

Student Portfolio Analysis November 2018

General Introduction

A portfolio with a satisfactory grade is a graduation requirement for all students entering the MS in Information and Library Science program, as of summer/fall 2012. The study planner and portfolio serves as a tool for planning the student's program of study and, upon completion of the program, demonstrates the meeting of program learning objectives as well as the student's educational and professional goals. The portfolio is intended to focus on the student's knowledge of the Library and Information Science (LIS) field and on professional competencies developed in both required and elective courses. Students can use their program portfolio as a springboard for producing a professional portfolio, a tool that is common in the job application process.

In fall 2018, MS in LIS student portfolio essays completed from fall 2014 to summer 2017 were analyzed for student mentions of particular LIS courses, technologies, topics of interest, stated career paths, career goal changes, conferences attended, associations, leadership roles, and professional experiences. In addition, a writing engagement score was coded.

Data included in Part I of this report is based on 157 total student portfolios submitted between fall 2014 to summer 2017. Part II of this report analyzes how students are meeting the goals of the LIS program, specifically through allocation of particular work products to program goals.

Table 1: Courses Mentioned Most by Student Portfolios

Course	Student Portfolio Mentions (% ,n)	Notes
<i>Required</i>		
505	45% (n=70)	
506	35% (n=55)	
518	55% (n=86)	*The most mentions of any course
571	38% (n=60)	
581	33% (n=53)	
<i>Elective</i>		
503 Diverse Users	10% (n=15)	
503 Scholarly Communication	6% (n=10)	
509	9% (n=14)	
513	11% (n=18)	
523	13% (n=21)	
531	6% (n=10)	
534	20% (n=32)	
535	24% (n=38)	

542	11% (n=18)	
566	13% (n=21)	
575	8% (n=13)	
584	8% (n=13)	
587	21% (n=33)	

There was a total of 686 student mentions across all 49 LIS courses mentioned, yielding a mean of 14 mentions per course.

Table 1 displays the raw number of student portfolios that mentioned each of 18 courses which received at least 10 student mentions, and the percentage of all of the student portfolios that mentioned these courses. The totals here represent the sum of all student mentions for each course. Note that even if one student had mentioned a course more than once, the course is only considered to have been mentioned once by this student.

Of all courses mentioned by students, some stand out as having the most mentions. Core courses, as a group, are perhaps to be expected to have the greatest number of mentions, since each student in the LIS program will have gone through these courses by the time they submit their portfolio. In addition, at least one work product from each core class is required to be included in the portfolio, so these courses would be on students' minds at the time of writing. The total number of student portfolio mentions for all core courses (505, 506, 518, 571 and 581) was 324 for a mean of 2.1 mentions of a core course per student portfolio, or an average of 0.4 mentions of any single core course per student portfolio. From the fall semester of 2014 through the summer of 2017, over half (55%) of all student portfolios mentioned LIS 518 in some capacity. This represents the greatest number of mentions for any course. LIS 571 had the second greatest number of student mentions, with 38% of student portfolios making mention of it.

Among elective courses, LIS 509 had the smallest number of mentions, with 9% of student portfolios making mention of it. Electives had a more varied spread of mentions. LIS 531, LIS 503: Scholarly Communications, and LIS 503: Digital Curation tied for the smallest number of mentions, with 6% of students mentioning these courses in their portfolios. It should be noted that many courses were not taken at all by some students and would therefore have had no occasion to be mentioned in a portfolio designed to showcase the meeting of program goals through courses. Out of the 7,693 possible mentions that could have been found if each portfolio had mentioned each course, there are only 686 actual portfolio mentions, or 9% of total possible mentions. A course is only mentioned, then, about one-tenth of the time that it could have been mentioned. While these numbers do presumably indicate some level of student engagement, an absence of a mention does not necessarily mean that a student did not find it useful to the fulfillment of program goals.

Table 2: Technologies Mentioned Most by Students

Technology	Student Mentions (count)
LIS-specific tools & databases	102

Multimedia presentation, communication, and social media tools	60
General web design, programming languages, data analysis and search tools	83

Table 2 illustrates the total number of technologies mentioned by students in each of three technology categories listed in the table. In the coding phase, the number of technologies a student mentioned in their portfolio was represented by a tally enumerating all of the technologies mentioned by a student in their portfolio. These mentions were then allocated into the three technology categories seen here.

