

2020-01-16

# Research Impact While You Eat

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<https://dx.doi.org/10.7302/814>

<https://hdl.handle.net/2027.42/167137>

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January 16, 2020

[Slide 1]

Good morning, everyone! My name is Rebecca Welzenbach. I am the research impact librarian here at the University of Michigan and today I am one part of your lunch time entertainment. My goal for the day is to offer you some thoughts to chew on with respect to research impact, while you eat.

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So, you might be wondering, what is a research impact librarian? I am based in the Hatcher Graduate Library, and I'm part of the Library's research division. I work with faculty across disciplines, with these aims in mind: to help create conditions under which scholars can develop for themselves a strong public scholarly identity, a complete and coherent account of their contributions to the scholarly enterprise, and a persuasive body of evidence for the impact of their work. I'm the only person in the library whose whole job is dedicated to research impact issues, but I am far from the only person with expertise in this area. Most notably for the audience today, I want to make sure to point out the Research Impact Core at the Taubman Health Sciences Library. This team consists of three health sciences informationists who can provide expertise and guidance on research impact issues specific to the health sciences. A bit later in the presentation I'll say more about the resources and support available to you from the library.

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For today, I'm hoping to get you thinking and sharing a bit about what you already know, or think you know about research impact or scholarly impact. I'll ask you to do a little thinking and sharing at your tables. From there, I'd like to share a way of thinking about these questions that I hope might bring a bit of a broader perspective, and help you think holistically about your work, why it matters, and how best to express that. Finally, I'll point to some people, resources, and other support available to you in the library to go further with all of these things.

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So, let's get started with some audience participation. I have a few questions that I want to pose, and I'll ask you to reflect for a minute and then share some thoughts with others at your table. Then I'll ask for a few folks to shout out some ideas for the room. First up: What does "research impact" mean to you? No wrong answers here--including "I have no idea"

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OK, next: this is more brainstorming: what terms, words, ideas, emotions, etc. come up when you think about research impact?

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You might be surprised--or maybe you won't be--to learn that there's no single, concrete definition for what is meant by research impact. In fact, the term is so vague and contested in

that a couple of years ago, Kristel Alla and others conducted a systematic review of public health literature to identify how the term is used, whether or not its defined when used, and how those definitions differ.

[slide 7] They found that only 23% of articles that met their study criteria explicitly defined the term research impact, and that, of these, 76% were drawn from external agencies such as funding bodies. They identified common areas and patterns for where research impact tends to be observed--in the scholarly literature, in policy, in clinical practice, etc. We'll be coming back to this shortly, so for now please just bear this in mind.

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And finally, one more question: when, or under what circumstances, do you think about research impact issues?

Right, so, frequently we think about research impact when we're under pressure--applying for a job, submitting a grant proposal, going up for promotion--situations where you really feel you're under the microscope.

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My hope for the rest of this session is to share with you some tools that will help you to approach research impact in such a way that it's less something that happens to you, and more a narrative that \*you\* create about your work.

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To guide our conversation, I'm going to use a model called SCOPE. This framework is really brand new. It was just debuted by Laura Himanen and Lizzie Gadd, who are research managers in the UK, this past December. However, I'm jumping right into using it because I find that it maps really well onto the approach I usually take to research impact conversations already--it just does it more concisely and pithily. You can read more about the SCOPE model on the Bibliomagician blog--the post is linked here--but for now I'll walk you through each stage. The purpose of this model is to give folks a series of ordered steps for responsibly planning out an appropriate approach to discussing research impact for their work.

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SCOPE, as you may have guessed, is an acronym, so unsurprisingly the first step starts with 'S' : start with what you value. A bit earlier we talked about the different types and definitions of research impact. It doesn't mean just one thing. So before you can even think about measuring, you need to know what you want to measure--let me pause here for a moment and say: you are all scientists and social scientists. I know you already live these values in your own work! But it is really common for folks to stop doing these same fundamental best practices at the level of evaluating their own work--so I still think it's worth talking about.

Think about why your work is important, what it's trying to do, who it's meant to reach, and how you would determine whether that's happened.

A couple of cautions: do not just start with the data that's most readily available, and don't start from what other people are interested in measuring--or, if you have to start there, at least be sure you don't end there.

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Not sure how to go about this? Let me show you a couple of examples that might help guide your thinking. First, the Becker Model. This resource comes from the Becker Medical Library at Washington University St. Louis, and articulates clearly all the different types of impact health sciences research might have, as well as what types of evidence would show each type of impact.

