



Metrics Literacy

Educating Researchers and Research Support Staff on Scholarly Metrics

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THAT MOMENT WHEN THE COFFEE

Metrics Literacy
on a coffein high



FINALLY KICKS IN

Bibliometric community



Field-normalized citation rates
Percentile ranks
Collaboration
...
Benchmarks
Social network analysis

Academia



Impact factor
h-index

Bibliometric community



Field-normalized citation rates
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Impact factor
h-index

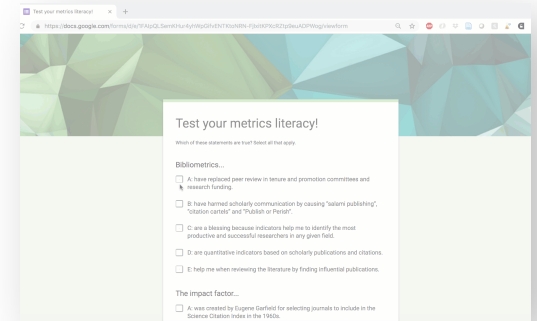
Metrics experts



Regular academics

Test your metrics literacy^{*†§}

bit.ly/MetricsLiteracyQuiz



* Participate at your own risk. IRB approval has not been obtained, as IRB approval has never been asked for.

† Yes, I know that this is a non-generalizable convenience sample. This is not research, this is just my way of trying to be as fun and engaging as a last day, last session, last talk can be.

§ I came up with this Wednesday night, when I should have actually been preparing my online classes. I'm slightly worried how this will affect my teaching evaluations. At least I did learn how to make gifs in Camtasia. Hey, why are you still reading this? You are supposed to take the quiz!

Scholars are overwhelmed by too much to read.



Why do Some Species Thrive in Cities?

949,757 views

17K 200 SHARE SAVE ...

The Higgs

THE HIGGS BOSON S1 · E1
The Higgs Boson, Part I

2,425,390 views

21K 290 SHARE SAVE ...

Why not provide audio-visual material instead of text?

The Ebola Virus Explained — How Your Body Fights For Survival

6,987,943 views

101K 1.3K SHARE SAVE ...

Why Do We Have More Boys Than Girls?

6,145,592 views

72K 3.3K SHARE SAVE ...

The race is on!

Is Twitter more metrics literate than FORCE2018 on a Friday afternoon?

Stefanie Haustein @stefhaustein

#FORCE2018 presenters are asked to make their talks engaging and fun. My talk on #MetricsLiteracy will be Friday at 4PM. Last day. Last session. Last presentation. #thepressureison #ScholCommLab

9:42 PM - 10 Oct 2018


4 Retweets 26 Likes

3 4 26

Stefanie Haustein @stefhaustein · Oct 10

Not sure if quizzes are "fun", but I thought I'd test attendees' metrics literacy with a quiz on Friday... Twitter, if you want to prove that you know more about scholarly metrics than them, answer the questions on #bibliometrics, #impactfactor and #hindex via poll below:

1 17 6



causing "salami publishing", "citation cartels" and "Publish or Perish".

71% True

29% False

75 votes • Final results

1 1 1

Stefanie Haustein @stefhaustein · Oct 10

1c) Bibliometrics are a blessing because indicators help me to identify the most productive and successful researchers in any given field.

30% True

70% False






73 votes • Final results

Let's see how you did









For each  add $+1$
 -1







Bibliometrics...

-  A: have replaced peer review in tenure and promotion committees and research funding.
-  B: have harmed scholarly communication by causing "salami publishing", "citation cartels" and "Publish or Perish".
-  C: are a blessing because indicators help me to identify the most productive and successful researchers in any given field.
-  D: are quantitative indicators based on scholarly publications and citations.
-  E: help me when reviewing the literature by finding influential publications.

The impact factor...

-  A: was created by Eugene Garfield for selecting journals to include in the Science Citation Index in the 1960s.
-  B: is size dependent (i.e., affected by a journal's number of publications).
-  C: can be used to estimate a researcher's impact by adding up the impact factors of the journals they published in.
-  D: is mentioned by one fifth of Canadian and US universities in review, tenure and promotion documents.
-  E: has affected scholarly communication by becoming a synonym for journal prestige.
-  F: is a field-normalized two-year citation rate to compare journals from different disciplines.

The h-index...

-  A: was invented by a physicist to combine publication and citation rates.
-  B: is a useful indicator to compare the overall impact of researchers.
-  C: can only be applied to scientific authors.
-  D: is size dependent (i.e., affected by number of publications).
-  E: has been shown to be inconsistent and not an appropriate indicator of scientific impact.
-  F: is affected by a researcher's age.




