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Author(s): Craig S. Finlay, Cassidy R. Sugimoto, Daifeng Li, and Terrell G. Russell

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LIS DISSERTATION TITLES AND ABSTRACTS (1930–2009):  
WHERE HAVE ALL THE LIBRAR\* GONE?<sup>1</sup>

Craig S. Finlay,<sup>2</sup> Cassidy R. Sugimoto,<sup>3</sup> Daifeng Li,<sup>4</sup>  
and Terrell G. Russell<sup>5</sup>

This article examines the topicality of Library and Information Science (LIS) dissertations written between 1930 and 2009 at schools with American Library Association (ALA)-accredited university programs in North America. Dissertation titles and abstracts were examined for the presence of library-related keywords drawn from the core curricula of ALA-accredited schools, and trend data were created to describe the evolution of LIS doctoral research over the past eighty years. The results show that the percentage of dissertations found to contain no instance of any of the selected library keywords has steadily risen since 1980. Simultaneously, the percentage of dissertations found to contain instances of keywords in both the title and abstract has steadily declined. The results provide general empirical support for long-held anecdotal assertions that libraries are no longer the primary research focus at the doctoral level in LIS.

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  2. School of Library and Information Science, Indiana University, Bloomington; E-mail craig-finlay@gmail.com.
  3. School of Library and Information Science, Indiana University, Bloomington; Telephone 821-856-2323; E-mail sugimoto@indiana.edu.
  4. School of Information Management and Engineering, Shanghai University of Finance and Economics, Shanghai; E-mail ldf3824@yahoo.com.cn.
  5. School of Information and Library Science, University of North Carolina at Chapel Hill; E-mail Terrell@terrellrussell.com.

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## Introduction

In 1982, Lloyd J. Houser, concluding a yearlong series of columns on library and information science (LIS) dissertations for the journal *Library Research*, finished with this call for further research: "If the field is serious about renaming itself either 'information science' or 'library and information science,' then an analysis of the dissertations in this new field should provide us with substantial information about the new research front in the field. Since it is logically impossible for a field to rename itself, unless it has invented theory to describe its range of problems and has begun serious testing of that theory, it must be presumed that since research in a field begins at the Ph.D. level, these dissertations map the new territory" [1, p. 197].

Houser, in this and a companion piece [2], was not presuming that dissertations collectively represent all research in the field; he admitted that dissertations were idiosyncratic, disjointed, less scholarly than journal articles, and contributed little to the literature. Rather, Houser hoped that a study of all dissertations might aid in defining the discipline of LIS by charting the evolution of research interests. While the authors of journal articles need not always be scholars in the field serviced by the publishing journal, a dissertation author is necessarily firmly located within the same field as the department granting the dissertation. Thus, while journal articles may represent a domain, dissertations may be considered indicative of a discipline [3]. However, nearly three decades after Houser's call for an in-depth examination of dissertations, that body of literature remains a largely uncharted territory with only a few accounts recounting sporadic explorations. Dissertation studies, still an emergent tool for LIS analysis, can yet provide us with an expanded view of a field that has been viewed primarily through the lens of journal articles. Given the large corpus of LIS literature devoted to understanding the disciplinary identity of the field, an open-ended, extensive study of dissertations is necessary if we aim to move closer to Houser's goal of moving "away from intellectual confusion and towards the consensus which any field requires for its identity and status" [1, p. 195].

The majority of studies seeking to understand the topics of research popular among LIS scholars have consisted of co-citation and content analyses focusing on journal articles. The majority of these studies share some characteristics: (1) highly cited journals and high-producing authors tend to feature prominently, and (2) most analyses are synchronic, rather than diachronic, focusing on single time periods. Furthermore, these analyses often employ different research methods, making it difficult to build coherent long-term trend data. What trend data there are must come from infrequent replication studies. Thus, there is a real need for a diachronic examination of LIS that does not focus primarily on high-producing au-

thors and highly cited journals, a technique akin to studying the ten largest trees in a forest and declaring that those trees are, in fact, the forest itself. Dissertations offer unique insight into the field by revealing the foci of research and instruction within the institutions that produce LIS scholars. Recently, MPACT, an academic genealogy project at Indiana University and the University of North Carolina, completed the collection of title and abstract information for over 99 percent of all dissertations written at institutions with North American ALA-accredited programs since the first dissertation was granted by the University of Chicago in 1930. This enables us to address a number of questions regarding the evolution of LIS through the disciplinary lens of dissertations and in a more comprehensive fashion than any study to date.

