

MEASURING YOUR RESEARCH IMPACT

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TODAY'S OUTCOMES

By the end of the session, you will be able to:

- **Be familiar with the tools you can use to measure the impact of a journal, article, and author**
 - **Find your research impact**
-

A photograph of a person's hands typing on a silver laptop keyboard. The laptop is on a wooden desk. A light-colored bag is on the desk next to the laptop. The background is a solid purple color with a yellow triangle in the top right corner.

POLL

What tools do you currently use to measure your scholarly research impact?

WHY MEASURE IMPACT?



Used to evaluate the research impact or “importance” of a journal, article, or researcher.



May be considered in higher education for tenure & promotion decisions.



Can be used for other items, like grant proposals.

LEVELS OF MEASURING IMPACT



Journal



Article or
Item



Researcher

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JOURNAL METRICS

- Used to measure a journal's importance and/or performance in a given field.
- A variety of these metrics are available:
 - SCImago Journal Rank (SJR)
 - CiteScore from Scopus (Elsevier)
 - Google Scholar Journal Metrics
 - Journal Citation Reports
- Considerations: some more suited to specific disciplines; each impact tool has its own algorithm; may be limited in scope; some include self-citations



MEASURING IMPACT: JOURNAL IMPACT FACTOR (JIF)

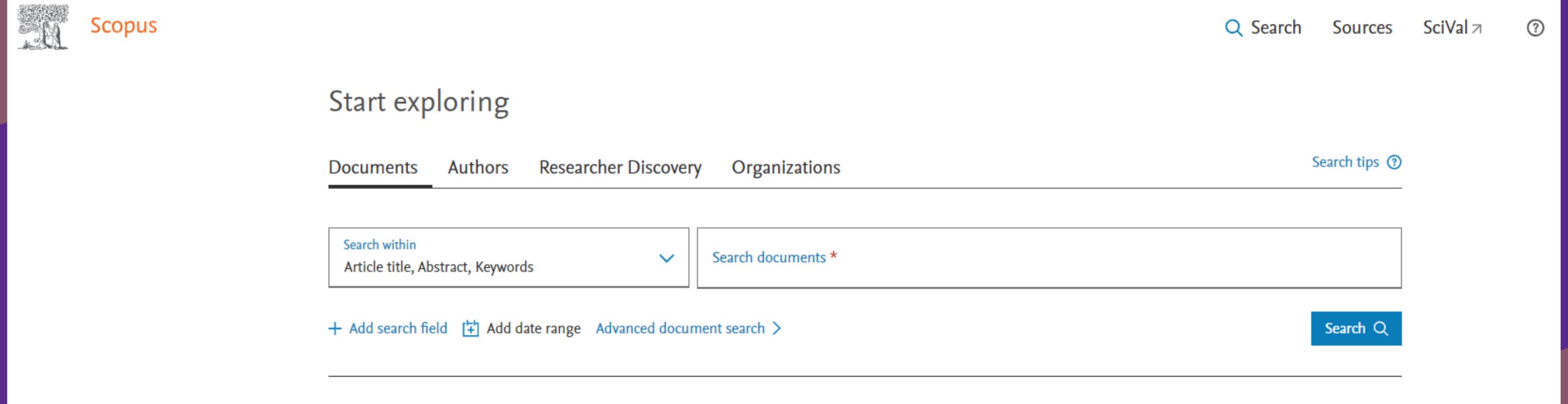
- One of the oldest scholarly research metrics in use is the Journal Impact Factor (JIF)
- Located in Journal Citation Reports (JCR), a database owned by Clarivate (formally Thomson Reuters), and uses journals in ISI Web of Knowledge.
- ECU does not have access to Journal Citation Reports
- May be available on the journal website
 - [JCR Impact Factor Example](#)
- Please contact ECU Libraries if you have issues finding the Journal Impact Factor



MEASURING IMPACT: SCIMAGO JOURNAL RANK

- SCImago Journal Rank (SJR) is free and is in Scopus (Elsevier).
- Includes about 34,100 titles and covers social sciences, sciences, medicine, and some humanities.
- Allows you to analyze by journal or country rank.
- Citations are based on the article prestige
 - An article is cited in a high ranking journal, the impact would be higher.
 - Weighs the number of citations for the journal to the prestige of those citations.