+10

Congratulations, you're a metrics nerd!
Wanna help teach others?



0

Your metrics literacy skills are about as high as that of a monkey. Too bad they're not as cute: 



-7

Oh boy...
You better hope that I'll get some funding for this!

Metrics Literacy Quiz

Twitter poll results

#FORCE2018 presenters are asked to make their talks engaging and fun. My talk on #MetricsLiteracy will be Friday at 4PM. Last day. Last session. Last presentation. #thepressureison #ScholCommLab
9:42 PM - 10 Oct 2018
4 Retweets 26 Likes

Stefanie Hausteин @stefhausteин · Oct 10
1j) Bibliometrics are quantitative indicators based on scholarly publications and citations.
95% True
5% False
73 votes · Final results

Stefanie Hausteин @stefhausteин · Oct 10
1e) Bibliometrics are helpful when reviewing the literature by identifying influential publications.
88% True
12% False
69 votes · Final results

Stefanie Hausteин @stefhausteин · Oct 10
1a) Bibliometrics have replaced peer review in tenure and promotion committees and research funding.
32% True
68% False
77 votes · Final results

Stefanie Hausteин @stefhausteин · Oct 10
1b) Bibliometrics have harmed scholarly communication by causing "salami publishing", "citation cartels" and "Publish or Perish".
71% True
29% False
75 votes · Final results

Stefanie Hausteин @stefhausteин · Oct 10
1c) Bibliometrics are a blessing because indicators help me to identify the most productive and successful researchers in any given field.
30% True
70% False
73 votes · Final results

Stefanie Hausteин @stefhausteин · Oct 10
2d) The impact factor is mentioned by one fifth of Canadian and US universities in review, tenure and promotion documents.
80% True
20% False
59 votes · Final results

Stefanie Hausteин @stefhausteин · Oct 10
2e) The impact factor has affected scholarly communication by becoming a synonym for journal prestige.
99% True
1% False
67 votes · Final results

Stefanie Hausteин @stefhausteин · Oct 10
2f) The impact factor is a field-normalized two-year citation rate to compare journals from different disciplines.
30% True
70% False
63 votes · Final results

Stefanie Hausteин @stefhausteин · Oct 10
2g) The impact factor was created by Eugene Garfield for selecting journals to include in the Science Citation Index in the 1960s.
85% True
15% False
66 votes · Final results

Stefanie Hausteин @stefhausteин · Oct 10
2h) The impact factor can be used to estimate a researcher's impact by adding up the impact factors of the journals they published in.
64% True
36% False
67 votes · Final results

Stefanie Hausteин @stefhausteин · Oct 10
2c) The impact factor is used to estimate a researcher's impact by adding up the impact factors of the journals they published in.
11% True
89% False
64 votes · Final results

Stefanie Hausteин @stefhausteин · Oct 10
3c) The h-index can only be applied to scientific authors.
22% True
78% False
58 votes · Final results

Stefanie Hausteин @stefhausteин · Oct 10
3d) The h-index is size dependent (i.e., affected by number of publications).
93% True
7% False
56 votes · Final results

Stefanie Hausteин @stefhausteин · Oct 10
3e) The h-index has been shown to be inconsistent and not an appropriate indicator of scientific impact.
93% True
7% False
59 votes · Final results

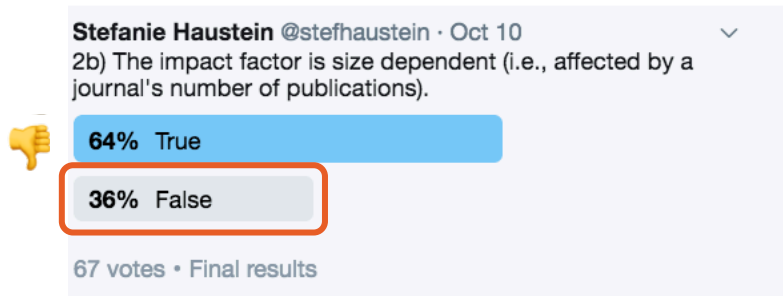
Stefanie Hausteин @stefhausteин · Oct 10
3f) The h-index is affected by a researcher's age.
88% True
12% False
60 votes · Final results

Stefanie Hausteин @stefhausteин · Oct 10
3b) The h-index is a useful indicator to compare the overall impact of researchers.
33% True
67% False
60 votes · Final results

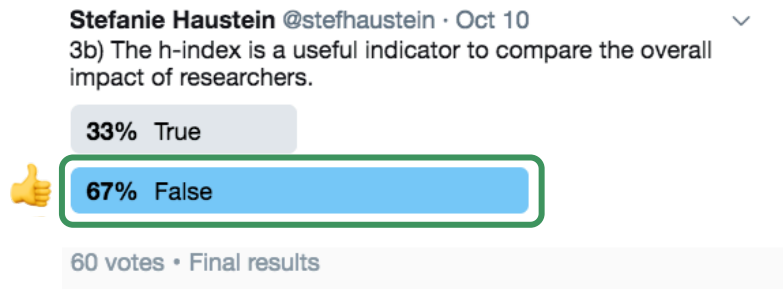
Correct answers are encircled.

