

Beyond Journal Impact & Usage Statistics: Using Citation Analysis for Collection Development

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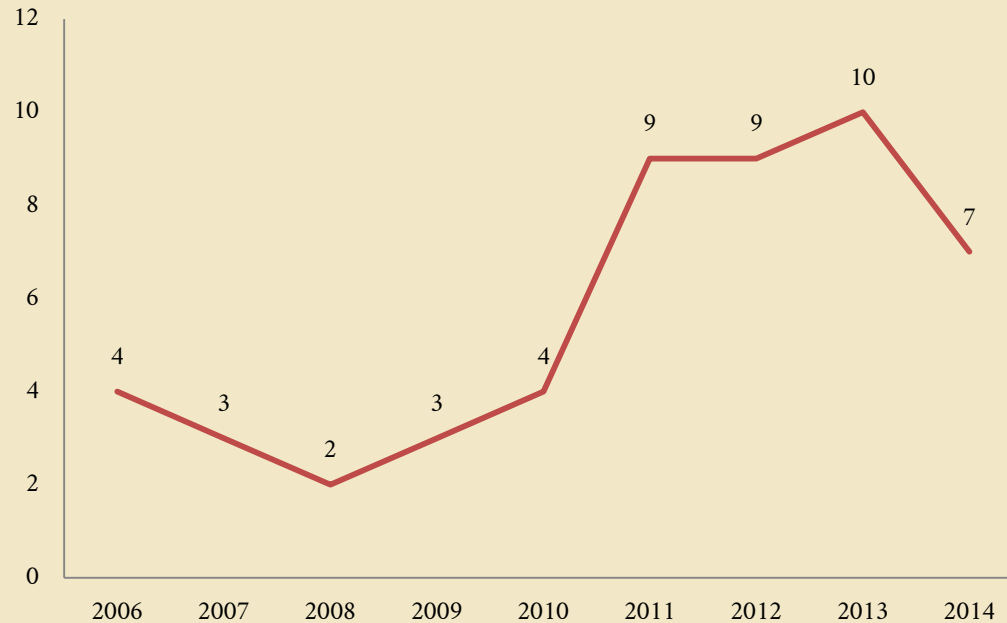
Outline

- Background and goals
- Methodology
- Findings
- Implications
- Limitations

Background



School of Communication faculty publication trend (as of May 2014)



Goals

- Learn communication faculty use of information
- Examine if the library collection meets faculty needs
- Analyze the correlation between indicators of use and journal metrics

Project Management

- Timeline
- Collaborators
- Stakeholders



Methodology

- Data Source

- Citation data: Scopus

- Usage data: EBSCONet (downloads)

- Journal metrics:

- Journal Impact Factor (JIF) from 2012 edition of Journal Citation Report (JCR)

- 2012 SCImago journal rank (SJR)

- Size of data

- 1,689 citations retrieved from the 51 publications

Data Source

Scopus Scopus SciVal

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Year

- 2015 (2)
- 2014 (12)
- 2013 (10)
- 2012 (11)
- 2011 (11)

Author Name

- Heath, R.L. (12)
- Ni, L. (9)
- Xiao, Z. (9)
- Schiff, F. (6)
- Yamasaki, J. (6)

Subject Area

- Social Sciences (62)

Operable persistent photoconductivity of Bi2S3 nested nano-networks 1 [Find This Item](#) [View at Publisher](#) Tian, Y., Guo, C.F., Zhang, J., Liu, Q.

"That Was Grown Folks' Business": Narrative Reflection and Response in Older Adults' Communication 2 [Find This Item](#) [View at Publisher](#) Yamasaki, J., Hovick, S.R.

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A Study on the Knowledge, Perception, and Use of Breast Cancer Screening Methods and Quality of Care Among Women from Central Mexico 4 [Find This Item](#) [View at Publisher](#) Cruz-Castillo, A.B., Hernández-Valero, M.A., Hovick, S.R., (...), Karam-Calderón, M.A., Bustamante-Montes, L.P.