MEASURING IMPACT: SCOPUS DATABASE



The screenshot shows the Scopus database search interface. At the top left is the Scopus logo, and at the top right are navigation links for Search, Sources, SciVal, and a help icon. The main heading is "Start exploring". Below this are four tabs: Documents (selected), Authors, Researcher Discovery, and Organizations. To the right of these tabs is a "Search tips" link. The search area contains a dropdown menu for "Search within" (set to "Article title, Abstract, Keywords") and a search input field containing "Search documents *". Below the search area are links for "+ Add search field", "+ Add date range", and "Advanced document search >". A blue "Search" button is located at the bottom right of the search area.

Scopus

Search Sources SciVal ?

Start exploring

Documents Authors Researcher Discovery Organizations Search tips ?

Search within
Article title, Abstract, Keywords

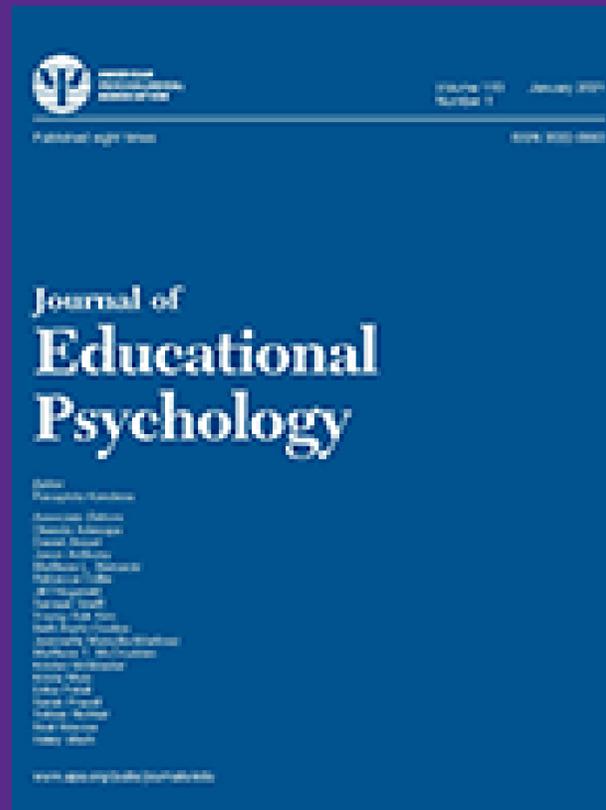
Search documents *

+ Add search field + Add date range Advanced document search >

Search

<https://lib.ecu.edu/databases/go/489>

MEASURING JOURNAL IMPACT: CHALLENGES



SJR 2023: 2.774
Ed. Psych.



SJR 2023: 5.489
Chemistry



SJR 2023: 0.968
Sociology

**SOME TOOLS, LIKE SCIMAGO JOURNAL RANK, ARE NOT
DESIGNED TO BE COMPARED ACROSS DISCIPLINES**

GOOGLE SCHOLAR JOURNAL METRICS

Google Scholar

Top publications

Categories ▾ English ▾

		<u>h5-index</u>	<u>h5-median</u>
	Vision and Pattern Recognition	<u>488</u>	745
	e	<u>440</u>	689
		<u>434</u>	897
		<u>409</u>	633
		<u>375</u>	492
6.	The Lancet	<u>368</u>	678
7.	Neural Information Processing Systems	<u>337</u>	614
8.	Advanced Materials	<u>327</u>	420

Business, Economics & Management
Chemical & Material Sciences
Engineering & Computer Science
Health & Medical Sciences
Humanities, Literature & Arts
Life Sciences & Earth Sciences
Physics & Mathematics
Social Sciences

https://scholar.google.com/citations?view_op=top_venues&hl=en

MEASURING IMPACT: ARTICLE LEVEL

- Found in databases, like Scopus and Google Scholar.
- Measures the impact of specific articles.
- Issues: may not count everything; may double count citations; limitations within databases.

