

Evolution of Library Assessment Literature – A Bibliometric Analysis of LAC Proceedings

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Abstract

The purpose of this paper is to analyze the publications reflected in the Library Assessment Conference (LAC) Proceedings from 2006 to 2014. Taking data from the online Library Assessment Conference Proceedings, we constructed a data set to study various bibliometric dimensions in terms of research topics, growth of literature, authorship distribution, and collaboration pattern. The finding suggest that, the contribution to LAC proceeding has steadily been increased. Some of the authors and organizations have shown their loyalty to the LAC and contributed in every proceeding from 2006 to 2014. It shows that 6 organizations have contributed in all the LAC proceedings with "University of Washington, USA tops the list with 32 contributions Similarly, the study of authors loyalty to LAC shows that 6 authors have shown their loyalty by contributing papers in all the LAC proceedings. "Martha Kyrillidou" and "Megan J. Oakleaf" tops the list with 12 contributions.

Keywords: Library Assessment, Bibliometrics, Proceeding Literature, Productivity Ranking, Authorship Collaboration

1. Introduction

Through the present paper an attempt has been made to explore various characteristics of the publications appeared in five proceedings of the Library Assessment Conference (LAC), applying bibliometric tools. Bibliometric is a well established research tool that report on the research topics, utilized methods, leading researchers, institutions and countries, collaboration pattern, research anomalies, journal ranking etc. The Library Assessment Conference (LAC) is generally held biennially and it is jointly organized by The Association of Research Libraries, the University of Virginia Library, and the University of Washington Libraries. Till now five conferences have been successfully completed in the years 2008, 2010, 2012 and 2014. The basic aim of the conference is to provide a platform for LIS practitioners & research-

ers who have interest in the broad fields of library assessment. The conference accepts invited speeches, contributed papers, posters, and workshops that stimulate discussion and provide workable ideas for effective, practical and sustainable library assessment. Every year, the LAC organizers create a web site to provide online access to the publications reflected in the proceedings to the Library and information science community.

2. Structure of the Paper

The paper is structured as follows. The section –II presents review of related literature. The section – III outlines the methodologies where as the Section –IV reports the analysis of the study and section V presents findings of the study.

3. Literature Review

Lister and Box (2009) compared the CORE rankings of computing conferences and journals to the frequency of citation of those journals and conferences



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in the Australasian Computer Science Conference (ACSC) of 2006, 2007 and 2008 proceedings with the assumption that there should be a positive relationship between citation rates and the CORE rankings. The findings showed that the CORE rankings broadly reflect the ACSC citations, but with some anomalies. Hamadicharef (2010) present a bibliometric study of the Digital Audio Effects (DAFx) conference proceedings from 1998 to 2009. Using the online DAFx proceedings, the authors constructed a DAFx database (LaTeX) to study its bibliometric statistics in terms of research topics, growth of literature, authorship distribution, citation patterns, and frequency distribution of scientific productivity and identified the 20 top DAFx contributors and found that the top 10 most cited DAFx papers deal with sound and music analysis (e.g. extraction of sinusoids, musical genre classification, perceived intensity of music, and musical note onset detection). This study also confirmed that the DAFx literature conforms to the Lotka's law ($n=2.0771$ and $C=0.6336$) at 0.01 level of significance using the Kolmogorov-Smirnov test (KS-test) of goodness of-fit. Janakiramaiah (2011) made a study of all the conference papers published in the Convention of CALIBER for the years 2005 and 2006 to assess the bibliographic forms, average number of citations per paper, authorship pattern, different website domains, geographical distribution of authors and rank list of cited journals. Serenko, Cocosila and Turel (2008) investigated the state and evolution of information systems (IS) research in Canada as reflected in publications of the proceedings of the annual conference of the Administrative Sciences Association of Canada from 1974 to 2007. The authors present a scientometric analysis of (a) individual and institutional research outputs; (b) differences in three productivity score calculation methods: straight count, equal credit, and