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Limit to Exclude

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- Choi, H. (3)
- Hovick, S.R. (2)
- Heath, R.L. (2)
- Camaj, L. (2)
- Dillman Carpentier, F.R. (2)

Subject Area

- Social Sciences (14)
- Arts and Humanities (6)
- Medicine (4)
- Psychology (4)
- Business, Management and (3)

<input checked="" type="checkbox"/>	1	Recent photoconductivity of Bi2S3 nested nano-networks	Tian, Y., Guo, C.F., Zhang, J., Liu, Q.	2015	Find This Item View at Publisher
<input checked="" type="checkbox"/>	2	"That Was Grown Folks' Business": Narrative Reflection and Response in Older Adults' Family Health History Communication	Yamasaki, J., Hovick, S.R.	2015	Find This Item View at Publisher
<input checked="" type="checkbox"/>	3	Students as subjects in food advertising studies. An appraisal of appropriateness	Choi, H., Reid, L.N.	2014	Find This Item View at Publisher
<input checked="" type="checkbox"/>	4	A Study on the Knowledge, Perception, and Use of Breast Cancer Screening Methods and Quality of Care Among Women from Central Mexico	Cruz-Castillo, A.B., Hernández-Valero, M.A., Hovick, S.R., (...), Karam-Calderón, M.A., Bustamante-Montes, L.P.	2014	Find This Item View at Publisher
<input checked="" type="checkbox"/>	5	When first comes love (or Lust): How romantic and sexual cues bias first impressions in online social networking	Dillman Carpentier, F.R., Parrott, M.S., Northup, C.T.	2014	Find This Item View at Publisher
<input checked="" type="checkbox"/>	6	Systematic review of HIV prevention interventions in China: A health communication perspective	Xiao, Z., Noar, S.M., Zeng, L.	2014	Find This Item View at Publisher

Findings from Citation Analysis

- Types of materials cited
- Age of citations
- Local core journal list
- Subject of journal titles
- Local availability



Next Step

Which factor correlates to another?

- Citation count vs. Usage
- Citation count vs. Impact factor
- Usage vs. Impact factor
- No relationship at all!

Respond at [PollEv.com/nasig](https://www.poll-ev.com/nasig) or Text NASIG to 22333 to join

Literature Review

- Citation vs. Usage

Author	Year	Variables	Test	Result
Scales	1976	Citation count		Low
		Frequency of use in library		
Blecic	1999	Citation count	Both Spearman and Pearson	Positive
		Circulation		
		In house use		
McDonald	2005	Journal citation		Positive
		Print journal use		
		Online journal use		
Feyereisen and Spoiden	2009	Citation count		Positive (Moderate)
		Electronic usage		

Literature Review

- Citation vs. Impact Factor

Author	Year	Variables	Test	Result
Ralston	2008	Citation	Spearman	Positive
		Impact factor		
Vallmitjana and Sabate	2008	Citation	Spearman	Positive (Moderate)
		Impact factor		
Schmidt, Davis, and Jahr	1994	Citation	Spearman	Positive
		Impact factor		
		Circulation		

Literature Review

- Usage vs. Impact Factor

Author	Year	Variables	Test	Result
Pan	1978	Impact factor		No relationship
		Use in library		
Duy and Vaughan	2006	Impact factor	Pearson	E-usage vs. print usage--Yes
		Print usage		
		E-usage		E-usage vs. impact factor--No
		Citation		

Correlations

- Is journal citation a valid indicator of journal use?
- Do journal citation patterns support use of journal metrics for collection development?
- JIF vs. SJR