The numbers provided in the table denote sums of student mentions in the respective technology category. While some students did not mention any of the technologies grouped under a given category, other students mentioned technology from a given category multiple times in their portfolio. A mention of one technology in one category does not preclude mentions of other technologies in the same or different categories. Four portfolios mentioned at least one technology from each category. Sixty-four portfolios made no mentions of any of the technologies that were coded.

Overall, 102 student mentions were made of LIS-specific technologies, which encompass the following: AACR2, ALEPH, ArchivesSpace, archivists' toolkit, ARTstor, Ask a librarian, BISAC, Controlled Vocabulary, Dewey, Dublin Core, EAD, EBSCO, Embase, e-readers, ERIC, FRBR, ILLiad, ILS or LMS, IPL2, ISBD, LCNAF, LCSH, LibGuides, Library 2.0, LOC, MARC(21), Mimsy, OCLC, Omeka, PastPerfect, ProQuest Dialog, and RDA.

Sixty total student mentions were made of multimedia presentation, communication, and social media tools, which category encompasses the following: AnyMeeting, BookTalk, Brainshark, Camtasia, Delicious, Doodle Poll, Dropbox, Google Docs, Google Drive, Google Hangout, Google Talk, iMovie, InDesign, Jing, LinkedIn, LucidChart, ooVoo, PBWorks, Photo Story 3, Pinterest, PowerPoint, Prezi, screencasting, Skype, Slideshare, springshare, SurveyMonkey, Teambox, TeamViewer, Twitter, Wiki, and YouTube.

Eighty-three total student mentions were made of general web design, programming languages, data analysis and search tools, which category includes these possible examples: About.me, Boolean operators, CSS, CreativeCommons, Dreamweaver, EndNote, FileZilla, HTML, javascript, MS Access, MS Excel, PHP, Web 2.0, Weebly, Wix, Wordpress, and XML.

While the LIS Department Mission Statement specifies a “focus on the intersection of people, information and technology,” the LIS program goals do not make explicit mention of technology

as such.¹ Technology implicitly factors into all four of the department’s goals, however, so the appearance of the technologies identified in portfolios could point to any of the program’s goals. That said, it might be argued that technologies in the LIS-Specific category align with goal 2 more strongly, whereas the technologies listed under “Multimedia presentation, communication, and social media tools” and “General web design, programming languages, data analysis and search tools” more readily translate to goal 3 applications, since they apply to communication more generally.

Table 3: Topics of Interest Mentioned Most by Students

Topic of Interest	Student Mentions (%, n)
Literacy, User Education, Lifelong Learning	50% (n=79)
Acquisitions and Needs Assessment	34% (n=53)
Access Issues	30% (n=47)
Children and Youth Services	26% (n=41)
Management, Marketing, Promotion, and Budget	26% (n=41)
Reference	25% (n=40)
Emerging Technologies	21% (n=33)
Cataloging, Metadata, and Information Systems	20% (n=31)
Archives, Preservation, and Records Management	15% (n=24)
Research, Bibliometrics, Data Analysis	11% (n=18)
Subject Librarianship	7% (n=11)
Museums and/or public history	5% (n=8)

¹ University at Buffalo, Department of Library and Information Studies Mission and Goals (revised April 4, 2018). <http://ed.buffalo.edu/information/about/mission.html>

Embedded Librarianship	4% (n=6)
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Table 3 depicts topics of interest mentioned in student portfolios. Portfolios sometimes mentioned more than one topic of interest, but any mentions of a given topic of interest beyond the first in a single portfolio were not counted. Thirteen of these topics of interest were identified; all 13 are included in this table. The topic of interest most mentioned is “Literacy, User Education, Lifelong Learning,” and 79 portfolios (50% of the total) made mention of it. Following this by number of mentions is “Acquisitions and Needs Assessments” with 53 portfolios (34% of all portfolios) making mention of it. The least represented topic of interest was “Embedded Librarianship,” with just 6 mentions, or a mention from 4% of all portfolios. While these topics of interest may not speak to the meeting of program goals per se, they may be a valuable source of information if they are viewed as topics that students have identified as significant as a result of their time in the program, or leave the program wanting to know more about. Perhaps the strong interest in Literacy, User Education, and Lifelong Learning is a result of the LIS program, or perhaps UB’s LIS program attracts students that identify an interest in this topic.

