

Aspects of Authorship, Coauthorship, and Productivity in *School Library Research* 1998 – 2012

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Abstract: The purpose of this study is to examine authorship and coauthorship characteristics in the approved and published articles in *School Library Research*, formerly known as *School Library Media Research*. The original paper, written to fulfill the requirements to receive the MLIS degree from the University of Southern Mississippi, has been updated to include fifteen (15) volumes spanning fifteen (15) years. The study was conducted to provide information about the scholarly communication that is taking place in a professional journal whose focus is school librarianship. It identifies major contributors to school library literature, publication patterns and communication trends that have and are currently taking place, and encourages future research. The findings support studies that report a general trend by scholars to engage in collaborative efforts that appear to increase coauthorship activity and findings support previous studies that found (1) little or no contributions by school librarians in preeminent journals in library and information science literature and (2) library science faculty among the heaviest contributors to library and information science literature. Unlike previous studies, this study indicates that female authors' contributed and coauthored more articles than their male counterparts.

Keywords: Authorship, Coauthorship, Productivity, School Libraries, School Library Research, Bibliometric Study

1. Introduction

Authorship refers to the originator or creator of an idea or written work. Glanzel (2002) describes it as "a primary bibliometric descriptor." (p.461). If more than one person is responsible for producing a written work, it has joint authorship or coauthorship. The recent increase in coauthorship, the collaboration by two or more individuals to produce a single work, has been noted by researchers in various disciplines including library and information science. Consequently, the bibliometric research method has been used to

identify characteristics of authorship, coauthorship, and their relationship to productivity.

Bibliometrics, as Liu (2003) points out, provides researchers with an objective and repeatable method to analyze scholarly communication. The focus of that communication has often been refereed, or peer-reviewed, journals. Scholarly journals, viewed as the “gold standard” by most professionals, are a respected arena researchers use to communicate their private observations. The bibliometric examinations of single authored and coauthored articles in refereed journals provide researchers with a tool to describe the relationship between collaboration and productivity.

Coauthorship, an observed pattern in the professional literature of many disciplines, represents what Cronin (2001) described as a “structural shift in scholarly communication” (p.558). Researchers, using bibliometric techniques, can effectively study this communication phenomenon by examining the characteristics of those whose works are being disseminated. Among other things, gender, geographical, and occupational biases can be identified. Coauthorship studies, using the bibliometric research method, offer insights into changing publication patterns among authors that are impacting numerous fields of study.

Collaborative patterns among authors, whose primary concern is school libraries, can be identified by examining refereed journals that concentrate on that sub-discipline of library and information science. Although author productivity and coauthorship have been addressed across the field, research articles devoted to publication patterns among authors of school library literature are difficult to find. For that reason, studies that examine the characteristics of school library authorship and coauthorship are needed. “Creation evaluations” of school library literature can (1) enhance collection development decisions, (2) identify publication patterns and communication trends, (3) establish authority and/or major contributors, and (4) suggest areas for future study (Norton, 2001, p.65).

School Library Research, formerly known as *School Library Media Research* and *School Library Media Quarterly*, is a refereed journal that is published annually by the American Association of School Libraries. Its stated purpose is “to promote and publish high quality original research” about school library media programs (n.p.). Undergoing what Callison refers to as a “rigorous review process”, authors may not submit documents that have been “submitted or accepted elsewhere” (n.p.). *SLR* has consistently been ranked as the top journal in the school library media sub-discipline. In 2004, it ranked 16th out of seventy (70) refereed research journals evaluated by deans and directors of accredited MLS degree programs in North America. It was the only online journal among the top twenty selections. *School Library Research* provides

scholars with a professional platform to communicate their ideas to likeminded individuals in their field. Therefore, it is a publication worthy of analysis.