As pointed out in an article by Cassidy Sugimoto and colleagues [3], it is during doctoral programs that LIS researchers and faculty are acculturated into LIS, learning the theories and research methods that they will use in future research or, in the case of those who become faculty members, teach to MLS and MIS students in the classroom. Renee Franklin and Paul Jaeger argue that dissertations are a “remarkably efficient” window into both the research interests of new scholars and the direction of faculty encouragement and, as such, provide a truly unique opportunity for examining the evolution of research in a field [4, p. 187]. William Newberry, remarking on J. Periam Danton’s shock that “cataloging, classification, and subject headings” accounted for only 7 percent of topics surveyed, writes, “the safest thing to conclude from this is that library science dissertations should reflect the emphases of contemporary interests of the library field’s leaders as well as advanced students” [5, p. 211]. Whereas the content of a journal article is indicative of a researcher’s current interests, and may be one of many journal articles that the researcher has produced, the vast majority of researchers traditionally write only one dissertation. This one-to-one ratio presents a unique opportunity to diachronically examine the past and continuing evolution of LIS.

Recent scholarship has begun to take advantage of this opportunity. Sugimoto and colleagues found that over the history of LIS dissertations, the presence of all variants of the word “library” (library, libraries, librarian, librarianship, etc.) as a dominant keyword has become less frequent. However, that study was limited to the top 100 loading keywords and was not designed specifically to understand changing emphases on libraries and librarianship over time [3]. Further research, focusing specifically on this topic, is warranted and may provide a new and important lens on the evolving disciplinary identity of LIS. This study seeks to address this gap by conducting a keyword analysis from the titles and abstracts of all LIS dissertations written at schools with ALA-accredited LIS programs in North America from 1930–2009, with a focus on library-related keywords. The

assumption underlying this research is that titles and abstracts provide a broad understanding of the documents that they represent and, through analysis of certain keywords, an understanding of trends can be discerned. Therefore, this article will evaluate the presence or absence of selected library-related keywords diachronically in order to depict emergent and declining themes in doctoral-level research and, in so doing, contribute to the understanding of the field's identity. In addition to understanding the general trends, it is also the goal of this article to examine relationships between these trends and the school at which the dissertation was written. Therefore, the following null hypotheses were established for this study:

**H1.** There is no relationship between the presence of the keywords in both the title and the abstract and the year in which the dissertation was written.

**H2.** There is no relationship between the presence of the keywords in both the title and the abstract and the university where the dissertation was written.

This study should be of interest to anyone involved with or connected to schools of library and information science, be they faculty, administrators, students, or practitioners. Situated as we are within a discipline, it is important that we are able to coherently define just what the boundaries of the discipline are. While most agree on calling the field "library and information science," there is little consensus on just how much of the field those twin pillars respectively support. Frederik Aström [6] conducted a co-citation analysis of LIS journals to better understand if library science (LS) and information science (IS) may be classified as subdisciplines of a larger field. That such analysis is still necessary in 2010 is extraordinary and speaks to the continuing confusion and disagreement on the subject that Aström surveys in his literature review. A look at the names of the schools currently training future librarians and LIS scholars further illustrates this point. There are schools of LIS, schools of information science, schools of information, schools of information embedded in or merged with other disciplines, and schools that are still altering their names in an effort to more accurately describe exactly what it is they do. Gary Olson and Jonathan Grudin provide a visualization of the history of iSchool names [7] that further illustrates this point. Given such a state of flux, a more accurate picture of how LIS has evolved will help construct a better, more accurate notion of our discipline. As Bob Marley said, "if you know your history, then you would know where you're coming from."<sup>6</sup>

6. Bob Marley and Noel Williams, "Buffalo Soldier," April 1980, *Confrontation*, vinyl record, Island Records.

## Literature Review

For a comprehensive literature review of quantitative analyses of LIS journal articles, see Sugimoto et al. [3], in which a diachronic study examined the dominant topics in LIS dissertations from 1930–2009. That study identified three commonalities in the majority of quantitative analyses of LIS: (a) they were synchronic, rather than diachronic; (b) they were primarily focused on journal articles; and (c) they focused on either interjournal/author relationships or on co-occurrence of keywords rather than content analysis [3]. This article aims to expand upon this earlier body of work by examining a neglected genre—the dissertation—and doing so diachronically, since such an approach will provide better and more complete trend data replication studies, which are infrequent.

