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The Different Flavors of Research Impact:

A Tasting of Traditional and Alternative Bibliometric Assessment Tools

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NUTRITION INFORMATION

This workshop introduces researchers to a variety of traditional and alternative bibliometric assessment tools. These metric tools are each defined and their potential uses, abuses, benefits, and drawbacks discussed. Researchers are then shown how to effectively utilize these metric tools to best fit their personal research needs and assess their research impact.

LEARNING OUTCOMES

Participants will learn the following:

- The basics of traditional bibliometrics and altmetrics
- How to effectively use and consult bibliometrics and altmetrics to assess research impact

NUMBER SERVED

20–30 faculty and graduate students

COOKING TIME

- Prep time: 4–5 hours
- Cooking time: 1 hour

DIETARY GUIDELINES

This recipe seeks to provide a tasting of the capabilities of traditional metrics and alt-

metrics to all levels of researchers. It is best served by librarians or information specialists that are particularly interested in raising awareness about these metric tools and their potential uses to their patrons.

INGREDIENTS & EQUIPMENT

- Computer with internet access connected to TV/projector
- Copies of a Journal Article Abstract Handout (see step 2 of Preparation).
- Access to Journal Citation Reports (JCR) is recommended but not required. If access to JCR is not possible, impact factors (IF) can still be covered by finding journals that share the IF on their homepage. Scimagojr.com can also be used for other metrics besides IF.
- Access to Web of Science and/or Scopus is recommended but not required. Scopus author profiles can be viewed without a subscription and Google Scholar can be used to show citation counts.

PREPARATION

1. Select a journal article's abstract and copy and paste it into a word document or a Google Doc. Use an article from a researcher at your institution, if possible. Add in a variety of metric information

about the journal article into the document (Journal Impact Factor, Eigenfactor, Citation Counts, Social Media Shares, etc.). Make sure to include a mix of traditional metric and altmetric information on the article. This will be used for an introductory exercise to the workshop. (See Example of Metrics Article Handout)

2. Create a survey/assessment tool to receive feedback on the session. (See Example of Survey/Assessment tool to gather feedback)

COOKING METHOD

1. First, hand out copies of the Journal Article Abstract handout to each participant. Instruct everyone to read the abstract and metric information. (5 minutes)
2. Once everyone has read the article, begin a discussion by asking questions that prompt the participants to think about how they define and determine research impact (5 minutes). Examples of questions that could be asked are:
 - a. How do you determine if a research work has had significant impact?
 - b. After examining the article in this handout, do you believe it demonstrates a significant research impact? Why or why not?

- c. The goal is to get the participants thinking about how they assess research, what metrics matter to them, and why.
3. Begin the presentation by covering the basics of traditional bibliometrics tools. This can include topics such as journal impact factor and other Journal Citation Reports metrics, h-index, eigenfactor, Web of Science and/or Scopus metrics, Scientific Journal Rankings (SciMago), or any additional traditional metrics that you believe your institution or researchers would have an interest in exploring further. Include definitions of each metric, how they are calculated, what they are best used for, their strengths and weaknesses, and how to find them. (20 minutes)
 4. Next, move onto the second part of the presentation on altmetrics. Cover the definition of altmetrics, their history, and what types of metrics are generally considered “altmetrics.” Then, begin introducing altmetric tools and resources, such as plumX, Altmetrics.com, and the altmetrics

donut. Be sure to discuss the potential uses of altmetrics, especially in relation to open repositories, as well as any potential benefits and drawbacks. (20–25 minutes)

5. Finish with an open discussion about how the participants now feel about traditional bibliometrics and altmetrics, how they could use these metrics to help with their own research, and how they think the library could help better support metric-related services to suit their research needs. (5–10 minutes)

ALLERGY WARNING

When discussing bibliometrics and altmetrics in relation to research impact, it may be good to highlight that these metrics represent just *one* way of assessing impact and should never be the sole factor to consider when determining the impact of research. It may also be good to acknowledge that the discipline of the researcher may have a significant impact on how they view and approach the use of these metric tools.

CHEF’S NOTES

For hungrier groups, this recipe pairs well with the recipe “Whipping up an Online Research Profile: How to Promote and Manage Your Research for Improved Science Communication.” Both recipes build well on each other and, if time allows, providing both in a half-day workshop allows participants to more easily tie everything together. However, the recipes can also be easily shared on different days if that more closely fits the schedules and interest of the target audience. If providing both, it is recommended that “The Different Flavors of Research Impact: A Tasting of Traditional and Alternative Bibliometric Assessment Tools” goes first to provide participants with useful background information.

ADDITIONAL RESOURCES

- Example of Metrics Article Handout (see Preparation step #1). <https://bit.ly/2W1Goi1>
- Example of survey/assessment tool to gather feedback (see Preparation step #2). <https://bit.ly/2W10TLP>