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Essay Bryan, J. (2016). The preparation of academic librarians who provide instruction: A comparison of first and second career librarians. Journal of Academic Librarianship, 42(4), 340-354. Introduction: The impetus for this article stemmed from my personal experience as a second career reference and instruction academic librarian. Prior to this career change, I had an extensive first career in arts education at several colleges and universities. As I transitioned into librarianship and began teaching numerous one-shot sessions, I realized that there were many attributes from my first career that could be transferred to librarianship, especially with regard to teaching; these included creativity, improvisation, discipline, instructional design, planning and organization. I began to wonder if any research had been done to investigate the impact of first careers on second career librarians in the area of instruction. In addition, through my personal observations and discussions with colleagues, I realized that formal preparation for teaching as an academic librarian varies greatly. Therefore, the purpose of my study was twofold: 1) to determine the degree to which previous work experience (specifically a first career) may have had an impact on a librarian's ability to perform the teaching responsibilities of his/her position and 2) to examine the extent to which the Master's Degree in Library Science (MLS) has prepared librarians in the area of instruction. Research: An extensive literature review found that considerable research exists regarding the inclusion of pedagogical skills in MLS programs. Several of these studies employed proficiencies for instruction librarians developed by the Association of College and Research Libraries (ACRL). The overarching conclusion appeared to be that while there has been an increase in integrating teaching skills into the MLS curriculum, the majority of librarians who participated in these studies believed that they received most of their instructional skills post MLS from on-the-job training, professional development, and self-teaching.

However, these studies did not consider the effect of prior careers and/or work experience. In contrast, there was very little research regarding the impact of first careers on second career librarians, especially with regard to teaching. The few studies that were completed were primarily qualitative in nature and used a very small sample size. Therefore, there appeared to be a need for further research in this area using a quantitative study designed to elicit responses from a large sample of academic librarians who provide instruction (hereafter referred to as ALPIs). An online survey was disseminated to four library Listservs and 608 responses were received. In addition to demographic information, the survey asked the respondents to identify themselves as either 1) first career ALPIs, 2) those employed in another library position before becoming an ALPI, or 3) second career ALPIs. The remaining questions asked the librarians to what extent their MLS degree program had provided them with the 12 categories of skills in the ACRL Standards for Proficiencies for Instruction Librarians and Coordinators (2007), and then, to what extent prior work experience had provided them with these skills. The statistical analysis employed the use of a Sign Test, chi-square test, and the Cramer's Phi test to determine the statistical significance and validity of the findings and the strength of the relationships in the data. The results indicated that prior work experience influenced the overall instructional skills of ALPIs to a greater extent than did their MLS education. Furthermore, this experience does provide significant, specific and identifiable skill set benefits for individuals seeking a position as an ALPI. Impact on Librarianship: The findings of this study clearly indicated that prior work experience has a significant positive effect on the instructional skills of ALPIs. Therefore, it would be beneficial for those in a hiring position, e.g. library directors and search committees, to provide an opportunity for potential employees to illustrate how these acquired attributes could be applied to the responsibilities of a new position. Given the fact that librarianship is a profession that appears to attract a large number of second career professionals, this would seem to be especially relevant. The results of this study also indicated that, in their opinion, ALPIs receive most of their pedagogical training outside of their MLS degree programs and rely heavily upon on-the-job training, professional development, and self-teaching to develop the skills they are lacking. It is hoped that graduate schools offering programs in library and information science will recognize the importance of instructional skills and will continue to integrate these skills into the curriculum to a greater extent. (Please see supporting documentation for JAL's impact factor statistics and Mendeley statistics.) Impact on Community: Data from the National Center for Education Statistics indicated a greater than 20% rise in the number of group presentations conducted in academic libraries from FY 2000 (432,000) to FY 2010 (520,122). These numbers, combined with the outcomes of the present study (as shown in multiple graphs and tables) highlight the need for ALPIs who have the necessary skills to carry out their teaching responsibilities. Students who receive information literacy instruction will reap the benefits of working with academic librarians who have obtained pedagogical skills through their MLS program and/or have acquired transferable skill sets that apply to instruction through prior work experience. This study includes qualitative examples and suggestions for further research in this area, as we consider all of the factors that play a role in providing the highest quality of instruction for our students.

