How Can Dissertation Citation Networks Accelerate Discovery?

ProQuest Breakfast/CGS Summer Workshop

July 11, 2022
AGENDA

1. Benefits of Citation Indexing
2. How does it work?
3. Why is it helpful?
4. Why expand to dissertations and theses?
5. How does it work today?
6. How can I help students apply these tools to their work?
7. Q & A

Gilia Smith, PhD
Director of Academic Relations for Australia, New Zealand and North America
“...a citation index...tends to bring together material that would never be collated by the usual subject indexing. It is best described as an association-of-ideas index...”

Citation Indexing: Benefits for Information Retrieval


• In a citation index, the search begins with a paper of interest (a “seed paper”) and permits navigation backward through cited references or forward through papers citing the seed paper.

• Authors embed their expertise and judgment in the cited references they append to their papers, resulting in an “association of ideas index.”

• Citation indexing and searching breaks lexical barriers (controlled vocabulary of indexers) and subject limitations of source coverage. It is not dependent on changing terminology.

“Every time an author makes a reference, he is in effect indexing that work from his point of view.” p. 110
Bibliographic Coupling: Discovering Closely Similar Documents

If two documents share cited references, they are **coupled or paired**, indicating some degree of similar content. The greater the number of shared cited references, the higher probability that the two papers are strongly related.

In the **Web of Science**, “**Related Records**” are provided in the source record. This is a list of bibliographically coupled papers, ranked by the number of shared cited references.

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Mapping the Citation Network for Discovery and Insights

Citations uncover hidden connections

Navigate an interconnected web of multidisciplinary research to locate papers relevant to your work.

Related Records
Papers that cite some of the same research
Uncover the Undiscovered

Dissertations and Theses
Acceptance Rates of Top Science Journal Publishers
Dissertations and Theses are essential for comprehensive discovery

Web of Science™

Peer-reviewed Journal Articles
Conference Proceedings
Books
Emerging Sources

Unpublished scholarship
Unpublished Data sets
Marginalized perspectives
Representing Marginalized Perspectives and Filling Diversity Gaps

Bring more diversity into research

Women of Color missing from Textbooks

Topics lacking a Platform

Improving Diversity in Curriculum by Uncovering Unheard Voices

Faculty leaders and researchers use dissertations to fill the diversity gaps in current undergraduate psychology textbook curriculum.

As a black woman being able to see myself in these dissertations and connections is wonderful.

Dr. Rihana S. Mason, Research Scientist, Georgia State University

Women of Color missing from Textbooks

Topics lacking a Platform

The history I wrote was not mine to hold onto, but rather belongs to the drag performers of the past, present, and future.

Dr. Lady J

ProQuest Dissertations & Theses Success Story

Read the Case Study: Dr. Lady J Dissertation

The Erasure of Drag Contributions in Performance History

How one researcher’s decision to include her dissertation in PQDT allowed her to document, elevate, empower her voice.

ProQuest Dissertations & Theses Success Story

View Case Study: The Erasure of Drag Contributions in Performance History

Ruth Howard

Tsuruko Haraguchi

Lillian Comas-Diaz

Carolyn Attneave

Alberta Banner Turner

Tomi Kora

Dr. Inez Beverly Prosser, First African-American female to receive a doctorate in Psychology, University of Cincinnati, 1933

Professors, Dr. Jon Grahe, Department Chair and Professor of Psychology at Pacific Lutheran University, Dr. Rihana S. Mason, an experimental psychologist and research scientist at Georgia State University and co-chair of the Inez Beverly Prosser Scholarship, and Dr. Michelle Ceynar, Dean of Social Sciences and Professor of Psychology at Pacific Lutheran University, all noticed a gap in women of color in their psychology courses. Inspired by the APA’s I Am Psyched! Exhibit at PLU in 2018, they decided to build a course around this. The students were so excited about learning about women of color in the early history of psychology that Dr. Jon Grahe tried to start incorporating it into other aspects of his classes but quickly found there weren’t resources out there to support these women.
Leveraging Unique and Unpublished Findings

Providing researchers with the unique opportunity to conduct research that can only be done with dissertations.

Reviewing Unpublished Data Sets

“The published research literature is biased toward statistically significant results, and the content in PQDT represents the most current research in an area that is not biased toward statistical significance. When I review systematic reviews for journals, I insist that PQDT is searched for relevant research.”

*—*Test Figit, Professor of the School of Public Health at the College of Education, Georgia State University

Using a Global Collection for Text and Data Mining

“We are excited about the potential for greater international coverage within ProQuest Dissertations & Theses Global. Innovation is increasingly a global enterprise and the ability to identify and follow researchers from many countries is tremendously valuable.”

