

An Analysis of Health and Science LIS Courses and Faculty Experience at ALA-Accredited Schools Across the United States

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Abstract

Background

The National Library of Medicine (NLM) intends to increase its outreach and engagement with ALA-accredited library schools. This report outlines the first step in that goal: an inventory of health or sciences library and information science (LIS) courses offered by each institution, and of LIS faculty members with health or science experience. Using 2018 data from the Association for Library and Information Science Education (ALISE), the project also creates an inventory of health or science certificates or joint programs offered by the ALA-accredited institutions. Lastly, this report also analyzes the ALISE 2018 demographic data relating to the racial/ethnic diversity of students attending each program. The project will be continued in the fall by the Office of Engagement and Training (OET) staff at NLM to identify a list of institutions that would be good candidates for NLM collaboration.

Methods

54 ALA-accredited institutions across the United States were analyzed during the course phase of this project. All LIS courses offered by the ALA-accredited programs were analyzed to determine if they discussed health or science topics. This data was obtained publicly from program webpages, course catalogues, and class schedules. The faculty analysis examined 48 ALA-accredited institutions to determine which of their faculty members have health or science experience. Data for this phase was obtained from faculty directories or Google searches which linked to CVs, LinkedIn profiles, and Google Scholar or ResearchGate pages. The certificate, joint program, and diversity data were obtained from a 2018 ALISE dataset and then were cleaned and analyzed for use in this project.

Results

The course analysis identified 184 courses with health or science content and 566 faculty members with health or science experience. When compared to the total offering of LIS courses and faculty members, that translates to 4% and 38% respectively. The most common topics of health sciences courses were health librarianship and health informatics. Faculty were more likely to have health experience rather than science experience and they were more likely to have three or more experiences rather than two or less experiences. As for the certificate and joint program inventories, 13 institutions offered health or science certificates, whilst nine institutions offered health or science joint programs. Seven institutions were within the ten institutions with the highest proportion of students of one racial/ethnic group for three or more racial/ethnic groups.

Conclusions

This project provides greater insight into the course offerings and faculty affiliated with the ALA-accredited programs at institutions within the United States and where there are opportunities for NLM based on NLM priorities and needs. An institution might be identified as a candidate for collaboration due to many reasons such as they have a large number of health or science faculty members, but offer few health or science courses; they have few health or sciences LIS courses or faculty; or because the institution serves racially/ethnically diverse students with few health or science opportunities, amongst other reasons. Three schools preliminarily identified as candidates

for NLM collaboration based on the findings included within this report include the University of Wisconsin-Milwaukee, Emporia State University, and the University of Southern California. Additional work will be done on the project to complete data collection and more concretely identify, through an amalgamation of the already present analyses, candidates for engagement as well as more clearly define what these collaboration opportunities would entail.

Background

The National Library of Medicine (NLM)'s Office of Engagement and Training (OET) is investigating opportunities for NLM and the Network of the National Library of Medicine (NNLM) to engage with and train LIS faculty and students. The project is multiphasic and intends to culminate with NLM or NNLM increasing its collaboration with some of the ALA-accredited LIS institutions across the United States. To determine which institutions would make good candidates for collaboration, information about their LIS program's current opportunities and engagement with health or sciences must be gathered. This project collected a majority of the data needed to begin evaluating schools for their suitability for collaboration including evaluating all 54 ALA-accredited institutions for their health or science related offerings of LIS courses. This project also included establishing an inventory of LIS faculty with health or science experience across 48 of 54 institutions. 50 of 54 institutions were analyzed for their offerings of health or science related certificates and joint programs. Finally, this project analyzed data describing the racial/ethnic diversity of students attending 50 of 54 institutions as NLM also aims to ensure that there are health or science LIS opportunities for diverse students. Each of these attributes of data have been analyzed independently and preliminary findings are discussed within this report. In the Fall of 2020, OET plans to continue work on this project, completing data collection for faculty members at the six remaining institutions and then combining and analyzing the entirety of the data collected to establish a list of candidate institutions and further define what these collaborations may look like. Additionally, the data can be analyzed and used in a multitude of other ways including providing insight on how Regional Medical Libraries can better engage with library schools, better understanding how library students are prepared in school for the various roles they may take on as librarians, and ensuring that there are opportunities for diverse students to take health or biomedical science courses or to engage with faculty member mentors with health or science experience while in library school.