Summary With a growing emphasis on information literacy and critical thinking, it is important that academic librarians who provide instruction have the necessary skills related to their teaching responsibilities. This study, with 608 respondents, concluded that librarians who had a prior career felt that they were better prepared to teach, in a number of significant ways, compared to those who

did not have a prior career. In addition, these librarians' responses seemed to suggest that their prior work experience provided them with a greater extent of preparation than did their MLS education. By considering prior work experience and ensuring the inclusion of pedagogical skills in MLS programs, librarians will be better prepared to provide high quality instruction for their students. Contents lists available at ScienceDirect

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The Preparation of Academic Librarians Who Provide Instruction: A Comparison of First and Second Career Librarians



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ABSTRACT

With the growing emphasis on information literacy and critical thinking in higher education, it is important that academic librarians who provide instruction have the necessary skills related to their responsibilities. The ACRL Standards for Proficiencies for Instruction Librarians and Coordinators include twelve skill categories that can serve as a measure of a librarian's ability as an instructor. The purpose of this study was to examine how academic librarians feel they have been prepared to provide instruction by determining the degree to which previous work experience (specifically a "first career") may have had an impact on their ability to perform their teaching responsibilities and to examine the extent to which the MLS degree has prepared them in the area of instruction. A survey was sent to four library Listservs yielding 608 respondents. Results indicated that librarians who had another career prior to becoming an academic librarian who provides instruction felt that they were better prepared to suggest that for the majority of the skill categories, their prior work experience provide them with a greater extent of preparation than did their MLS education.

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INTRODUCTION

The role of information literacy in higher education has become increasingly important, especially as a means of engaging students in critical thinking and problem solving. Many academic librarians who provide instruction have responded by moving away from traditional bibliographic instruction and the teaching of skills (e.g., point and click) toward focusing on information literacy concepts as a means of framing instruction (Determing & Johnson, 2011). The adoption of the Association of College and Research Libraries (ACRL) *Framework for Information Literacy for Higher Education* by the ACRL board in January 2016 has encouraged academic librarians to approach their instruction from a different perspective and has sparked the development of new and creative lesson plans based on threshold concepts.

With an increased emphasis on information literacy instruction, academic librarians are being called upon to teach more and more frequently and in many different formats and settings, i.e., one-shot sessions, semester courses, face-to-face, online, synchronous, asynchronous, etc. Curriculum initiatives such as the first-year experience, writing across the curriculum, and general education have provided additional opportunities for librarians to take on the role of teacher and have impelled academic libraries to emphasize teaching as a "core service" (Walter, 2008). Due to this increased demand, teaching responsibilities are not limited to "instruction" librarians, but can encompass all librarians in public service (Sproles & Ratledge, 2004). Librarians from all divisions of the library who are seeking tenure may now also be required to demonstrate teaching effectiveness, although this may vary greatly based on their particular institution. For these reasons, the term "academic librarians who provide instruction" was used in this study to identify those librarians who are involved in teaching in an academic library.

The purpose of this study was to examine how academic librarians feel they have been prepared to provide instruction by 1) determining the degree to which previous work experience (specifically, a "first career") may have had an impact on a librarian's ability to perform the teaching responsibilities of his/her position and 2) examining the extent to which the Master's Degree in Library Science (MLS) has prepared librarians in the area of instruction. The impetus for this study arose from observations the author has made regarding the circuitous pathways to teaching that librarians in her library have followed, as well as discussions she has had with colleagues regarding the effect of first careers on the teaching skills of second career librarians. Steven Bell (2016), Associate University Librarian for Research & Instructional Services at Temple University commented on his own early career in academic librarianship saying that, "Because I worked in an academic library, I was told to teach students how to use library research databases. I knew how to use the databases, but I had no idea how to

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teach students or effectively communicate why they should use the databases." As a second career reference and instruction librarian with a first career in arts education, the author of the current study has become increasingly cognizant of the fact that her previous work experience has provided her with many attributes that can be of value when carried over into academic librarianship, especially with regard to teaching, such as creativity, improvisation, discipline, instructional design, planning and organization. Taking into consideration the skills that potential employees have acquired through prior work experience would be both important and advantageous for hiring committees as they attempt to match skill sets of potential employees to the needs of the specific library.

