	3,606,732	17%	17%	0%	66%
Gannon University	CloudSource+	12,164	95%	77%	0%	0%
Houston Christian University	CloudSource+	36,082	85%	68%	56%	100%
Tarleton State University	CloudSource+	42,066	87%	70%	48%	100%

Library Hi Tech

Library Hi Tech (see tables 5 and 6) brought back a mixed percentage of results; the one consistent number was the percentage of full text online results for the keyword searching. As expected, when using the title search, the total results retrieved dropped and the percentage of articles retrieved also dropped dramatically for the EDS catalogs and Houston Christian.

Gone with the Wind

In the third task without using any limits, I was looking for either the book or the movie version of Gone with the Wind (see tables 7 and 8).

In looking at EDS and Primo, the percentage of articles was relatively low as it was also retrieving physical materials. CS+ does not include physical materials housed in the library so their percentage of articles is much higher than Primo or EDS. Generally, this is true for both the keyword and title searches. Again, Houston Christian had a dramatic drop in article results between keyword and title searching.

Acid Rain in Shenandoah Park, Virginia

Results for this is a government document are in tables 9 and 10. Outside of West Virginia University, the total items retrieved was low and the percentage of articles varied considerably. When performing the title search, the results were further reduced with two of the sites retrieving only that document.

Table 5. Journal Keyword Search

Library Hi Tech - Keyword Search	Interface	Total Retrieved	Articles	Peer-Reviewed	Open Access	Full Text Online
University of Southern Mississippi	Primo	8,056	78%	0%	0%	0%
Clemson University	Primo	7,700	81%	37%	9%	100%
Kansas State University	Primo	136,579	33%	24%	13%	100%
Delta State University	EDS	39,790	45%	31%	0%	85%
Auburn University	EDS	22,124	59%	48%	0%	100%
West Virginia University	EDS	251,123	25%	23%	0%	88%
Gannon University	CloudSource+	3,801	98%	72%	0%	0%
Houston Christian University	CloudSource+	24,934	43%	32%	21%	100%
Tarleton State University	CloudSource+	23,907	49%	37%	22%	100%

Table 6. Journal Title Search

Library Hi Tech - Title Search	Interface	Total Retrieved	Articles	Peer-Reviewed	Open Access	Full Text Online
University of Southern Mississippi	Primo	5,795	94%	0%	0%	0%
Clemson University	Primo	5,511	94%	41%	5%	100%
Kansas State University	Primo	5,745	92%	41%	6%	100%
Delta State University	EDS	1,348	12%	6%	0%	23%
Auburn University	EDS	469	17%	6%	0%	99%
West Virginia University	EDS	500	19%	14%	0%	49%
Gannon University	CloudSource+	138	91%	48%	0%	0%
Houston Christian University	CloudSource+	15,343	8%	2%	2%	100%
Tarleton State University	CloudSource+	13,501	10%	3%	2%	100%

Table 7. Book Keyword Search

Gone with the Wind - Keyword Search	Interface	Total Retrieved	Articles	Peer-Reviewed	Open Access	Full Text Online
University of Southern Mississippi	Primo	10,017	11%	0%	0%	0%
Clemson University	Primo	4,683	31%	18%	7%	92%
Kansas State University	Primo	566,079	25%	13%	4%	100%
Delta State University	EDS	80,397	7%	3%	0%	40%
Auburn University	EDS	42,321	4%	4%	0%	99%
West Virginia University	EDS	3,045,275	6%	5%	0%	64%
Gannon University	CloudSource+	47,171	99%	99%	0%	0%
Houston Christian University	CloudSource+	72,811	88%	79%	76%	100%
Tarleton State University	CloudSource+	72,641	89%	80%	76%	100%

I discussed relevancy with a reference librarian colleague to reduce bias in my evaluation. For the Keyword searches (see table 11), all systems performed well with the Autism search. Beginning with the Oil & Gas Investigations search, less relevant titles were returned. For

Table 8. Book Title Search

Gone with the Wind - Title Search	Interface	Total Retrieved	Articles	Peer-Reviewed	Open Access	Full Text Online
University of Southern Mississippi	Primo	1,959	20%	0%	0%	0%
Clemson University	Primo	1,651	29%	20%	6%	92%
Kansas State University	Primo	2,152	24%	15%	7%	98%
Delta State University	EDS	30,297	9%	4%	0%	27%
Auburn University	EDS	12,820	8%	7%	0%	100%
West Virginia University	EDS	16,635	9%	8%	0%	50%
Gannon University	CloudSource+	1,435	96%	81%	0%	0%
Houston Christian University	CloudSource+	13,340	37%	25%	22%	100%
Tarleton State University	CloudSource+	13,129	43%	29%	23%	100%

Table 9. Government Document Keyword Search

Acid Rain in Shenandoah Park, Virginia - Keyword	Interface	Total Retrieved	Articles	Peer-Reviewed	Open Access	Full Text Online
University of Southern Mississippi	Primo	30	43%	0%	0%	0%
Clemson University	Primo	21	67%	52%	5%	100%
Kansas State University	Primo	317	44%	37%	12%	100%
Delta State University	EDS	84	15%	8%	0%	67%
Auburn University	EDS	17	18%	12%	0%	88%
West Virginia University	EDS	9,000	3%	3%	0%	84%
Gannon University	CloudSource+	18	100%	89%	0%	0%
Houston Christian University	CloudSource+	63	79%	65%	49%	98%
Tarleton State University	CloudSource+	66	83%	67%	47%	98%

example, USM's seventh result, "Recognition of Middle Miocene foraminifers in highly indurated rocks of the Monterey Formation, coastal Santa Maria Province, central California" was flagged as not relevant as the title sounded more like rock formations and not oil and gas. For those who have more knowledge of the topic, arguments may be made for it to remain on the list as being relevant. For Kanas State,

Table 10. Government Document Title Search

Acid Rain in Shenandoah Park, Virginia - Title	Interface	Total Retrieved	Articles	Peer-Reviewed	Open Access	Full Text Online
University of Southern Mississippi	Primo	2	0%	0%	0%	0%
Clemson University	Primo	1	0%	0%	0%	100%
Kansas State University	Primo	2	50%	0%	0%	100%
Delta State University	EDS	5	0%	0%	0%	60%
Auburn University	EDS	1	0%	0%	0%	100%
West Virginia University	EDS	5	0%	0%	0%	40%
Gannon University	CloudSource+	4	100%	50%	0%	0%
Houston Christian University	CloudSource+	42	71%	55%	38%	100%
Tarleton State University	CloudSource+	45	78%	58%	36%	100%

Table 11. Boolean Relevancy Ranking

		Autism	Oil	Music	
	Interface	Relevance Rank	Relevance Rank	Relevance Rank	Average Score
University of Southern Mississippi	Primo	10	9	8	9
Clemson University	Primo	10	7	10	9
Kansas State University	Primo	10	10	10	10
Delta State University	EDS	10	10	10	10
Auburn University	EDS	10	10	9	10
West Virginia University	EDS	10	10	10	10
Gannon University	CloudSource+	10	10	10	10
Houston Christian University	CloudSource+	10	10	10	10
Tarleton State University	CloudSource+	10	10	10	10

the second, fifth, and sixth results were flagged as not relevant, which brought their score down to seven. For the music therapy and treatment search, USM's catalog brought back *The Music Man* and *The Sound of Music* in ninth and tenth places and Auburn's eighth result was "*Sports Therapy Services*: *Organization and Operations*. All three were flagged as not relevant. In this test, Primo was only slightly less

relevant than the other discovery products. For a complete list of titles returned please view Appendices A-C.

The known-item relevancy is less subjective (see table 12). For *Library Hi-Tech*, West Virginia returned the journal in second place in both keyword and title searching. Their first result was an actual article instead of the journal. Gannon University is suspected of only displaying the OA material; because *Library Hi Tech* is not OA it did not return any results and was therefore excluded from the relevancy scoring. Results for *Gone with the Wind* were surprising. In both Auburn and West Virginia, articles were returned above the book or movie in the results list, where the book or movie was located anywhere from third to fifth on the hitlist. CS+, as mentioned earlier, only pulls from subscription material, but is linked to the online catalog, Enterprise, for the physical material, and the desired material was first in all the catalog entries. *Acid Rain in Shenandoah Park, Virginia*, was found in all catalogs except Gannon University. In CS+, this government document is marked as a report and I suspect that Gannon suppresses reports so that they do not appear in the results. For Primo libraries in this study, the keyword search placed the exact title in second place. Primo indexes this title as a book and the first item returned in the hitlist was a journal article. For a complete list of titles returned please view Appendices D-I.

The results suggest the following observations to keep in mind when selecting discovery products for your library.

1. Primo and EDS have robust indexes
2. Holdings are interfiled with items from the Central Index in Primo and EDS
3. CS relies on the Enterprise functionality for physical holdings—this will require patron education to help them find the resources they are looking for
4. CS+ is still in development and has a "younger" index that needs to grow—this young index is constantly growing especially as they ingest the Gale index, but it still has gaps in content such as government documents and literature reviews which should improve once the Gale index has been fully ingested.

Table 12. Known Item Placement in Hitlist

		Library Hi Tech		Gone with the Wind		Acid Rain in Shenandoah Park, Virginia		
		Keyword	Title	Keyword*	Title*	Keyword	Title	
	Interface	Place in hitlist	Place in hitlist	Place in hitlist	Place in hitlist	Place in hitlist	Place in hitlist	Average Score
University of Southern Mississippi	Primo	1	1	1	1	2	1	1
Clemson University	Primo	1	1	1	1	2	1	1
Kansas State University	Primo	1	1	1	1	2	1	1
Delta State University	EDS	1	1	1	1	1	1	1
Auburn University	EDS	1	1	5	4	1	1	2
West Virginia University	EDS	2	2	4	3	1	1	2
Gannon University	CloudSource+	N/A	N/A	1	1	N/A	N/A	N/A
Houston Christian University	CloudSource+	1	1	1	1	1	1	1
Tarleton State University	CloudSource+	1	1	1	1	1	1	1

*CloudSource+ Results are based on placement in the online portion of the search results.

