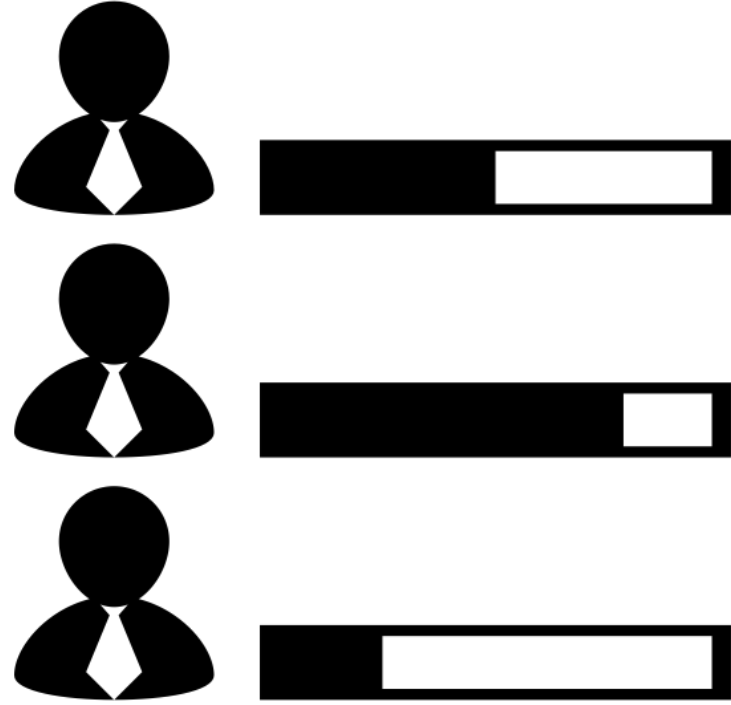
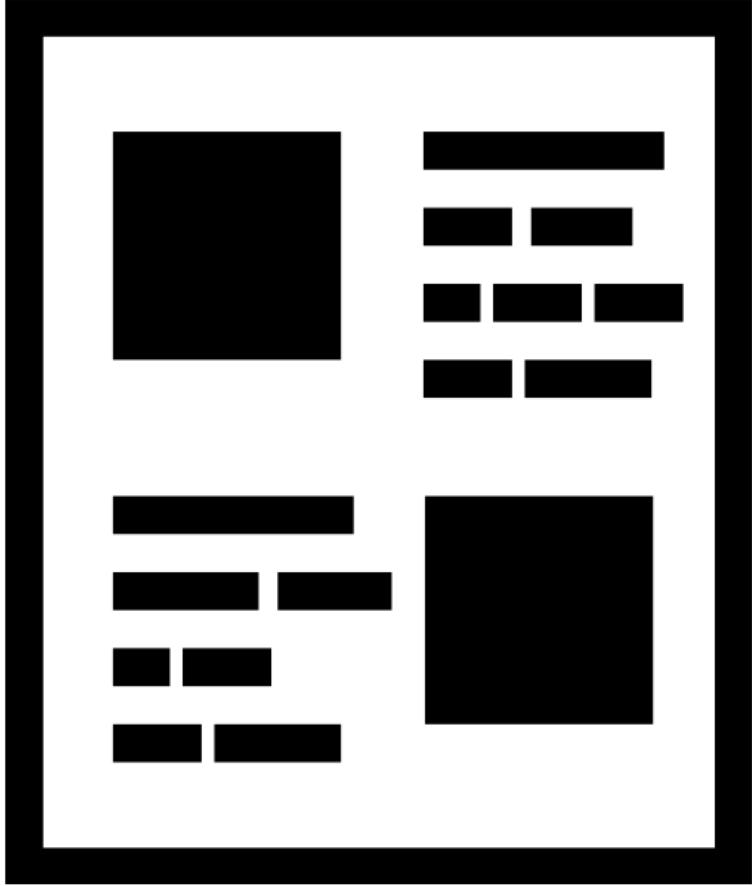