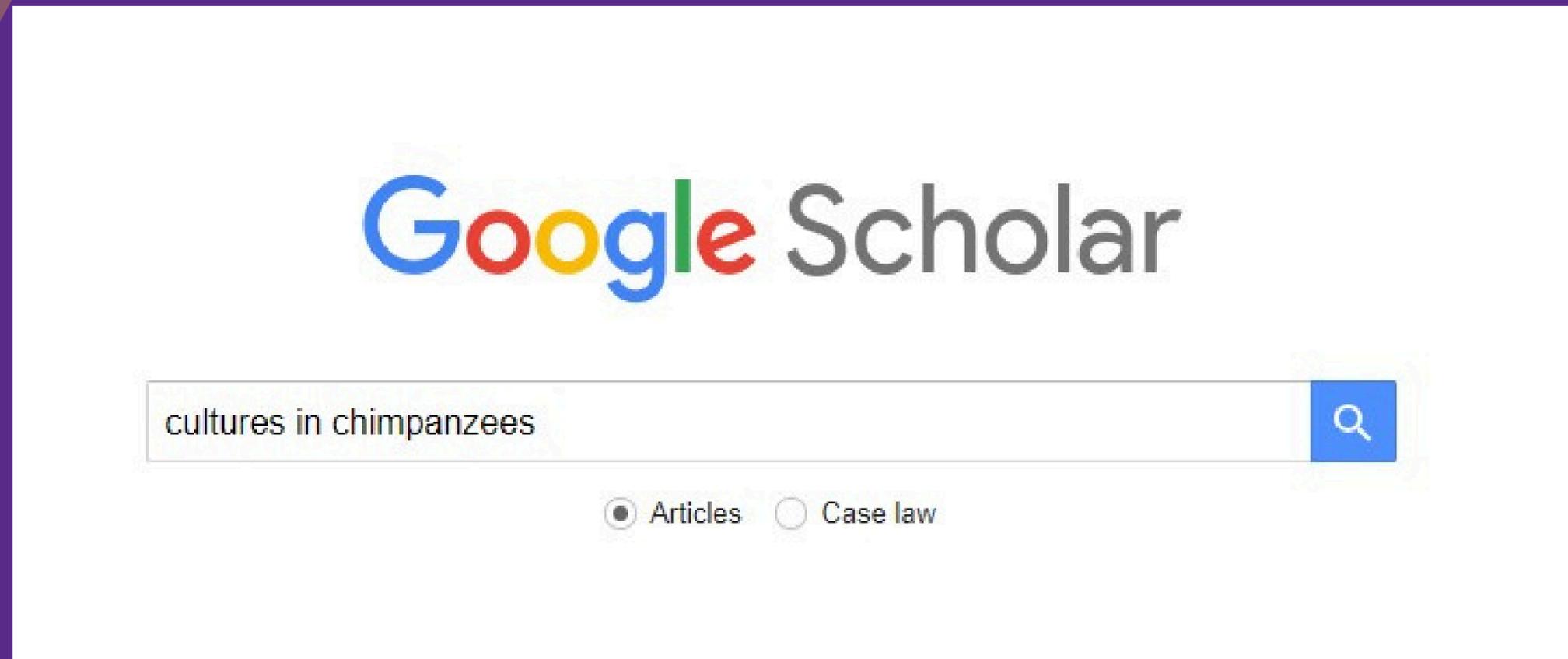


ARTICLE LEVEL METRICS



- Jane Goodall's article, "Cultures in Chimpanzees" published in *Nature* in 1999 has been cited:
- Scopus: 1,683 times
- Google Scholar: 3,349 times

MEASURING ARTICLE LEVEL IMPACT: GOOGLE SCHOLAR



<https://scholar.google.com>

MEASURING IMPACT: AUTHOR LEVEL

- Measures the impact of a specific author or researcher in a field.
- Metrics include: H- index*
- Found in databases like Scopus and Google Scholar, if available.
- H-index can be calculated by hand, if needed.