1.1 Purpose of the Study

The purpose of this study was to examine authorship and coauthorship characteristics in the published articles in *School Library Research* from 1998 - 2012, Volume 1 - 15, respectively, to determine:

- R1. What percentage of the total authors engaged in at least one collaboration?
- R2. What percentage of the total female authors engaged in at least one collaboration?
- R3. What percentage of the practicing school librarians engaged in at least one collaboration?
- R4. What percentage of the total articles is coauthored?
- R5. What is the rate of author productivity as compared to the expected percentages set forth in Lotka's Law?

1.2 Limitations and Assumption

Limitations

- The study did not include ERIC articles.
- The findings of the study are limited to *School Library Research*.

Assumption

It is assumed that the author information in *SLR* is accurate.

2. Review of the Literature

2.1 Scholarly Communication and Bibliometrics

Scholarly communication has been examined by researchers in economics, psychology and the sciences for decades. Many of these studies have used bibliometrics to describe aspects of authorship and coauthorship that have influenced communication in their disciplines. Lotka's Law, which describes the publication frequency of authors in a field, has provided researchers with an accepted method to identify the major contributors and publication patterns in a field of study. Recently, coauthorship characteristics and author productivity have become the focal point of studies conducted to analyze professional publications. Library and information science researchers, like their counterparts in other disciplines, have applied a variety of bibliometric methods to explore and evaluate the communication features of the publications in their fields

However, from a historical perspective, the field of library and information science has not aggressively attempted to examine its communication. Olsgaard and Olsgaard (1980) noted that library and information science, whose staple commodity is the "communication and the transfer of information," (p.49) has failed to fully explore the scholarly literature produced by its professional community. That being said, two of the earliest studies that examined the characteristics of authorship among librarians were conducted in the 1960's and 1970's by Masse Bloomfield (1966) and Paula De Simone Watson (1977).

2.2 Authorship Studies in Library Science

Bloomfield used quantitative measures to examine authorship. He analyzed the citations in *Library Literature* to determine what he referred to as the writing habits of all librarians. He concluded that many of the authors were educators, administrators, and had a doctorate degree (Bloomfield, 1966; Raptis, 1992). His study was followed by Watson's 1977 study, which focused on the publication activity of academic librarians. Watson's contemporaries, O'Connor and Van Orden (1978) and Kim and Kim (1979), attempted to measure the communication among scholars in library science by surveying the "publishing policies of major library journals" and examining academic research over a twenty year period (Olsgaard and Olsgaard, 1980, p.49).

During the 1970's, libraries devoted increasingly larger percentages of their budgets to journals (Liner, 2001). Therefore, it should come as no surprise that by the end of the decade, Nicholas and Ritchie (1978) suggest that over two thirds of the "intradisciplinary communication in librarianship" took place in journals (Olsgaard & Olsgaard, 1980, p.52). Since that time, the majority of research conducted to examine scholarly communication, regardless of the field of study, has focused on the publication patterns of journals.

Olsgaard and Olsgaard's study, published in 1980, examined five major library science journals to determine publication biases based on gender, occupation, and geographic location. Cognizant of the lack of information about communication within the field, they considered journals to be the best source to investigate this phenomenon. The Olsgaard's research was replicated by Adamson and Zamora (1982) and Carol Steer (1982); however, their focus was contributors to journals that emphasized special librarianship and the *Canadian Library Journal*, respectively. Their results, with the few exceptions, mirrored those observed by the Olsgaards (Steer, 1982; Zamora & Steer, 1982; Raptis, 1992).

Bibliometric inquiries, which had previously comprised only a small percentage of the published articles in library science journals, were rapidly becoming the "modus operandi" for library science researchers in the 1990's. Atkins' 1988 quantitative analysis of library literature identified "publishing by librarians" as one of the least examined subjects in the 1970's and 1980's (Raptis, 1992, p.37). Acknowledging the need for this type of research, as Olsgaard and Olsgaard had a decade before, Raptis examined five international library and information science journals to identify the characteristics of the contributors and the documents they cited.

