Brecha entre investigación y práctica bibliotecológica. Cómo reducir la distancia

The gap between research and library practice. How to reduce the distance

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VOL. 1

Coordinadora
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Ilustración de cubierta:
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Encouraging Interdisciplinarity: The Impact of Assignment Requirements on Students' Use of Interdisciplinary Sources in an LIS Research Methods Course

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Interdisciplinary scholarship has been recognized as that which "[…] draws upon the theories, methods and paradigms of more than one discipline to solve a particular problem that is too large or complex to be addressed by a single discipline […]" (Meyer 2014, 323). When the topic of interdisciplinary research in library and information science (LIS) arises, it is usually accompanied by the suggestion that LIS should engage in more interdisciplinary research, especially as a way to prepare to tackle the problems the LIS community faces, which cannot be solved with the knowledge produced by a single discipline (McNicol 2003, 23). It can be argued that LIS has become more interdisciplinary in its research over the last twenty years. Historical studies of the use of sources and literature outside of library science indicate a lack of use of interdisciplinary sources (Gatten 1991, 579). But subsequent research and reviews of LIS research have indicated a change in the form of upticks in the use of sources outside of the LIS literature (Chang and Huang 2012; Herring 1999, 361).

Beyond interdisciplinary research itself, the question of reliance on interdisciplinary sources of information to support LIS research has also arisen. In a recent article, Dali and McNiff suggested that librarians are reluctant "[…] to build interdisciplinary knowledge into professional practices […]" (Dali and McNiff 2019, 574). And despite research that indicates librarians do source and cite outside of the LIS literature (Chang and Huang 2012, 27; Dali and McNiff 2019, 586; Herring 1991, 362), research also shows repeated reliance on the same sources, especially sources within LIS (Dali and McNiff 2019, 586; Gatten 1991, 579). These issues inform the main questions driving this research: Is the reliance on majority LIS sources related to how librarians are taught to conduct research in their LIS programs? Are students who complete research proposals showing a similar tendency to rely primarily on the same LIS resources within their work? And what impact would the introduction of required use of interdisciplinary sources have on students' choice of sources overall? This study will explore these questions in an effort to define the main issues related to interdisciplinarity in its relationship to LIS research and practice. This will allow LIS educators to appraise the exposure of LIS students to a broad body of research beyond that of the field. This study seeks to illustrate the need for LIS professionals to engage with scholarly literature/materials beyond those published in the field in order to enrich research and practice in LIS.

Literature Review. Interdisciplinary Research

When viewed as the number of cited sources from outside one's own discipline, interdisciplinary research has steadily been on the rise in both the natural and social sciences (Van Noorden 2015, 306). Beyond interdisciplinary citing of sources, research also indicates that even use of the word interdisciplinary has grown in many fields (Van Noorden 2015, 306). This increase in interdisciplinary research may be attributed to a number of factors, including the idea that it will lead to the discovery of solutions to society's

great problems (Brown 2018; Danermark 2019, 368; Yegros-Yegros, Rafols, and D'Este 2015, 1), finding new ways to understand research questions (Brown 2018; Danermark 2019, 368), or new approaches to research questions developed from the integration of techniques from different disciplines (Brown 2018; Yegros-Yegros, Rafols, and D'Este 2015, 3). Additionally, engaging in interdisciplinary research is seen as a way to improve the quality of research within one's own discipline (Lopatovska and Ransom 2016, 19).

While the value of interdisciplinary research has not been lost on the field of LIS, efforts may still be needed to fully realize the benefits. Research indicates that some of the interdisciplinarity seen in LIS research is found in the use of theories and models from other fields (Luo and McKinney 2015, 128). More recent research indicates that for some topics, LIS research shows increased interdisciplinarity through the use of scholarship from a wide variety of fields (Dali and McNiff 2019, 586). Preparing students in LIS programs for work in a field that is ever more interdisciplinary is important to the development of the field and student's future professional development. This process takes multiple approaches in the LIS curriculum. Students need to be prepared to serve as contact to researchers who are engaging in interdisciplinary research, but also to be able to conduct research themselves. To this last point, many programs accredited by the American Library Association (ALA) in North America require or offer introductory research methods courses as part of their curriculum and can be seen as places where students start exploring the topics in their field according to their interests.