Conclusions

Is one discovery service better than another? I, personally, am not willing to make that call. Each service has its strengths, and each institution will need to consider these strengths along with their particular needs. With twenty years of development behind them, Primo and EDS appear stronger . . . at this time. But when they were first being developed, they had their bumps and bruises resulting in some libraries opting to not adopt them. In looking at the User Interface (UI) for EDS and CS+ and seeing a preview of a new UI for Primo, I note similarities, especially a cleaner interface than their earlier iterations. They are similar, but still different. CS+ is still in development and is still building relationships with content providers. Once those relationships are built and the data stream is established, CS+ has the potential to be a strong web-scale discovery service. If the budget allows, it would be great to offer CS+ as another option for your patrons and allow them access to the aggregated OA content.

APPENDICES
Appendix A

autism OR asd OR autism spectrum disorder			
		Primo	
Rank	**University of Southern Mississippi**	**Clemson University**	**Kansas State University**
1	Autism spectrum disorder.	Autism spectrum disorder	Autism spectrum disorder
2	Autism spectrum disorder	Autism spectrum disorder.	Autism spectrum disorder
3	Sleep difficulties and disorders in autism spectrum disorder	Autism spectrum disorder	Autism spectrum disorder
4	Enhancing experiences: physical education and health-related movement for individuals with autism spectrum disorder	Autism spectrum disorder	ICD 10. Autism spectrum disorder series. F84.0 autism spectrum disorder, requiring support
5	A Personalized Medicine Approach to the Diagnosis and Management of Autism Spectrum Disorder	Autism spectrum disorder	Autism spectrum disorder. Subject expert analysis series. Episode 1, Autism spectrum disorder, mild with expert analysis
6	Sensory issues for adults with autism spectrum disorder	Sleep difficulties and disorders in autism spectrum disorder	Children and youth with autism spectrum disorder (ASD): recent advances and innovations in assessment, education, and intervention
7	Crime and autism spectrum disorder: myths and mechanisms	Supporting individuals with autism spectrum disorder in recreation	Autism spectrum disorder: perspectives from psychoanalysis and neuroscience
8	Autism Spectrum Disorder: Profile, Heterogeneity, Neurobiology and Intervention	Evidence-based practices for supporting individuals with autism spectrum disorder	Translational Approaches to Autism Spectrum Disorder
9	Autism spectrum disorder in mid and later life	Autism spectrum disorder: symptoms, diagnosis and types of treatment	Autism spectrum disorder in mid and later life
10	Social Skills Training For Children and Adolescents With Autism Spectrum Disorder	Music education for children with autism spectrum disorder: a resource for teachers	Handbook of Treatments for Autism Spectrum Disorder

(*Continued*)

Appendix A (Continued)

	EDS		
Rank	**Delta State University**	**Auburn University**	**West Virginia University**
1	Association between autism symptomatology and DSM-5 symptoms and parents' mental health	ToM & ASD: The Interconnection of Theory of Mind with the Social-Emotional, Cognitive Development of Children with Autism Spectrum Disorder. The Use of ICTs as an Alternative Form of Intervention in ASD	The role of physical activity and sport in children and adolescents with autism spectrum disorder (ASD): A narrative review.
2	The utilization of psychopharmacological treatments for individuals with autism spectrum disorder (ASD) in a middle-income European country	2010 Strategic Plan for Autism Spectrum Disorder Research. NIH Publication No. 10–7573 [electronic resource].	Association between the degree of autism and permissiveness of pragmatic impairments in Japanese-speaking adults with and without autism spectrum disorder.
3	Predictors of daily physical activity, screen time, and sleep duration in children with and without Autism Spectrum Disorder (ASD)	Autism Spectrum Disorders (ASDs).	A survey on technological tools and systems for diagnosis and therapy of autism spectrum disorder.
4	Omega-3 and omega-6 polyunsaturated fatty acid intake and aberrant behaviors in Jordanian children with autism spectrum disorders (ASD): A pilot study	Postural balance control interventions in autism spectrum disorder (ASD): A systematic review	Phenotype of ASDs Associated With 4p16 Risk Locus and Novel Genome-Wide Associations of ASD Patients in the Finnish Population.
5	Development of the pupillary light reflex from 9 to 24 months: association with common autism spectrum disorder (ASD) genetic liability and 3-year ASD diagnosis	Autism Spectrum Disorder [electronic resource]: Examining Current Diagnosis Strategies and Assessment Tools/Amy Marie Wormald.	ToM & ASD: The Interconnection of Theory of Mind with the Social-Emotional, Cognitive Development of Children with Autism Spectrum Disorder. The Use of ICTs as an Alternative Form of Intervention in ASD

(*Continued*)

Appendix A (Continued)

		EDS	
Rank	**Delta State University**	**Auburn University**	**West Virginia University**
6	Identification of Autism spectrum disorder by parents: a retrospective-comparative study of the role of early behavioral signs, developmental and demographic characteristics.	The utilization of psychopharmacological treatments for individuals with autism spectrum disorder (ASD) in a middle-income European country	This record cannot be displayed to guest users
7	Effect of incredible years autism spectrum and language delays (IY-ASD) program on stress and behavioral management skills among parents of children with autism spectrum disorder in Palestine	Autism Spectrum Disorders [electronic resource]: Guidance on Providing Supports and Services to Young Children with Autism Spectrum Disorders and Their Families. Technical Assistance Manual/Pat Osbourn and Fletcher Scott.	THE EFFECTIVENESS OF MUSIC EDUCATION IN IMPROVING SOCIAL COMMUNICATION FOR AUTISM SPECTRUM DISORDER (ASD) STUDENTS.
8	Educational Psychological Counselling and Collective Competence Improvement Related to Autism/Autism Spectrum Disorders (ASD)	Autism spectrum disorders/ edited by Eric Hollander, Randi Hagerman, Deborah Fein.	Training work-related social skills in adults with Autism Spectrum Disorder using a tablet-based intervention.
9	Autism spectrum disorder: Where does the Gulf Region stand? An overview of ASD in the Arab Gulf Region: The UAE as a regional model	Predictors of daily physical activity, screen time, and sleep duration in children with and without Autism Spectrum Disorder (ASD)	A qualitative examination of play therapy and mindfulness interventions with youth with autism spectrum disorder.
10	Job accommodations for people with autism spectrum disorders (ASD) [electronic resource].	Adolescents with autism spectrum disorder: a clinical handbook/edited by Nicholas W. Gelbar.	?Donde has oldo hablar del trastorno del espectro autista? Identificando las fuentes de conocimiento docente sobre el TEA.

(*Continued*)

Appendix A (Continued)

		Cloudsource+	
Rank	**Gannon University**	**Houston Christian University**	**Tarleton State University**
1	The autism spectrum disorders (ASD)	Autism Spectrum Disorder (ASD)	Autism Spectrum Disorder (ASD)
2	AUTISM SPECTRUM DISORDER - ASD: INCLUSION AND DEVELOPMENT	Autism spectrum disorders (ASD).	Autism spectrum disorders (ASD).
3	Apraxia and autism spectrum disorder ASD	Autism Spectrum Disorder (ASD)	Autism Spectrum Disorder (ASD)
4	Autism Spectrum Disorder (ASD) in Kenya	Autism spectrum disorders (ASD).	Autism spectrum disorders (ASD).
5	Preschool Teachers' Knowledge of Autism Spectrum Disorder (ASD)	The autism spectrum disorders (ASD)	The autism spectrum disorders (ASD)
6	Genetic factors in Autism Spectrum Disorders (ASD)	AUTISM SPECTRUM DISORDER - ASD: INCLUSION AND DEVELOPMENT	AUTISM SPECTRUM DISORDER - ASD: INCLUSION AND DEVELOPMENT
7	Risk Factors of Autism Spectrum Disorder (ASD)	Apraxia and autism spectrum disorder ASD	Apraxia and autism spectrum disorder ASD
8	Oral microbiota and autism spectrum disorder (ASD)	Follow-up Autism Spectrum Disorders (asd).	Follow-up Autism Spectrum Disorders (asd).
9	Comprehensive dental care for Autism Spectrum Disorder (ASD) patient	Dyspraxia and autism spectrum disorders (ASDs)	Dyspraxia and autism spectrum disorders (ASDs)
10	Mistreatments of Autism Spectrum Disorder	Autism Spectrum Disorder (ASD) in Kenya	Autism Spectrum Disorder (ASD) in Kenya

Appendix B

Oil AND Gas Investigations			
		Primo	
Rank	**University of Southern Mississippi**	**Clemson University**	**Kansas State University**
1	Oil indexation, market fundamentals, and natural gas prices: An investigation of the Asian premium in natural gas trade	Oil indexation, market fundamentals, and natural gas prices: An investigation of the Asian premium in natural gas trade	Oil indexation, market fundamentals, and natural gas prices: An investigation of the Asian premium in natural gas trade
2	Maps showing hydrocarbon plays of the Florida peninsula, USGS Petroleum Province 50	Subsurface correlation of Jurassic and Cretaceous rocks having occurrences of uranium, coal, and oil; Mariano Lake--Lake Valley Drilling Project, northwestern New Mexico	Underground storage of natural gas in Kansas
3	Laboratory Investigations on Field Gas Huff-n-Puff for Improving Oil Recovery in Eagle Ford ShaleGEffect of Operating Conditions	Laboratory Investigations on Field Gas Huff-n-Puff for Improving Oil Recovery in Eagle Ford ShaleGEffect of Operating Conditions	Laboratory Investigations on Field Gas Huff-n-Puff for Improving Oil Recovery in Eagle Ford ShaleGEffect of Operating Conditions
4	Reserve growth of oil and gas fields: investigations and applications	Maps showing hydrocarbon plays of the Florida peninsula, USGS Petroleum Province 50	High-saturation gas hydrate reservoirs; a pore scale investigation of their formation from free gas and dissociation in sediments
5	Reserve growth of oil and gas fields: investigations and applications	Isopach maps of the Powder River Basin, Wyoming and Montana	A First-Principles Investigation of Gas-Phase Ring-Opening Reaction of Furan over HZSM-5 and Ga-Substituted ZSM-5
6	Strontium isotope evidence for the age of the Vaqueros Formation and latest Oligocene marine transgression in the northern Santa Maria Province, central California	Structure-contour maps of the Powder River basin, Montana and Wyoming	Experimental investigation of gas-water relative permeability for gas hydrate-bearing sediments from the Mount Elbert gas hydrate stratigraphic test well, Alaska North Slope