Methods

This project analyzed subsets of the 54 ALA-accredited library programs in the United States (see Appendix A for a location of the full listing of the institutions examined). For the purposes of this project, health was defined to include general health disciplines such as medicine, biomedical informatics, socio-behavioural health, and life sciences disciplines. Science was defined to include scientific disciplines such as biodiversity, chemistry, physics, as well as some earth science and engineering. It must be noted that neither of these definitions for "health" or "science" are exhaustive, they serve more as guidelines. For the purposes of this report, courses and faculty members containing health or science content or having health or science experience will be denoted as H/S courses and H/S faculty, respectively. Similarly, certificates and joint programs related to health or sciences will be denoted as H/S certificates or H/S joint programs, respectively.

Courses

The goal for the course phase of the project was to identify courses that discussed health sciences or general science topics. Courses from the ALA-accredited LIS program(s) from 54 ALA-accredited library schools were examined during this phase. Sources of obtaining this data included publicly available sources such as course catalogues, LIS program webpages, and class

schedules. Once a comprehensive listing of courses offered by the ALA-accredited LIS program was obtained, course titles and descriptions (when available) were read for each course. If a course contained health or science content, the course’s name and description were recorded as well as information about schedule of offerings and a link to a syllabus (when available) within an Excel spreadsheet. The courses were then assigned two separate codes from two distinct coding systems. The first coding system indicated the topic of the course (see Table 1) whereas the second indicated the amount of content within the course (see Table 2).

Topic Code	Code Description
L	Health sciences librarianship
I	Health informatics
T	Health IT
H	Other health content
D	Disasters
S	Science librarianship
O	Other science content

Table 1: Course Topic Code Descriptions

Amount Code	Code Description
1	Full course on topic of interest
2	Unit in course or partial focus on topic of interest
3	Course may discuss topic of interest

Table 2: Course Amount Code Descriptions

The purpose of these coding systems were to allow for more granular analyses of courses offered, given the wide variation in course topic and the amount of the topic discussed in the course.

Faculty

The objective of the faculty phase of the project was to develop a listing of faculty members within the ALA-accredited program(s) at each institution who have health or science experience. Faculty from 48 of the 54-ALA accredited library schools were examined during this phase of the project. Syracuse University, the University of Pittsburgh, the University of Washington, Simmons University, San Jose State University, and the University of Puerto Rico were not included due to time limitations but will be explored in the Fall. Sources of data for this phase of the project were primarily faculty directories. If these directories provided links to further information about the faculty member, those links would be used, however, if no links were provided, a Google search was performed using the faculty member’s name and institution and the first two pages of results were examined. In either case, preferred information sources included CVs, research profiles such as Google Scholar, ResearchGate, or ORCID, and/or LinkedIn profiles. Alternative sources included news articles about the faculty member receiving a recent award or promotion that may list a brief job or research history. Each of these information sources were read to determine if the faculty member had any health or science experience. Experiences could include research, courses taught, funding, awards, positions, committees, professional memberships, or largely any other relation to the fields of health or science. If a faculty member was determined to have health or science experience, their name and position title (assistant professor, adjunct professor, instructor) were recorded as well as a description of their experience(s) of interest. The faculty members were then each assigned a code based upon their collective experiences (see Table 3). The faculty coding system is more broad than the course coding system as faculty members had more diverse and complex health or science experience than is present in a course description, however, it provides a method of categorizing faculty into four distinct groups. If a faculty member had both

health and science experience, they would be given the code that pertains to their health experience. For example, if a faculty member had two science experiences and one health experience, they would have been given a code of 1.5.

Code	Description
1	Three or more health experiences
1.5	Two or less health experiences
3	Three or more science experiences
3.5	Two or less science experiences

Table 3: Faculty Code Descriptions

Analyses Using ALISE Data

NLM has an institutional membership with the Association for Library and Information Science Education (ALISE). ALISE is an organization that unites students, faculty, and staff that are affiliated with LIS programs in North America. They collect yearly data about most of the ALA-accredited programs as well as the students attending them. Due to NLM’s institutional membership, the authors of this report have access to this data. 2018 ALISE data on the LIS programs’ certificates and joint programs were considered in this analysis as well as demographic data about students attending these programs. To gain the demographic information, presumably, students were asked to self-identify as one of the following nine racial groups: Hispanic of any race, American Indian or Alaska Native (which will be referred to as Indigenous for the remainder of this report), Asian, Black or African American, Native Hawaiian or Pacific Islander, White, two or more races, International, or race or ethnicity unknown. The ALISE data does not include data from four of the ALA-accredited institutions: the University of Arizona, Chicago State University, the University of Denver, and Queen’s College – CUNY.