Table 4: Stated Career Paths Mentioned Most by Students

Stated Career Path	Student Mentions (%, n)
Public Librarian	48% (n=76)
Academic or Special Librarian	28% (n=45)
Reference	15% (n=23)
Archives and Preservation	12% (n=19)
Cataloging, Metadata, Information Systems	9% (n=15)
School Librarian*	7% (n=11)

*Students in the MS in School Librarianship program do not complete this portfolio, so mention of school librarianship in this context would likely refer to career considerations or a change in focus from school librarianship to the more general MS in Information and Library Science program.

Table 4 describes the six career paths (of 14) mentioned by at least 10 portfolios. Career paths were not mutually exclusive; a portfolio could be coded as mentioning more than one career path, but could not be coded as mentioning a single career path twice.

Students mentioned changing career goal over the course of their studies. For the whole body of students for this period, we found that 58 students (37% of the total) expressed a change in career goal during their studies. We also identified 32 additional portfolios (20%) as possibly indicating a change in career goal.

Of all coded career paths, the “Public Librarian” career path was the most strongly represented, receiving a mention in each of 76 portfolios, or in 48% of all portfolios. Following this, “Academic or Special Librarian” received a mention in each of 45 portfolios, or in 28% of all portfolios. The least represented career paths of those coded for were Music Librarian, Law Librarian, and Information Broker, each of which was represented by 2 portfolios.

Career goals themselves have little to do with the goals of the LIS program; neither the LIS Department mission nor the LIS Department goals prescribe any career path beyond graduation.

Conferences

The “conferences” category describes the number of students that mentioned in their portfolio attending at least one conference during their time as a student in the LIS Department. Overall, only 11 students (7%) made mention of attending a conference in their portfolio. It appears that students either rarely attended conferences, or did not care to mention attended conferences in their portfolios. If attending professional conferences is considered to be one of the “behaviors associated with the roles and responsibilities of information and library professionals,” then there is opportunity to encourage students to attend conferences, in accordance with goal 4.²

Associations

The “associations” category describes the number of portfolios in which professional associations were mentioned. Twenty students (13%) mentioned at least one association. Of these twenty portfolios, twelve, or 60%, mentioned only one association, and eight, or 40%, mentioned more than one. Thirty-four non-discrete associations were mentioned altogether, and the American Library Association was the most commonly represented association in student portfolios. Similar to conferences, membership in an association might testify to participation in goal 4 of the program, but is not explicitly named in the department’s mission or goals. The relatively low proportion of students joining a professional association provides an opportunity for the department to encourage this in future.

Leadership

The “leadership” category describes the number of portfolios in which students mentioned a leadership role. If a portfolio mentioned leadership more than once it only registered as a single mention for leadership. Nine portfolios, 6% of the total, mentioned at least one leadership experience. Goal 3 of the department explicitly discusses leadership: “Graduates demonstrate professional competences, including leadership.”³ We believe that goal 3 allows for an interpretation wherein the students who did not mention leadership experiences still met goal 3 objectives through “critical and analytical thinking, research, communication, collaboration, reflective practice, and ethical adherence.”⁴ This finding suggests that students could be encouraged to more explicitly refer to all aspects of goal 3 in their portfolios.

² LIS Mission and Goals, <http://ed.buffalo.edu/information/about/mission.html>

³ *ibid*

⁴ *ibid*

Table 5: Professional Experiences Mentioned Most by Students

Professional Experience	Student Mentions (% , n)
Public Library	36% (n=57)
Academic Libraries	30% (n=47)
Children and Youth Services	20% (n=32)
Reference	16% (n= 25)
Special Libraries/ Special Collections	13% (n=21)
Archive Projects	13% (n=20)
Cataloging, Metadata, Information Systems	11% (n=17)

Table 5 describes the number and percentage of students who mentioned one of 14 professional experiences from a certain context in their portfolios. The seven categories with at least 10 mentions are included in the table. In the coding phase, 17 discrete professional experience categories were identified; thus, these are overlapping categories, as a given student may have expressed having professional experience in more than one area.

Fifty-seven students (36%) mentioned having professional experience in a public library, followed by 47 students, or 30%, who mentioned having professional experience in an academic library. Arguably, goals 3 and 4 recommend students graduate with professional experience already under their belts.

Average Writing Engagement Score

The “Average Writing Engagement Score” depicts student writing engagement scores, a measurement of how engaged a student was in the writing of their portfolio. This was not a formal grade, but rather a subjective assessment of the quality of writing with which students composed their portfolios. Portfolios could be scored 1 (poor), 2 (satisfactory), 3 (excellent), or 4 (outstanding). The mean score for all students was 2.7.