MEASURING IMPACT AT THE AUTHOR LEVEL: H-INDEX

H-Index of 50 means at least 50 of your papers have been cited at least 50 times each.

You may have different H-index numbers depending on where you find it.

Scopus: 50

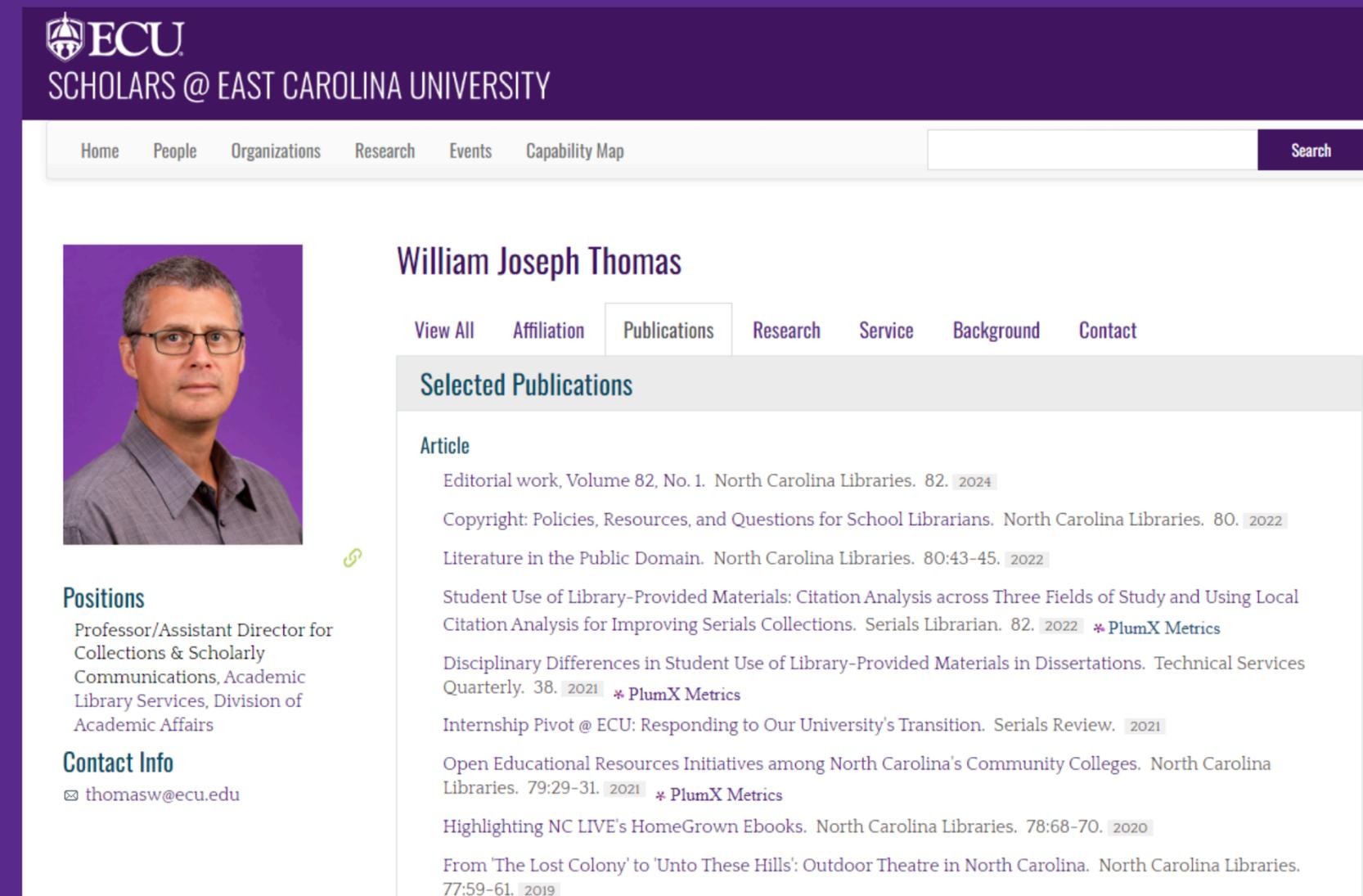
Google Scholar: 62

WHAT IS AN ALTMETRIC?

- Provides real-time data on research (articles, data sets, book chapters, books).