Results

Courses

184 courses across all 54 institutions were determined to discuss health or sciences topics (see Figure 1). The number of H/S courses at each institution ranged from 0 through 19 and the average number of H/S courses per institution was calculated to be 3. Institutions that offered zero H/S courses include Chicago State University, East Carolina University, Pratt Institute, the University at Albany, the University of Denver, the University of Puerto Rico, the University of Southern California, and Valdosta State University. Alternatively, the two institutions that offered more than ten H/S courses are the University of Michigan with 13 courses and the University of North Carolina at Chapel Hill with 19 courses. See Appendix A for the location of the full listing of the number of H/S courses per institution.

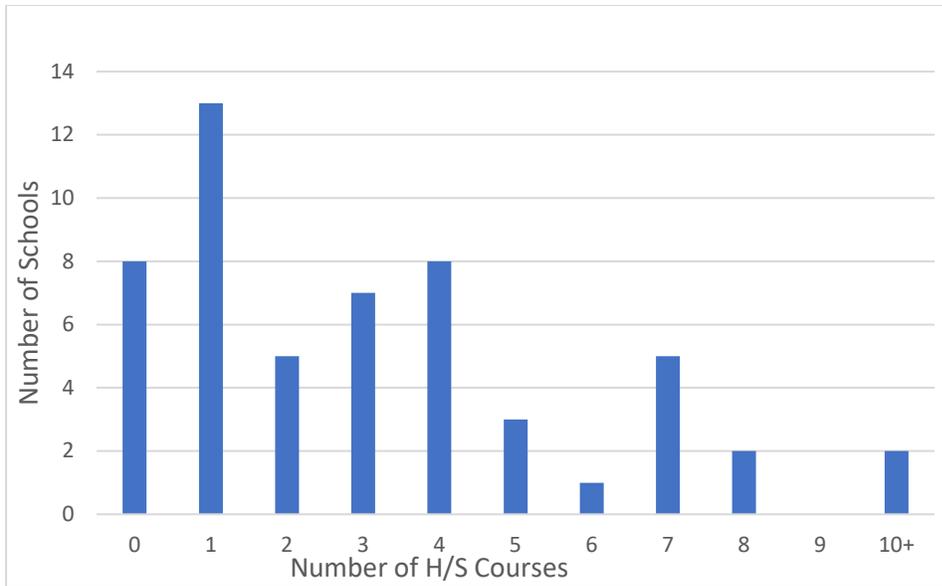


Figure 1: Number of H/S Courses Across Institutions

The proportion of total courses that are H/S courses was also analyzed. A total of approximately 4,267 courses were offered by the ALA-accredited library programs at the institutions, meaning that 4% of the total courses offered by the ALA-accredited programs were H/S courses (see Figure 2). The proportion of H/S courses ranged between 0% and 12% and there are ten institutions where 3% of the total courses offered are H/S courses. The three schools who have a proportion of H/S courses over ten percent are the University of Kentucky and the University of Michigan each at 11% as well as Florida State University at 12%. See Appendix A for the location of the full listing of the proportion of H/S courses per institution.