Metrics Literacy

The need.

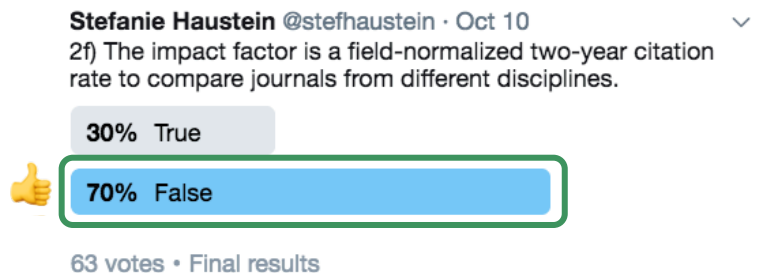


By dividing the number of citations by the number of publications, the impact factor is **size independent**.



The h-index has been shown to be **inconsistent**¹.

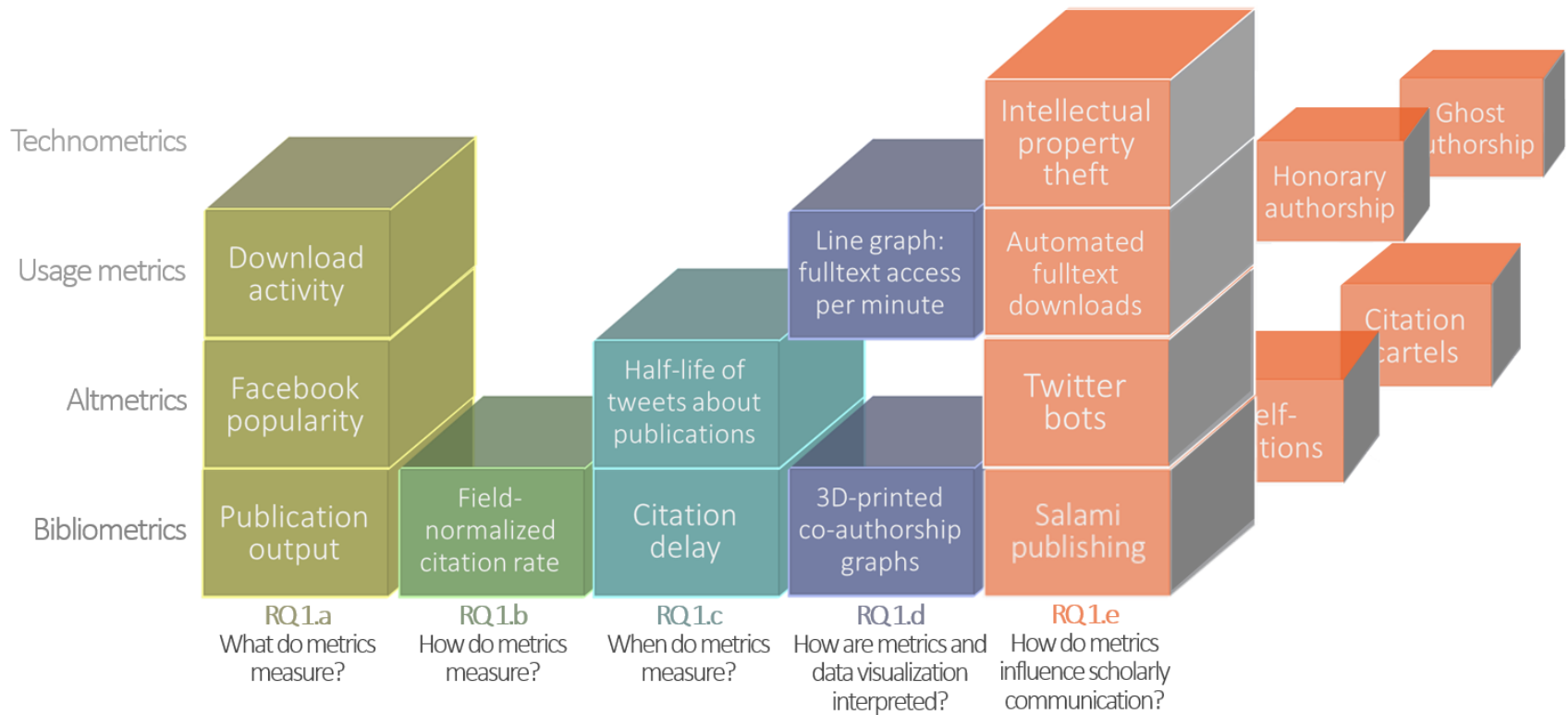
¹Waltman & van Eck (2011): The inconsistency of the h-index. *Journal of the American Society for Information Science*, 63(2), 406-415. doi: 10.1002/asi.21678



The impact factor **does not normalize** for field-specific differences and **cannot be compared across disciplines**.