— Bruce A. Weinberg, Ph.D.

PROQUEST DISSERTATIONS & THESES SUCCESS STORY

Avoiding Bias by Starting at the Source
Research Case Study: Outcome-Reporting Bias in Education Research, Loyola University Chicago

PROQUEST DISSERTATIONS & THESES SUCCESS STORY

Trends in the Evolution of Research and Doctoral Education
How text and data mining of ProQuest Dissertations & Theses Global allows
In order to support comprehensive scholarship sources must offer:

- Full text
- Equitable Discoverability
- Global
- Multi-disciplinary
- Multi-lingual
- Multi-cultural

<table>
<thead>
<tr>
<th>60+</th>
<th>4.1K</th>
<th>3M</th>
<th>~60%</th>
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<tr>
<td>Countries represented in content</td>
<td>Universities’ content represented</td>
<td>Full text records</td>
<td>Of titles added annually are from outside the U.S</td>
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SOLVING STUDENT CHALLENGES

To conduct efficient, and effective, discovery
## Top Challenges of Students and Researchers

<table>
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<tr>
<th>Graduate Students – selecting their research topic</th>
<th>Undergrads – term paper or thesis</th>
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<tbody>
<tr>
<td><strong>1</strong> Building Foundational Expertise in Their Field</td>
<td><strong>3</strong> Quickly Finding Relevant Sources on Niche Topics</td>
</tr>
<tr>
<td>How do I ensure I study the most important research that has been contributed to my field?</td>
<td>How can I find sources for a term paper or project when there seems to be little published on the topic?</td>
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<tr>
<td><strong>2</strong> Contributing Unique Scholarship to Their Field</td>
<td></td>
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<tr>
<td>How do I define a research project that will be a unique contribution to my field?</td>
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The Information Overload

The only solution to information overload is precise information retrieval.

In 2020...

15K Scholarly articles about nCoV-2 and COVID-19 in the first 5 months alone*

24K Dissertations & Theses were published to PQDT Global

Dissertation citations are a unique resource for uncovering hidden connections.
Citation Connections: Finding foundational sources using dissertations

**How do I find the most important research in my field?**

1. **“Seed Document” from a search**
   - Doctoral Thesis
   - A
   - B
   - C
   - D
   - ... 

2. Define a “Neighborhood” of up to 1000 documents that are bibliographically coupled by sharing at least 5 cited sources in common with the seed document.

3. Identify which sources are cited the most often by all documents in the “neighborhood”.

4. Sources are presented to users ranked by times cited.

- **E**
- **F**
- **G**
- **H**
- **E**
- **G**
- **H**
- **F**

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The most frequently cited sources in a subject area are part of the core knowledge in that topic.
Citation Connections: Finding similar sources using dissertations

How do I ensure I find a research topic that is a unique contribution to my field?

1. “Seed Dissertation” from a search
2. Define a “Neighborhood” of up to 1000 dissertations that are bibliographically coupled by sharing at least 5 cited sources in common with the seed dissertation
3. Compare cited sources of the neighborhood of dissertations with the seed dissertation
4. Estimate the “similarity index” of the dissertations in the neighborhood by % overlap in cited sources with the seed dissertation.

Sources cited by the seed document

The “Neighborhood”

Sources cited by the seed document

3 of 4 = 75%
2 of 4 = 50%
2 of 4 = 50%
Citation Connections in Action
Locating foundational expertise and contributing novel topics
How can Librarian’s Help?

**Graduate Students – selecting their research topic**

1. **Building Foundational Expertise in Their Field**
   - Help them quickly locate the most important research that has contributed to their field.

2. **Contributing Unique Scholarship to Their Field**
   - Guide them to all relevant dissertations in their field, so they can identify a gap to fill.

**Undergrads – paper or thesis**

3. **Quickly Finding Relevant Sources on Niche Topics**
   - Suggest they start their search with a dissertation. Using References and Foundational Research can help them find their sources.

**Cited References**

**Foundational Research on this topic**

- Brief Report: Ages of Language Milestones as Predictors of Developmental Trajectories in Young Children...

**Similar Dissertations**

- Motor Learning Guided Treatment with Childhood Apraxia of Speech: Cueing & Feedback

**Cited References**

- Full Text
- Full Text - PDF
- Abstract/Details
- 23 References
- Cited by
The Vision:

Harnessing the Power of Data-driven Research Insights
Questions?
gilia.smith@proquest.com

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