While engagement in writing a portfolio may not be a value explicitly mentioned by the department mission or goals, an artifact of quality writing testifies to a student’s ability to communicate, which is mentioned in goal 3. According to this analysis, the trend of the student body is to produce a portfolio that in its presentation testifies to their ability to communicate, with most scoring “excellent” or above, and only 4, or 2.5%, scoring below “satisfactory.”

Summary of Part I

Student mentions can provide a gauge of how well the department is seeing students fulfill its mission and goals. These data suggest that particular attention should be placed on the concept of

leadership as it is articulated in goal 3, and on examining the department's expectations for students expressing this leadership. Additionally, the department may re-examine expectations surrounding conferences and associations.

Part II

Another analysis was done to ascertain the kinds of work products that students were using to demonstrate that they had met certain program goals. It is not a qualitative assessment of their work product statements, rather a simple count of the use of specific assignments in specific courses.

2015-2016

In core courses for the year 2015-2016, goal 1 was best represented with 102 work products (WPs), or 29% of all core course WPs. This was followed by goal 2 with 101 WPs, which amounted to 28% of the WPs submitted for core courses in this period. Goals 3 and 4 trailed with roughly three quarters of those numbers, with 75 WPs (21% of core WPs) and 77 WPs (22% of core WPs) represented respectively.

Seventy-eight percent of WPs from LIS 505 were used to address goal 1. Thirty-three percent of the WPs from LIS 505 came from the lit review, 28% of the WPs from LIS 505 came from the 9 Functions Assignment, and another 28% of the WPs from LIS 505 came from Concept Mapping.

Sixty-five percent of WPs from LIS 506 were used to address goal 2. Fifty-seven percent of LIS 506 WPs came from the Website Assignment.

Forty-seven percent of WPs from LIS 518 were used to address goal 2, and 31% of WPs from LIS 518 were used to address goal 4. Of the WPs from LIS 518, 33% came from the Reference Interaction Assignment, and 47% came from Reference Consultation.

Thirty-eight percent of WPs from LIS 571 were used to address goal 1. Twenty-seven percent of WPs from LIS 571 were used to address goal 2. The most frequently used WPs from LIS 571 came from the Organization System Design Project, representing 55% of WPs from LIS 571.

Fifty percent of WPs from LIS 581 were used to address goal 4, and a further 46% of WPs were used to address goal 3. Of WPs submitted for LIS 581, 51% came from Customer Analysis/Communication Presentation, and 47% came from Human Resources Presentation.

In electives for the year 2015-2016, goal 3 was best represented by WPs, with 66 or 34% of WPs across goals. Goal 4 was second with 62 WPs or 32% of WPs across goals, with goals 1 and 2 trailing with roughly half those numbers, at 34 WPs, or 17%, and 35 WPs, or 18% of total WPs respectively. LIS 587 Collection Development WPs are the most frequently used elective WPs in portfolios for this period, and other electives well represented in portfolios of this period are: LIS 526 Practicum, LIS 535 Sources and Services for Young Adults, LIS 542 Sources and Services for Adults, LIS 584 Academic and Research Libraries.”

2016-2017

In core courses for the year 2016-2017, goal 1 was best represented, with 71 WPs, or 28% of all core course WPs. This was followed by goal 2 with 69 WPs or 28% of core course WPs. Goals 3 and 4 trailed with 57 WPs (23%) and 54 WPs (22%) respectively.

Seventy-three percent of WPs from LIS 505 were used to address goal 1. 45% of WPs submitted for LIS 505 came from the 9 Functions Assignment. Another 27% of WPs from LIS 505 came from the Lit Review, and 22% of WPs for LIS 505 came from Concept Mapping.

Fifty percent of WPs from LIS 506 were used to address goal 2. Sixty-five percent of WPs submitted for LIS 506 came from the Website Assignment.

Fifty-one percent of WPs from LIS 518 were used to address goal 2. A further 24% of WPs from LIS 518 were used to address goal 3. 51% of WPs from LIS 518 came from the Reference Interaction Assignment, and 43% of WPs from LIS 518 came from Reference Consultation.

Thirty-eight percent of WPs from LIS 571 were used to address goal 1. Forty-nine percent of WPs from LIS 571 came from the Organizational System Design Project.

Forty-nine percent of WPs from LIS 581 were used to address goal 3, and 49% of WPs from LIS 581 were used to address goal 4. Fifty-seven percent of WPs from LIS 581 came from the Analysis/Communication Presentation. Two students used WPs from LIS 585 to substitute for required LIS 581 WPs.