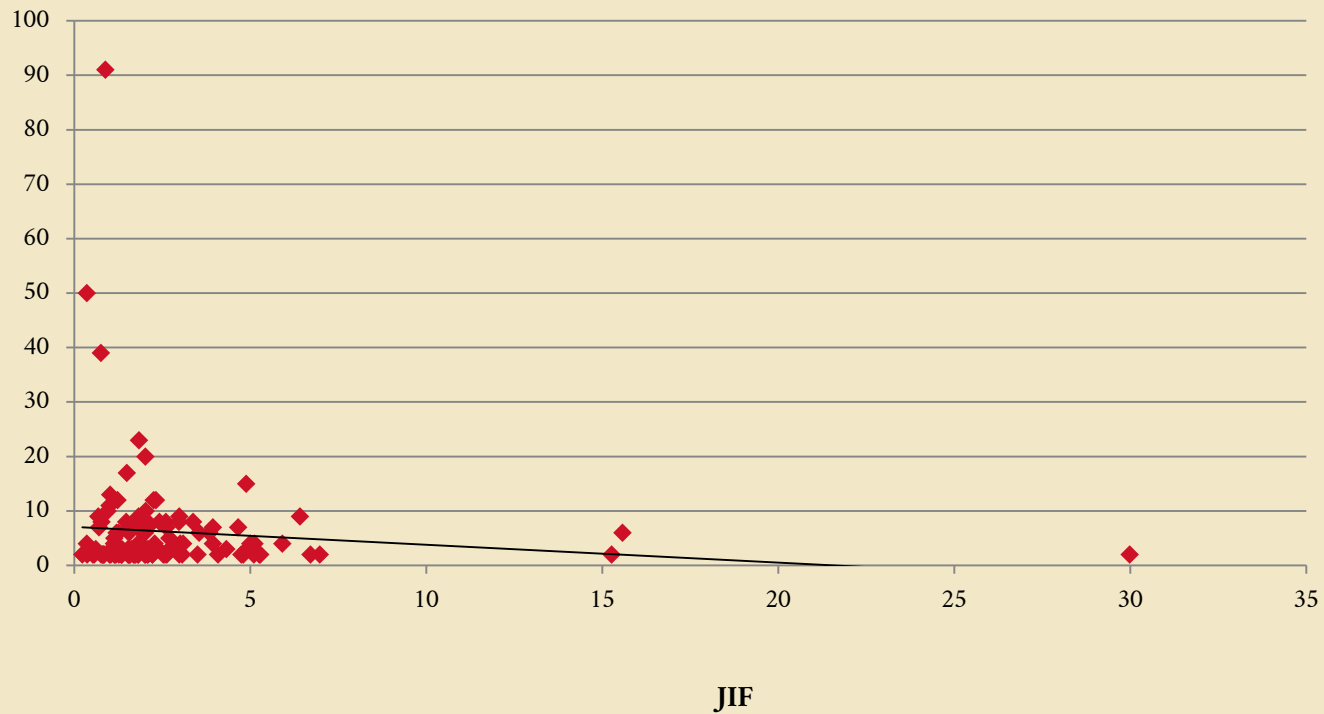
Descriptive Statistics of the datasets					
	N	Minimum	Maximum	Mean	Std. Deviation
Citation Count	147	2.00	91.00	5.58	9.24
JIF	118	0.23	29.98	2.71	3.39
SJR	131	0.10	16.00	1.77	1.99
Usage	108	1.00	4771.00	728.39	916.73

Citation Count vs. Journal Rankings

Correlations Between Citation Count and Journal Rankings			
	N	Correlation Spearman's rho	p
Citation Count and JIF	147 and 118	-0.015	0.872
Citation Count and SJR	147 and 131	0.125	0.154

Scatter Plot

Correlation between Citation Count and JIF: a Random Correlation



Citation Count vs. Usage

Correlations Between Citation Count and usage			
	N	Correlation Spearman's rho	p
Citation Count and Usage	147 and 108	0.006	0.951

