MEASURING YOUR RESEARCH IMPACT

Jeanne Hoover, Laura Bright, & Bryna Coonin

ECU Joyner Library

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

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

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

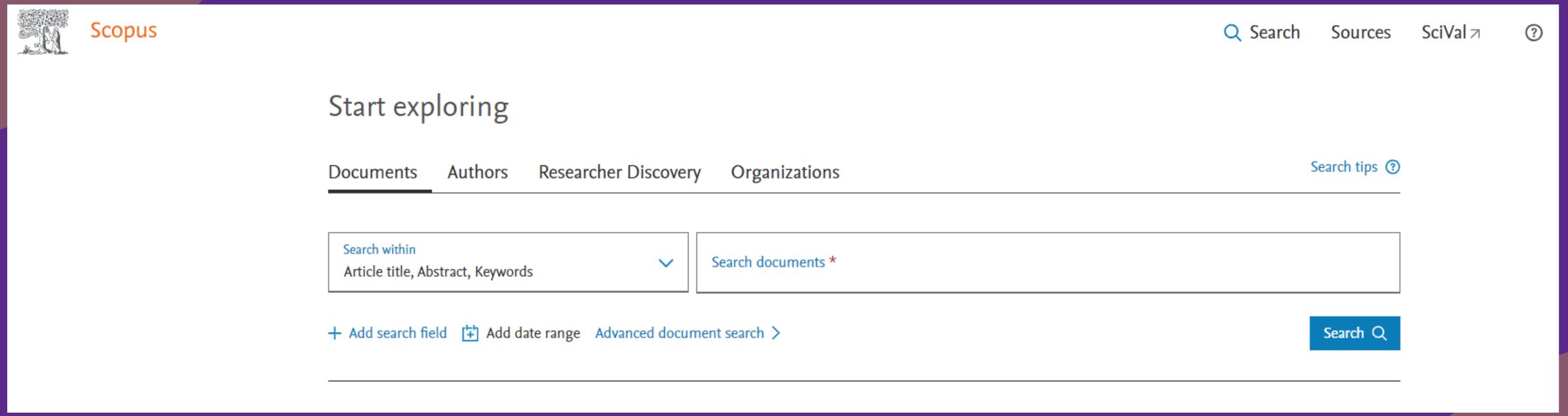
MEASURING IMPACT:
JOURNAL IMPACT FACTOR (JIF)

- 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



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

MEASURING JOURNAL IMPACT: CHALLENGES

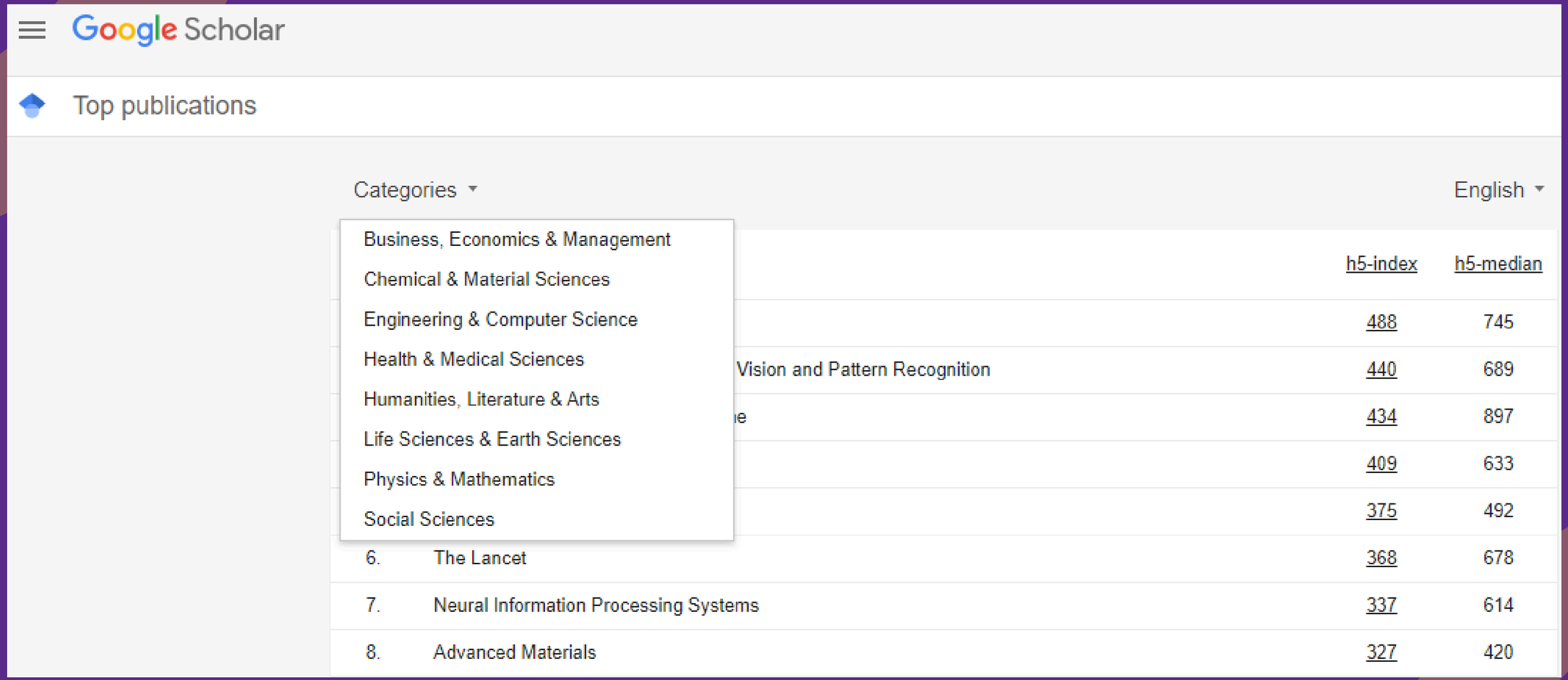
SJR 2023: 2.774
Ed. Psych.