RESEARCH METHODS COURSES IN LIS

Research methods courses are common in LIS programs; however, the courses tend to be introductions to research with very few programs offering advanced courses in research methods (Stephenson 1990, 55; Park 2003, 20). For those introductory courses, past research indicated that the content was inconsistent

and favored quantitative methods (Park 2003, 20), despite re-
search indicating that students do not have experience with
research or statistics and that these topics provoke anxiety in
them (Dilevko 2000, 307; Matusiak and Bright 2020) It is most
often the case that research courses help prepare LIS students to
understand research, plan for research, and become research con-
sumers, rather than preparing them to create and publish their
own research (Alemanne and Mandel 2018, 36; Powell, Baker,
and Mika 2002, 61; Matusiak and Bright 2020). Luo indicates that
in order for students to make better use of the knowledge they
gain in research methods courses, the courses need to be more
practical in nature, both in terms of providing hands-on practi-
ce and more focus on applied research techniques that they can
incorporate into their work as practitioners in LIS (Luo 2017, 59).
Mandel echoes Luo's suggestions and offers the "unClassroom"
approach to teaching research methods as a way to "spark stu-
dents' interest in research, help them see the relevance and im-
portance of research to their future careers, and prepare them to
conduct and publish research once they are working members of
the profession" (Mandel 2017, 200).

TEACHING INTERDISCIPLINARITY

How are researchers prepared to conduct interdisciplinary re-
search? Research indicates that interdisciplinary research can
be encouraged. Many methods focus on researchers already in the
field, including the creation of training programs and offers of lu-
crative funding for interdisciplinary research collaborations (Ravid,
et al. 2017, 1399). But there is also recognition of the importance
of preparing future researchers, in the form of undergraduate and
graduate students (Stamp, Tan-Wilson and Silva 2015, 431). In one
case, a group of science and engineering students who completed
specially designed workshops showed positive gains in their inter-
disciplinary research skills and an increased understanding of the
importance of interdisciplinary research (Stamp, Tan-Wilson and

Silva 2015, 434-435). In the field of geography, efforts to prepare doctoral students for future interdisciplinary research were embedded within aspects of the curriculum, including through special research projects, specific degree programs, and coursework (Hedberg, *et al.* 2017, 110).

While many fields have identified interdisciplinary research as a skill for students to learn before entering the professional sphere, the literature on teaching LIS students research methods offer few indications of the importance of interdisciplinary research or whether interdisciplinarity is covered as a topic in research methods courses. A recent study that explored one LIS program's efforts to offer diversified instruction in research methods by offering 10 different research methods courses, only mentioned interdisciplinary research once, in the form of a student suggesting it as a future topic (Luo 2017, 58). Another LIS program described the preparation of students for their future professional work by having interdisciplinary researchers as instructors and sharing interdisciplinary research within a research methods seminar (Evans, *et al.* 2013, 251). These two lone studies indicate a need for further investigation of whether and how interdisciplinary research is addressed within LIS research methods courses.

This study offers a two-phase investigation into the use of interdisciplinary sources by master's students enrolled in a required introductory research methods course. This study aims to offer insight into how often and what types of interdisciplinary resources students use in the completion of a research proposal; and what impact requiring interdisciplinary resource use has on students' inclusion of other interdisciplinary resources within their work. The final sections of this paper describe the methodology and results from Phase I of the study and a description of Phase II.