(*Continued*)

Appendix B (Continued)

Oil AND Gas Investigations			
		Primo	
Rank	**University of Southern Mississippi**	**Clemson University**	**Kansas State University**
7	Recognition of Middle Miocene foraminifers in highly indurated rocks of the Monterey Formation, coastal Santa Maria Province, central California	Stratigraphy and correlation of Cretaceous and Paleocene rocks, west-central River Basin, Wyoming	Soil gas investigation of an alleged gas migration issue on a residential farm located above the Weyburn-Midale CO2 enhanced oil recovery project
8	A First-Principles Investigation of Gas-Phase Ring-Opening Reaction of Furan over HZSM-5 and Ga-Substituted ZSM-5	High-Saturation Gas Hydrate Reservoirs—A Pore Scale Investigation of Their Formation From Free Gas and Dissociation in Sediments	The VIIRS-Based RST-FLARE Configuration: The Val d'Agri Oil Center Gas Flaring Investigation in Between 2015–2019
9	Experimental investigation of gas-water relative permeability for gas-hydrate-bearing sediments from the Mount Elbert Gas Hydrate Stratigraphic Test Well, Alaska North Slope	A First-Principles Investigation of Gas-Phase Ring-Opening Reaction of Furan over HZSM-5 and Ga-Substituted ZSM-5	Adsorption and gas-sensing investigation of oil dissolved gases onto nitrogen and sulfur doped graphene quantum dots
10	Soil gas investigation of an alleged gas migration issue on a residential farm located above the Weyburn-Midale CO2 enhanced oil recovery project	Experimental investigation of gas-water relative permeability for gas-hydrate-bearing sediments from the Mount Elbert Gas Hydrate Stratigraphic Test Well, Alaska North Slope	Arduino-based slider setup for gas-liquid mass transfer investigations: Experiments and CFD simulations

(*Continued*)

Appendix B (Continued)

	EDS		
Rank	**Delta State University**	**Auburn University**	**West Virginia University**
1	Microfluidic Investigation on the Microscopic Mechanism of Gas Injection for Enhanced Oil Recovery in Deep Reservoirs	Numerical Investigation into the Performance of a Rarefaction Shock Wave Cutter for Offshore Oil-Gas Platform Removal [electronic resource]	Oil and gas investigations.
2	Climate-Related Disclosure and Litigation Risk in the Oil & Gas Industry: Will State Attorneys General Investigations Impede the Drive for More Expansive Disclosures	Climate-Related Disclosure and Litigation Risk in the Oil & Gas Industry: Will State Attorneys General Investigations Impede the Drive for More Expansive Disclosures	This record cannot be displayed to guest users
3	Adsorption and gas-sensing investigation of oil dissolved gases onto nitrogen and sulfur doped graphene quantum dots	The experimental investigation on the geo-polymerization of water-based filtercake at the second interface of the oil-gas well	Climate-Related Disclosure and Litigation Risk in the Oil & Gas Industry: Will State Attorneys General Investigations Impede the Drive for More Expansive Disclosures
4	Universal apparatus module of radioactivity logging for the investigation of oil-and-gas reservoirs while drilling	Log in to gain access to this result.	Investigation of the transport and metabolic patterns of oil-displacing bacterium FY-07-G in the microcosm model using X-CT technology.
5	INVESTIGATION OF GAS-OIL RELATIVE PERMEABILITY PARAMETERS IMPACT ON THE FIELD DEVELOPMENT EFFICIENCY IN LOW PERMEABLE RESERVOIRS	EVALUATIONS OF RADIONUCLIDES OF URANIUM, THORIUM, AND RADIUM ASSOCIATED WITH PRODUCED FLUIDS, PRECIPITATES, AND SLUDGES FROM OIL, GAS, AND OILFIELD BRINE INJECTION WELLS IN MISSISSIPPI [electronic resource]	This record cannot be displayed to guest users

(*Continued*)

Appendix B (Continued)

	EDS		
Rank	**Delta State University**	**Auburn University**	**West Virginia University**
6	Numerical investigation of CO2-carbonated water-alternating-gas on enhanced oil recovery and geological carbon storage	Performance Investigation and Optimization of the Primary Separation Part of the Oil-Gas Sepa rator.	This record cannot be displayed to guest users
7	Experimental Investigation of Hydrocarbon and Non-Hydrocarbon Gas Injection in a Tight Danish North Sea Oil Reservoir	Log in to gain access to this result.	The experimental investigation on the geo-polymerization of water-based filtercake at the second interface of the oil-gas well
8	An investigation of factors affecting Low Tension Gas process for enhanced oil recovery in carbonate reservoirs	ADAPTIVE MANAGEMENT AND PLANNING MODELS FOR CULTURAL RESOURCES IN OIL & GAS FIELDS IN NEW MEXICO AND WYOMING [electronic resource]	This record cannot be displayed to guest users
9	Recent Interior Department Inspector General investigations on federal oil and gas royalty collections [electronic resource]: oversight hearing before the Committee on Natural Resources, U.S. House of Representatives, One Hundred Tenth Congress, second session, Thursday, September 18, 2008.	ADAPTIVE MANAGEMENT AND PLANNING MODELS FOR CULTURAL RESOURCES IN OIL & GAS FIELDS IN NEW MEXICO AND WYOMING [electronic resource]	This record cannot be displayed to guest users

(*Continued*)

Appendix B (Continued)

		EDS	
Rank	**Delta State University**	**Auburn University**	**West Virginia University**
10	Recent Interior Department Inspector General investigations on federal oil and gas royalty collections [electronic resource]: oversight hearing before the Committee on Natural Resources, U.S. House of Representatives, One Hundred Tenth Congress, second session, Thursday, September 18, 2008.	Log in to gain access to this result.	Synthesis of an innovative SF/NZVI catalyst and investigation of its effectiveness on bio-oil production in liquefaction process alongside other parameters

		Cloudsource+	
Rank	**Gannon University**	**Houston Christian Universtiy**	**Tarleton State University**
1	Adsorption and gas-sensing investigation of oil dissolved gases onto nitrogen and sulfur doped graphene quantum dots	Oil company involved in Arvin gas leak investigated for oil tank emissions.	Oil company involved in Arvin gas leak investigated for oil tank emissions.
2	INVESTiGATiON OF CARBON GAS iN OiL TRANSFORMERS	KODIAK OIL & GAS ALERT: Johnson & Weaver Investigating the Proposed Sale of Kodiak Oil & Gas Corp.	KODIAK OIL & GAS ALERT: Johnson & Weaver Investigating the Proposed Sale of Kodiak Oil & Gas Corp.
3	Experimental study on flue gas foam-assisted steam flooding: investigating characteristics of enhanced oil recovery and gas storage	Nass Investigates Oil and Gas Production.	Nass Investigates Oil and Gas Production
4	Investigation and Implementation of loT Based Oil & Gas Pipeline Monitoring System	U.S. Geological Survey Oil and Gas Resource Investigations Program	Oil and gas commission investigating quakes in northeast B.C.

(*Continued*)

Appendix B (Continued)

		Cloudsource+	
Rank	**Gannon University**	**Houston Christian Universtiy**	**Tarleton State University**
5	Direct Investigation of Oil Recovery Mechanism by Polymer-Alternating-Gas CO2 through Micromodel Experiments	Oil and gas commission investigating quakes in northeast B.C.	U.S. Geological Survey Oil and Gas Resource Investigations Program
6	Investigation of physical chemical properties of drilling fluids for drilling oil and gas wells	Enbridge investigates gas leak.	Enbridge investigates gas leak.
7	Performance Comparison of Waste Cooking Oil on Coal Slime Flotation with Sunflower Oil and Gas Oil	Reserve growth of oil and gas fields — Investigations and applications	Reserve growth of oil and gas fields—Investigations and applications
8	Capital Structure, Firm Size, Profitability, and Tax Avoidance: Investigating the Oil and Gas Industry of Pakistan	Adsorption and gas-sensing investigation of oil dissolved gases onto nitrogen and sulfur doped graphene quantum dots	Adsorption and gas-sensing investigation of oil dissolved gases onto nitrogen and sulfur doped graphene quantum dots
9	Universal apparatus module of radioactivity logging for the investigation of oil-and-gas reservoirs while drilling	Wildfire Investigations Oil And Gas Expert.	Wildfire Investigations Oil And Gas Expert.
10	Investigation of the effect of the Reservoir Rock Compressibility on Oil Recovery Factor during Gas Injection Author	ACCUMULATION CHARACTERISTICS AND EXPLORATION PERSPECTIVE OF THE TIGHT OIL IN SOUTHERN POYANG DEPRESSION	DOE to Investigate Gas Prices

Appendix C

music AND (treatment OR therapy)

	Primo		
Rank	**University of Southern Mississippi**	**Clemson University**	**Kansas State University**
1	British journal of music therapy (London, England: 1995)	Music therapy: research and evidence-based practice.	Journal of music therapy.
2	Australian journal of music therapy: the journal of the Australian Music Therapy Association Inc.	British journal of music therapy (London, England: 1995)	Music therapy perspectives.
3	Journal of music therapy.	Music therapy (New York, N.Y.)	Australian journal of music therapy: the journal of the Australian Music Therapy Association Inc.
4	Music therapy perspectives.	Music therapy for developmental disabilities	Voices (Sandane, Norway)
5	Voices (Sandane, Norway)	Journal of music therapy.	Canadian journal of music therapy = Revue canadienne de musicotherapie.
6	Canadian journal of music therapy = Revue canadienne de musicotherapie.	Music therapy perspectives.	Music therapy index.
7	Nordic journal of music therapy (Online)	Australian journal of music therapy: the journal of the Australian Music Therapy Association Inc.	Music therapy; book of proceedings of the National Association for Music Therapy.
8	Journal of music therapy.	Canadian journal of music therapy = Revue canadienne de musicotherapie.	Music, health, and wellbeing
9	The sound of music	Nordic journal of music therapy (Online)	Approaches (Greece)
10	The music man	Voices (Sandane, Norway)	The bulletin of historical research in music education.