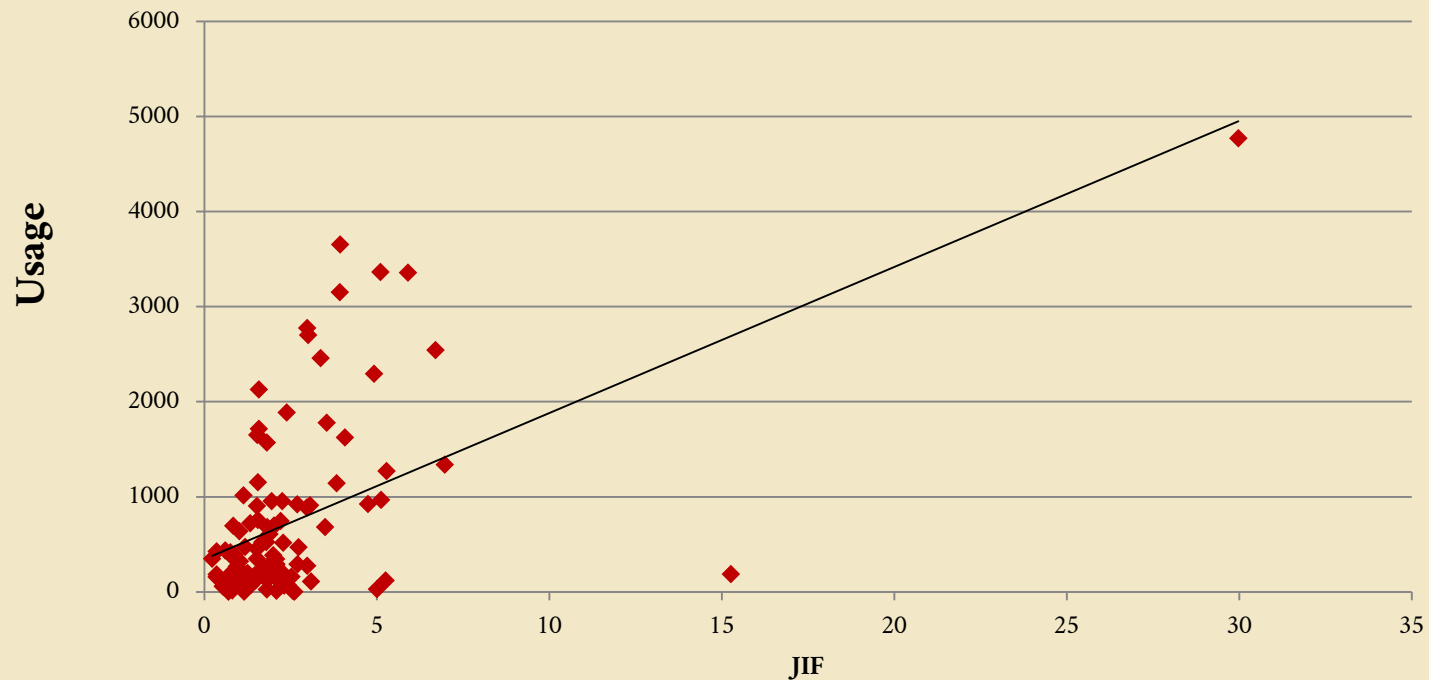
Usage vs. Journal Rankings

Correlations Between Usage and Journal Rankings			
	N	Correlation Spearman's rho	p
Usage and JIF	108 and 118	0.415**	<0.01
Usage and SJR	108 and 131	0.417**	<0.01

** Correlation is significant at the 0.01 level (2-tailed).

Scatter Plot

Correlation Between Usage and JIF: a Positive Significant Correlation



Implications

For collection development

- Decision on old materials
- “Core” journal list
- Collaboration among librarians
- Factors to consider for collection development

For outreach

- Evidence based data to prove our value

Limitations

- Scopus as data source
- “Point of time” data
- Research vs. teaching needs
- Usage data not by user demographics
- Single year usage data

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5. Ralston, Rick, Carole Gall, and Frances A. Brahmi. "Do Local Citation Patterns Support Use of the Impact Factor for Collection Development?" *Journal of the Medical Library Association: JMLA* 96, no. 4 (2008): 374. DOI: 10.3163/1536-5050.96.4.014.
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Questions or Comments?