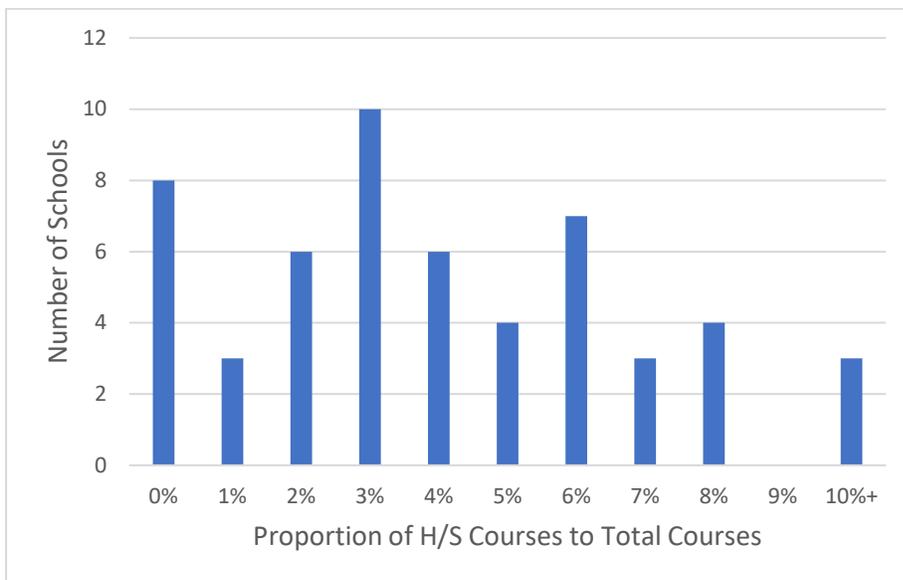


Figure 2: Proportion of H/S Courses Across Institutions

Each course was also assigned two distinct codes: one that addresses the content topic and another to address the amount of focus on the topic within the course. As seen in Figure 3, the two most frequent content topics were determined to be health librarianship (38%) and health informatics (28%). Health topics (which include health informatics [I], health librarianship [L], health IT [T], general health [H], and disasters [D]) comprised 84% of courses, with science topics (which include science librarianship [S] and general science [O]) comprising the remaining 16%. In terms of the amount of each course which focused on the health or science topic, 80% of H/S courses focused entirely on the health or science topic, 15% had a partial focus or unit on the health or science topic, and 5% of courses may discuss the health or science topic mentioned. The University of North Carolina at Chapel Hill contained the most L1 and I1 courses with five and six, respectively. See Appendix A for the location of the full listing of the topic and amount codes of H/S courses per institution. The full set of raw course data used for these course analyses can be found Appendix B.

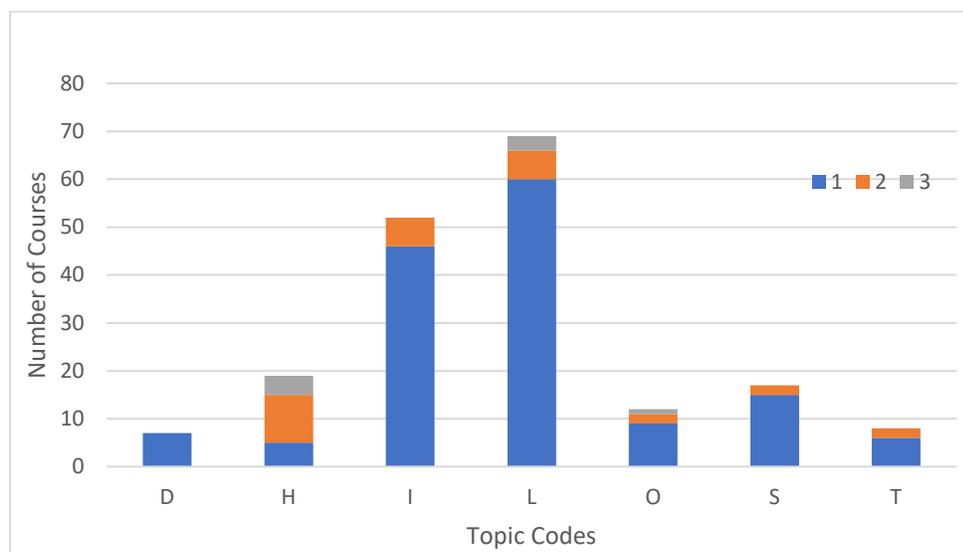


Figure 3: Codes Assigned to H/S Courses

Faculty

There were determined to be 566 faculty members with health or science experience amongst the 48 institutions within the sample, though three of these faculty members taught at two institutions. As seen in Figure 4, the number of H/S faculty at each institution ranged between one and 68, with Long Island University, Chicago State University, East Carolina University, and the University of Hawai'i having one faculty member each and the University of Michigan having 68. While the average number of H/S faculty at each institution was calculated to be 12, 40% of institutions had between 1 and 5 H/S faculty. The median and mode for this dataset were calculated to be 8 and 4, respectively. A location for a full listing of the number of H/S faculty at each institution is available in Appendix A.

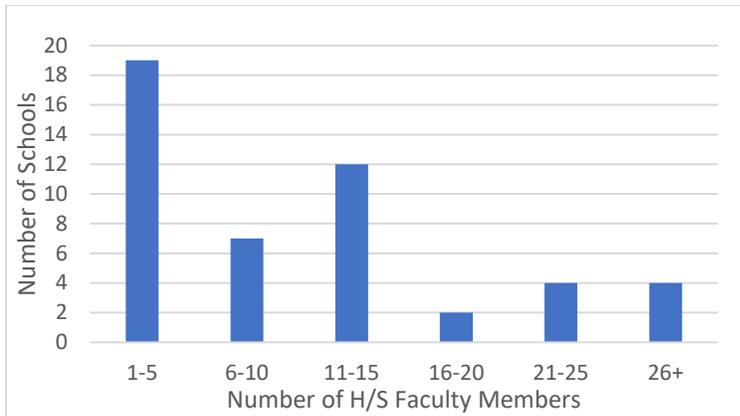


Figure 3: Number of H/S Faculty Across Institutions

The average proportion of total LIS faculty (1,506 faculty members were evaluated for this project) that had health or science experience was calculated to be 40% (see Figure 5). 10% of faculty at East Carolina University have health or science experience while 90% of faculty at Drexel University have health or science experience. Almost one third (31%) of institutions in the sample have a H/S faculty proportion of 41%-50%. A location for a full listing of the proportion of H/S faculty per institution is available in Appendix A.