(*Continued*)

Appendix C (Continued)

	EDS		
Rank	**Delta State University**	**Auburn University**	**West Virginia University**
1	The proper chord with music: Treatment of behavioral problems in dementia with individual music therapy. - Individual music therapy in dementia care	Music Therapy with Children [electronic resource] A Review of Clinical Utility and Application to Special Populations/John David Andrew Yeaw.	Effects of Combining Music Therapy, Light Therapy, and Chromotherapy in the Treatment of Chronic Pain Patients: A Pilot Study.
2	Effects of Combining Music Therapy, Light Therapy, and Chromotherapy in the Treatment of Chronic Pain Patients: A Pilot Study.	Music therapy and the Autism Spectrum [electronic resource]: an integrative overview/Gustavo Schulz Gattino.	The music therapy treatment process in mental health settings
3	Effect of Music on Pain in Cancer Patients in Palliative Care Service: A Randomized Controlled Study.	Music Therapy with Autistic Children [electronic resource]: A Multiple Case Study/Jose Maria G. Pelayo, III and Celeste S. Sanchez.	Changes in music-evoked emotion and ventral striatal functional connectivity after psilocybin therapy for depression.
4	Evaluation of the music therapy program interventions on agitated behavior for people with dementia in Taiwan institutional care.	Music Therapy [microform]: A Therapeutic Intervention for Girls with Rett Syndrome/ Kathleen A. Coleman.	Effects of music therapy on mood, pain, and satisfaction in the neurologic inpatient setting.
5	Changes in music-evoked emotion and ventral striatal functional connectivity after psilocybin therapy for depression.	Sports therapy services [electronic resource]: organization and operations/edited by James E. Zachazewski, David J. Magee.	The evolution of psychotherapy. The emergence of a polyvagal-informed therapy: how vocal music and voice contribute to healing following trauma
6	Evaluating a theoretical framework for the use of music therapy in the treatment of selective mutism in young children: a multiple case study	Music therapy with preschool children on the autism spectrum: moments of meeting/ Geoff Barnes.	Music Therapy

(*Continued*)

Appendix C (Continued)

	EDS		
Rank	**Delta State University**	**Auburn University**	**West Virginia University**
7	Treatment description and case series report of a phased music therapy group to support Veteran reintegration	Effects of Combining Music Therapy, Light Therapy, and Chromotherapy in the Treatment of Chronic Pain Patients: A Pilot Study.	Evaluating a theoretical framework for the use of music therapy in the treatment of selective mutism in young children: a multiple case study
8	Music-supported Therapy in the rehabilitation of motor deficits after stroke	Effect of Music on Pain in Cancer Patients in Palliative Care Service: A Randomized Controlled Study.	Experiences of music therapy in paediatric palliative care from multiple stakeholder perspectives: A systematic review and qualitative evidence synthesis.
9	Effectiveness of Medical Music Therapy Practice: Integrative Research Using the Electronic Health Record: Rationale, Design, and Population Characteristics.	Short-term music therapy treatment for adolescents with depression - A pilot study	Case Examples of Music Therapy for Developmental Problems in Learning and Communication
10	Music Therapy	Music Therapy with Military and Veteran Populations	This record cannot be displayed to guest users

	Cloudsource+		
Rank	**Gannon University**	**Houston Christian Universtiy**	**Tarleton State University**
1	Musical interaction in music therapy for depression treatment	MUSIC THERAPY IN PHYSICAL TREATMENT	MUSIC THERAPY IN PHYSICAL TREATMENT
2	Trauma, music and music therapy	MUSIC THERAPY TREATMENT TECHNIQU ES	MUSIC THERAPY TREATMENT TECHNIQUES
3	The Modernization of Oriental Music Therapy: Five-Element Music Therapy Combined with Artificial Intelligence	Musical interaction in music therapy for depression treatment	Musical interaction in music therapy for depression treatment

(*Continued*)

Appendix C (Continued)

		Cloudsource+	
Rank	**Gannon University**	**Houston Christian Universtiy**	**Tarleton State University**
4	Music Therapy as a Low-Cost Treatment for Alzheimer's Disease	Musical interaction in music therapy for depression treatment	Musical interaction in music therapy for depression treatment
5	Randomized Clinical Trial: Effectiveness of Tinnitus Treatment Using Music de Tinnitus Therapy Compared with Standard Therapy	Effectiveness of Medical Music Therapy in Lifestyle Metabolic Treatment	Effectiveness of Medical Music Therapy in Lifestyle Metabolic Treatment
6	Music Therapy in the Treatment of Dementia: A Review Article	Efficacy of Co-Treatment with Occupational Therapy and Music Therapy in the NICU	Efficacy of Co-Treatment with Occupational Therapy and Music Therapy in the NICU
7	Music therapy	Using music for therapy.	Using music for therapy.
8	Music therapy in insomnia	Trauma, music and music therapy	Trauma, music and music therapy
9	Effects of Combining Music Therapy, Light Therapy, and Chromotherapy in the Treatment of Chronic Pain Patients: A Pilot Study	The Modernization of Oriental Music Therapy: Five-Element Music Therapy Combined with Artificial Intelligence	The Modernization of Oriental Music Therapy: Five-Element Music Therapy Combined with Artificial Intelligence
10	Application of Music Therapy in General Surgical Treatment	Music Therapy as a Low-Cost Treatment for Alzheimer's Disease	Music therapy.

Appendix D

Library Hi Tech - Keyword Search

	Primo		
Rank	**University of Southern Mississippi**	**Clemson University**	**Kansas State University**
1	Library hi tech (Online)	Library hi tech (Online)	Library hi tech (Online)
2	Library hi tech.	Library hi tech news (Online)	Library hi tech news (Online)
3	Library hi tech news (Online)	Library hi tech. Volume 26, Number 1, Information orgnaization futures	Library hi tech. Volume 26, Number 1, Information orgnaization futures
4	Mapping scientific profile and knowledge diffusion of Library Hi Tech	Library hi tech. Volume 25, Number 4, Special sections on accessibility [and] OPAC	Library hi tech. Volume 25, Number 4, Special sections on accessibility [and] OPAC
5	Mapping knowledge structure by keyword co-occurrence and social network analysis: Evidence from Library Hi Tech between 2006 and 2017	Mapping scientific profile and knowledge diffusion of Library Hi Tech	Mapping scientific profile and knowledge diffusion of Library Hi Tech
6	Opening the black box of Library Hi Tech: a social network and bibliometric analysis	Mapping knowledge structure by keyword co-occurrence and social network analysis: Evidence from Library Hi Tech between 2006 and 2017	Mapping knowledge structure by keyword co-occurrence and social network analysis: Evidence from Library Hi Tech between 2006 and 2017
7	A nostalgic look back at library hi tech(nology)	Opening the black box of Library Hi Tech: a social network and bibliometric analysis	Opening the black box of Library Hi Tech: a social network and bibliometric analysis
8	Trend analysis of co-authorship network in Library Hi Tech	A nostalgic look back at library hi tech(nology)	A nostalgic look back at library hi tech(nology)
9	Library Hi Tech at 30	Trend analysis of co-authorship network in Library Hi Tech	Trend analysis of co-authorship network in Library Hi Tech
10	Library Hi Tech and information science	Library Hi Tech at 30	Library Hi Tech at 30

(*Continued*)

Appendix D (Continued)

		EDS	
Rank	**Delta State University**	**Auburn University**	**West Virginia University**
1	Library hi tech.	Library hi tech [electronic resource].	Library hi tech./Vol. 23, No. 1 / UNLV libraries: four years later (part 1)/Theme editor: Bradford Lee Eden.
2	Library hi tech news.	Library hi tech news [electronic resource].	Library hi tech.
3	Opening the black box of Library Hi Tech: a social network and bibliometric analysis	Library hi tech bibliography [print].	Library hi tech.
4	COVID-19 Pandemic and Health Informatics Part 1: Library Hi Tech /	Log in to gain access to this result.	This record cannot be displayed to guest users
5	Data for better health: Library Hi Tech /	Mapping scientific profile and knowledge diffusion of Library Hi Tech	Library hi tech news.
6	Linked Open Data of Bibliometric Networks: Analytics Research for Personalized Library Services: Library Hi Tech /	Trend analysis of co-authorship network in Library Hi Tech	Mapping scientific profile and knowledge diffusion of Library Hi Tech
7	Human behavior analysis for library and information science: Library Hi Tech /	Mapping knowledge structure by keyword co-occurrence and social network analysis: Evidence from Library Hi Tech between 2006 and 2017	Content Analysis of DESIDOC and Library Hi Tech Journal: An Assessment.
8	Trend analysis of co-authorship network in Library Hi Tech	A nostalgic look back at library hi tech(nology)	Trend analysis of co-authorship network in Library Hi Tech
9	Trend analysis of co-authorship network in Library Hi Tech	Log in to gain access to this result.	Mapping knowledge structure by keyword co-occurrence and social network analysis: Evidence from Library Hi Tech between 2006 and 2017
10	Mapping knowledge structure by keyword co-occurrence and social network analysis: Evidence from Library Hi Tech between 2006 and 2017	Researchers from University of Jinan Report New Studies and Findings in the Area of COVID-19 (Opening the Black Box of Library Hi Tech: a Social Network and Bibliometric Analysis)	This record cannot be displayed to guest users