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



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.

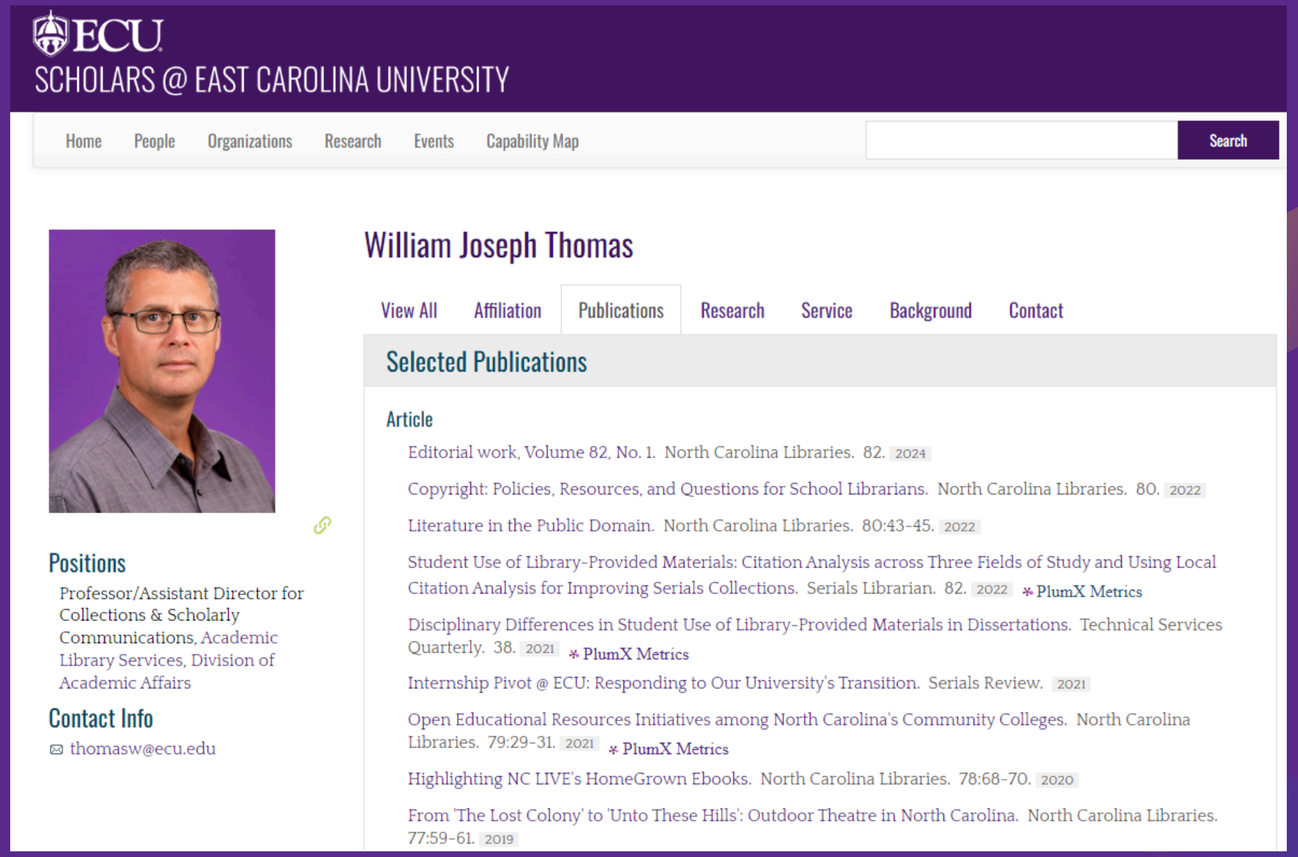
You may have different H-index numbers depending on where you find it.
Scopus: 50
Google Scholar: 62

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.