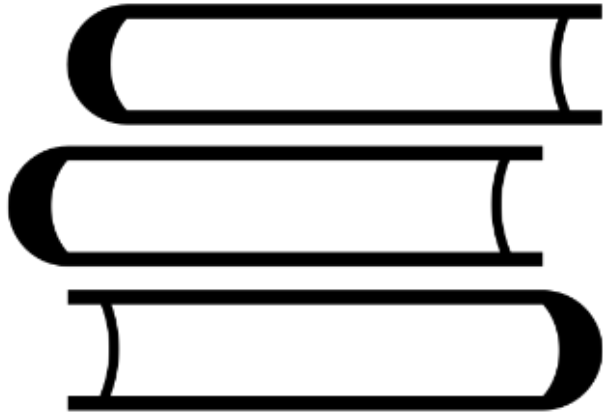
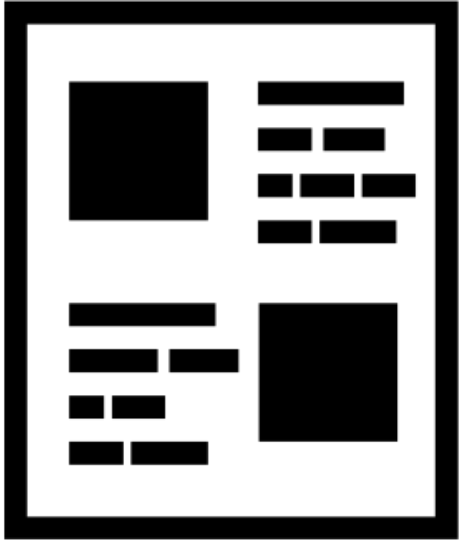
Altmetrics 101

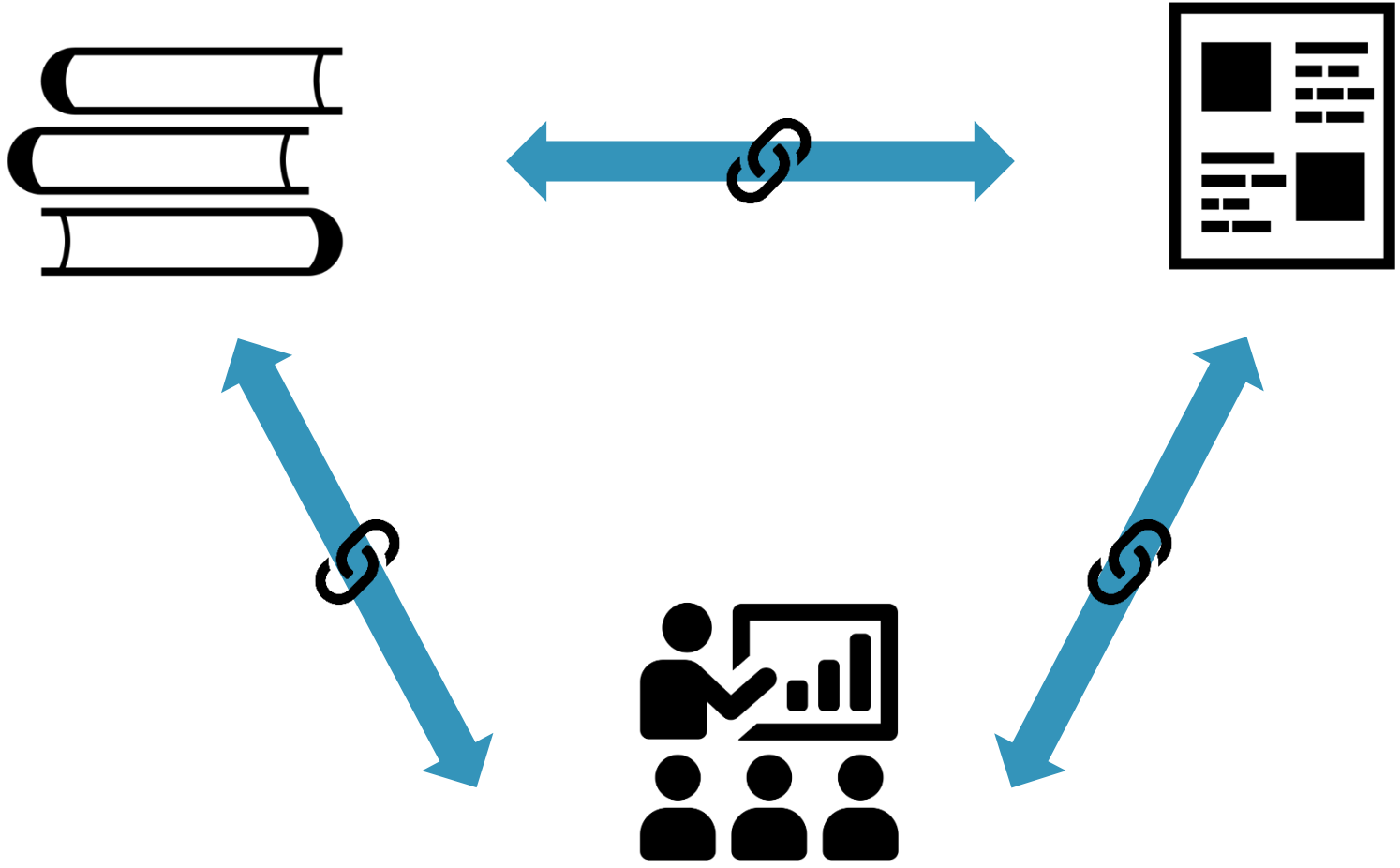
LITA Altmetrics & Digital Analytics Webinar
December 8, 2016