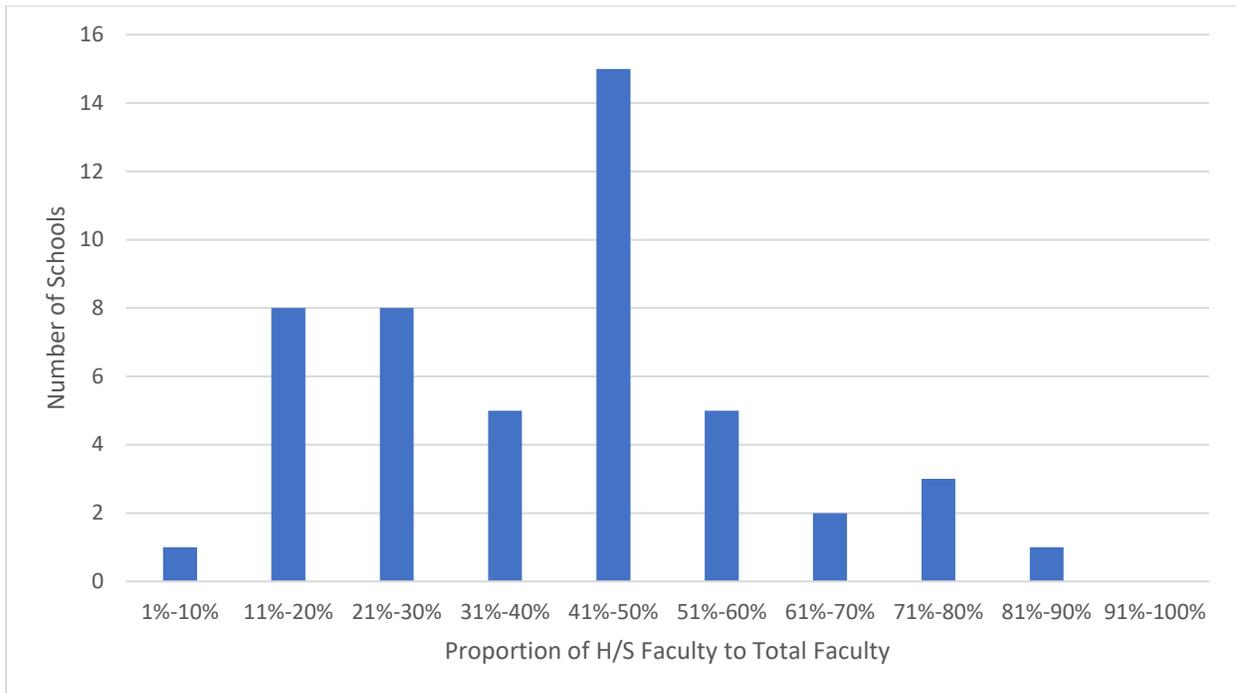


Figure 4: Proportion of H/S Faculty Across Institutions

Exploring the codes faculty members were assigned permits observation at a slightly more granular level. As seen in Figure 6, 75% of H/S faculty had health experiences while the remaining 25% had science experience. Further, almost half (47%) had three or more health experiences while 13% had three or more science experiences. The University of Michigan had the most level 1

faculty members (37), while there are 11 institutions with only one level 1 faculty member. A location for the full list of H/S faculty codes at each institution is available in Appendix A. The full set of raw faculty data used for these faculty analyses can be found in Appendix B.