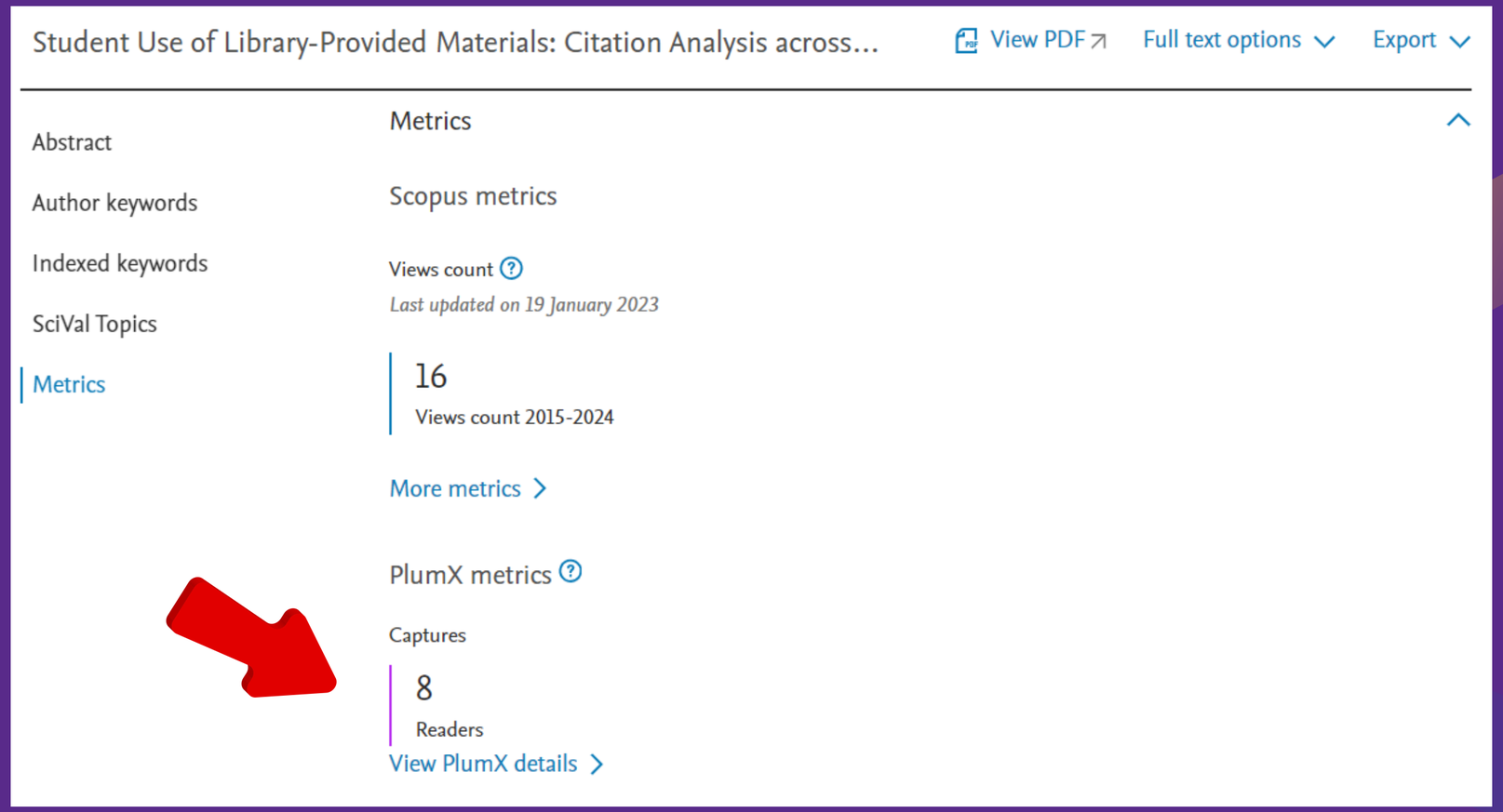
HOW WOULD I USE ALTMETRICS? HOW CAN I FIND THEM?

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



HOW CAN I FIND ALTMETRICS?

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



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; acknowedges 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.