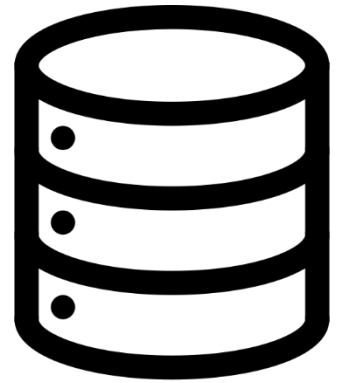
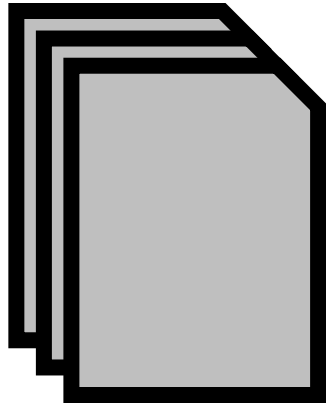
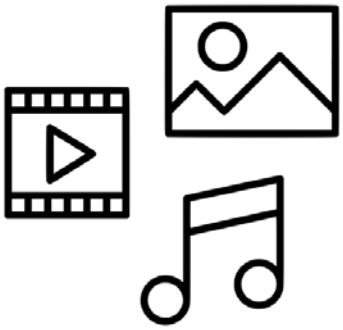
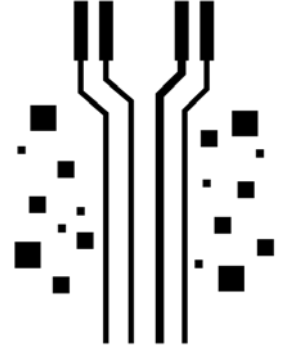
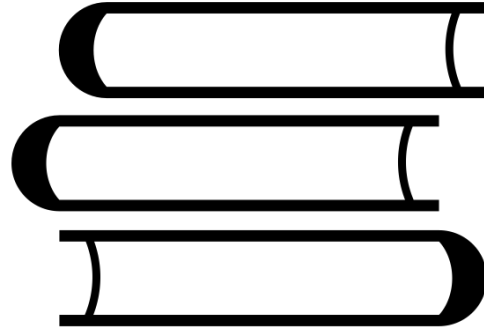
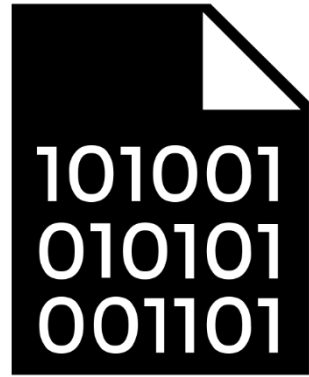
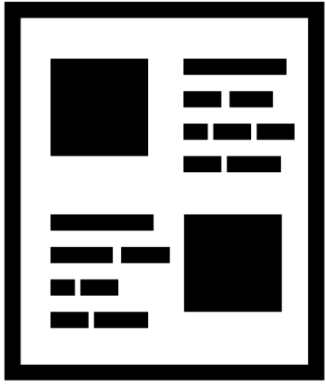
Heather L. Coates, MLS, MS @IandPanguarBan
IUPUI University Library Center for Digital Scholarship