Quantitative analyses of dissertations are likewise infrequent and, as such, do not collectively comprise a large body of literature. Some large-scale studies sought to understand the field as a whole. For example, George Bobinski undertook a study examining admission criteria, financial aid, and types and number of degrees awarded, in addition to types of dissertation research (survey, historical, theoretical, etc.) [8]. George Whitbeck sought to supplement this study with a thirty-one item questionnaire sent out to all North American doctoral LIS programs [9–10]. In 2008, Sugimoto, Terrell Russell, and Sheryl Grant completed a full historical survey of doctoral degrees granted since 1930 [11]. For a description quantifying academic genealogy from that survey, see Russell and Sugimoto [12]. A few citation analyses of dissertations have also been conducted [13–16].

Danton conducted the first major study of LIS dissertations, examining all 129 dissertations granted from 1930 to the late 1950s, utilizing a title-only approach [17]. While he did not follow a diachronic approach, Danton found that background, organization and administration, resources, reader services, technical processes and documentation, and personnel and education to be more or less sufficient in categorizing the existing body of literature. Tim LaBorie and Michael Halperin [18], in their analysis of dissertation citation patterns, used and updated the classification scheme of Tefko Saracevic and Lawrence Perk [19] to categorize LIS dissertations written between 1969 and 1972. They held that the vast majority of LIS dissertations could reasonably be placed into the categories of library administration, library service, library technical processes, material selection for libraries, automation of library processes, and historical studies of libraries.

Newberry conducted the first large-scale diachronic study, classifying all available dissertations into four categories: (a) functional topics (including classification, access, and information exchange); (b) literature of the profession (librarianship); (c) literature of the institution (the library); and

(d) literature of associated fields, including publishing and literature [5, p. 200]. Newberry examined 667 dissertations, utilizing Gail Schlacter and Dennis Thomison's *Library Science Dissertations, 1925–1972* [20]. Schlacter and Thomison later updated their reference source through the subsequent decade [21]. Newberry notes that “informational topics fell off dramatically in the late 1950s but had of late become the most frequently selected” and that “informational topics rose sharply in number after the end of 1950s and are still on the increase if the trend from 1960–75 is still in vogue” [5, p. 203]. The increase in informational topics to over 46 percent came at the expense of subjects on publishing, literature, and other library-related topics.

Thomas Slavens studied dissertations accepted by the University of Michigan between 1954 and 1977, relying on responses to questionnaires from the authors themselves [22]. The survey touched on the time required to complete the dissertation, value of the dissertation, development of research abilities, contact with the dissertation committee, motivations of choice of topics, publications resulting from the dissertations, and so on. One interesting finding from his study is that 93 percent of respondents replied that they felt no pressure from their school or doctoral committee in choosing the topic of their dissertation. Furthermore, 58 percent cited “prior research” as the main reason for choosing a topic, while 16 percent responded that “mutual interest with chairpersons” [22, p. 237] was the primary motivating factor in topic selection. This suggests that students chose topics as a natural outgrowth of their own theoretical research interests, corroborating Houser's assertion that the dissertation is a good barometer for the current state of the discipline. Franklin and Jaeger, in investigating the thirty-five dissertations written by African American women in LIS from 1993–2003, examined each title and abstract for topicality [4]. While their study is not diachronic, the authors corroborate the theoretical basis for such a study, writing that the “dissertation analysis has not been widely used as a method of research; however, it provides a very efficient method for understanding what new scholars in the field are studying and being encouraged to study by current faculty” [5, 190]. Thus, a diachronic study would reveal the current interests of each crop of new scholars at a formative point in their careers, roughly indicating the popularity of those subjects over time within doctoral-level LIS schools and potential trajectories for research within the field.

Of the extant quantitative studies of LIS, this article builds most upon Sugimoto et al.'s [3] work, which examined trending subjects in LIS dissertations from 1930–2009 and found that over that time “librar\*” (any variant of the word) as a keyword has seen a decline in popularity. Supplanted by a variety of keywords, the findings indicated a shift away from the institution of the library as a strict focus of study in LIS dissertations.

However, the analysis was limited to the highest-loading keywords and did not examine a range of other words possibly associated with libraries or librarianship.