- May create a number based on factors such as social media and news shares.
- Shows up in a number of databases and on journal homepages.
- Can be useful for recent publications or grant applications.

HOW WOULD I USE ALTMETRICS? HOW CAN I FIND THEM?

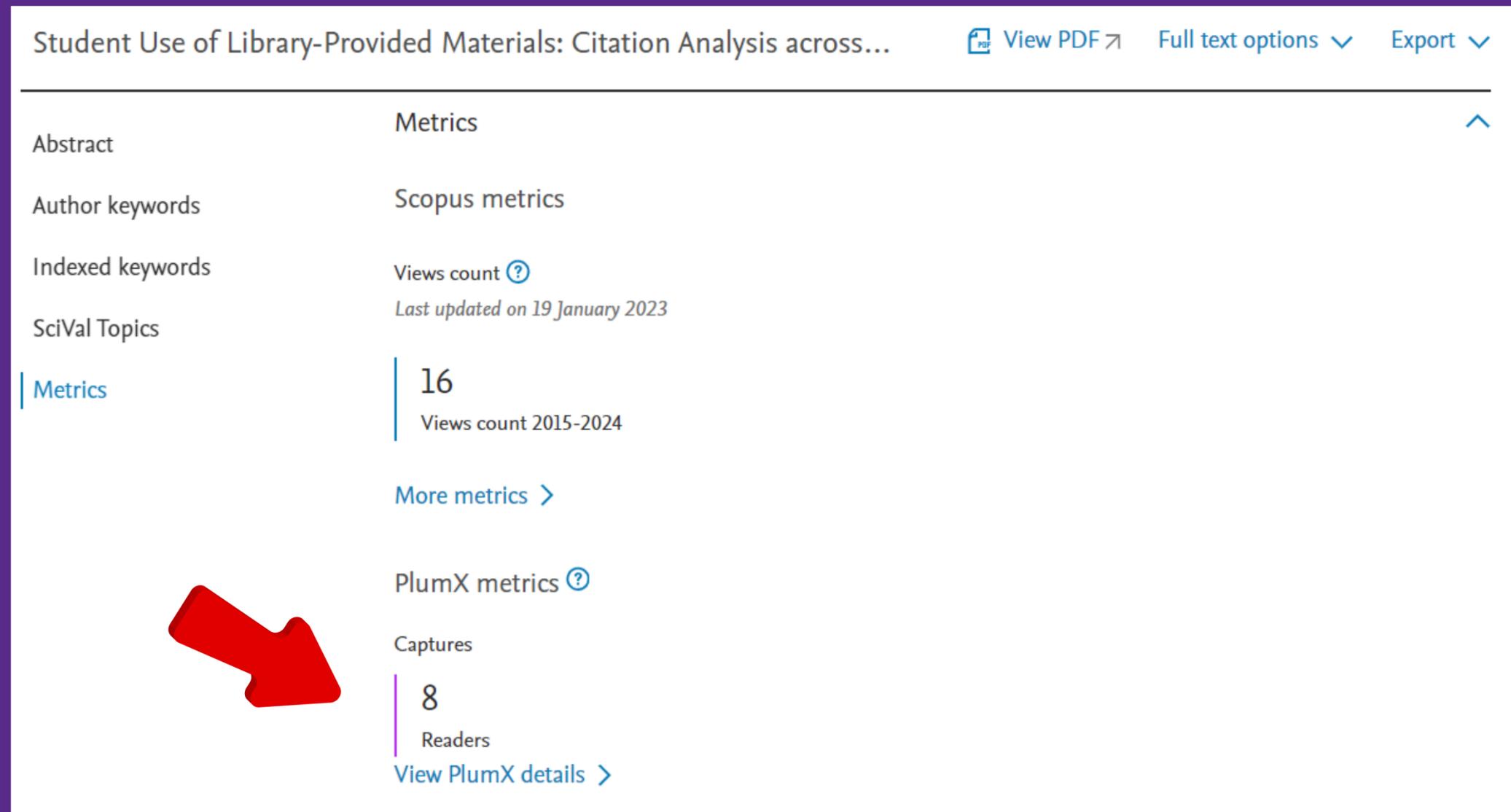
- **How would I use them?**
 - **Example: Scholars @ ECU**