author position; (c) study topics; (d) research methods. The conclusions revealed that IS Management issues were the most frequently investigated topic (22.5%), followed by studies of various Information Systems (19%). Types of information systems examined varied longitudinally, and no leading system was identified. The three different score calculation methods that were used in the analysis (straight count, equal credit, and author position) generated similar results. Therefore, these methods may be potentially used as substitutes for one another to measure individual and institutional research output. From the above literature it is reflected that like journal articles and other forms of publications, conference proceeding also forms an important scholarly field of study where bibliometric tools can be applied to assess various outcomes as a matter of which it has captured the attention of the scholars across different disciplines.

4. Methodology

Our dataset covers LAC publications reflected in the proceedings for the calendar years 2006, 2008, 2010, 2012 and 2014. Altogether 356 papers have been published in the five proceedings. For each article variables like the name of the author, title of the article, publication year, institute of affiliation of authors, location of the institutions have been noted down. A computerized data sheet in ms-excel was prepared to record all these data. The entire data was checked to determine data accuracy and then further analysis was made keeping in view the research questions.

5. Research Questions

1. In terms of LAC proceedings, what is the research output in individual years?

2. What are the core areas of LAC discussion that have captured the attention of the contributors?
3. Which authors have shown their loyalty by contributing to each of the LAC proceeding?
4. Which are the leading institutions that have contributed maximum to the conferences in each of the years?

6. Observation and Analysis

The Library Assessment Conference (LAC) is the largest conference of its kind in the world and is

held in between the month of August to October (details of time line is reflected in Table – 1). Out of five conferences, twice it has been held at Virginia, twice at Washington and once in Maryland. All the conferences have been successfully completed with remarkable growth in the number of registrants. In the commencing year in 2006 the numbers of registrant were 215 while it increased consistently and reached to 600 in the recently held 5th conference in 2014.

Table - 1: Time line of LAC

Year	Date	Location	Registrants
2006	September 25–27, 2006	Charlottesville, Virginia	215
2008	August 4-7, 2008	Seattle, Washington	375
2010	October 24–27, 2010	Baltimore, Maryland	460
2012	October 29–31, 2012	Charlottesville, Virginia	560
2014	August 4-6, 2014	Seattle, Washington	600

6.1 Article Distribution in LAC Proceedings

It is observed that the number of papers published at each LAC conference is consistently increasing keeping similar pace with the increasing number of

registrants. Altogether 356 papers have been published by the year 2014. The mean growth rate of LAC literature is 0.53 with mean doubling time 1.54. LAC conference in 2014 is the most productive year with a contribution of 109 papers that contributes 30.6% of the total LAC output (Table – 2).

Table 2: Distribution of LAC Publications

Year	Articles	%	Cumulative No.	Cumulative %	Log	Growth Rate (GR)	Doubling Time (DT)
2006	43	12.1	43	12.08	2.49		
2008	66	18.5	109	30.62	3.42	0.93	0.75
2010	68	19.1	177	49.72	3.91	0.48	1.43
2012	70	19.7	247	69.38	4.24	0.33	2.08
2014	109	30.6	356	100.00	4.61	0.37	1.90
Total	356	100.0			Mean	0.53	1.54

Table - 3: Distribution of Papers as per Conference Topics

Sl. No.	Conference Topics	2006	2008	2010	2012	2014	Total
1	Teaching and Learning			6	10	11	27
2	Plenary Session	2	7	5	6		20
3	LibQUAL+®	2	7	3	4	3	19
4	Collections		2	3		13	18
5	Information Literacy	3	9				12
6	Methods		3			9	12
7	Data					11	11
8	Value and Impact	3		8			11
9	Organizational Capacity					10	10
10	Library As Place	4		5			9
11	Organizational Culture	3	6				9
12	Organizational Performance			6	3		9
13	Qualitative Methods	3	3	3			9
14	UX/Methods					9	9
15	Space/Services					8	8
16	Digital Libraries	2	2	3			7
17	Space				4	3	7
18	The LibValue Project					7	7
19	Collaboration					6	6
20	Collections / E-Resources				6		6
21	Information Services			3	3		6
22	Special Collections				4	2	6
23	Value				3	3	6
24	Research in Process			5			5
25	Usability		2	3			5
26	Other Aspects	21	25	15	27	14	102
Total		43	66	68	70	109	356