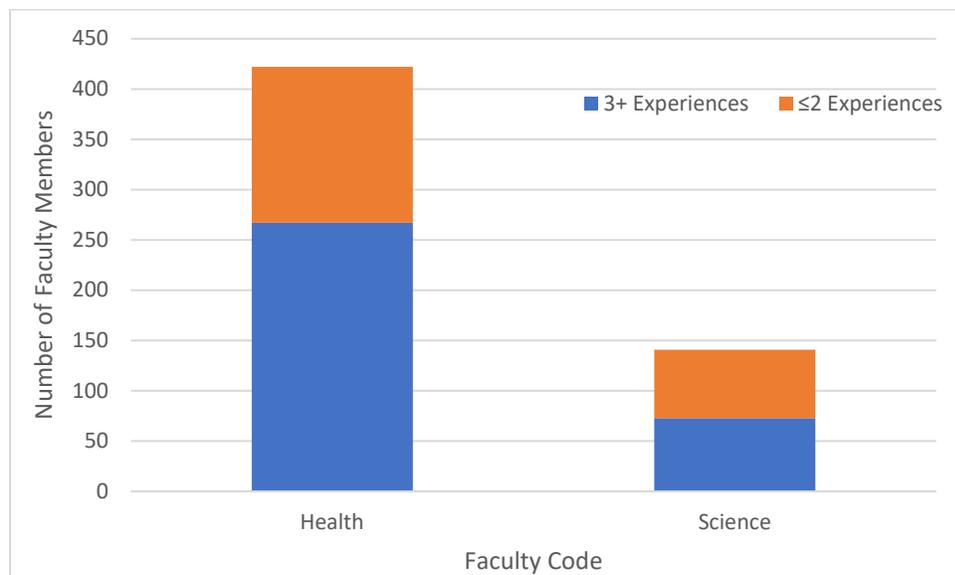


Figure 5: Codes Assigned to H/S Faculty

Analyses Using ALISE Data

This project also compiled a list of health or science related certificates offered by 50 of the 54 institutions within the sample. 13 institutions offer a H/S certificate (see Table 4). Two schools (Florida State University and University of North Carolina at Chapel Hill) offer two distinct H/S certificates, though one of Florida State University’s H/S certificates target undergraduate students rather than Masters students.

School	Name/Area of Certification
Dominican University	Informatics
Drexel University	Certificate in Healthcare Informatics
Emporia State University	Informatics
Florida State University	Undergraduate Health Information Technology
Florida State University	Graduate Certificate in Health Information Technology
University of Iowa	Informatics
Kent State University	Certificate in Health Informatics
University of Michigan	Health Informatics
North Carolina Central University	Certificate in Health Informatics
University of North Carolina at Chapel Hill	Interdisciplinary Health Communications
University of North Carolina at Chapel Hill	Bioinformatics
University of North Texas	Certificate of Advanced Study in Health Informatics
University of South Florida	Graduate Certificate in Health Information

School	Name/Area of Certification
Syracuse University	Data Science
Texas Woman's University	Graduate Certificate in Evidence-Based Health Science Librarianship

Table 4: Institutions Offering H/S certificates

An analysis of joint programs offered by 50 of the 54 schools in the sample revealed that nine institutions offered health or science related joint programs (see Table 5). The University of North Carolina at Chapel Hill, Simmons University, and the University of Oklahoma each offer more than one joint program, offering three, two, and two, respectively.

School	Joint Program
Catholic University of America	Department of Biology
University of Michigan	School of Public Health
University of North Carolina at Chapel Hill	UNC-School of Public Health
University of North Carolina at Chapel Hill	Duke-School of Medicine
University of North Carolina at Chapel Hill	UNC-School of Nursing
Simmons University	Computer Science - BS/MS
Simmons University	Information Technology - BS/MS
University of Texas at Austin	Department of Computer Science
Texas Woman's University	Health Studies
University of Wisconsin-Milwaukee	Health Care Informatics
University of Hawai'i	Information and Computer Sciences
University of Oklahoma	History of Science (Thesis)
University of Oklahoma	History of Science (Non-Thesis)

Table 5: Institutions Offering H/S Joint Programs

NLM is interested in ensuring diverse students have access to health or science courses or faculty mentors with health or science experience while in library school. To that end, 2018 student demographic data from ALISE was analyzed to determine the ten institutions with the highest percentage of students in six distinct racial/ethnic groups: Hispanic of any race, Indigenous, Asian, Black or African American, Native Hawaiian or Pacific Islander, and students of two or more races (see Table 6). A number of schools have a high percentage of students in more than one racial/ethnic group. For example, the University of Southern California is within the ten schools with the highest proportion of students that are Hispanic, Indigenous, Native Hawaiian or Pacific Islander, Asian, Black or African American, and two or more races. Other schools with many racially diverse students include San Jose State University and University of Washington each being within the ten schools with the highest proportion of students for four racial/ethnic groups, as well as the University of Hawai'i, the University of California – Los Angeles, the University of Oklahoma, and St. John's University within the ten institutions for students within three racial/ethnic groups. This data will be considered when determining collaborations between NLM and library schools. See Appendix A for a listing of racial/ethnic diversity of students at each institution as well as a listing of the counts of each institution's number of appearances in Table 6. The raw 2018 ALISE data can be found in Appendix B.