The screenshot shows the 'Scholars @ East Carolina University' website. At the top, there is a navigation bar with links for Home, People, Organizations, Research, Events, and Capability Map, along with a search box. The main content area features a profile for William Joseph Thomas. On the left is a portrait photo. To the right of the photo are sections for 'Positions' (Professor/Assistant Director for Collections & Scholarly Communications, Academic Library Services, Division of Academic Affairs) and 'Contact Info' (thomasw@ecu.edu). The main profile area is titled 'William Joseph Thomas' and has tabs for View All, Affiliation, Publications, Research, Service, Background, and Contact. The 'Publications' tab is active, showing a list of 'Selected Publications' under the 'Article' category. The publications listed include: 'Editorial work, Volume 82, No. 1. North Carolina Libraries. 82. 2024'; 'Copyright: Policies, Resources, and Questions for School Librarians. North Carolina Libraries. 80. 2022'; 'Literature in the Public Domain. North Carolina Libraries. 80:43-45. 2022'; 'Student Use of Library-Provided Materials: Citation Analysis across Three Fields of Study and Using Local Citation Analysis for Improving Serials Collections. Serials Librarian. 82. 2022 * PlumX Metrics'; 'Disciplinary Differences in Student Use of Library-Provided Materials in Dissertations. Technical Services Quarterly. 38. 2021 * PlumX Metrics'; 'Internship Pivot @ ECU: Responding to Our University's Transition. Serials Review. 2021'; 'Open Educational Resources Initiatives among North Carolina's Community Colleges. North Carolina Libraries. 79:29-31. 2021 * PlumX Metrics'; 'Highlighting NC LIVE's HomeGrown Ebooks. North Carolina Libraries. 78:68-70. 2020'; and 'From 'The Lost Colony' to 'Unto These Hills': Outdoor Theatre in North Carolina. North Carolina Libraries. 77:59-61. 2019'.

HOW CAN I FIND ALTMETRICS?

- **Databases:**
PlumX Metrics
available in
databases like
Scopus



The screenshot shows a web page titled "Student Use of Library-Provided Materials: Citation Analysis across...". The page has a navigation bar with "View PDF", "Full text options", and "Export" links. The main content area is divided into two columns. The left column contains a list of menu items: "Abstract", "Author keywords", "Indexed keywords", "SciVal Topics", and "Metrics" (which is highlighted with a blue vertical bar). The right column displays the "Metrics" section, which includes "Scopus metrics", "Views count" (with a help icon and a note "Last updated on 19 January 2023"), a large number "16" representing the "Views count 2015-2024", a "More metrics" link, "PlumX metrics" (with a help icon), "Captures" (with a large number "8" representing "Readers"), and a "View PlumX details" link. A large red arrow points to the "PlumX metrics" section.