Both Raptis (1992) and the Olsgaards (1980) identified the gender, occupation, and geographic location of the authors who contributed to the journals they examined. Their findings indicated that the majority of the authors were male, practicing librarians, faculty or administrators. Since Raptis stated purpose was

to explore the communication in international journals, his geographic location findings differ from the Olsgaards who selected journals published in the United States for their study

2.3 Co-authorship Studies in Library Science

One aspect of authorship that the Olsgaards did not attend to was coauthorship. Coauthored articles were given the same treatment as single authored articles. Each author received a data entry as if she/he had written the article single-handedly. No calculations were included to determine the percentage of authors who coauthored. However, one of their contemporaries, Gloria S. Cline, included coauthorship in her extensive four-decade 1982 study of *College and Research Libraries*. Her findings indicated that only 9 percent of the articles were coauthored (Cline, 1982; Raptis, 1992).

Raptis, like Cline, identified and reported the percentage of articles that were coauthored. His findings were similar, but slightly higher (13.54%) than those Cline observed. By the end of the decade, Lipetz (1999) reported that coauthorship had increased in one of the most respected information science journals (*JASIST*) in each of the last five decades. His findings also indicated an increase in papers with three or more authors (Lipetz, 1999; Liu, 2003). Liu's two-year follow-up study confirms Lipetz findings and point out the possibility that the small increase noted by Raptis was the beginning of a coauthorship pattern first studied by Beaver and Rosen in 1978 - 1979 (Glanzel, 2002).

2.4 Collaboration and Productivity

The relationship between collaboration and productivity has been the focus of studies in the science fields for over twenty-five years. Library and information science researchers, armed with research that suggests the same coauthorship patterns and trends in their field, have an obligation to examine the current communication process in order to fully understand the changes that have and still are occurring. Without that knowledge, as the Olsgaards pointed out so long ago, it is impossible to estimate the value of the information being transferred.

3. Methodology

Data Source

Every article published in the online journal, *School Library Research*, from 1998 - 2012, was examined. The "Best of ERIC," which is included in some volumes, was not included in the study.

Procedure

Each article was examined and the following information was recorded on an Excel spread sheet, about each author that appeared, regardless of placement: the author's name, single or coauthored article, gender, and occupation. The gender was determined by analyzing the first name. If the first name could not be attributed to either gender, and the information preceding the body of the

article did not indicate gender of the author, the gender was ascertained by conducting an “image” search.

The author’s occupation was determined by analyzing the article, since each author’s occupation was recorded directly after his/her name. Tables were used to show the distribution of coauthors, their gender, and occupation.

Each volume was examined and the following information was recorded on an Excel spread sheet: the number, year, total number of articles, total number of coauthored articles, and the gender of the authors of each coauthored article. Tables were used to show the distribution of coauthored articles. Additional data were examined and analyzed when appropriate to the discussion of the findings.

The observed author productivity, calculated by percentages, was compared to that expected following Lotka’s Law, following the methodology and presentation used by Liu (2003, p.111).

4. Results

4.1 What percentage of the total authors engaged in at least one collaboration?

Collaboration, an aspect of authorship that has been observed across disciplines, is steadily increasing. Coauthorship patterns may impact the publication activity and citation rate in a field. As indicated in Table 1, eighty-two authors (65%) who contributed to *School Library Research* from 1998-2012 engaged in at least one collaboration. Sixty-six authors (52%) engaged in only one collaboration. Fourteen authors (11%) engaged in two collaborations. Two authors (2%) engaged in three collaborations.

Table 1. Distribution of Co-Authors

Authors per Article	Authors	Percentage (%)
1	44	35%
2	66	52%
3	14	11%
4	2	02%
Total:	126	100%

4.2 What percentage of the total female authors engaged in at least one collaboration?

Historically, the distribution of women publishing in librarianship was lower than the distribution of women in the profession (Olsgaard & Olsgaard, 1980; Raptis, 1992). Coauthorship studies suggest that collaboration, which may increase overall productivity in a field of literature, may decrease productivity

among females who are not selected to collaborate with males (McDowell & Smith, 1992; Durden & Perri, 1995; Maske, Durden, & Gaynor, 2003).