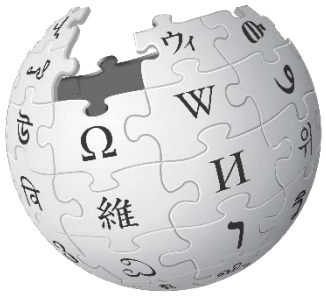
<http://ulib.iupui.edu/digitalscholarship>



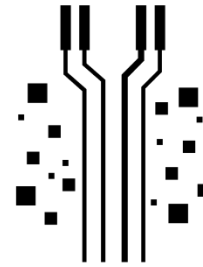
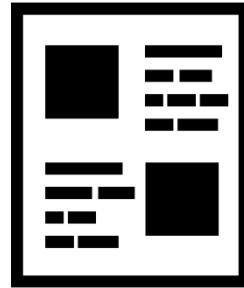
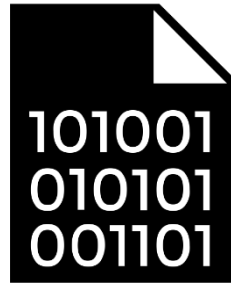
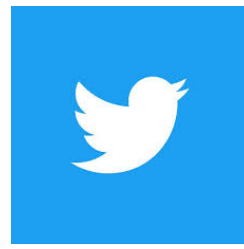








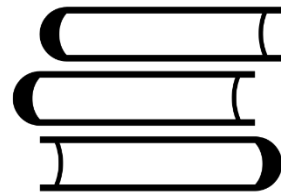
WIKIPEDIA
The Free Encyclopedia



StackExchange



citeulike



PubPeer

F1000
FACULTY of 1000

PLOS | ARTICLE-LEVEL METRICS

publons

Changing practices to align with values

Leiden Manifesto for research metrics: <http://www.leidenmanifesto.org/>

San Francisco Declaration on Research Assessment (DORA):

<http://www.ascb.org/dora/>

“Do not use journal-based metrics, such as Journal Impact Factors (JIFs), as surrogate measures of the quality of individual research articles, to assess an individual scientist’s contributions, or in hiring, promotion, or funding decisions.”

Why do we need metrics?

- P&T review committees can't read everything
- P&T review committee members are not experts in your field
- Models for producing scholarship differ by discipline and research methods used

- Some metrics are decent *indicators* of scholarly use (e.g., citation)
- Some metrics are decent *indicators* of public discussion (e.g., Twitter, Facebook, news media attention)
- Some metrics are decent *indicators* of reuse (e.g., data citations)

Terminology

Haustein et al, 2016, Interpreting Altmetrics

- Research object: a scholarly object for which an event can be recorded
- Event: a recorded activity or action which relates to the research object
- Host: the place where research objects are made available and exposed to potential events
- Source: a platform where events are available
- Consumer: a party that collects and uses events to research objects (types of consumers include aggregators or end user or audience)

NISO RP-25-2016

- Impact: The subjective range, depth, and degree of influence generated by or around a person, output, or set of outputs. Interpretations of impact vary depending on its placement in the research ecosystem.

THE MODEL FOR ASSESSMENT OF RESEARCH IMPACT IS A FRAMEWORK FOR **TRACKING DIFFUSION** OF RESEARCH OUTPUTS AND ACTIVITIES TO LOCATE INDICATORS THAT DEMONSTRATE EVIDENCE OF BIOMEDICAL RESEARCH IMPACT.

Research Output and Activities

What was **CREATED** by a research study? How was the research output **DISSEMINATED**? What activities were **UNDERTAKEN** by the members of the research group?

Advancement of Knowledge

How were research output and activities **USED**? How was **AWARENESS** of research output demonstrated?