Nomenclature is important in defining a discipline. The rise of the iSchool movement represents a change in which the term “library” is dropped from the school or department name. This is chronicled in Olson and Grudin’s analysis of the history of the iSchool, which looks specifically at the impact of the iSchool movement on human computer interaction. Of note is their commentary on the closing of fifteen library science programs in the 1970s and 1980s: “They were producing librarians but failed to meet the academic standards of leading research universities. In addition, librarianship was overshadowed by the expanding, highly paid information technology profession. . . . It was in this period that many schools added the term ‘information’ to their name, most often by shifting ‘library’ to ‘library and information’” [7, p. 15]. Indicative of the concerns over disciplinary identity is the fact that there is still little uniformity in name. Blaise Cronin commented on this, writing that while schools of law, medicine, or business have “denotatively powerful” names, many LIS programs “fret endlessly about the pros and cons of being called a library school in a way that their peers do not” [23, p. 363]. Chaim Zins’s survey of fifty-seven scholars from sixteen countries for definitions of various components of information science is a fascinating window in a field unsure if its own precise definition [24–25]. It is in this context that this study may be useful, with Houser’s hope in mind that the dissertation, with its unique one-to-one ratio of author and research, may provide an accurate measure of contemporary research trends and, thus, when viewed diachronically, a crucial map in a woefully incomplete atlas.

## Methods

### *Data Collection*

All data for this analysis was collected through MPACT, an academic genealogy project that seeks to illustrate academic lineage through intellectual history (advisor, committee, and advisee relationships), schools, disciplines, and citation networks. Conducted jointly at Indiana University and the University of North Carolina, the MPACT project contains nearly complete information for all LIS dissertations written at institutions with ALA-accredited master’s degree programs within North America from 1930–2009. The database is dynamic, as more data is added as it becomes available. MPACT researchers manually collected the title and abstract for each dissertation, utilizing ProQuest’s Dissertations and Theses database or interlibrary loan. On rare occasions, the author of a dissertation was



located and contacted directly. For more on the database and analyses of collected data, see previous MPACT publications [3, 11–12; 26].

For dissertations that were found not to contain an abstract, “N/A” was entered into the database. This is far more common for dissertations written prior to 1980. Of the 2,210 dissertations that make up the primary data set (1980–2009) for this article, we were able to collect abstract information from 2,173 (98.3 percent). Of the remaining thirty-seven, twenty dissertations could not be located, and, in seventeen cases, the author chose not to write an abstract.

### *Data Analysis*

Data from MPACT was downloaded and organized by year and school and analyzed for any instance of the following keywords in the title or abstract: *librar\**, *catalog\**, *circulat\**, *collection develop\**, *collection manag\**, *school media*, and *reference*. Through this method of analysis, the aim of this article is primarily historical and descriptive: to ascertain what percentage of dissertations contain an instance of any of these keywords in the title or abstract and if that percentage has remained constant over time. The working assumption of this study is that as these keywords represent the core curriculum of the master’s in library science, they may give a good indication of whether, as a whole, doctoral research is trending away from an explicit focus on libraries/librarianship as defined by the course work of the MLS curriculum. We do not presuppose that this list of keywords is exhaustively descriptive in encompassing all aspects of librarianship; however, it can provide an indicative barometer.

The results were compiled in a spreadsheet with each dissertation described by five column entries: an individual identification number, the number of instances of the keywords in the title, the number of instances of the keywords in the abstract, the school name, and the year of the dissertation. The data were then analyzed for the presence of a positive integer in the title and abstract columns. Thus, multiple instances of keywords in the title or abstract were counted the same as single instances. This study treated the occurrence of the keywords as an absolute value and focused on whether or not the words appear at all, rather than how often. As a result, the primary area of interest is the percentage of LIS dissertations that do not mention any variant of the keywords. After entering the title and abstract for each dissertation in the spreadsheet, a dependent variable was created by examining the title and abstract for the existence of the keywords. Because abstracts only came into widespread use after 1980, the 2,335 dissertations granted since that date were chosen as the primary area of inquiry. However, some limited inquiry into pre-1980 dissertations was possible, the results of which are displayed in table 1. Individual instances of keywords were not counted. Thus, the mean