	Hispanic of Any Race	Indigenous	Asian	Black or African American	Hawaiian Native or Pacific Islander	2+ Races
1	Puerto Rico	Oklahoma	Hawaii	North Carolina - Central	Hawaii	Hawaii
2	Long Island Post	Southern California	Rutgers	Southern Mississippi	East Carolina	Southern California
3	Texas Woman's	Washington	California - Los Angeles	Louisiana State	Rhode Island	California - Los Angeles
4	San Jose State	Wisconsin - Madison	San Jose State	Valdosta State	Washington	Catholic
5	North Texas	East Carolina	Washington	Dominican	Oklahoma	North Carolina - Chapel Hill
6	California - Los Angeles	St. John's	Southern California	North Carolina - Greensboro	North Texas	Wisconsin - Milwaukee
7	Southern California	South Florida	Michigan	Catholic	Wayne State	Florida State
8	Florida State	Iowa	Pratt	St. John's	San Jose State	Texas - Austin
9	Washington	Buffalo	St. John's	Alabama		Oklahoma
10	South Florida	San Jose State	Maryland	Southern California		St. Catherine

Table 6: Ten Schools with the Highest Percentage of Students in Six Racial Groups

Conclusions

Courses

An analysis of all LIS courses offered by 54 ALA-accredited institutions revealed that 15% of the LIS programs analyzed offered zero H/S LIS courses and 20% of institutions offered only one H/S course. This leaves the remaining 65% of institutions to offer between two and 19 H/S courses. It is important to remember, however, that this data does not consider how often the courses are offered by the school, though that data was collected for many of the courses, so these counts are likely high. There is a lot of room, especially in the 35% of schools offering zero or one H/S courses, for collaboration with NLM to strengthen H/S LIS course offerings and provide more opportunities for LIS students interested in health sciences librarianship to learn more. 66% of H/S courses focused on health librarianship or health informatics which are key areas of interest for NLM. Finally, the majority of courses focused entirely on the health or science topic rather than only having a short unit within a more general course that discussed the health or science topic.

Faculty

Each of the ALA-accredited LIS programs at the 48 institutions examined within this phase of the analysis had at least one faculty member with health science experience. Additionally, there was a higher proportion of faculty members with health or science experience than expected: 38%. Both of these findings indicate that there is faculty knowledge within each institution which could be put toward creating more health or science opportunities for students, potentially with NLM assistance and collaboration, especially since 47% of faculty members are assigned a code of 1, indicating they have three or more health or science experiences. Altogether, 60% of H/S faculty members have significant amounts of experience in health or science (faculty members with three or more experiences in either discipline) which indicates a strong basis of knowledge to build upon.

Analyses Using ALISE Data

Health or science certificates and joint programs were also analyzed in this project. ALISE data shows that 24% of ALA-accredited institutions offer H/S certificates and that a majority of those institutions offered only one H/S certificate. 17% of ALA-accredited institutions offer H/S joint programs, however, in this case, one third of institutions offered multiple H/S joint programs. NLM's third strategic goal from the 2017-2027 Strategic Plan is to build a data-ready workforce for the future (National Library of Medicine, 2017). As a part of that goal, NLM intends to increase workforce diversity (National Library of Medicine, 2017). Therefore, a part of this project was to ensure that NLM is collaborating with programs that have a racially/ethnically diverse student population. ALISE demographic data was used to establish which LIS programs are attended by an audience of racially/ethnically diverse students. There were determined to be seven programs at seven institutions which were attended by a significant proportion of racially/ethnically diverse students in at least three distinct racial/ethnic groups. Further, 65% of programs were in the ten schools with the highest proportion of diverse students for a particular racial/ethnic group for at least one racial/ethnic group. This data will be considered when determining candidates for NLM collaboration.

NLM Collaborations

This project analyzed a lot of data. To date, this data has been analyzed independently to draw some preliminary conclusions. In the fall, this project will be continued by OET staff who will be able to finish faculty data collection and will combine the results from these independent analyses to create a more full picture of the data. This will permit better understanding of which institutions would make the best candidates for collaborations with NLM. However, some preliminary conclusions can be drawn from the data analyzed within this report. Based on findings elucidated within this project, three schools are recommended for collaboration with NLM. The first school that was identified as a candidate for NLM collaboration is the University of Wisconsin-Milwaukee. This school was chosen due to having a large number of H/S faculty (19 H/S faculty members total, eight level 1 faculty members), yet only offering one H/S course. Emporia State University was identified because this institution already has a strong relationship with NLM in that two past faculty members are alumni NLM Associate Fellows and another faculty member has received multiple NLM awards. The final school identified was the University of Southern California because of its high proportion of students from diverse racial/ethnic groups. While this

report reports largely on data collection and preliminary analyses and recommendations, it would be remiss if it did not at least briefly touch upon what these collaborations between NLM and LIS institutions could consist of. Likely, these collaborations would see NLM in a consulting role. NLM staff could advise faculty members on how to better integrate NLM products and services into their curriculum. NLM staff could also serve as guest speakers within health or science librarianship classes, or alternatively, in general librarianship classes. NLM could also host a train-the-trainers type summer workshop for faculty members to learn more about NLM and health sciences librarianship. Ideas for collaboration will evolve as the project moves on.