In electives for the year 2016-2017, goal 4 was best represented with 42 WPs, or 32% of WPs submitted across electives. Following this was goal 3 with 40 WPs or 30% of elective WPs. Goals 2 and 1 trailed with 26 WPs (20%) and 25 WPs (19%) respectively. LIS 575 Research Methods WPs were the most frequently used elective WPs in portfolios for this period, with 14 WPs or 11% of elective WPs.

Summer 2017

In core courses for portfolios completed in summer year 2017, goal 1 was best represented with 69 WPs, or 31% of the WPs across core courses. This was followed by goal 2 with 60 WPs or 27% of core WPs. Goals 3 and 4 trailed with 53 WPs (24%) and 42 WPs (19%) respectively.

Seventy-two percent of WPs from LIS 505 were used to address goal 1. Forty-eight percent of WPs for LIS 505 came from the 9 Functions Assignment, and a further 35% from the Literature Review.

Sixty-seven percent of WPs from LIS 506 were used to address goal 2. Seventy-two percent of WPs from LIS 506 came from the Website Assignment.

Forty-one percent of WPs from LIS 518 were used to address goal 2, and a further 36% of WPs from LIS 518 were used to address goal 3. Of the WPs submitted for LIS 518, 41% came from

the Reference Interaction Assignment, and 55% came from Reference Consultation. This is interesting since Goal 2 is skills focused and Goal 3 is more abstract, having to do with more abstract concepts like professional competencies. This course obviously addressed both effectively.

Fifty percent of WPs from LIS 571 were used to address goal 1. Of the WPs submitted for LIS 518, 78% came from the Information Organization System Design Project.

Ninety-three percent of the WPs from LIS 581 were used to address goals 3 or 4. Students see LIS 581 as more appropriate to addressing goals that are focused more on professional competencies and dispositions than skills. Of the WPs submitted for LIS 581, 29% came from Human Resources Presentation, and 27% came from Discussion Point Exercise. Four students used WPs from LIS 585 to substitute for required LIS 581 WPs.

In electives for portfolios completed in summer 2017, goal 4 was best represented with 46 WPs, or 35% of elective WPs. This was followed by goal 3 with 36 WPs or 28% of elective WPs. Goals 2 and 1 trailed with 28 WPs (22%) and 20 WPs (15%) respectively. LIS 587 Collection Development WPs are the most frequently used elective WPs in this period, with 14% of total elective WPs.

Summary of Part II

The preponderance of WPs coming from core courses is attributable to how and where students were required to allocate WPs in the portfolio instructions. The instructions for the portfolio state that “each Program Goal must have at least one work product from a core class and that all five (5) core classes must be represented. You may use electives or additional core class work products to round off the eight (8) work products submitted.”⁵ In other words, students were required to submit one WP for each program goal, and every goal had to be represented by a core class. This means that, invariably, a minimum of 4 WPs come from core classes, one for each goal. This leaves either 1, 2, 3, or 4 core courses still unrepresented by WPs (all four goals might have been allocated WPs from the same core course), or 1, 2, or 3 WPs left to attribute as students wish (at least one of the four remaining WPs must come from the one or more unrepresented core courses). Even if a student has only one core course unrepresented after each of the program goals have been given a WP, the majority (5/8) of the students’ WPs will come from core courses. This is the minimum number of WPs (out of 8) that can come from core courses, the maximum being 8/8.

For all three years for which all data are available, goals 1, 2, 3, and 4 were represented in WPs in core classes in essentially that order of frequency. Goal 1 is always represented better than any other goal for core courses. Goal 2 is always represented second most. Goal 3 comes in third place and goal 4 comes in fourth place, except in 2015-2016 where they switch places.

Meanwhile, almost the opposite trend is occurring in elective courses. Here, goal 1 is always represented least by WPs for all 3 years. Goal 2 is always represented second least. Goal 3 comes in second place and goal 4 comes in first place, except, once again, in 2015-2016, where they

⁵ “Portfolio Planner 2014”, p. 8

switch places. In other words, there is an inverse relationship between core and elective WP goal attribution.

It is clear that students as a whole turn more often to core courses to prove accomplishment of goals 1 and 2, and turn more to electives to demonstrate meeting goals 3 and 4. This suggests that through WP attribution students describe their courses of study as being channeled from core goals (1 and 2) to elective goals (3 and 4), or that core goals are more fundamental or elementary than elective goals.

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