The table – 3 depicts the year wise distribution of articles over the years from 2006 to 2014. In the LAC proceedings papers are invited under different conference topics. It is observed that there are 66 conference topics under which all the 356 articles have

been distributed. Out of 66 conference topics, 25 (37.8%) are having topics ≥ 5 contributions which counts 254 (71.3%) publications. Rest 102 (28.7%) belongs to other aspects which contain 41 different topics.

6.2 Aspect-wise Categorization of LAC Publications

Table 4: Aspect-wise Categorization of LAC Publications

Aspect	No Facets	Facet Descriptions of
Collection of Resources Digital Resources	4	Collections, Collection of E-Resources, Special Collections,
Data Interpretation Outcomes, Institutional Data, Statistical Data	6	Data, Data and Impact, Data and Libraries, Data into
Evaluation & Assessment	13	Assessment Capacity, Building Assessment in Our Libraries ,User Assessment & Behavior, Moving Assessment Forward, evaluation and Assessment Methods, Service Quality Assessment, Assessment in LIS Education, Assessment Plans, Information Literacy, Information Services, Usability, Impact / Evaluation, Management Information
Invited Deliberations Speaker, Reception Speech	5	Opening Speaker, Plenary Session, Closing Speaker, Dinner
Library As Place	5	Library As Place, Space/Services, Space, Place, Space/Learning
Organizational Study	8	Organizational Capacity, Organizational Culture , Organizational Performance, Assessing Organizational Climate, Assessment in the Organization, Organizational Performance - Library Scorecards, Organizational Issues, Organizational Performance - ClimateQUAL [®]
Professional Competency	5	Marketing and Advocacy, New Roles, Planning to Action, Reference, Assessing Liaisons
Qualitative & Quantitative Methods	16	LibQUAL+ [®] , Methods, Qualitative Methods, UX/Methods, Research in Process, Discovery, Surveys, Assessment in Practice, Mixed Methods, Balanced Scorecard, E-Metrics, Strategic Planning, Usage Metrics/Visualization, Evaluation Metrics, Teaching and Learning, Collaboration
Values & Ethics	4	Value and Impact, The LibValue Project, Value, Communicating Value

The above table shows the broader aspects of conference topics and articles associated with these. All the articles have been thoroughly studied and again those are categorized into 9 broader aspects. The number of facets in each aspect varies from lowest 4 to highest 16. The aspect "Qualitative & Quantitative Methods" constitutes maximum 16 facets, followed by "Evaluation & Assessment" with 13. Two of the

facets "Collection of Resources" & "Values & Ethics" are having 4 facets each, while "Invited Deliberations", "Library as Place", & "Professional Competency" each contain 5 facets. The aspect "Data Interpretation" contains 6 facets and "Organizational Study" contains 8 facets.

Table 5: Aspect wise Distribution of Percentage Articles

Aspect	2006	2008	2010	2012	2014	Total	%
Collection of Resources	2	4	6	10	15	37	10.4
Data Interpretation		6	3	6	11	26	7.3
Evaluation & Assessment	14	19	6	7	4	50	14.0
Invited Deliberations	5	7	6	6		24	6.7
Library As Place	4	3	5	4	13	29	8.1
Organizational Study	6	6	11	6	11	40	11.2
Professional Competency		5	3	3	1	12	3.4
Qualitative & Quantitative Methods	9	16	20	21	44	110	30.9
Values & Ethics	3		8	7	10	28	7.9
Total	43	66	68	70	109	356	100

The above table reveals that articles in 9 different aspects are distributed variedly over the years. It is observed that "Collection of Resources", "Evaluation & Assessment", "Library as Place", "Organizational Study", & "Qualitative & Quantitative Methods" facets have papers in all the five years from 2006 to 2014, while "Data Interpretation", "Invited Deliberations", "Professional Competency", & "Values & Ethics" facets have no papers during the year 2006, 2014, 2006 & 2008 respectively. Highest contribution has been made on the aspect "Qualitative & Quantitative Methods" that accounts for 30.9 % of the total publications.

