BIBLIOMETRICS & THE MODERN ACADEMIC LIBRARY: A UNIQUE CROSS-CAMPUS PARTNERSHIP AT THE UNIVERSITY OF WATERLOO

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AGENDA

1. Background
2. Partners
3. Projects
4. Key takeaways
5. Discussion
WATERLOO CONTEXT

- Main campus
- 3 satellite campuses
- 4 affiliated & federated institutions
- 6 faculties
- 10 faculty-based schools
- 42 research centres and institutes
“A statistical or mathematical method for counting the number of academic publications, citations and authorship. *It is frequently used to measure academic output.* Data usually comes from an international database e.g. Thomson Reuters Web of Science or Elsevier-Scopus.”

([European Commission on Research and Innovation](https://ec.europa.eu))
Publish and/or Perish

Propose

Posters

Present

Postdoc

Produce Ph.D.'s

www.phdcomics.com
KEY PROJECTS

• White paper on bibliometrics
• Research metrics framework
• Validate university rankings data
• Competitive applications
WORKING GROUP ON BIBLIOMETRICS
STRUCTURE

Advisory Group
- Director, Institutional Analysis & Planning
- University Librarian
- Vice-President, University Research

Working Group & Sub-Committee
- Faculties, Office of Research, Institutional Analysis & Planning, Library

~20 members
White Paper
Measuring Research Productivity and Impact through Bibliometrics

Draft for consultation

Background
Fall 2015 consultation
Winter 2016
Online guide
• White paper
  » Rationale for measuring
  » Commonly used measures
  » Limitations
  » Appropriate uses
  » Recommended practices
WHITE PAPER PROCESS

Environmental Scan & Literature Review

Outline

Draft
## CONSULTATION

<table>
<thead>
<tr>
<th>Consultation Phase</th>
<th>Timeline</th>
<th>Stakeholders</th>
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| One                | June – August 2015      | • Working Group on Bibliometrics  
|                    |                         | • Advisory Group  
|                    |                         | • Provost  |
| Two                | October – November 2015 | • Deans’ Council  
|                    |                         | • Associate Deans, Research  
|                    |                         | • Faculty Association  
|                    |                         | • Graduate Students Association  
|                    |                         | • FEDS  
|                    |                         | • Library  
|                    |                         | • IAP  
|                    |                         | • Campus at large  |
| Three              | November – December 2015| • Senate Grad & Research  
|                    |                         | • Executive Council  
|                    |                         | • Senate  |
| Four               | January – February 2016 | • Other interested Universities  |
WHITE PAPER NEXT STEPS

• Finalize and distribute widely
• Online Subject Guide
• Encourage use:
  » Recommended practices for researchers, staff and administrators
  » Standard practices for researchers
PRACTICAL APPLICATION
LEVEL OF ANALYSIS

✓ University level
✓ Discipline level
✗ Author level
Research Metrics Framework

- Strategic highlights
- Research productivity
- Research funding
KEY PARTNERS

Research Institute / Centre

Office of Research

Institutional Analysis & Planning

Library
METHODOLOGY

1. Finalize list of researchers
2. Search by author name
3. Identify relevant Waterloo authors for each publication
4. Research area vets pub list
5. Create master spreadsheet of publications by author
6. Finalize master spreadsheet of publications by author
7. Create master spreadsheet of publications by year
8. Calculate needed measures
9. Synthesize data & create report
BIBLIOMETRIC MEASURES

- Number of publications
- Number of citations
- Average number of citations per publication
- Median number of citations per publication
- Number of publications with 1 or more citations
- Number of publications with 100 or more citations
- Number of publications with no citations
KEY MESSAGES

Snapshot

Trends

Consider over time

Discipline level

Avoid comparisons

Context is everything!
VALIDATING RANKINGS RESULTS
Is it possible to validate/replicate this bibliometric-based data for university ranking X?
METHODOLOGY

• What is the data source?
• What is the time span?
• What document types are included?
• Are self-citations included or excluded?
• How are subjects classified?
MACLEAN’S 2016 RESULTS

• New: Citations indicator
  » 5% weight of Faculty area score
  » Scopus; 2010-2014

• Total number of publications (2.5% weight)

• Field-weighted citation impact (2.5% weight)
Rankings & collaboration

Library

IAP

Ranking organization
GOOD PRACTICE

Involve those evaluated in the analysis process

Discourage author-level comparisons

Work from a basket of measures

Understand & account for disciplinary variations
RECOMMENDATIONS

As an author, use your name consistently when publishing

Use an author identifier such as ORCID to connect your works to you

Ensure appropriate affiliation / acknowledgement to UW
Thank you

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