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KEEPING UP WITH SCIENCE FACULTY SCHOLARSHIP: A NO-COST OPTION FOR GENERATING FACULTY CITATION LISTS

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ABSTRACT

To support SJSU's College of Science's efforts to identify and quantify science faculty research publications for fund disbursement, we compiled a bibliography of science faculty research and scholarship. The citation lists would be used to develop and formalize baseline research metrics. We used existing and available resources including librarian time, subscribed science databases, and the institution-subscribed reference citation manager.

NEED FOR FACULTY CITATION LISTS

- Proper allocation of limited campus resources (\$\$ and course release) for scholarly activities – reward proven performers
- Growing emphasis on faculty research output and impact
- University interest in understanding faculty output
- University desire to improve reputation and standing

IMPACT ON LIBRARY SERVICES

- Generating citation lists is a growing area for academic librarianship, as faculty request assistance with reporting accomplishments for annual evaluations, promotion & tenure
- Citation lists can assist faculty and university with scholarly impact information, grant proposals, and reporting
- Libraries could seek ways to integrate this information into other campus systems: electronic dossiers, institutional repository profiles, marketing/communication pages, and grant systems

METHODS

Materials

- List of parameters (tenured and tenure-track faculty output from last 5 years)
- List of departments in the college
- List of faculty
- Bibliographic citation manager

Prep

- Determined corresponding subjects/disciplinary databases available at SJSU
- Developed search strategies

Data Gathering

- Applied research strategies for each database using native search facets and limiters

Data Analysis

- Saved results to the institution-subscribed citation manager (RefWorks)
- Removed duplicate citations
- Examined list and databases for accuracy, overlap, and metadata quality

Time Investment

2 librarians,
2 weeks,
20 hours
=
one faculty
citation list

Search strategies for each database

Database name	Search limiters and terms or search strings
ACM Digital Library	Author affiliation = "san jose state university" Publication year = 2012-2017
Biological Abstracts	Address = San Jose State Univ* Address = "Dept Biol" OR "Dept Chem" OR "Dept Comp Sci" OR "Dept Geol" OR "Dept Math & Stat" OR "Dept Meteorol & Climate Sci" OR "Moss Landing Marine Lab" OR "Phys & Astrono" Year Published = 2012-2017
Education Research Complete (EBSCO)	Select a field (optional) = "san jose state university" AND "science education" Publication Date = 2012-2017
ERIC (EBSCO)	Select a field (optional) = "san jose state university" AND "science education" Publication Date = 2012-2017
Geological Society of America	Author Search = name of faculty from roster Refine: Date = 01/01/2012-09/06/2017 (repeat search)
GeoRef (ProQuest)	Author affiliation - AF = San Jose State University Publication date = 2012-2017
MathSciNet	"(Institution=(san jose state university)) AND pubyear in [2012 2017]" ((san jose state university[Affiliation]) AND (department of biological sciences[Affiliation] OR department of chemistry[Affiliation] OR department of geology[Affiliation] OR department of physics[Affiliation] OR department of meteorology[Affiliation] OR department of mathematics[Affiliation] OR department of computer science[Affiliation] OR science education[Affiliation] OR moss landing[Affiliation])) AND ("2012"[Date - Publication] : "2017"[Date - Publication])
PubMed	Company name search: "San Jose State University" Refine: Date = 2012-2017 Refine: Company name = department name (repeat search with every department name)
SciFinder	Organization-Enhanced = ("San Jose State University") AND Address = "Dept Biol" OR "Dept Chem" OR "Dept Comp Sci" OR "Dept Geol" OR "Dept Math & Stat" OR "Dept Meteorol & Climate Sci" OR "Moss Landing Marine Lab" OR "Phys & Astrono" AND Year Published = 2012-2017
Web of Science	

Database facets and rationale

Primary or secondary facet	Facet	Rationale to use or not to use
Primary	Author affiliation	Used to limit to San José State University faculty only
Primary	Publication date	Used because Associate Dean of College of Science requested citations from the last 5 years (2012-2017) only
Secondary	Department	Used in non-subject-specific or multidisciplinary databases (if available) to obtain College of Science results. Can also be used if option is available in subject-specific databases.
Secondary	Keywords	Used when department limiter is not available and database coverage is broad

Author and affiliation information by database			
	Author name convention	Identifies all author affiliations	Identifies reprint author
ACM Digital Library	Last Name, First Name MI	No	No
Biological Abstracts	Last Name, First Name MI	No	Yes
Education Resource Complete (EBSCO)	Last Name, First Name Middle Name	No	No
ERIC (EBSCO)	Last Name, First Name Middle Name	No	No
Geological Society of America	Last Name, First Name MI	No	No
GeoRef (ProQuest)	Last Name, First Name MI	No	No
MathSciNet	Last Name, First Name MI	No	No
PubMed	Last Name, FI MI	Yes	No
SciFinder	Last Name, First Name MI	No	No
Web of Science	Last Name, First Name MI	Yes	Yes

Prioritization list for selecting records when there is a duplicate

If overlap exists between...	Prioritize...	Rationale
Web of Science and SciFinder	Web of Science	Web of Science includes author affiliation for all authors, reprint or first author, and full first name of authors; SciFinder does not include reprint or first author
Web of Science and PubMed	Web of Science	Web of Science includes author affiliation for all authors, reprint or first author, and full first name of authors; PubMed does not include reprint or first author and provides minimal author name information (first initial of author first name)
SciFinder and PubMed	SciFinder	SciFinder includes full first name of authors; PubMed only includes initial of author first name
Web of Science and Biological Abstracts	Web of Science	Web of Science includes author affiliation for all authors, reprint or first author, and full first name of authors
GSA and GeoRef	GeoRef	GeoRef possessed the greatest number of results (ensuring citation uniformity as much as possible)
Biological Abstracts and PubMed	Biological Abstracts	Biological Abstracts includes full first name of author and has reprint or first author; PubMed only includes first initial of author first name
MathSciNet and ACM and Web of Science	Web of Science	Web of Science includes author affiliation for all authors, reprint or first author, and full first name of authors
SciFinder and MathSciNet	SciFinder	SciFinder includes first author affiliation
SciFinder and Biological Abstracts	SciFinder	Higher number of SciFinder results compared to Biological Abstracts (ensuring citation uniformity, as much as possible)
ACM Digital Library or MathSciNet	MathSciNet	Periodical title is given in full in MathSciNet
Web of Science and GeoRef	Web of Science	Higher number of Web of Science results; no author affiliations in GeoRef
GeoRef or SciFinder	SciFinder	SciFinder includes full first name of authors; GeoRef only includes initial of author first name

DISCUSSION

- Not perfect as there is the presence of false positives and author name disambiguation issues
- There is duplication of records & coverage across databases and inconsistency of metadata quality
- Scaling a project of this nature may be difficult depending on university size, areas or expertise, research output and availability of indexes

CONCLUSION & FUTURE DIRECTIONS

The authors' methods could be a low-cost option to start providing this service. Additionally, compiling times cited lists could another valuable service. With the onset of new technologies, changes in faculty research output, and the desires of university administrators to support this type of management across all campus departments, librarians can demonstrate their skill and expertise and meet the campus' evolving campus research, scholarship, and creative activity needs.

MORE DETAILS

Tran, N-Y., & Chan, E. K. (2018). Using existing bibliographic resources to compile faculty publication lists: A case study from San José State University. *Issues in Science and Technology Librarianship*. doi:10.5062/F4930RDD