6.3 Authorship Pattern

The authorship distribution shown in the above table reveals that out of 356 papers, the majority of papers are written by one, two or three authors which is 40.17%, 32.87% and 14.61% respectively. There are 3 Papers jointly written by 6 authors each and 2 papers written by 7 authors each have been published in LAC proceedings.

Table - 6: Authorship Distribution

Authorship	2006	2008	2010	2012	2014	Total Articles	%
1 Author	19	32	28	27	37	143	40.17
2 Authors	12	17	21	27	40	117	32.87
3 Authors	7	7	10	9	19	52	14.61
4 Authors	4	6	8	5	6	29	8.15
5 Authors	1	4	1	1	3	10	2.81
6 Authors				1	2	3	0.84
7 Authors					2	2	0.56
Total	43	66	68	70	109	356	100

6.4 Degree of Collaboration

The degree of collaboration is defined as the ratio of the number of collaborative research papers to the total number of research papers in a discipline during a certain period of time. The formula suggested by Subramanyam is used in this study to find out degree of collaboration among authors. It is expressed as: (C) is the degree of collaboration in a discipline; (Nm) is the number of multi-authored

research papers in the discipline whereas (Ns) is the number of single authored research papers in the discipline published during a year. The following table reveals that, the degree of Collaboration is maximum (0.66) in the year 2014 while lowest (0.52) in the year 2008. The result of the study shows that degree of collaboration has increasingly steadily from the year 2010 to 2014 which indicates that contributors prefer to write collaboratively.

$$C = Nm / (Nm + Ns)$$

Table 7: Degree of Collaboration

Year	Single Authors	Multiple Authors	Total Papers	Degree of Collaboration
2006	19	24	43	0.56
2008	32	34	66	0.52
2010	28	40	68	0.59
2012	27	43	70	0.61
2014	37	72	109	0.66
Total	143	213	356	0.60

6.5 Prolific Authors

To analyze the productive authors' contribution in the LAC conference data was analyzed and tabulated as below. Authors' having more than or equal

to 5 publications during the period of study i.e., 2006 to 2014 are tabulated. Of the 533 unique authors who contributed to the 356 publications of the LAC proceedings, one can look at the frequency of publi-

cation by authors. As shown in above table, a majority of 428 (80.3%) authors contributed only one publication, while 63 (11.8%) authors made 2 publications, 21 (3.9%) have done 3 publications and 8 (1.5%) to 4 publications. The accumulated count for each author revealed the top 2 contributors as

Martha Kyrillidou & Megan J.Oakleaf who have contributed maximum 12 papers, where as two authors Colleen Cook & Stephen Town have contributed 7 papers. Similarly six authors have contributed 6 papers each and three authors have contributed 5 papers.

Table 8: Prolific Authors with Contributions

Author	Contributions	2006	2008	2010	2012	2014
Martha Kyrillidou	12	3	3	2	1	3
Megan J. Oakleaf	12	1	3	3	3	2
Colleen Cook	7	2	2	1	1	1
Stephen Town	7	1	2	1	1	2
Brinley Franklin	6	1	2	1	2	
Bruce Thompson	6	1	2	1	1	1
Donald W. King	6	1		2	1	2
Kathryn M. Crowe	6	1		1	1	3
Lisa Janicke Hinchliffe	6	1	3	1	1	
Steve Hiller	6	1	1	1	2	1
Carol Tenopir	5		1	1	3	
Charles R. McClure	5	2	1	2		
Terry Plum	5		1	2	1	1
8 - Authors	4					
21 - Authors	3					
63 - Authors	2					
428 - Authors	1					
Total Authors = 533						