TABLE 1  
 NUMBER AND PERCENTAGES OF DISSERTATIONS WITH  
 AT LEAST ONE KEYWORD IN THE TITLE

PERIOD	TOTAL DISSERTATIONS WRITTEN	INSTANCES WHERE KEYWORD WAS NOTED	
		Count	%
1930–1939	23	13	56.6
1940–1949	43	26	60.4
1950–1959	66	29	44.1
1960–1969	169	98	57.9
1970–1979	624	382	61.2
1980–1989	714	414	57.9
1990–1999	746	269	36.0
2000–2009	845	182	21.5
Total		1,413	43.3

value of this variable shows the percentage of dissertations where the keyword appears in both the title and abstract. Initially, we planned to examine each word individually to determine trends. The database was examined and coded for the presence of each keyword, resulting in seven separate data sets. However, instances of individual keywords aside from “librar\*” were determined to be too low to provide trend data for each keyword. Therefore, the data sets were conglomerated, and LIS dissertations were examined for any instances of any keyword in the title and abstract. Data were examined by institution and year. While we possessed information for dissertations dating back to 1930, the infrequency of abstracts prior to 1980 made it difficult to conduct a statistical analysis for those years.

### *Limitations*

Loet Leydesdorff argues that co-occurrence and co-absence analyses alone are insufficient, as words are context-dependent units of meaning, and a sentence is the smallest possible single unit of meaning that may stand alone [27]. He cited the change in frequency of interrelationships of words as reasons why, while word analysis may prove useful at the level of individual articles, “the codification of meaning identifiable in one text breaks down if one generalizes among more texts, even within this narrowly defined subject area” [27, p. 425]. With this in mind, we have attempted to tailor this article to avoid spurious leaps of logic as to the subjects of the dissertations. The list of keywords should not be considered the final word on the subject but, rather, an attempt to draw up a core list of words

commonly associated with libraries. While not a 100 percent accurate mapping of “library-ness” (indeed, such a feat of accuracy may be impossible), we believe our study provides a reasonable barometer.

## Results

The data are based on 3,230 dissertations written from 1930 through 2009 at all institutions with ALA-accredited programs in North America. A title was located for each of these dissertations. However, abstract information was missing for many dissertations, particularly for those written before 1980. In many cases, an abstract was not written. In some cases, we were unable to examine the dissertation and could not determine whether there was an abstract. Sugimoto et al. [3] determined that fewer than 20 percent of dissertations written between 1930 and 1969 contained abstracts, and for the 1970s the total was fewer than 35 percent. In 1980, that number jumped above 90 percent, to 99 percent by 1999, and 99.7 percent starting in 2000. Of the 2,335 LIS dissertations written between 1980 and 2009, MPACT was unable to locate fifteen dissertations—a 99.4 percent success rate. Due to the infrequency of abstracts prior to 1980, the results are split into three sections. The first section examines the result of the keyword analysis based only on titles from 1930–2009. The second section examines the results based on both titles and abstracts from 1980–2009, with a focus on the element of time. The third section examines the results from titles and abstracts (1980–2009), with a focus on schools.

### *1930–2009: Titles*

Results show a sharp decline in the percentage of dissertations with at least one instance of any of the selected keywords in the title starting in the 1990s, with a decline of more than twenty points between 1980 and 1999 and a decline of fifteen points since 2000 (see fig. 1 and table 1).

Dissertations were examined for instances of any keyword in both title and abstract, title but not abstract, abstract but not title, and neither abstract nor title. From 1980–2009, only thirty dissertations out of 2,335 contained the keyword in the title but not the abstract, and this precluded the use of this measurement in our subsequent analysis. The results of our investigation reveal a sharp decline in the percentage of dissertations with the keywords in both the title and abstract beginning in the 1990s and continuing into the 2000s (table 2).

The percentage of dissertations with keyword instances in both title and abstract displays a sharp decline beginning in the mid-1990s. Initially, the majority of dissertations fell into this category and remained so through