Metrics Literacy

The idea.



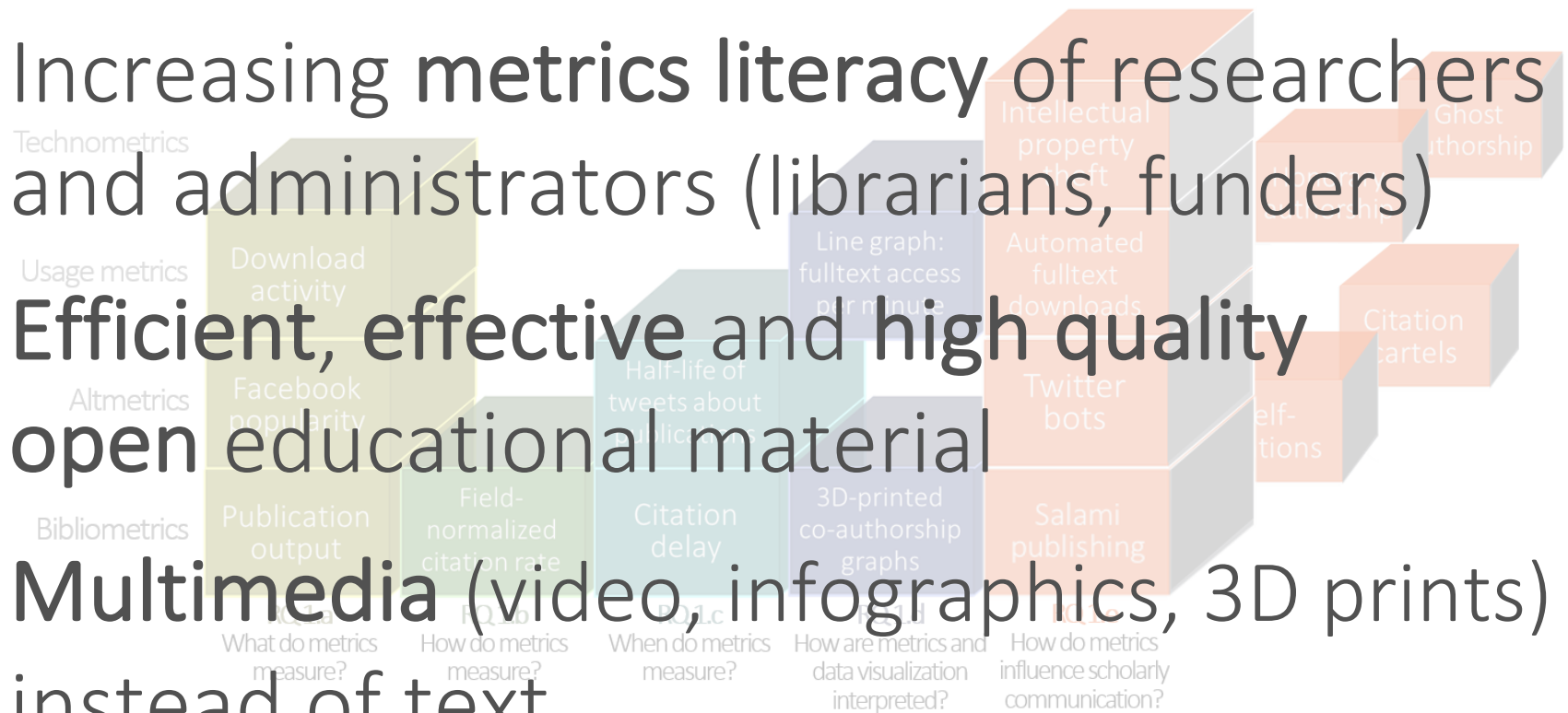
Metrics Literacy

The idea.

Increasing metrics literacy of researchers and administrators (librarians, funders)

Efficient, effective and high quality open educational material

Multimedia (video, infographics, 3D prints) instead of text



Metrics Literacy Like the idea?



Merci. Danke.

Thanks

for still being here on a Friday afternoon.



scholcomm**lab**

stefanie.haustein@uottawa.ca | @stefhaustein | #ScholCommLab