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Here's another example, a totally different one. This comes from the HuMetricsHSS initiative, which is based at Michigan State University, but building up a community worldwide. This initiative is focused more on people than on individual research objects. This framework is a response to the observation that too often in academia, we incentivize and reward behavior that is really...uncollegial. This initiative is an attempt to define a clear set of values for "a scholarly life well lived" in the humanities, and offer examples of the kinds of work that would signal success in these areas. So if you're having trouble connect your values to the outcomes of your work and their impact on the world, frameworks like these can help provide language and structure that you can work from.

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The next step in the SCOPE model is "Contextual considerations" -- what entity are you actually assessing? (Is it an article? A person? A department?); What is the purpose of the measurement (understanding, comparison/benchmarking, etc.); and what is the metric serving as a proxy for--and is that appropriate? For example, if evaluating a department, the number of publications \*might\* serve as a one proxy for the productivity of that department--but it would be inappropriate to use number of publications as a signal of the \*quality\* of work coming out of that department.

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I think of these "contextual considerations" as looking both ways before crossing the street: have I really thought through what I'm doing, and is it safe to proceed? Building on the red light, green light model, Lizzie Gadd, one of the authors of SCOPE, has also created this graphical matrix, laying out what you might measure, why you might measure it, and her take on whether that's a go or a no-go. You needn't use a matrix exactly like this one, but it's important to be asking these questions.

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The next step in the SCOPE model is to determine your options for measuring. This will entail addressing a few big decisions. For example, are quantitative (such as the number of publications or citations) or qualitative metrics more appropriate for the case you are investigating? Best practices recommend--perhaps obviously, but people fail to do it all the time--that quantitative metrics only be used for quantitative things: number of publications, grant dollars earned, etc.--but not as a proxy for non-quantitative measures, such as quality or impact.

Are traditional, citation-based bibliometrics appropriate, or are you looking for more "alternative" signals of impact, whether that be social media engagement or public policy influence?

And how many indicators should be used? Again, best practices in the responsible metrics community say that one metric is really never adequate to communicate anything meaningful about a person, publication, or department--there should be multiple metrics used to describe different aspects or types of impact. If only one metric is requested, you can be sure that a full and nuanced picture of the work is not going to be generated.

There are lots of places to start as you're looking for ways to measure and describe different aspects of your work. Here are a few tools that illustrate and define different types of research impact metrics, from normalized quantitative metrics such as the Source Normalized Impact per Paper (or SNIP) to the Journal Impact Factor, to the h-index, to alternative metrics.

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Here are some examples of what different types of metrics show. On the left is an image from Google Scholar--you may have seen something like this yourself. In this case it is showing my scholarly creations over time, and making some claims about me as a scholar based on how much they have been cited. On the right is an example of the way a tool called Altmetric captures information about when research is cited in policy documents.

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OK, you've gotten to the point of defining impact for your purposes, and gathering some measure of evidence. The next step in your SCOPE model is to probe deeply--to stress test the decisions that you've made, by asking questions about whether these metrics systematically disadvantage particular scholars or kinds of scholarship; if they're subject to gaming, abuse, or other bad behavior, and whether--having done the work to gather them--it was indeed worth it.

This step might feel more frustrating than anything else to folks in your shoes--this is really intended for administrators, research managers, and others who are setting up the criteria to be used in evaluation. If you're more likely to be on the other side of that equation--i.e., having instructions given to you that you have to follow--this might just enrage you. Rage can be useful, though, when it gives you the power and conviction to respond. If you've thought through and identified exactly how a measure like the h-index, for example, doesn't show your

accomplishments to their best advantage, you'll be better positioned to provide additional information where possible--or even ultimately to advocate for change.

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And finally, the silent 'e' in scope: evaluation! Again, this step may be more directly relevant to those setting up systems of evaluation, but it's a case where again being aware and critically engaged can serve you well -- even in terms of asking questions like "when did we last review these guidelines? What's changed since then? Who receives this information and what is it used for?"

SO--that's SCOPE.

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I realize this might seem like...a lot to take in over your lunch.

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I agree! So let's digest, think it over, and talk more later. Here is my contact information again, as well as that of my colleagues in the health sciences library. Judy Smith and I will be at the research impact table this afternoon when lunch is over--come on by and tell us about your work, ask us your questions, and let's chat--or find another time to meet up, if that's better for you.

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Before I hand over the stage to my colleague Justin, I just wanted to draw your attention to a few other resources in the library:

There are some research guides that will help you with the fundamentals of research impact, as well as in-person workshops, definitely during the Enriching Scholarship conference that takes place in May every year, but also occasionally throughout the semester, including upon request. We love your questions and consultations!

Finally, next week we'll be running our second annual Research Impact Challenge--there's a link here where you can sign up. This consists of one email every day for two weeks, containing one activity or challenge that you can do to help establish your scholarly presence online and start to think through the audience for and impact of your work.

Thanks! And we'll see you in the library.