Limitations

There are a number of inherent limitations when utilizing public data. One limitation specific to this project was that the courses and faculty members examined were intended to be courses offered by the ALA-accredited program(s) or faculty members who taught courses within the ALA-accredited program(s) at each school. However, many of the schools in the sample only provided course listings or faculty directories at the School or College of Information level which often included at least a few other similar programs that are not ALA-accredited. There was typically no method of accurately determining which of the programs that the courses or faculty members belonged to (whether it be the Masters of Library and Information Science program versus the Masters of Health Informatics program), therefore, many of the H/S courses or H/S faculty members (in particular) identified by this project may not be affiliated with the ALA-accredited program this project meant to examine. Additionally, the total number of LIS courses and faculty (4,267 and 1,506, respectively) used for the proportion calculations, may not be entirely accurate as they were calculated by hand. Some schools would list their courses mixed in with undergraduate or doctoral courses and others would list all of their special topics courses individually whilst others would group them altogether as one course. Therefore, the total course count may not be accurate. More general limitations with using public data include a potential lack of currency which could result in inaccurate faculty or course listings as well as outdated sources for faculty data such as CVs or LinkedIn profiles that exclude recent health or science experience. Additionally, CVs were likely more comprehensive and accurate sources for faculty data, however, not all faculty members had a CV accessible online. Due to the time intensive nature of the project, only the primary source of faculty data was investigated: if a CV mentioned a paper, that paper was evaluated for consideration based solely on the title – the paper was not searched for and read separately, so relevant papers might have been missed and non-relevant papers could have been included if either had a misleading title. Also, if data was present in another language, it was not translated into English, although exceptions were made for the University of Puerto Rico course titles and descriptions. Finally, the coding systems are fairly simplified, especially the faculty coding system. Both systems are not specific and neither take date into account: for courses, how often the course is offered and for faculty, how recent the experience is, amongst other important variables.

Next Steps

There are many next steps that can be taken with this project. Firstly, collection of faculty data from the remaining six institutions should be completed. The faculty and course coding systems should then be refined to be more specific and account for date. The faculty and course data could be verified with each institution to ensure that the faculty members and courses are affiliated with the ALA-accredited programs and thus that the data is accurate. Course data for the University of

Puerto Rico should be confirmed by a fluent Spanish speaker. After the data collection and cleaning is completed and the aforementioned limitations are addressed, the data can be analyzed again and combined to provide more accurate insight to H/S course and faculty at all 54 American ALA-accredited institutions. Steps can then be taken to propose engagement strategies for NLM and NNLM with these library schools. However, it must be noted that this data can be utilized for a number of additional purposes that may prove useful to NLM.

References

National Library of Medicine. (2017). *A platform for biomedical discovery and data-powered health: National Library of Medicine strategic plan 2017-2027: Report of the NLM Board of Regents*.
https://www.nlm.nih.gov/pubs/plan/lrp17/NLM_StrategicReport2017_2027.pdf

Appendix A

All of the following tables are found in Data_Listed_by_Institution.xlsx:

Tab	Contents
A1	Full listing of 54 institutions with ALA-accredited library programs within the United States
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A4	Full listing of H/S course topic codes per institution
A5	Full listing of H/S course amount codes per institution
A6	Full listing of the number of H/S faculty per institution
A7	Full listing of the proportion of H/S faculty per institution
A8	Full listing of H/S faculty codes per institution
A9	Full listing of proportion of Hispanic students per institution
A10	Full listing of proportion of Indigenous students per institution
A11	Full listing of proportion of Asian students per institution
A12	Full listing of proportion of Black or African American students per institution
A13	Full listing of proportion of Native Hawaiian or Pacific Islander students per institution
A14	Full listing of proportion of students of more than two races per institution
A15	Full listing of the counts of each institution's number of appearances in Table 4

Appendix B

All of the following tables are found in Full_Raw_Data.xlsx:

Tab	Contents
B1	Full set of raw course data
B2	Full set of raw faculty data
B3	Full set of ALISE certificate data
B4	Full set of ALISE joint program data
B5	Full set of ALISE student diversity data