Clinical Implementation

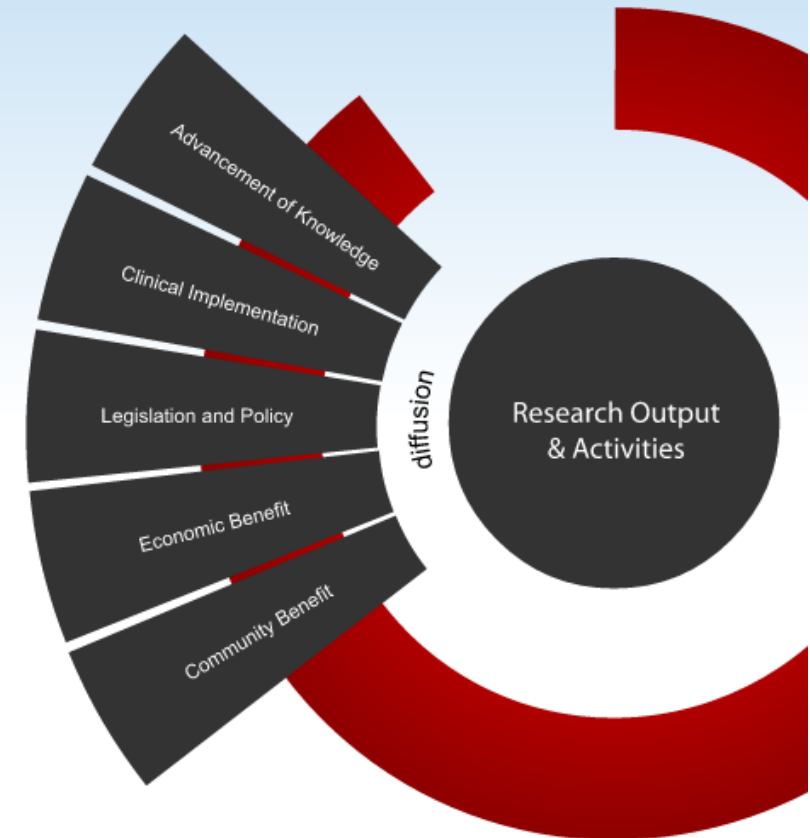
How was **TRANSLATION** of research output and activities into clinical applications demonstrated?

Legislation and Policy

How did research output and activities **INFLUENCE** or **RESULT** in enactment of public law, guidelines, standards or policy?

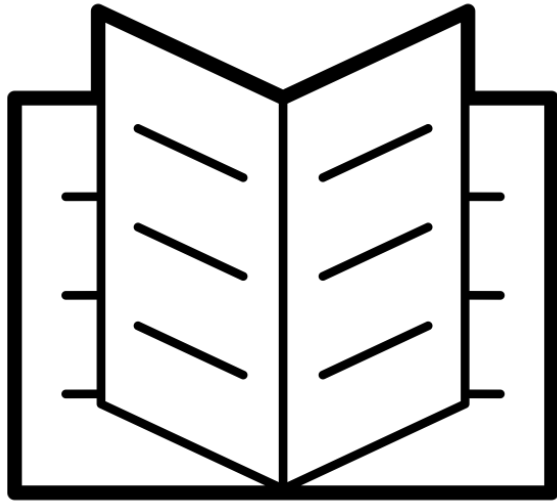
Economic Benefit

What economic outcomes were **PRODUCED** from research output and activities?

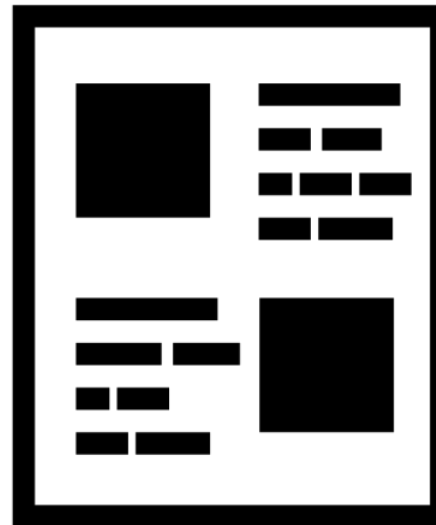


Impact	Indicators
Research Output & Activities	Biological materials, collaborations, data, databases, repositories, techniques & procedures, grey literature, invention disclosures, mobile apps, patents, trainees, etc.
Advancement of Knowledge	Books/chapters (inclusion in bibliographies, library ownership, textbook use), change in understanding (paradigm shift, lead to new approach), citations (first & second generation citations, countries and institutions represented), conference themes, new centers/institutes
Clinical Implementation (or TRIP)	Biological materials, study cited in clinical decision aid, clinical/practice guidelines, diagnostic application, instruments, quality measure guidelines (gov't or NPO), reporting requirements
Legislation & Policy	Committee participation, study cited in guidelines, study cited in policy, study cited in enactment of standards
Economic Benefit	Findings cited in reduced costs for delivery of healthcare services, findings result in enhancement of existing resources and expertise, license agreements for use of IP, spinoff or startup company
Community Benefit	Public awareness of risk factors, patient decision materials, cited in public/private insurance benefit plan