(*Continued*)

Appendix D (Continued)

		Cloudsource+	
Rank	**Gannon University**	**Houston Christian Universtiy**	**Tarleton State University**
1	Equip public managers with data analytics skills: a proposal for the new generation of MPA/ MPP programs with data science track	Library Hi Tech	Library Hi Tech
2	Artificial intelligence as enabler of future library services: how prepared are librarians in African university libraries	Library Hi Tech News	Library Hi Tech News
3	Social media aesthetics as part of academic library merchandising	Library Hi Tech at 30	Library Hi Tech at 30
4	Libraries in the metaverse: the need for metaliteracy for digital librarians and digital age library users	Library Hi Tech and information science	Library Hi Tech and information science
5	Personal factors and the role of memory in faculty refinding of stored information	Libraries go hi-tech.	Tassie eBook surge Library's hi-tech lift.
6	Libraries and librarians' roles in ensuring cyberethical behaviour	Tassie eBook surge Library's hi-tech lift.	School library goes hi-tech.
7	Knowledge mapping of research data in China: a bibliometric study using visual analysis	School library goes hi-tech.	2012 Awards for Excellence Library Hi Tech News
8	Telepresence robots in libraries: applications and challenges	2012 Awards for Excellence Library Hi Tech News	Library to go hi-tech.
9	Facilitated virtual learning for advanced geriatric education among nursing students during the COVID pandemic in Taiwan	Moulaison Sandy Wins 2018 LITA/Library Hi Tech Award.	A nostalgic look back at library hi tech(nology)
10	Repurposed collection marketing and visibility: using LibGuide gallery boxes as virtual library bookshelves	A nostalgic look back at library hi tech(nology)	Moulaison Sandy Wins 2018 LITA/Library Hi Tech Award.

Appendix E

Library Hi Tech - Title Search

	Primo		
Rank	**University of Southern Mississippi**	**Clemson University**	**Kansas State University**
1	Library hi tech (Online)	Library hi tech (Online)	Library hi tech (Online)
2	Library hi tech.	Library hi tech news (Online)	Library hi tech news (Online)
3	Library hi tech news (Online)	Library hi tech. Volume 26, Number 1, Information orgnaization futures	Library hi tech. Volume 26, Number 1, Information orgnaization futures
4	Opening the black box of Library Hi Tech: a social network and bibliometric analysis	Library hi tech. Volume 25, Number 4, Special sections on accessibility [and] OPAC	Library hi tech. Volume 25, Number 4, Special sections on accessibility [and] OPAC
5	Mapping knowledge structure by keyword co-occurrence and social network analysis: Evidence from Library Hi Tech between 2006 and 2017	Opening the black box of Library Hi Tech: a social network and bibliometric analysis	Library hi tech bibliography.
6	CITATION BASED COMPARATIVE ANALYSIS OF LIBRARY HI-TECH AND LIBRARY QUARTERLY JOURNALS USING SCIMAGO JOURNAL RANK	Mapping knowledge structure by keyword co-occurrence and social network analysis: Evidence from Library Hi Tech between 2006 and 2017	Library Hi tech's past, present and future.
7	Mapping scientific profile and knowledge diffusion of Library Hi Tech	CITATION BASED COMPARATIVE ANALYSIS OF LIBRARY HI-TECH AND LIBRARY QUARTERLY JOURNALS USING SCIMAGO JOURNAL RANK	Library hi tech. Vol. 23, No. 1, UNLV libraries: four years later (part 1)
8	Trend analysis of co-authorship network in Library Hi Tech	Mapping scientific profile and knowledge diffusion of Library Hi Tech	Opening the black box of Library Hi Tech: a social network and bibliometric analysis

(*Continued*)

Appendix E (Continued)

	Primo		
Rank	**University of Southern Mississippi**	**Clemson University**	**Kansas State University**
9	Content Analysis of DESIDOC and Library Hi Tech Journal: An Assessment	Trend analysis of co-authorship network in Library Hi Tech	Mapping knowledge structure by keyword co-occurrence and social network analysis: Evidence from Library Hi Tech between 2006 and 2017
10	A nostalgic look back at library hi tech(nology)	Content Analysis of DESIDOC and Library Hi Tech Journal: An Assessment	Citation based comparative analysis of library hi-tech and library quarterly journals using scimago journal rank

	EDS		
Rank	**Delta State University**	**Auburn University**	**West Virginia University**
1	Library hi tech.	Library hi tech [electronic resource].	Library hi tech./Vol. 23, No. 1 / UNLV libraries: four years later (part 1)/Theme editor: Bradford Lee Eden.
2	Library hi tech news.	Library hi tech news [electronic resource].	Library hi tech.
3	Opening the black box of Library Hi Tech: a social network and bibliometric analysis	Library hi tech bibliography [print].	Library hi tech.
4	COVID-19 Pandemic and Health Informatics Part 1: Library Hi Tech /	Log in to gain access to this result.	Library hi tech news.
5	Data for better health: Library Hi Tech /	Information ethics [electronic resource]/ theme editor, Kenneth Einar Himma.	This record cannot be displayed to guest users
6	Linked Open Data of Bibliometric Networks: Analytics Research for Personalized Library Services: Library Hi Tech /	Information ethics [electronic resource]/ theme editor, Kenneth Einar Himma.	This record cannot be displayed to guest users

(*Continued*)

Appendix E (Continued)

	EDS		
Rank	**Delta State University**	**Auburn University**	**West Virginia University**
7	Human behavior analysis for library and information science: Library Hi Tech /	National leadership grants [electronic resource]/ Guest editors, Timothy W. Cole and Sarah L. Shreeves.	Mapping scientific profile and knowledge diffusion of Library Hi Tech
8	Trend analysis of co-authorship network in Library Hi Tech	National leadership grants [electronic resource]/ Guest editors, Timothy W. Cole and Sarah L. Shreeves.	Trend analysis of co-authorship network in Library Hi Tech
9	Mapping knowledge structure by keyword co-occurrence and social network analysis: Evidence from Library Hi Tech between 2006 and 2017	Mapping scientific profile and knowledge diffusion of Library Hi Tech	Mapping knowledge structure by keyword co-occurrence and social network analysis: Evidence from Library Hi Tech between 2006 and 2017
10	CM to dedicate hi-tech library today.	Trend analysis of co-authorship network in Library Hi Tech	CITATION BASED COMPARATIVE ANALYSIS OF LIBRARY HI-TECH AND LIBRARY QUARTERLY JOURNALS USING SCIMAGO JOURNAL RANK

	Cloudsource+		
Rank	**Gannon University**	**Houston Christian Universtiy**	**Tarleton State University**
1	Hi Tech versus Hi Touch: The Digitalisation of Asnafpreneurs in Perlis	Library Hi Tech	Library Hi Tech
2	Advertisements: Hi-language for Hi-tech?	Library Hi Tech News	Library Hi Tech News
3	BANDARA DEWADARU KARIMUNJAWA BERPENDEKATAN ARSITEKTUR HI-TECH	Library Hi Tech at 30	Library Hi Tech at 30
4	From Hi-Tech to Hi-Touch: A Global Perspective of Design Education and Practice	Library Hi Tech and information science	Library Hi Tech and information science

(*Continued*)

Appendix E (Continued)

	Cloudsource+		
Rank	**Gannon University**	**Houston Christian Universtiy**	**Tarleton State University**
5	Enhancing the Skills of Hi Tech Lab Utilization in Teaching Geometrical Concepts	Libraries go hi-tech.	Tassie eBook surge Library's hi-tech lift.
6	Modelling of processes of creation of hi-tech construction products	Tassie eBook surge Library's hi-tech lift.	School library goes hi-tech.
7	PENERAPAN ARSITEKTUR HI-TECH PADA APARTEMEN MAHASISWA DI GORONTALO	School library goes hi-tech.	2012 Awards for Excellence Library Hi Tech News
8	HI-TECH ABORTION: A LEGAL PERSPECTIVE	2012 Awards for Excellence Library Hi Tech News	Library to go hi-tech.
9	Risk map of hi-tech journalism.	A nostalgic look back at library hi tech(nology)	A nostalgic look back at library hi tech(nology)
10	Medan Amusement Center (Hi-Tech Architecture)	Moulaison Sandy Wins 2018 LITA/Library Hi Tech Award	Moulaison Sandy Wins 2018 LITA/Library Hi Tech Award.