Table 2 illustrates the gender distribution of the one hundred twenty-six authors who contributed to *School Library Research* from 1998-2012. Sixty-nine female authors (67%) engaged in at least one collaboration. Fifty-six female authors (54%) engaged in one collaboration. Twelve female authors (12%) engaged in two collaborations. One female author (1%) engaged in three collaborations.

Table 2. Distribution of Co-Authors by Gender

Authors per Article	Female Authors	Percentage %	Male Authors	Percentage %
1	34	33%	10	43%
2	56	54%	10	43%
3	12	12%	2	09%
4	1	01%	1	05%
Total:	103	100%	23	100%

4.3 What percentage of the practicing school librarians engaged in at least one collaboration?

In 1966, Masse Bloomfield identified educators and administrators with doctoral degrees as the major contributors to the literature of librarianship. Studies conducted in the 1980s and 1990s listed the top two contributors as academic librarians and library science faculty (Olsgaard & Olsgaard, 1980; Raptis, 1992). A recent study, published in 2003, found academic library administrators, academic librarians, and library science faculty the most productive (Winston & Williams II, 2003). No representation was found for school librarians in any of the above studies. As indicated in Table 3, three out of seven practicing school librarians (43%) who contributed to *School Library Research* from 1998-2012 engaged in at least one collaboration. It should be noted that the original 2005 unpublished study, which examined the first five years of the journal, found that three out of the four (75%) school librarians had collaborated with one other author.

Table 3. Distribution of Co-Authors Who are Practicing School Librarians

Authors per Article	Number of School Librarians	Percentage %
1	4	57%
2	3	43%

3	0	00%
Total:	7	100%

Table 4. Distribution of Coauthored Articles

Authors per Article	Number of Articles	Percentage %
1	62	58%
2	30	28%
3	14	13%
4	1	01%
Total:	107	100%

4.4 What percentage of the total articles is coauthored?

The increase in coauthored articles has been a subject of interest for researchers in many disciplines. As mentioned previously, a steady increase in coauthored articles can also be observed in library and information science. Table 4 illustrates the distribution of coauthored articles published in *School Library Research* from 1998 - 2012. Forty-five articles (42%) were coauthored. Thirty articles (28%) had one coauthor. Fourteen articles (13%) had two coauthors. One article had three coauthors (1%).

4.5 What is the rate of author productivity as compared to the expected percentages set forth in Lotka's Law?

As indicated in Table 5, one hundred twenty-six articles were published in *School Library Research* from 1998-2012. Ninety-two authors (73%) contributed one article. Twenty-eight authors (22%) contributed two articles; five authors (4%) contributed three articles; and one author (1%) contributed four articles.

The observed percentages were compared to the expected percentages set forth in Lotka's Law (Palmquist, 1999). The results, presented in Table 5, indicate that the observed percentage of authors that contributed one and two articles is higher than that expected according to Lotka's Law for productivity in a given field. However, the percentage that contributed three and four articles is slightly lower than that expected.

Table 5. Comparison of Observed and Expected Author Productivity

Number of Articles Contributed per Author	Observed Percentage %	Expected Percentage %
1	73%	60.8%
2	22%	15.2%
3	04%	06.8%
4	01%	03.8%
5	0%	02.4%
5	0%	11.0%
Total:	100	100%

5. Conclusion

Eighty-two authors (65%) coauthored articles that were published in *School Library Research* from 1998 - 2012. This finding supports studies that report a general trend by scholars to engage in collaborative efforts that appear to increase coauthorship activity. Coauthorship percentages in library and information science literature have steadily increased since Cline's findings in 1982.