In this study, the ACRL Standards for Proficiencies for Instruction Librarians and Coordinators (approved by the ACRL Board in 2007) were employed as a means of eliciting information from librarians in regard to their preparation for teaching. A comparison was made between three categories of librarians who provide instruction as part of their job responsibilities: 1) first career librarians (typically these individuals did not have a substantial prior career before becoming an academic librarian who provides instruction, 2) individuals with previous non-instructional work experience in libraries prior to taking on instructional responsibilities, and 3) second career librarians who had a substantial non-library prior career. The survey asked these individuals to indicate to what extent their prior work history helped prepare them for each of the skill categories listed in the ACRL standards. It was predicted that individuals with extensive prior work experience (subgroups 2 and 3) would rate their instructional preparedness skills higher than individuals who did not have such a foundation. These same individuals were also asked to what extent their MLS education prepared them for these same skill categories, but in this case, it was not expected to find significant differences between the three subgroups. It should be noted here that the responses received were subjective in nature and were based on the librarians' self-perception of how their past experiences assisted them in acquiring instructional skills. While a more direct, objective measurement of these librarians' teaching skills would be very useful, such a measurement would be difficult to accomplishment and was not incorporated in this study at this point in time.

LITERATURE REVIEW

The literature contains considerable information concerning the integration (or lack thereof) of instruction/teaching skills in the MLS curriculum, but there is scant research on the impact of prior careers on second career librarians, especially with regard to teaching.

MLS CURRICULUM AND TEACHING PREPARATION

Research studies conducted in the 1970s and 1980s revealed that library schools were found to be lacking in providing formal training in bibliographic instruction. Patterson and Howell's (1990) survey found that professional education for library user instruction "remains uneven and haphazard, and few instruction librarians have had the necessary courses and practical experience in their formal library education programs to prepare them even minimally for what is encountered on the job" (1990). However, by the end of the 1990s, there had been some improvement in this area and the majority of accredited MLS degree programs offered a separate course on instruction (usually in the form of an elective) and/or provided content on pedagogy in other courses within the curriculum (Walter, 2008). Despite these gains, Dalrymple (2002), recommended that library schools do more to emphasize the importance of acquiring teaching skills to pre-service librarians and strengthen the curriculum in regard to instructional content. Pappert (2005) agreed that librarians should receive a strong foundation in pedagogical theory and practice while in library school.

Within the past 20 years, several studies have examined a list of proficiencies for instruction librarians in order to investigate the level to which these librarians are prepared to teach. Some of these studies analyzed the proficiencies from the librarians' perspective. Shonrock and Mulder (1993) used the 84 proficiencies for bibliographic instruction delineated in the Core and Advanced Competencies for Library Instructors & Coordinators published by the ACRL Bibliographic Instruction Section (BIS) in 1985 as a basis for two surveys. The first survey asked members of BIS to evaluate the importance of those 84 proficiencies in 13 categories. The categories of Communication Skill, Instructional Ability, and Planning Ability received the highest mean scores from the 144 respondents. The second survey asked how the librarians had acquired the 25 most important proficiencies identified in the first survey and where they would have preferred to acquire them. Respondents (N = 181) indicated that only two of these proficiencies had been acquired primarily in library school and that 18 of the 25 proficiencies were acquired primarily through training on the job or were self-taught.

In 2007, the Instruction Section of ACRL published the Standards for Proficiencies for Instruction Librarians and Coordinators. These revised standards were built around 12 broad skill categories, each with a set of specific proficiencies for instruction librarians (yielding 41 proficiencies), as well as 27 proficiencies for coordinators of instruction programs, for a total of 68 proficiencies (Association of College and Research Libraries, ACRL, 2007). Utilizing these new proficiencies, Westbrock and Fabian (2010) recreated Shonrock and Mulder's earlier study utilizing two surveys. They administered both surveys through the ACRL Information Literacy Instruction Listserv and elected to use only the 41 proficiencies that applied to instruction librarians. The results of the first survey indicated that planning skills, information literacy integration skills, and instructional design skills were the categories that were of most importance to respondents (N = 173). Similar to the findings of Shonrock and Mulder (1993), the second survey found that the majority of the 41 proficiencies were learned primarily on the job (37) or through self-teaching (4) and none were learned primarily in library school.

Other studies that have focused on the preparation of librarians in the area of instruction have analyzed course offerings and syllabi in library schools. Albrecht and Baron (2002) reviewed the websites of 41 American Library Association (ALA) accredited library schools and found that 26 offered courses related to library instruction (although many of these were intended for media specialists in the public schools) and 63% had instructional content as part of another course. In addition to the content analysis of the websites, Albrecht and Baron attempted to survey 49 library school deans and received responses from 26. 58% of the respondents indicated that instructional content was integrated into other coursework. Surprisingly, a requirement in instruction was reported by only one institution. Albrecht and Baron also queried practicing instruction and information literacy librarians as to how they learned their instructional skills. The results were very similar to those of Shonrock and Mulder (1993) and Westbrock and Fabian (2010), with 84% of the 80 respondents indicating that their teaching skills were primarily acquired through on the job training.