Appendix F

Gone with the Wind - Keyword Search

	Primo		
Rank	**University of Southern Mississippi**	**Clemson University**	**Kansas State University**
1	Gone with the wind	Gone with the Wind	Gone with the wind
2	Gone with the wind.	Gone with the wind	Gone with the wind
3	Gone with the wind.	Gone with the wind	Gone with the wind
4	Gone with the wind	Gone with the wind: The consequences of US drone strikes in Pakistan	Gone with the wind
5	Gone with the wind	Recasting: "Gone with the wind" in American culture	Gone with the wind
6	Gone with the wind	Gone with the wind on film: a complete reference	Gone with the wind: The consequences of US drone strikes in Pakistan
7	Gone With The Wind.	New approaches to Gone with the wind	Gone with the wind Margaret Mitchell's story of the old South
8	Gone with the wind: The consequences of US drone strikes in Pakistan	Selznick's vision: Gone with the wind and Hollywood filmmaking	Margaret Mitchell's Gone with the wind letters, 1936–1949
9	GWTW: the making of Gone with the wind	Scarlett, Rhett, and a cast of thousands: the filming of Gone with the wind	Frankly, my dear Gone with the wind revisited
10	Selznick's vision: Gone with the wind and Hollywood filmmaking	Margaret Mitchell's Gone with the wind letters, 1936–1949	A Literary Form for Love: Yves Navarre's My Friends Are Gone with the Wind

Gone with the Wind - Keyword Search

(*Continued*)

Appendix F (Continued)

	EDS		
Rank	**Delta State University**	**Auburn University**	**West Virginia University**
1	Gone with the wind/ Margaret Mitchell.	Gone with the wind [electronic resource]: impacts of wind turbines on birds and bats: oversight hearing before the Subcommittee on Fisheries, Wildlife, and Oceans of the Committee on Natural Resources, U.S. House of Representatives, One Hundred Tenth Congress, first session, Tuesday, May 1, 2007.	Gone with the wind: (sped up)/Mantovani.
2	Gone with the wind [DVD]: Margaret Mitchell's story of the old South/[presented by] Selznick International in association with Metro-Goldwyn-Mayer; produced by David O. Selznick; screenplay by Sidney Howard; directed by Victor Fleming.	Gone with the wind [electronic resource]: impacts of wind turbines on birds and bats: oversight hearing before the Subcommittee on Fisheries, Wildlife, and Oceans of the Committee on Natural Resources, U.S. House of Representatives, One Hundred Tenth Congress, first session, Tuesday, May 1, 2007.	Gone with the wind/Helen Taylor.
3	Gone with the wind/by Margaret Mitchell.	Gone with the wind [sound/ electronic resource]: (sped up)/Mantovani.	Gone with the wind: impacts of wind turbines on birds and bats: oversight hearing before the Subcommittee on Fisheries, Wildlife, and Oceans of the Committee on Natural Resources, U.S. House of Representatives, One Hundred Tenth Congress, first session, Tuesday, May 1, 2007.

(*Continued*)

Appendix F (Continued)

	EDS		
Rank	**Delta State University**	**Auburn University**	**West Virginia University**
4	Gone with the wind [sound recording]/Dave Brubeck Quartet.	Gone with the wind: impacts of wind turbines on birds and bats: oversight hearing before the Subcommittee on Fisheries, Wildlife, and Oceans of the Committee on Natural Resources, U.S. House of Representatives, One Hundred Tenth Congress, first session, Tuesday, May 1, 2007.	Gone with the wind/David O. Selznick's production of Margaret Mitchell's [novel], a Selznick International Picture; screenplay by Sidney Howard; directed by Victor Fleming.
5	Gone with the wind [sound recording]/ music composed by Max Steiner.	Gone with the wind/Margaret Mitchell; with a preface by Pat Conroy.	Gone with the Wind (Technicolour)
6	Gone with the wind [sound recording]: the original sound track album.	Gone with the wind [videorecording (DVD)]/David O. Selznick's production of Margaret Mitchell's [novel], a Selznick International Picture; screenplay by Sidney Howard; directed by Victor Fleming.	Gone with the wind/ Margaret Mitchell; with a preface by Pat Conroy.
7	Gone with the Wind (Technicolour)	The wind done gone/Alice Randall.	The wind is never gone: sequels, parodies and rewritings of Gone with the wind/M. Carmen Gomez-Galisteo.
8	"J. A. Rogers Rips 'Veil of Hypocrisy' From 'Best-Seller,'" Pittsburgh Courier, February 27, 1937 (Review of Margaret Mitchell's Gone with the Wind)	Gone with the wind: the three-day premiere in Atlanta/by Herb Bridges.	Gone With the Wind
9	Margaret Mitchell and the Nobel Prize, or Per Hallstrom and Gone with the Wind.	Gone with the wind: the definitive illustrated history of the book, the movie, and the legend/by Herb Bridges and Terryl C. Boodman.	Margaret Mitchell and the Nobel Prize, or Per Hallstrom and Gone with the Wind.
10	Missouri's Chance at Low-Cost Renewable Energy 'Gone with the Wind'?	New approaches to Gone with the Wind/edited by James A. Crank.	Missouri's Chance at Low-Cost Renewable Energy 'Gone with the Wind'?

(*Continued*)

Appendix F (Continued)

	Cloudsource+		
Rank	**Gannon University**	**Houston Christian Universtiy**	**Tarleton State University**
1	Gone With the Wind	GONE WITH THE WIND.	GONE WITH THE WIND.
2	Introduction. Gone With the Wind after Gone With the Wind	Gone with the wind.	Gone with the wind.
3	Gone with the wind? Wind farm-induced wakes and regulatory gaps	GONE With The Wind actor [. . .].	Gone with the wind
4	Gone With the Wind: Honey Bee Collective Scenting in the Presence of External Wind	GONE With The Wind actor [. . .]	Gone with the Wind
5	Poster: Vortex rings gone with the wind	Gone with the Wind	Gone with the wind.
6	Progressive and Conservative Ideology of Women in Gone with the Wind	Gone with the wind.	GONE WITH THE WIND.
7	Gone with the wind? The Norwegian licencing process for wind power: does it support investments and the realisation of political goals?	GONE WITH THE WIND.	GONE WITH THE WIND.
8	Interpretation of feminism in Gone with the Wind	Gone with the wind.	Gone with the Wind.
9	Gone with the Wind - Innate Immunity and Airway Inflammation	GONE WITH THE WIND.	Gone With the Wind.
10	Gone with the Wind: Demographic Transitions and Domestic Saving	Gone with the Wind.	Gone With The Wind

Appendix G

Gone with the Wind - Title Search

	Primo		
Rank	**University of Southern Mississippi**	**Clemson University**	**Kansas State University**
1	Gone with the wind	Gone with the Wind	Gone with the wind
2	Gone with the wind	Gone with the wind	Gone with the wind
3	Gone with the wind	Gone with the wind	Gone with the wind
4	Gone with the wind	Recasting: "Gone with the wind" in American culture	Gone with the wind
5	Gone with the wind.	"Gone with the wind": original motion picture soundtrack	Gone with the wind
6	Gone with the wind.	Margaret Mitchell's Gone with the wind letters, 1936–1949	Gone with the wind Margaret Mitchell's story of the old South
7	Gone With The Wind.	The making of Gone with the Wind	Scarlett: the sequel to Margaret Mitchell's Gone with the wind
8	Scarlett: the sequel to Margaret Mitchell's Gone with the wind	New approaches to Gone with the wind	Margaret Mitchell's Gone with the wind letters, 1936–1949
9	Gone with the wind Margaret Mitchell's story of the old South	Gone with the wind as book and film	"Gone with the Wind" cook book.
10	"Gone with the wind" cook book: a gift with your purchase of Pebeco toothpaste.	Gone with the wind? — Electricity market prices and incentives to invest in thermal power plants under increasing wind energy supply	Gone with the wind (sped up)

(*Continued*)

Appendix G (Continued)

	EDS		
Rank	**Delta State University**	**Auburn University**	**West Virginia University**
1	Gone with the wind/ Margaret Mitchell.	Gone with the wind [electronic resource]: impacts of wind turbines on birds and bats: oversight hearing before the Subcommittee on Fisheries, Wildlife, and Oceans of the Committee on Natural Resources, U.S. House of Representatives, One Hundred Tenth Congress, first session, Tuesday, May 1, 2007.	Gone with the wind: (sped up)/Mantovani.
2	Gone with the wind [DVD]: Margaret Mitchell's story of the old South/[presented by] Selznick International in association with Metro-Goldwyn- Mayer; produced by David O. Selznick; screenplay by Sidney Howard; directed by Victor Fleming.	Gone with the wind [electronic resource]: impacts of wind turbines on birds and bats: oversight hearing before the Subcommittee on Fisheries, Wildlife, and Oceans of the Committee on Natural Resources, U.S. House of Representatives, One Hundred Tenth Congress, first session, Tuesday, May 1, 2007.	Gone with the wind/Helen Taylor.
3	Gone with the wind [sound recording]/ music composed by Max Steiner.	Gone with the wind [sound/ electronic resource]: (sped up)/Mantovani.	Gone with the wind/Helen Taylor.
4	Gone with the wind [sound recording]/Dave Brubeck Quartet.	Gone with the wind/ Margaret Mitchell; with a preface by Pat Conroy.	Gone with the wind/Helen Taylor.
5	Gone with the wind [sound recording]: the original sound track album.	Gone with the wind [videorecording (DVD)]/ David O. Selznick's production of Margaret Mitchell's [novel], a Selznick International Picture; screenplay by Sidney Howard; directed by Victor Fleming.	Gone with the wind/ Margaret Mitchell; with a preface by Pat Conroy.