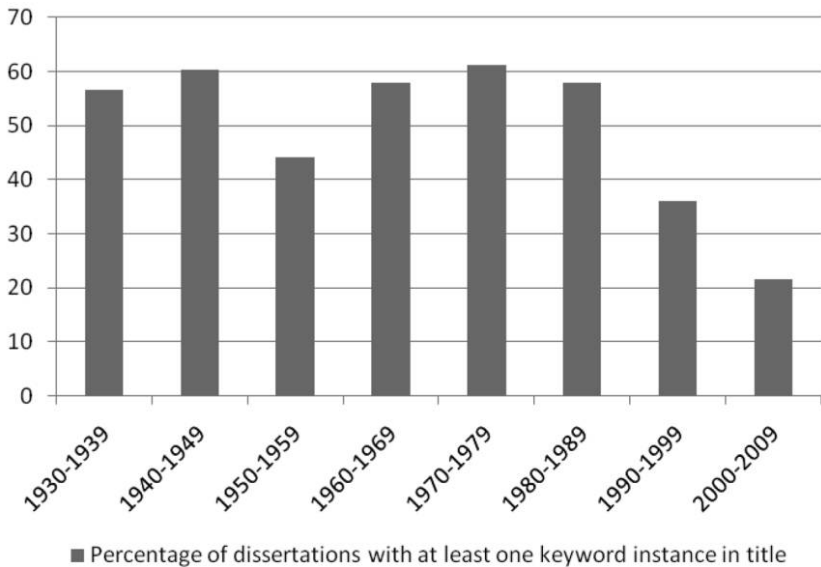


FIG. 1.—Illustrated decrease in frequency occurrence of library keywords in dissertation titles, 1930–2009.

the 1980s. However, after 1990, that percentage dipped below 40 percent; after 1995, it never again topped 30 percent. The lowest yet recorded was 13.3 percent, which occurred in 2009. Conversely, the percentage of dissertations with no observed instances of any keyword in either the title or the abstract steadily rose between 1980 and 2005 before leveling off at around 60 percent. As a result, the totals for 1980 and 2009 are roughly reversed (table 3). Since, as noted above, the percentage of dissertations with keyword instances in the abstract but not in the title holds relatively steady, a direct comparison between the other two groupings is instructive (table 3). The results from table 3 are further depicted in figure 2.

Chi-square analysis was employed to compare the existence of library keywords by the time period during which the degree was granted. As demonstrated in table 4, the results of this comparison reveal a significant relationship between the occurrence of the keywords in both the title and abstract and the year in which the dissertation was written.

Based upon these numbers, null hypothesis 1 is rejected, and it is concluded that there is a relationship between the presence of the keywords in both the title and abstract and the year in which the dissertation was written.

TABLE 2  
PERCENTAGE INSTANCES OF LIBRARY KEYWORDS BY TIME PERIOD

PERIOD	TOTAL	LIBRARY KEYWORDS IN TITLE OR ABSTRACT		BOTH TITLE AND ABSTRACT		NEITHER	
		Count	%	Count	%	Count	%
1980–1984	385	68	17.6	225	58.4	80	20.7
1985–1989	329	64	19.4	173	52.8	88	26.7
1990–1994	353	83	23.5	156	44.1	108	30.5
1995–1999	391	88	22.5	114	29.1	188	48.0
2000–2004	426	76	17.8	93	21.8	254	59.6
2005–2009	419	74	17.6	83	19.8	256	61.0
Total		461	19.7	851	36.0	993	42.5

*1980–2009: Titles and Abstracts by School*

While overall the percentage of dissertations featuring a positive integer in both title and abstract shows a steady decrease over the past thirty years, this trend is not uniform among all schools. For instance, the average for the words appearing in both the title and the abstract was 36.9 percent, with Wisconsin (60.3 percent), USC (72.4 percent), and Indiana (61.3 percent) being well above this level. Alternatively, for all schools, the average percentage of dissertations in which no keywords appear in the title and abstract was 42.0 percent, with SUNY-Albany (89.8 percent), Syracuse (82.1 percent), Missouri (79.3 percent), Hawaii (73.0 percent), Montreal (70.0 percent), and Long Island (70.0 percent) showing much higher percentages of nonoccurrence. One of the most interesting findings is that the results from SUNY-Albany and SUNY-Buffalo are virtually opposite, with SUNY-Buffalo showing a much higher level of occurrence.

The schools were also analyzed for trend data. Due to the low numbers of dissertations granted per school each year, the fifteen highest-producing schools since 1980 were selected and compared on a basis of five-year time periods. Together, these schools have a total output of 1,677 dissertations, or 72.7 percent of the 2,305 dissertations granted during this time period.