One hundred and three female authors (82%) submitted articles that were published in Volume 1 - 15 in *SLR*. Sixty-nine (67%) female authors coauthored articles. Thirty-one (69%) of the coauthored articles had no male author. Irregardless of the gender configuration, one female contributed to 43 coauthored articles (96%). Only 2 (4%) coauthored articles did not have a female author. Unlike previous studies, whose findings indicate that female authors' contributions do not match their distribution in their profession and that they have fewer opportunities to coauthor than males, this study indicates that female authors contributed and coauthored more articles in *SLR* between 1998-2012 than their male counterparts (Olsgaard & Olsgaard, 1980; McDowell & Smith, 1992; Raptis, 1992; Durden & Perri, 1995).

In the original 2005 unpublished study, only four male authors (40%) out of a total of ten male authors coauthored articles. Although that figure has increased to 13 (57%) out of a total of 23 male authors; the percentage of female authors who engaged in collaborations is ten percentage points higher than the number of male authors who engaged in collaborations.

Seven practicing school librarians contributed to *School Library Research* from 1998 - 2012. Only three (43%) engaged in at least one collaboration, which represented only 4 percent of the total coauthors in a highly regarded journal whose focus is school librarianship. The majority of the authors (96%) who coauthored articles were library science faculty and the faculty from other disciplines. These findings support previous studies that found (1) no contributions by school librarians in preeminent journals in library and information science and (2) library science faculty among the heaviest contributors to library and information science literature (Olsgaard & Olsgaard, 1980; Raptis, 1992; Winston & Williams, II, 2003). The contributions of library science and other faculty may reflect the emphasis many institutions place on publishing, tying it to tenure and promotion. Hence, the familiar saying, "publish or perish".

Forty-five articles (42%) were coauthored in Volumes 1 - 15 in *School Library Research* from 1998 - 2012. Thirty articles (28%) had one coauthor. Fourteen articles (13%) had two coauthors. One article (1%) had three coauthors. No article had more than three coauthors. This study suggests that authors who contribute to *SLR* do not engage in what Cronin (2001) coined "hyperauthorship", an increasing propensity for large groups of authors to produce papers (p.558). The majority of the articles (58%) are single-authored; therefore, it does not support the tendency some studies have observed for authors to produce more than one document.

Ninety-two authors (73%) had one article published in *School Library Research* from 1998-2012. Twenty-eight authors (22%) had two articles, five authors (4%) had three articles and one authors (1%) had four published. The expected percentages calculated by Lotka are 60.8 percent, 15.2 percent, and 6.8 percent, respectively. The higher observed percentages for authors who had one or two articles accepted may reflect *SLR*'s strict review process, which could hinder higher publication rates. Only five authors had three articles published and no authors had more than four articles published over a fifteen-year period. One possible cause is that the submitted research topics may not reflect those that the editor and/or editorial board view as appropriate and best-suited for the journal.

6. Future Studies

This study examined aspects of authorship, co-authorship, and productivity in *School Library Research*, one journal devoted to the sub-discipline of school librarianship. While it described a number of characteristics that may shed light on the scholarly communication process in *SLR*, its findings are limited. Future studies may wish to examine several school library journals in order to identify authorship and publication patterns. Collectively, they may provide information that is representative of the sub discipline and enhance the body of knowledge that currently exists about the field of library and information science.

Studies reporting increased collaboration, co-authorship, and productivity have prompted researchers to suggest that co-authorship, the result of collaboration, enhances productivity. Although Glanzel's (2002) findings did not support a relationship between collaboration and productivity, they did confirm previous reports of an increased citation rate for coauthored articles. It is recommended that citation and co-citation analyses be conducted to identify co-authorship trends and patterns in school library literature. Bibliometric examinations can also be applied to the content of articles to determine the range of topics that have and are currently being addressed in school librarianship.

6.1 Practitioners with A Purpose

Only 7 out of 126 articles (< .06%) in *School Library Research* were authored or coauthored by school librarians during the 15 year period examined. School librarians must become practitioners with a purpose; practitioners who are guided by research, both their own and others, to solve the problems that arise on a daily basis. Practitioners and researchers, together, can raise the visibility of school librarianship and enhance the quality of programs designed to serve the needs of 21st century learners.

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