(*Continued*)

Appendix G (Continued)

	EDS		
Rank	**Delta State University**	**Auburn University**	**West Virginia University**
6	Gone with the wind/by Margaret Mitchell.	Gone with the wind: impacts of wind turbines on birds and bats: oversight hearing before the Subcommittee on Fisheries, Wildlife, and Oceans of the Committee on Natural Resources, U.S. House of Representatives, One Hundred Tenth Congress, first session, Tuesday, May 1, 2007.	Gone With the Wind
7	"J. A. Rogers Rips 'Veil of Hypocrisy' From 'Best-Seller,'" Pittsburgh Courier, February 27, 1937 (Review of Margaret Mitchell's Gone with the Wind)	Gone with the wind [microform]: story of a best seller.	The wind is never gone: sequels, parodies and rewritings of Gone with the wind/M. Carmen Gomez-Galisteo.
8	Missouri's Chance at Low-Cost Renewable Energy 'Gone with the Wind'?	Gone with the wind/by Margaret Mitchell; illustrated by Ben Stahl.	Missouri's Chance at Low-Cost Renewable Energy 'Gone with the Wind'?
9	Dicamba Is Gone with the Wind: The Ninth Circuit Blows Life into FIFRA in National Family Farm Coalition v. United States Environmental Protection Agency	Gone with the wind: the three-day premiere in Atlanta/by Herb Bridges.	Dicamba Is Gone with the Wind: The Ninth Circuit Blows Life into FIFRA in National Family Farm Coalition v. United States Environmental Protection Agency
10	32. Gone with the Wind	Gone with the wind/by Margaret Mitchell.	Gone with the wind? Wind farm-induced wakes and regulatory gaps

	Cloudsource+		
Rank	**Gannon University**	**Houston Christian Universtiy**	**Tarleton State University**
1	Gone With the Wind	GONE WITH THE WIND.	GONE WITH THE WIND.
2	Introduction. Gone With the Wind after Gone With the Wind	Gone with the wind.	Gone with the wind.
3	Poster: Vortex rings gone with the wind	Gone with the Wind	Gone with the wind

(*Continued*)

Appendix G (Continued)

		Cloudsource+	
Rank	**Gannon University**	**Houston Christian Universtiy**	**Tarleton State University**
4	Gone with the wind? Wind farm-induced wakes and regulatory gaps	Gone with the wind.	Gone with the Wind
5	Gone with the wind? The Norwegian licencing process for wind power: does it support investments and the realisation of political goals?	GONE WITH THE WIND.	Gone with the wind.
6	Interpretation of feminism in Gone with the Wind	Gone with the wind.	GONE WITH THE WIND.
7	Gone With the Wind: Honey Bee Collective Scenting in the Presence of External Wind	GONE WITH THE WIND.	Gone with the Wind.
8	Progressive and Conservative Ideology of Women in Gone with the Wind	Gone with the Wind.	Gone With the Wind.
9	Gone with the Wind - Innate Immunity and Airway Inflammation	Gone With the Wind.	Gone With The Wind
10	one with the Wind: Demographic Transitions and Domestic Saving	Gone With The Wind	Gone with the wind.

Appendix H

Acid Rain in Shenandoah Park, Virginia - Keyword

		Primo	
Rank	**University of Southern Mississippi**	**Clemson University**	**Kansas State University**
1	Streamwater acid-base chemistry and critical loads of atmospheric sulfur deposition in Shenandoah National Park, Virginia	Streamwater acid-base chemistry and critical loads of atmospheric sulfur deposition in Shenandoah National Park, Virginia	Vulnerability of streams to acid rain in Shenandoah National Park, Virginia
2	Acid rain in Shenandoah National Park, Virginia	Acid rain in Shenandoah National Park, Virginia	Acid rain in Shenandoah National Park, Virginia
3	Time series and recurrence interval models to predict the vulnerability of streams to episodic acidification in Shenandoah National Park, Virginia	Time series and recurrence interval models to predict the vulnerability of streams to episodic acidification in Shenandoah National Park, Virginia	Streamwater acid-base chemistry and critical loads of atmospheric sulfur deposition in Shenandoah National Park, Virginia
4	Acid rain in Shenandoah National Park, Virginia	Sensitivity of stream basins in Shenandoah National Park to acid deposition	Sensitivity of stream basins in Shenandoah National Park to acid deposition
5	Sensitivity of stream basins in Shenandoah National Park to acid deposition	Predicting the vulnerability of streams to episodic acidification and potential effects on aquatic biota in Shenandoah National Park, Virginia	Predicting the vulnerability of streams to episodic acidification and potential effects on aquatic biota in Shenandoah National Park, Virginia
6	Sensitivity of stream basins in Shenandoah National Park to acid deposition	Are Brook Trout Streams in Western Virginia and Shenandoah National Park Recovering from Acidification?	Time series and recurrence interval models to predict the vulnerability of streams to episodic acidification in Shenandoah National Park, Virginia

(*Continued*)

Appendix H (Continued)

	Primo		
Rank	**University of Southern Mississippi**	**Clemson University**	**Kansas State University**
7	Predicting the vulnerability of streams to episodic acidification and potential effects on aquatic biota in Shenandoah National Park, Virginia	Shenandoah watershed study: calibration of a topography-based, variable contributing area hydrological model to a small forested catchment	Climate Change to Offset Improvements in Watershed Acid-Base Status Provided by Clean Air Act and Amendments: A Model Application in Shenandoah National Park, Virginia
8	Are Brook Trout Streams in Western Virginia and Shenandoah National Park Recovering from Acidification?	Time series and recurrence interval models to predict the vulnerability of streams to episodic acidification in Shenandoah National Park, Virginia	Are Brook Trout Streams in Western Virginia and Shenandoah National Park Recovering from Acidification?
9	Shenandoah watershed study: calibration of a topography-based, variable contributing area hydrological model to a small forested catchment	Shenandoah Park on the brink	Interpretation of concentration-discharge patterns in acid-neutralizing capacity during storm flow in three small, forested catchments in Shenandoah National Park, Virginia
10	Time series and recurrence interval models to predict the vulnerability of streams to episodic acidification in Shenandoah National Park, Virginia	Stream geochemical response to reductions in acid deposition in headwater streams: Chronic versus episodic acidification recovery	Shenandoah watershed study; calibration of a topography-based, variable contributing area hydrological model to a small forested catchment

(*Continued*)

Appendix H (Continued)

	EDS		
Rank	**Delta State University**	**Auburn University**	**West Virginia University**
1	Acid rain in Shenandoah National Park, Virginia [electronic resource]/ [Karen C. Rice, Frank A. Deviney, Jr., and Gordon Olson]; prepared in cooperation with the National Park Service.	Acid rain in Shenandoah National Park, Virginia [electronic resource]/ prepared in cooperation with the National Park Service; Karen C. Rice, Frank A. Deviney, Jr., and Gordon Olson.	Acid rain in Shenandoah National Park, Virginia
2	Acid rain in Shenandoah National Park, Virginia [electronic resource]/ prepared in cooperation with the National Park Service; Karen C. Rice, Frank A. Deviney, Jr., and Gordon Olson.	Predicting the vulnerability of streams to episodic acidification and potential effects on aquatic biota in Shenandoah National Park, Virginia [electronic resource]/by Karen C. Rice . . . [et al.]; prepared in cooperation with National Park Service.	Acid rain in Shenandoah National Park, Virginia
3	Acid rain in Shenandoah National Park, Virginia/[by Karen C. Rice, Frank A. Deviney, Jr., and Gordon Olson]; prepared in cooperation with the National Park Service.	Sensitivity of stream basins in Shenandoah National Park to acid deposition/ by Dennis D. Lynch and Nancy B. Dise; prepared in cooperation with University of Virginia, Department of Environmental Sciences.	Acid rain in Shenandoah National Park, Virginia
4	Sensitivity of stream basins in Shenandoah National Park to acid deposition/by Dennis D. Lynch and Nancy B. Dise; prepared in cooperation with University of Virginia Department of Environmental Sciences.	Sensitivity of stream basins in Shenandoah National Park to acid deposition/ by Dennis D. Lynch and Nancy B. Dise; prepared in cooperation with University of Virginia Department of Environmental Sciences.	Acid rain in Shenandoah National Park, Virginia/ prepared in cooperation with the National Park Service; Karen C. Rice, Frank A. Deviney, Jr., and Gordon Olson.

(*Continued*)

Appendix H (Continued)

	EDS		
Rank	**Delta State University**	**Auburn University**	**West Virginia University**
5	Predicting the vulnerability of streams to episodic acidification and potential effects on aquatic biota in Shenandoah National Park, Virginia [electronic resource]/by Karen C. Rice . . . [et al.]; prepared in cooperation with National Park Service.	DROPPING ACID IN THE APPALACHIANS.	Sensitivity of stream basins in Shenandoah National Park to acid deposition
6	Acid rain in Shenandoah National Park, Virginia	Effects of the 1990 Clean Air Act amendments on distributions of visual impairment [electronic resource]	Predicting the vulnerability of streams to episodic acidification and potential effects on aquatic biota in Shenandoah National Park, Virginia
7	Acid rain in Shenandoah National Park, Virginia	Time series and recurrence interval models to predict the vulnerability of streams to episodic acidification in Shenandoah National Park, Virginia.	Shenandoah: A Story of Conservation and Betrayal
8	Streamwater acid-base chemistry and critical loads of atmospheric sulfur deposition in Shenandoah National Park, Virginia.	Shenandoah Park on the brink. (cover story).	Predicting the vulnerability of streams to episodic acidification and potential effects on aquatic biota in Shenandoah National Park, Virginia/by Karen C. Rice [and others]; prepared in cooperation with National Park Service.