6.6 Productivity Ranking of Authors

A critical issue in determining individual author and institution productivity involves assigning credit for multi-authored papers. There are four basic approaches to determining authorial credit (Alexander Serenko, 2010). These are normalized page size; au-

thor position; direct count and equal credit method. In equal credit scoring, each author receives an equal portion of the score regardless of the authorship order. A per-person score is derived by taking the inverse of the number of authors. For instance, an author of a single work receives 1 point; each author

of a two-authored work obtains a score of 0.5; three-authored, 0.333, etc. It is believed that this technique inherits less bias compared to its previously mentioned counterparts, and hence it is selected to report all productivity scores in this paper. For the present study Equal Credit scoring method is used to determine the author productivity. The analysis tabulated below reveals that "Megan J. Oakleaf" tops the list with 6.58 score, where as "Stephen Town" occupied second position with 5.50. Total of 11 authors scored above or equal to 2, whereas 133 authors secured score between 1 and 2 and a remarkable number of authors scored less than 1 which is 382 (71.6%) of the total contributors.

Table 9: Individual Productivity Ranking of Authors

Rank	Author(s)	Score
1	Megan J. Oakleaf	6.58
2	Stephen Town	5.50
3	Lisa Janicke Hinchliffe	5.41
4	Kathryn Crowe	4.00
5	Martha Kyrillidou	3.27
6	Raynna Bowlby	2.50
7	Brinley Franklin	2.48
8	Donald W. King	2.42
9	Roger Schonfeld	2.33
9	Sarah Murphy	2.33
10	Eric Ackermann	2.25
10	Yvonne Belanger	2.25
11	Frankie Wilson	2.00
11	Joseph R. Matthews	2.00
11	Kathleen Bauer	2.00
11	Larry Nash White	2.00
11	Michael Rawls	2.00
11	Steve Hiller	2.00
Total Authors = 533	133 Authors	>=1 but <2
	382 Authors	<1

From the comparison of prolific authors table and individual author's productivity table it is clearly evident that though an author contributes maximum number of papers he / she may not score high. It is revealed that though "Megan J. Oakleaf" and Martha Kyrillidou contributed 12 papers each, Megan J. Oakleaf scored 6.58 and considered as the most productive author in LAC literature superseding Martha Kyrillidou as per the individual productivity ranking method. Similarly "Stephen Town" who contributed 7 papers, scored 5.50 and considered as 2nd most productive author.

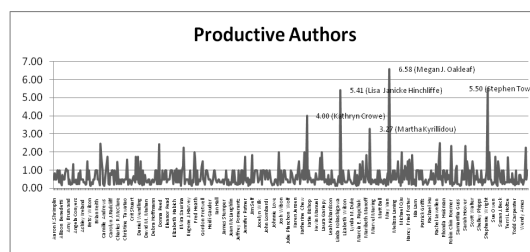


Figure 1: Most Productive Authors

6.7 Collaborative Pattern of Prolific Authors

From the collaborative pattern of prolific authors it is reflected that "Megan J. Oakleaf" and "Martha Kyrillidou" both top the list with 12 contributions each and they collaborated with 13 and 20 authors respectively. Similarly Colleen Cook collaborated with (10), Brinley Franklin (9), Bruce Thompson (7), Donald W. King (6), Kathryn M. Crowe (2), Lisa Janicke Hinchliffe (6), Steve Hiller (14), Carol Tenopir (6), Stephen Town (7), Terry Plum (10) and Charles R. McClure (9) authors each. The data on the collaborative pattern of authors and their position as author in the contributions are shown in the above table. It is observed that 11 authors have their position as 1st authors in the total output. As regards to the authors' position among the prolific

authors, "Stephen Town" tops the list with highest percentage of contribution as 1st author (85.71%) followed by "Kathryn M. Crowe" with (66.67%). Further it is observed that, some of the authors who are contributing papers with collaborations are collaborating with prolific authors. "Martha Kyrillidou" who has contributed 12 papers collaborated with 20 authors and from among them 5 au-

thors belong to prolific group. Similarly, "Megan J. Oakleaf" though contributed 12 papers in collaboration with 13 authors from among them only 1 author belongs to prolific group. Similarly "Bruce Thompson" and "Stephen Town" contributed 6 and 7 papers respectively have collaborated with 7 authors each and from among that 5 authors belong to prolific group.