TABLE 3  
COMPARISON OF KEYWORD INSTANCES IN DISSERTATIONS  
PUBLISHED IN 1980 AND 2009

YEAR	NO INSTANCES IN BOTH TITLE AND ABSTRACT	INSTANCES IN BOTH TITLE AND ABSTRACT
1980	14.7	64.7
2009	62.2	13.3

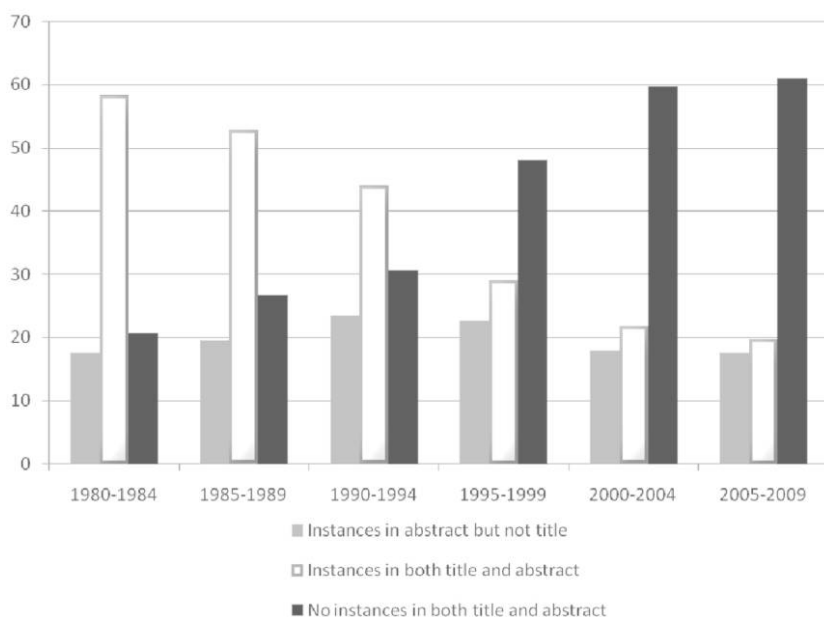


FIG. 2.—Occurrence of keywords by five-year time slice, 1980–2009

In general, each of the fifteen top-producing schools shows a decrease in the percentage of abstracts with a positive integer in both title and abstract, though to varying degrees. Data is graphically displayed in figure 3. Each school's dissertation output is represented by a bar, with the opacity of each time period showing the percentage of dissertations containing a library keyword in both the title and abstract with the darker segments showing a higher percentage and blank sections representing zero. A good example is Florida State University, which, in the first time slice at the left of the graph, has a high percentage of keyword occurrences. Evident is the gradual lightening of the time slices from left to right. Of particular

TABLE 4  
COMPARISON OF THE EXISTENCE OF KEYWORDS IN  
DISSERTATION TITLES AND ABSTRACTS BY TIME

STATISTICS	VALUE	DF	SIGNIFICANCE (Two-Sided)
Pearson $\chi^2$	511.38	66	.000
Likelihood ratio	573.19	66	.000
Valid cases	2,271		