METHODOLOGY

Through analysis of the research bibliographies completed by students in a required LIS research methods course, this study

examines the impact of assignment requirements on graduate students' use of interdisciplinary resources. This study is comprised of two phases. Phase I is the focus of this chapter and centers on the initial analysis of student bibliographies submitted in three prior iterations of a master's-level LIS research methods course. In these iterations of the course, there was no requirement to include sources outside of the LIS literature, nor a requirement limiting the dates of publication.

Phase II (to be completed in summer 2020) will analyze the student bibliographies submitted for the spring 2020 iteration of the course. This will capture the bibliographies after the assignment requirements were modified to include a statement requiring at least two sources from outside of the LIS literature, and materials no older than 5 years for journal articles and 10 years for monographs. The purpose of the comparison will be to explore whether a requirement for students to include a minimum of two resources from outside of LIS will encourage students to include additional interdisciplinary sources in their final research proposal.

SAMPLE IDENTIFICATION

This study employed a convenience sample of 48 papers completed by students during three consecutive semesters of a required introductory research methods course. The semesters included fall 2017, spring 2018 and summer 2018. Although the summer session was shorter than the spring and fall semesters, the assignment and course coverage were not modified. It was understood that the real differential of two weeks between summer and the regular semester was of little to no consequence in a fully online, asynchronous course format, which is the mode of instruction for all three iterations of the course.

For this course, students complete a research proposal as their final assignment. Throughout the semester, the course touches on various topics related to the completion of this project, focusing on creating various parts of a research proposal from a problem

statement to an annotated bibliography and a literature review on an LIS topic of their choice. As a final assignment, students create a research proposal, which incorporates all the parts they worked with throughout the semester.

Access to the sample was possible since one of the authors of this study was the instructor of record for this course. The faculty member filed an official protocol with the Institutional Review Board (IRB) at her institution. The board certified the work could proceed as planned as exempt from full review and that it did not infringe human subject limitations on data collection as the work was using existing data which was easy to anonymize and the students were no longer enrolled in the course, having completed and been graded well in advance of the data collection. The work produced by the students was not used in its entirety comprising only the reference page of each research proposal.

BIBLIOGRAPHY ANALYSIS

Data from each collected bibliography was entered into an Excel spreadsheet for further analysis. Each bibliography was assigned an id and group code (based on the semester of course completion) and the following information was collected: Total number of sources used, the number of unique sources, total number of LIS sources, total number of unique LIS sources, total number of non-LIS sources, and the total number of unique non-LIS sources. A separate list was created for the specific title of each source, the subject or discipline of the source, which bibliography used the source, and the source type *Ulrichsweb Global Serials Directory* was used to determine the subject-area of the journals and magazines. For books and other items not located in *Ulrichsweb,* the subject assigned to the item in the East Carolina University Library catalog was used. Items that had more than one subject listed were classified using the first subject assigned to the item. One final piece of information pulled from the bibliographies was the year of publication of each source.

PHASE I RESULTS. SAMPLE OVERVIEW

Forty-eight bibliographies were collected from the three iterations of the course. The original assignment required a minimum of five (5) sources be used in the final research proposal. Most students did limit their supporting sources for the research proposal to a number close to the suggested five sources; with the average number of sources cited being 8.7. The mode of the sample was 8, with a minimum of 3 and a maximum of 27 sources used. Slightly more than 1/3 of the bibliographies (n = 17, 35.42%) used only LIS sources, while 16.67% used only one non-LIS source, 22.92% used between two and three, 10.42% used between four and six, and 14.58% used seven or more. Only one bibliography included sources exclusively from outside the LIS literature.

SOURCES

There was a total of 425 sources included in all of the bibliographies, of which 365 (85.88%) were unique sources (different journals, books, or webpages within each bibliography). Overall, the bibliographies consisted of more LIS sources (n = 283, 66.59%) than non-LIS sources (n = 142, 33.41%). Of the 283 LIS sources, the majority (n = 235 83.04%) were unique sources; for non-LIS sources, an even higher percentage (n = 130; 91.55%) were identified as unique sources.