Table 10: Collaborative Pattern of Prolific Authors

Author	Collaborated with	Contributions	Authorship						
			1st	%	2nd	3rd	4th	5th	6th
Stephen Town	7 authors	7	6	85.71				1	
Kathryn M. Crowe	2 authors	6	4	66.67	2				
Megan J. Oakleaf	13 authors	12	7	58.33	5				
Brinley Franklin	9 authors	6	3	50.00	2	1			
Bruce Thompson	7 authors	6	3	50.00			1	1	1
Lisa Janicke Hinchliffe	6 authors	6	3	50.00	3				
Steve Hiller	14 authors	6	3	50.00	1	1	1		
Terry Plum	10 authors	5	2	40.00	2		1		
Donald W. King	6 authors	6	2	33.33	2	2			
Martha Kyrillidou	20 authors	12	3	25.00	6	3			
Carol Tenopir	6 authors	5	1	20.00	4				
Colleen Cook	10 authors	7			2	3	2		
Charles R. McClure	9 authors	5			3	2			

The below mentioned table shows the details of the nature of collaborations and the prolific groups.

Table 11: Prolific Authors' Nature of Collaborative Pattern

Author	Collaborated with	Belongs to prolific group
Martha Kyrillidou	20 authors	5 authors
Megan J. Oakleaf	13 authors	1 author
Colleen Cook	10 authors	5 authors
Brinley Franklin	9 authors	4 authors

Bruce Thompson	7 authors	5 authors
Donald W. King	6 authors	1 author
Kathryn M. Crowe	2 authors	none
Lisa Janicke Hinchliffe	6 authors	1 author
Steve Hiller	14 authors	4 authors
Carol Tenopir	6 authors	1 author
Stephen Town	7 authors	5 authors
Terry Plum	10 authors	2 authors
Charles R. McClure	9 authors	none

6.8 Productive Organizations

The LAC literature has 356 contributions by 533 unique authors who belong to 213 organizations of repute. The details of the data are tabulated below. It shows that 313 contributions form 22 prolific organization (having ≥ 8 contributions). 422 contributions from 191 organizations (having ≤ 7 contributions). "University of Washington, USA tops the

list with 32 contributions, followed by "Association of Research Libraries, USA" and "University of Tennessee, USA" with 22 contributions each. "University of Virginia, USA" contributed 21 papers. 13 organizations' contributions fall between 10 to 19, where as 5 organizations' contributions fall between 8 to 9. About 191 organizations are categorized under "Others" that contributed 422 papers.

Table 12: Distribution of Authors' Affiliations

Affiliation	2006	2008	2010	2012	2014	Total
University of Washington, USA	3	7	6	4	12	32
Association of Research Libraries, USA	4	7	3	1	7	22
University of Tennessee, USA	3		4	3	12	22
University of Virginia, USA	1	5	5	9	1	21
University of Illinois, USA		3	2	6	8	19
University of North Carolina, USA	2	5	1	2	9	19
Texas A& M University, USA	4	4	2	1	6	17
University of Maryland, USA	11		1	3	2	17
Syracuse University, USA	1	4	4	3	2	14
Cornell University, USA		6	3	1	3	13