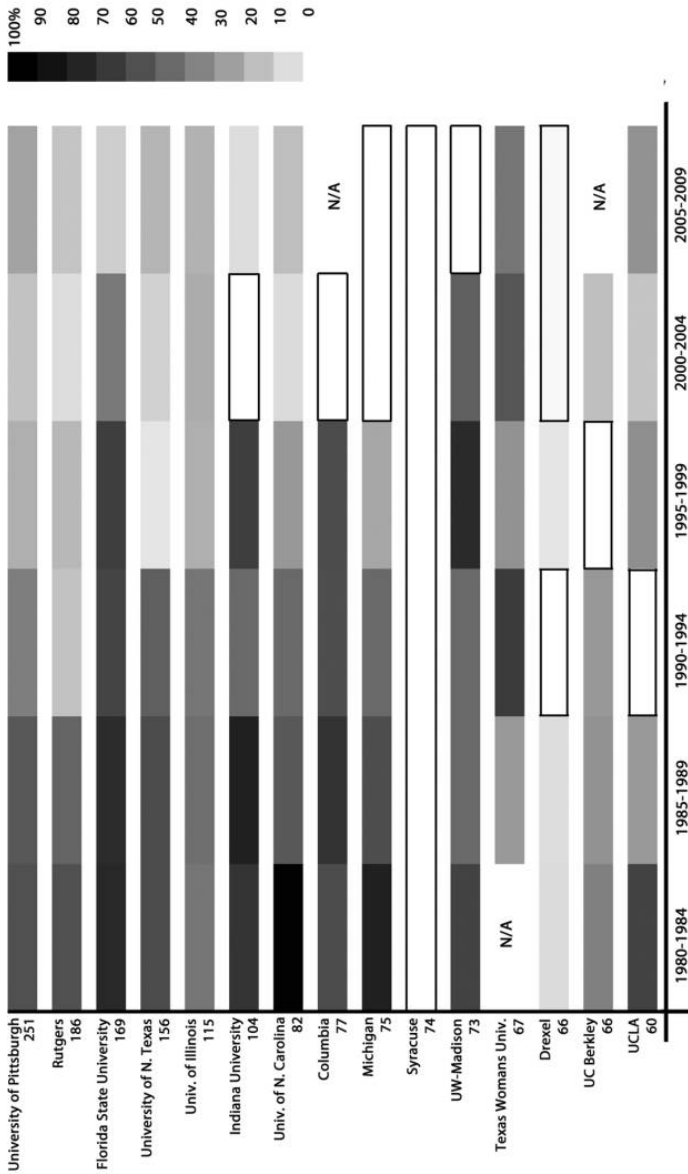


FIG. 3.—Occurrence of keywords in both title and abstract by institution in five-year time slices, 1980–2009

TABLE 5  
COMPARISON OF THE EXISTENCE OF KEYWORDS IN  
DISSERTATION TITLES OR ABSTRACTS  
BY INSTITUTION

STATISTICS	VALUE	DF	SIGNIFICANCE (Two-Sided)
Pearson $\chi^2$	511.38	66	.000
Likelihood ratio	573.20	66	.000
Valid cases	2,305		

interest is Syracuse, which has produced only one thesis in the past thirty years (2003) that contains a library keyword in both the title and the abstract. Chi-square analysis comparing the existence of library keywords and the university at which the degree was granted were also significant (see table 5). As a result of this analysis, null hypothesis 2 is rejected, and it is concluded that there is a significant difference between the presence of the keywords in both the title and abstract and the university from which the dissertation was written.

## Discussion

This work has provided empirical evidence for something that has been anecdotally acknowledged in the field for years: the lessening focus in LIS dissertations on topics commonly associated with librarianship (codified through the curriculum of ALA-accredited schools). Additionally, it supports the assertion that this focus varies significantly between schools—with some schools demonstrating a more explicit connection to library-related topics than other schools. This may reflect advances and associations with the iSchool movement, although, as many of the top producers of doctoral dissertations are at least nominally iSchools, this difference is difficult to ascertain. Regardless, this study and others examining the topical evolution of the field are particularly necessary when reflecting on issues in LIS education.

The dominant issue examined in this work is the decreasing prominence of library-related words. The selected words for this study were chosen explicitly to reflect the titles and words used in core courses at ALA-accredited schools, such as cataloging, reference, collection management/development, as well as general words such as “library” and “school media.” The use of such a blunt instrument was meant as a conservative estimate—one that would allow an overview of trends in the field.



As demonstrated, these words are quickly fading from the records of doctoral output.

Multiple reasons could be given for this trend. In the most skeptical view, one could assert that those receiving the most advanced research training in the field are no longer studying topics that are relevant to the practical field and, in the most extreme view, that the MLS and the PhD no longer represent a single, unified field but, rather, two disparate disciplines. Those arguing for this viewpoint may consider the marriage of these two programs merely a historical relic bound by contemporary financial necessity. A more optimistic interpretation could be that the keywords chosen are themselves antiquated, and dissertations are charting new territory, pushing the boundaries of both research and practice. A third interpretation could be that, while the dissertations may not be immediately applied work, the work could be utilized for application.

These various interpretations have critical implications for the field, particularly as the education of future practitioners is largely in the hands of those trained as doctoral students in the field. If the future faculty members of MLS programs do not have a connection to practice, how might that affect the quality of education received? If the core curriculum is not aligned with the most cutting-edge research, how might that impact the future of the practice? If we lack a connection between education, practice, and research, how can we consider ourselves to be a unified field?

### Conclusion and Future Work

This article has provided an initial exploration of the presence of certain keywords in doctoral dissertations in order to begin to set a foundation for answering the questions posed in the discussion. Future work needs to be done in order to more fully examine the content of LIS dissertations and the relationship between the content displayed here and advances in education, practice, and research. Aström's findings indicated that LS and IS function as distinct entities within the larger field of LIS [6]. A duplicate study examining this data set for the presence of information science keywords will serve as a requisite companion. Taken in tandem, this information could then be examined in the contexts of geography (institution) and mentorships (dissertation advisors and committee members) to more precisely map the evolution of our discipline.

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