When looking at sources across all bibliographies and only counting each source one time (ignoring repeated usage), there were a total of 242 sources used. Of this number, 47.5% were LIS-centered, 26.0% were classified as Education, and the remaining 26.4% covered all other fields. Out of the 26.4% from all other fields, 5.3% of the resources focused on medical sciences and were mostly the product of three bibliographies that heavily used non-LIS sources. All of the journals analyzed in this study were indexed in LIS databases, suggesting that any perceived interdisciplinarity could be due to the database used and not necessarily efforts taken by the students to locate non-LIS sources.

When the sources themselves are considered, the most cited was the LIS peer reviewed journal *Knowledge Quest,* which is the official journal of the American Association of School Librarians (AASL). Fourteen of the bibliographies analyzed in this research employed at least one article originating in this source. Other popular titles included *School Libraries Worldwide, Teacher Librarian,* and *Reference and User Services Quarterly,* with additional titles and number of uses presented in *Table 1. Teacher Librarian* is the only trade journal that appeared in the list; the rest of the titles are all peer reviewed and all focus on LIS.

Another interesting preliminary finding relates to the dates of publication for the sources found in the bibliographies. In this aspect, 58.6% of the sources had publication dates from 2014 and older, with most published between 2000 and 2014. While 41.4% of the sources used were published within the most recent five years, it was surprising to see that the majority of sources were more than five years old.

Table 1. Discipline, type, and number of uses for the top nine most used sources

Journal Title	Disciplines	No. of Uses	Resource Type
Knowledge Quest	LIS; Education	14	Refereed Journal
School Libraries Worldwide	LIS	10	Refereed Journal
Teacher Librarian	LIS	9	Magazine
Reference and User Services Quarterly	LIS	8	Refereed Journal
Library and Information Science Research	LIS	7	Refereed Journal
Library Hi Tech	LIS - Computer Applications	7	Refereed Journal
Library Review	LIS	6	Refereed Journal
School Library Research (née School Library Media Research)	LIS; Education	6	Refereed Journal
The Journal of Academic Librarianship	LIS	6	Refereed Journal

CONCLUSION

These preliminary findings resonate with those of Dali and McNiff, in that students still tend to rely heavily on the LIS literature (Dali and McNiff 2019, 584). With close to half of the sources used in the creation of a research proposal on an LIS topic being LIS focused resources, 26.0% classified as Education (an LIS adjacent discipline), and only 26.4% of the resources representing all other disciplines, it is suggested that students favor the literature produced in their field and are less reliant on literature beyond LIS. Moreover, these findings present a picture in which interdisciplinarity is not represented in LIS students' work through their chosen sources for citations. The age of the cited sources is also an area that must be explored, especially due to the use of social science focused literature, which favors journal publications and where publication cycles move at a faster pace than other fields of study (Bowers 2014, 90).

In Phase II of this study, these results will be analyzed *vis à vis* those from future iterations of the course. For the first time starting in the spring of 2020 the assignments for this class were modified to include more scaffolding of research requirements such as creation of annotated bibliographies and literature reviews which is expected to directly influence the materials used for the final research proposal. Some of the new modifications include the requirement to use at least two resources from outside of the LIS literature and time limitations for publications. These time limitations will limit sources to those no older than five years for peer reviewed journals and 10 years for monographs. These requirements are expected to influence the nature and age of the materials cited by students in their research papers.

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La bibliotecología, como área que se dedica al estu-
dio del conocimiento intencionalmente registrado,
tiene dos vertientes: la profesional y la disciplinar. En
cada uno de esos territorios, el practicante y el
investigador de la bibliotecología hacen tanto una
labor loable como aportes sustanciales; sin embargo,
practicante e investigador pocas veces se observan
y complementan. Hay diversos trabajos que han
tocado el problema de la división o brecha entre
práctica e investigación en bibliotecología; aun así, la
convergencia entre ambas no se nota, por lo que
ésta sigue siendo un tema pendiente.