Florida State University, USA	6	2	3	2		13
Emory University, USA	2	5	2		2	11
James Madison University, USA		1		7	3	11
University of California, USA	1				10	11
Simmons College, USA		2	5	2	1	10
University of Chicago, USA	4	3		1	2	10
University of Texas at, USA	3	2	4		1	10
Duquesne University, USA					9	9
California State University, USA		5			3	8
Columbia University, USA		2	1	3	2	8
University of Massachusetts Amherst, USA	3	1	2		2	8
University of York, UK		2	1	3	2	8
Others	37	65	87	90	143	422
Total						735

6.9 Individual Productivity Ranking of Organizations

Equal Credit method has also been applied to find out the individual productivity ranking of the organizations. The analysis so done reflects that, "University of Washington, USA" with a score of 13.92 tops the list, followed by "University of Illinois, USA" with score of 9.75. "University of North Carolina, USA" and "University of Virginia, USA" acquired score 9.42 and 9.73 respectively. 7 organizations' score fall between 5 to 8 while 10 organizations' score fall be-

tween 4 to 5. Similarly, 35 organizations' score fall between 1 to 2 and 64 institutions have scored less than 1. From the comparison of prolific organizations and individual productivity of organizations it is clear that "University of Washington, USA" tops the list with 32 contributions and with highest 13.92 score.

Table 13: Ranking of the Institution (Equal Credit method)

Rank	Institutions	Score
1	University of Washington, USA	13.92
2	University of Illinois, USA	9.75
3	University of North Caroline, USA	9.73
4	University of Virginia, USA	9.42
5	Syracuse University, USA	8.58
6	University of Tennessee, USA	7.92
7	Association of Research Libraries, USA	7.67
8	University of Maryland, USA	6.83
9	Cornell University, USA	5.58
10	University of York, United Kingdom	5.17
11	Texas A&M University, USA	5.03
12	Emory University, USA	5.00
13	California State University San Marcos, USA	4.83
13	University of Massachusetts Amherst, USA	4.83
14	Yale University, USA	4.50
15	Bryant University, USA	4.34
16	Ithaka S+R, USA	4.33
16	Loyala Marymount University, USA	4.33
17	University of Chicago, USA	4.25
18	Duke University, USA	4.00
18	University of Nebraska Omaha, USA	4.00
19	Virginia Commonwealth University, USA	4.00
	35 Institutions	>=2 but <4
	96 Institutions	>=1 but <2
	64 Institutions	<1
	Total Institutions	217

6.10 Organizations' Contribution vs. Contributors

Organizations' contributions and contributors are analyzed and tabulated below which shows that paper per contributor is highest (7.0) for "Syracuse University, USA". For 17 organizations paper per

contributor score falls between 1 to 2 where as 4 organizations paper per contributor score fall between 2 to 3.

Table 14: Productive Organizations' Contribution vs. Contributors

Affiliation	Contributions	%(n=356)	Contributors	%(n=533)	Paper per contributor
University of Washington, USA	32	9.0	23	4.3	1.4
University of Tennessee, USA	22	6.2	14	2.6	1.6
Association of Research Libraries, USA	22	6.2	10	1.9	2.2
University of Virginia, USA	21	5.9	15	2.8	1.4
University of North Carolina, USA	19	5.3	9	1.7	2.1
University of Illinois , USA	19	5.3	12	2.3	1.6
University of Maryland, USA	17	4.8	15	2.8	1.1
Texas A& M University, USA	17	4.8	8	1.5	2.1
Syracuse University, USA	14	3.9	2	0.4	7.0
Florida State University, USA	13	3.7	7	1.3	1.9
Cornell University, USA	13	3.7	8	1.5	1.6
University of California, USA	11	3.1	11	2.1	1.0
James Madison University, USA	11	3.1	10	1.9	1.1
Emory University, USA	11	3.1	8	1.5	1.4
University of Texas at, USA	10	2.8	7	1.3	1.4
University of Chicago, USA	10	2.8	7	1.3	1.4
Simmons College, USA	10	2.8	7	1.3	1.4
Duquesne University, USA	9	2.5	8	1.5	1.1
University of York, UK	8	2.2	3	0.6	2.7
University of Massachusetts Amherst, USA	8	2.2	5	0.9	1.6
Columbia University, USA	8	2.2	5	0.9	1.6
California State University, USA	8	2.2	8	1.5	1.0
Maximum	32	9.0	23	4.3	7
Minimum	8	2.2	2	0.4	1

