

A health librarian discusses his go-to database for systematic reviews

For Bruce Abbott of UC Davis Health, Scopus delivers the interdisciplinary and inclusive coverage his users need



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“Many of today’s research questions have to do with public health, particularly with public policy and informatics. This creates an overlap between computer science, informatics and health sciences... having a database as inclusive and interdisciplinary as **Scopus** is invaluable to us.”

—Bruce Abbott, Health Sciences Librarian at Blaisdell Medical Library, UC Davis Health

The contribution of interdisciplinary research to solving the complex and global challenges we face today is well documented. And with many of those challenges arising in the public health arena, it’s no surprise that universities such as UC Davis Health (UCDH) are becoming increasingly interdisciplinary in focus. A quick search of UCDH’s website reveals a wide range of interdisciplinary initiatives in areas ranging from women’s health and developmental disabilities, to primary health care and pharmacy services.

With so many of the university’s researchers reaching beyond their own discipline borders, they need access to a research database that captures the breadth and scope of the literature they want to explore. And, according to Bruce Abbott, a Health Sciences Librarian at the university’s Blaisdell Medical Library, that’s where Scopus really comes into its own.

The challenge

Systematic reviews are growing in importance in health: for funders, they can provide compelling evidence that further research is required; for clinicians, they are a great resource to keep track of developments in their field; while, for policy makers, they can be a useful springboard for developing clinical practice guidelines. At the same time, interdisciplinary research is on the rise, with many viewing it as the most promising channel to solve health- and environment-related grand challenges. However, a systematic review is only ever as strong as the scope and quality of the studies it reports on. For universities, that means finding a literature source that is both inclusive and comprehensive.

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“Scopus has the best user interface of any of the resources out there. That has direct benefits for systematic reviews. And we have found that it’s much easier to demonstrate to our user base how to do citation-based searching in Scopus.”

—Bruce Abbott

The solution

For Bruce Abbott, a Health Sciences Librarian at UC Davis Health’s Blaisdell Medical Library, Scopus has become an “invaluable” part of the team.

He explains: “On our campus, Medicine and Nursing constantly interact with Public Health. Our users are interested in resources that have to do with social determinants of health, so diversity, inclusion etc. They want to access information on psychology, education, sociology, policy... But many of these topics aren’t covered in depth in other databases, which are often too specialized, or too selective. Scopus has the breadth of coverage they are looking for when it comes to searching the journal literature. We find new ways to use Scopus all the time and it has to do with the interdisciplinarity of the work.”

For Bruce, that breadth of coverage is one of Scopus’ biggest strengths: “I think that 15 or 20 years ago, people respected databases with a restrictive, highly-selective approach to content. Now people want a much more inclusive search engine. They want to determine for themselves whether an article is worthwhile and not have that decided by a selection process outside of their control.”

Results

As Bruce notes: “When you are doing a systematic or other structured review, you want to retrieve all the most relevant articles and restrict as much as possible the non-relevant ones.”

To achieve this goal, the UC Davis librarians have developed — and published as a popular resource — a three-step process called the “Triple Database Pearl Search Method”. Its name is drawn from the three platforms that Bruce and his colleagues commonly use for systematic reviews — Google Scholar, PubMed and Scopus. The process works as follows:

Bruce’s triple database pearl search method

Step 1: Search Google Scholar (GS) for the topic using keywords, phrases, or natural language to identify a highly-relevant article

Bruce explains: “This becomes the “pearl” that is the basis for discovery in the other two databases. We frequently use GS as a discovery tool at the beginning stages of searching; however, we never recommend relying on GS alone for health science literature searches.”

Step 2: Move to PubMed and, starting with the same article (the “pearl”), explore other highly-relevant articles.

PubMed is the publicly-available interface of MEDLINE, the primary biomedical database for peer-reviewed journal articles with ~30 million article citations. Bruce recommends:

- Reviewing the list of *similar articles*.
- Using the title, abstract, author-supplied keywords and MeSH terms to identify additional search terms, including synonyms or related concepts. These can be used to develop a new conceptual search strategy in PubMed.

Step 3: Move to Scopus and, starting with the same article (the “pearl”), explore other highly-relevant articles.

Scopus is a large, multidisciplinary abstract and citation database (80 million+ articles). For Bruce, that means it’s ideally placed to complement a subject-specific database like PubMed when conducting a systematic review, because it includes literature from other disciplines (e.g., education, psychology, public policy, economics, engineering, and informatics). It also connects an article with its citations and references, helping a user to quickly locate related content. Bruce recommends:

- Reviewing the *Cited by documents*, *References* and *Related documents*.
- Repeating this process with one or more articles. Relevant articles can be saved to a list to keep track of them.

He adds: “A different approach to searching Scopus would be to run a new conceptual search from the Scopus homepage using some of the keywords identified during PubMed explorations. This is especially helpful for multidisciplinary topics. Tip: You can adopt MeSH terms as keywords in Scopus, but do not include the PubMed “[MeSH terms]” syntax.”

“Inevitably, our users will find that instead of the 8 to 10 articles they might have found on their own, we will come up with 150, 300 or 500 articles that are highly relevant for their search. Scopus provides a much higher retrieval, and, specifically, a much higher relevant retrieval than they get elsewhere.”

—Bruce Abbott

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