Student Use of Library-Provided Materials: Citation Analysis across... [View PDF](#) [Full text options](#) [Export](#)

Abstract Metrics [^](#)

Author keywords Scopus metrics

Indexed keywords Views count [?](#)
Last updated on 19 January 2023

SciVal Topics

Metrics

16
Views count 2015-2024

[More metrics](#) >

PlumX metrics [?](#)

Captures
8
Readers
[View PlumX details](#) >

SHARING YOUR RESEARCH

- **Academic Social Networks**
 - Examples include: ResearchGate, Academia.edu, LinkedIn
- **Open access**
 - Articles and data
- **ECU repositories**
 - ScholarShip (for articles, posters, presentations, etc)
 - Dataverse (for data)

RECAP

- **Levels of research impact measurements**
 - Journal
 - Article
 - Researcher
- You can use these measurements to establish and share your research impact
- Contact the library's Scholarly Communication Department if you have questions or if you would like advice about collecting your metrics at scholarlycomm@ecu.edu
 - For the Health Sciences, contact Jamie Bloss at blossj19@ecu.edu or your liaison librarian

RESOURCES

Library Guide: <http://libguides.ecu.edu/MeasuringImpact>

Articles

Bakker, Caitlin, et al. "Qualitative Analysis of Faculty Opinions on and Perceptions of Research Impact Metrics." *College & Research Libraries*, vol. 81, no. 6, 2020, pp. 896–912, <https://doi.org/10.5860/crl.81.6.896>.

- Discusses faculty opinions of the use of metrics in evaluation processes; acknowledges that administrators' use of metrics is a concern among some faculty.

Desanto, Dan, and Aaron Nichols. "Scholarly Metrics Baseline: A Survey of Faculty Knowledge, Use, and Opinion about Scholarly Metrics." *College & Research Libraries*, vol. 78, no. 2, 2017, pp. 150–170, <https://doi.org/10.5860/crl.78.2.150>.

- This study also provides a faculty perspective on scholarly research metrics. Authors surveyed faculty about their use of scholarly research metrics and data is shared across various disciplines.

Ioannidis, John P., and Zacharias Maniadis. "Quantitative research assessment: using metrics against gamed metrics." *Internal and Emergency Medicine*, vol. 19, no. 1, 2024, pp. 39–47, <https://doi.org/10.1007/s11739-023-03447-w>.

- Article discusses "gaming" the metrics; in this context, trying to "cheat the system" by use of citation farms, self-citations, and other means. Explains how quantitative measures, such as detection of extreme numbers, can help control gaming.

RESOURCES, CONTINUED

Knowlton, Sasha E., et al. "Measuring the Impact of Research Using Conventional and Alternative Metrics." *American Journal of Physical Medicine & Rehabilitation*, vol. 98, no. 4, 2019, pp. 331–338, <https://doi.org/10.1097/PHM.0000000000001066>.

- Introduces/discusses metrics at the author, article, and journal levels, as well as conventional metrics vs. altmetrics; argues that altmetrics are increasingly important.

Miskey, Christina M., and Richard Saladino. "Showing Impact in the Visual Arts and Design Disciplines: A Study of Faculty Usage and Knowledge With an Academic Librarian Perspective." *Journal of Librarianship and Scholarly Communication*, vol. 11, no. 1, 2023, pp. 1–20, <https://doi.org/10.31274/jlsc.15616>.

- This study provides a faculty perspective on scholarly research metrics. The authors surveyed faculty in the Arts and Design disciplines to gain a better understanding of use and interest research impact.

Olavarrieta, Sergio. "Using single impact metrics to assess research in business and economics: Why institutions should use multi-criteria systems for assessing research." *Journal of Economics, Finance and Administrative Science*, vol. 27, no. 53, 2022, pp. 6–33, <https://doi.org/10.1108/JEFAS-04-2021-0033>.

- Discusses use of Web of Science (WOS) journal-based impact factor to assess business and economics research. Study finds "relevant and substantial" differences across impact factors compared. Authors believe that making certain decisions (hiring, funding) based on a single impact factor is too simplistic.