6.11 Loyalty of Authors and Organizations to LAC

Some of the authors and organizations have shown their loyalty to the LAC and contributed in every proceeding from 2006 to 2014. It shows that 6 organizations have contributed in all the LAC proceedings among which" University of Washington, USA

tops the list with 32 contributions in total and highest in 2014 (12) contributions. Similarly "Association of Research Libraries, USA" comes 2nd with 22 and "University of Virginia, USA" comes 3rd with 21 contributions.

Table 15: Loyalty of Organizations to LAC

Affiliation	2006	2008	2010	2012	2014	Total
University of Washington, USA	3	7	6	4	12	32
Association of Research Libraries, USA	4	7	3	1	7	22
University of Virginia, USA	1	5	5	9	1	21
University of North Carolina, USA	2	5	1	2	9	19
Texas A & M University, USA	4	4	2	1	6	17
Syracuse University, USA	1	4	4	3	2	14

Similarly, from the study of authors' loyalty to LAC shows that 6 authors have shown their loyalty by contributing papers in all the LAC proceedings.

"Martha Kyrillidou" and "Megan J. Oakleaf" tops the list with 12 contributions, where as "Colleen Cook" and "Stephen Town" contributed 7 papers each and "Bruce Thompson" and "Steve Hiller" contributed 6 papers each.

Table 16: Loyalty of Authors to LAC

Author	Contributions	2006	2008	2010	2012	2014
Martha Kyrillidou	12	3	3	2	1	3
Megan J. Oakleaf	12	1	3	3	3	2
Colleen Cook	7	2	2	1	1	1
Stephen Town	7	1	2	1	1	2
Bruce Thompson	6	1	2	1	1	1
Steve Hiller	6	1	1	1	2	1

7. Findings and Conclusion

By examining the research disseminated through LAC literature over five years, the analyzed study gives very interesting insights with respect to the state and evolution of papers published in the LAC proceedings. As regards to the first research question our analysis shows that the evolution research demonstrates signs of maturity with a trend of an increasing number of papers over time and the most recent LAC witnessed 600 number registrants which is highest than all the previous years. As regards to the second research question the study revealed that

the broader aspect of the LAC is Library Assessment whereas the articles under the narrower aspect "Qualitative and Quantitative Methods" is maximum which is 110 followed by "Evaluation and Assessment" with 50 articles. This shows that the articles contributed by the authors are mostly restricted to the theme of LAC. With respect to the third research question the study shows that out of the 13 prolific authors two authors namely Martha Kyrillidou and Megan J. Oakleaf published 12 papers each during the study years. As per the individual productivity ranking of the authors by equal credit methods it is observed that Megan J. Oakleaf

tops the list with 6.58 score whereas Stephen Town earned the distinction for having highest contribution (85.71%) as 1st Author in his publications. On collaborative pattern of authors it is observed that Megan J.Oakleaf has collaborated with 13 authors whereas Martha Kyrillidou collaborated with 20 authors. Similarly the study of authors' loyalty to LAC shows that 6 authors namely Martha Kyrillidou, Megan J.Oakleaf, Colleen Cook, Stephen Town, Bruce Thompson and Steve Hiller have shown their loyalty by contributing papers in all the LAC proceedings. With regard to the fourth research question the study shows that the most prolific organization from which most papers are contributed to LAC is University of Washington, USA with 32 contributions. The individual productivity ranking of organizations by equal credit method shows that there are 22 universities falling between rank 1 to 18 and University of Washington, USA tops the list with 13.92 score. Papers per contributors from Syracuse University, USA are highest (7). Six organizations have shown their loyalty to the LAC and contributed in every proceeding from 2006 to 2014 with "University of Washington, USA" tops the list.

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