(*Continued*)

Appendix H (Continued)

	EDS		
Rank	**Delta State University**	**Auburn University**	**West Virginia University**
9	Sensitivity of stream basins in Shenandoah National Park to acid deposition/by Dennis D. Lynch and Nancy B. Dise; prepared in cooperation with University of Virginia Department of Environmental Sciences	DROPPING ACID IN THE APPALACHIANS.	Nature Guide to Shenandoah National Park
10	Sensitivity of stream basins in Shenandoah National Park to acid deposition/by Dennis D. Lynch and Nancy B. Dise; prepared in cooperation with University of Virginia Department of Environmental Sciences	Acid rain adds to contamination in Shenandoah-area streams	Acid rain in Shenandoah National Park, Virginia

	Cloudsource+		
Rank	**Gannon University**	**Houston Christian Universtiy**	**Tarleton State University**
1	Hydrologic conditions and trends in Shenandoah National Park, Virginia, 1983–84	Acid rain in Shenandoah National Park, Virginia	Acid rain in Shenandoah National Park, Virginia
2	Sensitivity of stream basins in Shenandoah National Park to acid deposition	Carbon Dioxide Dynamics in Acid Forest Soils in Shenandoah National Park, Virginia	Carbon Dioxide Dynamics in Acid Forest Soils in Shenandoah National Park, Virginia
3	Downscaling Maximum Temperatures to Subkilometer Resolutions in the Shenandoah National Park of Virginia, USA	Vegetation alteration along trails in Shenandoah National Park, Virginia	Vegetation alteration along trails in Shenandoah National Park, Virginia
4	Effects of historic wildfire and prescribed fire on site occupancy of bats in Shenandoah National Park, Virginia, USA	Ancient lavas in Shenandoah National Park near Luray, Virginia	Ancient lavas in Shenandoah National Park near Luray, Virginia

(*Continued*)

Appendix H (Continued)

		Cloudsource+	
Rank	**Gannon University**	**Houston Christian Universtiy**	**Tarleton State University**
5	Developing a Rock Garden at Edith J. Carrier Arboretum, Harrisonburg VA (U.S.A.) as a Resource for Promoting Geotourism	Streamwater acid-base chemistry and critical loads of atmospheric sulfur deposition in Shenandoah National Park, Virginia.	Streamwater acid-base chemistry and critical loads of atmospheric sulfur deposition in Shenandoah National Park, Virginia.
6	Spatial asynchrony and cross-scale climate interactions in populations of a coldwater stream fish	Hydrologic conditions and trends in Shenandoah National Park, Virginia, 1983–84	Survival of Introduced Black Bear Cubs in Shenandoah National Park, Virginia
7	Temperature, topography, soil characteristics, and NDVI drive habitat preferences of a shade-tolerant invasive gras	EPISODIC ACIDIFICATION OF THREE STREAMS IN SHENANDOAH NATIONAL PARK, VIRGINIA, USA	Hydrologic conditions and trends in Shenandoah National Park, Virginia, 1983–84
8	Bedrock depth influences spatial patterns of summer baseflow, temperature and flow disconnection for mountainous headwater streams	Lichen Evidence for Changes in Atmospheric Pollution in Shenandoah National Park, Virginia	EPISODIC ACIDIFICATION OF THREE STREAMS IN SHENANDOAH NATIONAL PARK, VIRGINIA, USA
9	Computation and Visualization of Regional-Scale Forest Disturbance and Associated Dissolved Nitrogen Export from Shenandoah National Park, Virginia	A Floristic Checklist of Shenandoah River State Park Warren Co., Virginia.	Lichen Evidence for Changes in Atmospheric Pollution in Shenandoah National Park, Virginia
10	Acute and chronic effects of acidic pH on four subtropical frog species	Community Dynamics and Topographic Controls on Forest Pattern in Shenandoah National Park, Virginia	A Floristic Checklist of Shenandoah River State Park Warren Co., Virginia

Appendix I

Acid Rain in Shenandoah Park, Virginia - Title

	Primo		
Rank	**University of Southern Mississippi**	**Clemson University**	**Kansas State University**
1	Acid rain in Shenandoah National Park, Virginia	Acid rain in Shenandoah National Park, Virginia	Acid rain in Shenandoah National Park, Virginia
2	Acid rain in Shenandoah National Park, Virginia		Vulnerability of streams to acid rain in Shenandoah National Park, Virginia
3			
4			
5			
6			
7			
8			
9			
10			

	EDS		
Rank	**Delta State University**	**Auburn University**	**West Virginia University**
1	Acid rain in Shenandoah National Park, Virginia [electronic resource]/[Karen C. Rice, Frank A. Deviney, Jr., and Gordon Olson]; prepared in cooperation with the National Park Service.	Acid rain in Shenandoah National Park, Virginia [electronic resource]/ prepared in cooperation with the National Park Service; Karen C. Rice, Frank A. Deviney, Jr., and Gordon Olson.	Acid rain in Shenandoah National Park, Virginia
2	Acid rain in Shenandoah National Park, Virginia [electronic resource]/ prepared in cooperation with the National Park Service; Karen C. Rice, Frank A. Deviney, Jr., and Gordon Olson.		Acid rain in Shenandoah National Park, Virginia

(*Continued*)

Appendix I (Continued)

	EDS		
Rank	**Delta State University**	**Auburn University**	**West Virginia University**
3	Acid rain in Shenandoah National Park, Virginia/[by Karen C. Rice, Frank A. Deviney, Jr., and Gordon Olson]; prepared in cooperation with the National Park Service.		Acid rain in Shenandoah National Park, Virginia
4	Acid rain in Shenandoah National Park, Virginia		Acid rain in Shenandoah National Park, Virginia/ prepared in cooperation with the National Park Service; Karen C. Rice, Frank A. Deviney, Jr., and Gordon Olson.
5	Acid rain in Shenandoah National Park, Virginia		
6			
7			
8			
9			
10			

	Cloudsource+		
Rank	**Gannon University**	**Houston Christian Universtiy**	**Tarleton State University**
1	Hydrologic conditions and trends in Shenandoah National Park, Virginia, 1983–84	Acid rain in Shenandoah National Park, Virginia	Acid rain in Shenandoah National Park, Virginia
2	Sensitivity of stream basins in Shenandoah National Park to acid deposition	Carbon Dioxide Dynamics in Acid Forest Soils in Shenandoah National Park, Virginia	Carbon Dioxide Dynamics in Acid Forest Soils in Shenandoah National Park, Virginia
3	Downscaling Maximum Temperatures to Subkilometer Resolutions in the Shenandoah National Park of Virginia, USA	Vegetation alteration along trails in Shenandoah National Park, Virginia	Vegetation alteration along trails in Shenandoah National Park, Virginia

(*Continued*)

Appendix I (Continued)

		Cloudsource+	
Rank	**Gannon University**	**Houston Christian Universtiy**	**Tarleton State University**
4	Effects of historic wildfire and prescribed fire on site occupancy of bats in Shenandoah National Park, Virginia, USA	Ancient lavas in Shenandoah National Park near Luray, Virginia	Ancient lavas in Shenandoah National Park near Luray, Virginia
5		Streamwater acid-base chemistry and critical loads of atmospheric sulfur deposition in Shenandoah National Park, Virginia.	Streamwater acid-base chemistry and critical loads of atmospheric sulfur deposition in Shenandoah National Park, Virginia.
6		Hydrologic conditions and trends in Shenandoah National Park, Virginia, 1983–84	Survival of Introduced Black Bear Cubs in Shenandoah National Park, Virginia
7		EPISODIC ACIDIFICATION OF THREE STREAMS IN SHENANDOAH NATIONAL PARK, VIRGINIA, USA	Hydrologic conditions and trends in Shenandoah National Park, Virginia, 1983–84
8		Lichen Evidence for Changes in Atmospheric Pollution in Shenandoah National Park, Virginia	EPISODIC ACIDIFICATION OF THREE STREAMS IN SHENANDOAH NATIONAL PARK, VIRGINIA, USA
9		Community Dynamics and Topographic Controls on Forest Pattern in Shenandoah National Park, Virginia	Lichen Evidence for Changes in Atmospheric Pollution in Shenandoah National Park, Virginia
10		Sensitivity of stream basins in Shenandoah National Park to acid deposition	Habitat models to assist plant protection efforts in Shenandoah National Park, Virginia, USA

Contributor Notes

Anita Winger is Discovery, Systems & Innovation Librarian, Mississippi State University, Starkville, Mississippi.

Blair Booker is Art, Architecture, and Design Librarian, Mississippi State University, Starkville, Mississippi.

Notes

1 W. Miller, "Web-Scale Discovery Services: The Next Step in the Evolution of Improving Access to Library Collections," *Library Issues* 32, no. 4 (2012): 1–4.
2 W. Miller, "Web-Scale Discovery Services: The Next Step in the Evolution of Improving Access to Library Collections," *Library Issues* 32, no. 4 (2012): 1–4.
3 Anita K. Foster, "Determining Librarian Research Preferences: A Comparison Survey of Web-Scale Discovery Systems and Subject Databases," *Journal of Academic Librarianship* 44, no. 3 (2018): 330–336.
4 Richard Guajardo, Kelsey Brett, and Frederick Young, "The Evolution of Discovery Systems in Academic Libraries: A Case Study at the University of Houston Libraries," *Journal of Electronic Resources Librarianship* 29, no. 1 (2017): 16–23, https://doi.org/10.1080/1941126X.2017.1270097.
5 Melissa A. Hofmann and Sharon Q. Yang, " 'Discovering' What's Changed: A Revisit of the OPACs of 260 Academic Libraries," *Library Hi Tech* 30, no. 2 (2012): 253–274.
6 Melissa A. Hofmann and Sharon Q. Yang, " 'Discovering' What's Changed: A Revisit of the OPACs of 260 Academic Libraries," *Library Hi Tech* 30, no. 2 (2012): 253–274.
7 Xianwen Wang, Yunxue Cui, and Shenmeng Xu, "Evaluating the Impact of Web-scale Discovery Services on Scholarly Content Seeking," *The Journal of Academic Librarianship* 44, no. 5 (2018): 545–552.
8 "Discovery Service for Libraries: Primo - Ex Libris," Ex Libris, accessed July 5, 2024, https://exlibrisgroup.com/products/primo-discovery-service/.
9 "Discovery Service for Libraries: Primo - Ex Libris," Ex Libris, accessed July 5, 2024, https://exlibrisgroup.com/products/primo-discovery-service/.
10 "Discovery Service for Libraries: Primo - Ex Libris," Ex Libris, accessed July 5, 2024, https://exlibrisgroup.com/products/primo-discovery-service/.

11 "EBSCO Discovery Service - Academic Libraries," EBSCO, accessed July 5, 2024, https://www.ebsco.com/academic-libraries/products/ebsco-discovery-service.
12 "CloudSource," SirsiDynix, accessed July 5, 2024, https://www.cloudsource.net/.
13 "CloudSource," SirsiDynix, accessed July 5, 2024, https://www.cloudsource.net/.
14 Karen Ciccone and John Vickery, "Summon, EBSCO Discovery Service, and Google Scholar: A Comparison of Search Performance Using User Queries," *Evidence Based Library and Information Practice* 10, no. 1 (March 6, 2015): 34–49, https://doi.org/10.18438/b86g6q.