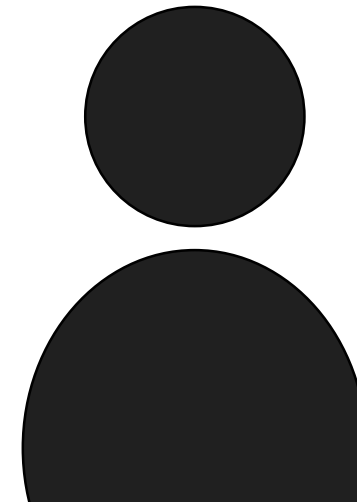
Levels of Metrics



Journal/Venue
Level Metrics



Output/Article
Level Metrics



Author Level
Metrics

Citation Metrics

- Article/Item-level:
 - Citation counts
 - Field Weighted Citation Impact (Scopus)
 - Eigenfactor Article Influence Score
 - Relative Citation Ratio (NIH - <https://icite.od.nih.gov/>)
- Journal-level:
 - Journal Impact Factor (JIF)
 - 5-year JIF
 - Eigenfactor
- Author-level:
 - h-index
 - i-10 index (Google Scholar)

Altmetrics



Web Metrics



Social Media
Metrics

View

Use

Share

Recommend

Discuss

***Altmetrics are item-level metrics**

Benefits of Altmetrics

- Supplement traditional metrics
- Scope extends beyond the formal published scholarly record (journals & books)
- Timeframe: immediate to short-term impact
- Sources: social media platforms where people interact with content and each other on a daily basis (e.g., where people live)
- DO capture and link to qualitative data (ex: blog snippets, tweet content)

Sources of Altmetrics

- Publishers
- Aggregation services
 - Impact Story: <http://impactstory.org/>
 - Altmetric.com: <http://www.altmetric.com/>
 - Plum Analytics: <https://plu.mx/g/samples>
- Subject repositories
 - PubMedCentral (PMC)
 - arXiv
 - SSRN
- Institutional repositories

Responsible Use of Altmetrics

- Altmetrics aren't alternative to citation-based indicators, they are complementary
- Start with the story, then use metrics to support your narrative
- Present metrics in context
- Present metrics along with qualitative evidence
- Consider using normalized metrics when available
- Both citation metrics and altmetrics can be used as indicators of various types of impact, if used appropriately

Try it out

1. Sign up for an ORCID
2. Connect your ORCID & Twitter account to ImpactStory profile
3. Get DOI for your scholarship, if they don't already have them
4. Engage with people online about your scholarship
5. Review your metrics for authenticity, completeness, accuracy
6. Reflect how these metrics reflect your scholarship, engagement, professional goals

Resources

1. Altmetrics for librarians: 100+ tips, tricks, and examples
<https://www.altmetric.com/libraries-ebook/>
2. The Evolution of Impact Indicators: From bibliometrics to altmetrics
<http://scholasticahq.com/altmetrics-the-evolution-of-impact-indicators>
3. The Metric Tide. doi:[10.13140/RG.2.1.4929.1363](https://doi.org/10.13140/RG.2.1.4929.1363)
4. NISO RP-25-2016 Outputs of the NISO Alternative Assessment Metrics Project
http://www.niso.org/topics/tl/altmetrics_initiative/
 - a) Altmetrics Definitions & Use Cases
 - b) Bibliography
5. Haustein, S. (2016). Grand challenges in altmetrics: heterogeneity, data quality and dependencies. *Scientometrics*, 1-11.
6. Sugimoto, C. R., Work, S., Larivière, V., & Haustein, S. (2016). Scholarly use of social media and altmetrics: a review of the literature. arXiv preprint arXiv:[1608.08112](https://arxiv.org/abs/1608.08112).
7. Haustein, S., & Larivière, V. (2015). The use of bibliometrics for assessing research: possibilities, limitations and adverse effects. In *Incentives and performance* (pp. 121-139). Springer International Publishing.

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