Sproles, Johnson, and Farison (2008) also studied the syllabi of information literacy courses to determine how their learning outcomes corresponded to the 12 skill categories in the 2007 ACRL *Standards for Proficiencies for Instruction Librarians and Coordinators*. The most frequently mentioned outcomes in the instruction syllabi were instructional design (mentioned 107 times), information literacy integration skills (68), and teaching skills (61). These were followed by presentation skills (45), planning skills (42), leadership skills (39), communication skills (36), and assessment skills (26). The skills that were least mentioned in the outcomes were promotion skills (12), administrative skills (7), subject knowledge (3) and curriculum knowledge (1). (It is interesting to note that in Westbrock and Fabian's (2010) study, librarians indicated that none of these skills were learned primarily in library school.) Sproles, Johnson, and Fabian concluded that although courses offered in library schools integrate some of the ACRL standards, they "cannot provide complete training in information literacy instruction solely in a classroom setting" (p. 207). Westbrock and Fabian's (2010) results would seem to lend credence to this opinion.

In his study of course syllabi, Bailey (2010) focused on the content of courses in academic librarianship. 24 of the 33 syllabi that were examined included information literacy/instruction as one of the subjects listed. He concluded that although the topic of library instruction or information literacy is included in the majority of the academic librarianship courses examined, it is not possible to develop all the necessary instructional skills in a single course of this nature. In addition, more general competencies, such as communication skills, collaborative skills, planning skills, and time management skills can and should also be addressed in all LIS courses.

This overview of the research regarding MLS degree programs and their relation to proficiencies for instruction librarians seems to indicate that while there has been a steady increase in the inclusion of subject matter related to the ACRL proficiencies in MLS coursework, the majority of librarians involved in instruction continue to believe that they gained most of their instructional skills outside of their formal education.

IMPACT OF FIRST CAREERS

Several studies described above (e.g. Shonrock & Mulder, 1993, Westbrock & Fabian, 2010) have shown that librarians have continued to rely heavily on on-the-job training and self-teaching in order to acquire the necessary skills for teaching. Less has been written with regard to how a first career outside of the library may have had an impact on a librarian's ability to perform his/her duties, especially in the area of instruction.

Librarianship is a profession that appears to attract a large number of second career professionals. Munde and Coonin (2015) assert that "it is generally accepted that librarians enter the profession later than those of other professions; that is, as a second career, or after raising young children, or leaving work to raise young children and returning later" (p. 614). In an interview in Reference Users Review, Connie Van Fleet, who served as President of the Association of Library Science and Information Education from 2006-2007, concurred that librarianship is still a second career for many individuals and draws from a wide array of professions including law, music, education, business, and retail sales (Zabel, 2007). Likewise, John Berry (2009), editor of Library Journal, refers to these second career librarians as "new refugees" who come from a variety of fields representing such areas as pharmaceuticals, law, dance, philosophy, art, and theater. These professionals bring with them knowledge, experience, technological expertise and a willingness to embrace innovation that can be assets to MLS programs and libraries.

In a survey of academic librarians employed at Association of Research Libraries institutions, as well as librarians belonging to ACRL, Luzius (2006) found that 57% (592) of the respondents indicated that librarianship was their second career. Prior careers for this group, in rank order, included teaching (129 respondents), library assistant work, special librarianship, researcher, secretarial work, sales, military, writing, management, and insurance work.

Whitten and Nozero (1997) investigated the impact of first careers on a small sample of second career academic reference librarians in Nevada. For their study, second career librarians included librarians with a non-library first career, as well those who had previously worked in libraries, either as professional librarians in other positions or as paraprofessionals. (The authors stated that, in the future, they would revisit the inclusion of this latter group in the second career category.) 21 of the 26 respondents were counted as second career librarians; the largest of this group were former teachers, followed by those with prior work experience in business or government. Skills or attributes that were cited as being transferred from prior work experience to the provision of reference services included customer service, ability to work with people, subject expertise, and research, interviewing and teaching skills. Whitten and Nozero noted that even though former teachers comprised the largest group of second career librarians, teaching as a transferable skill was not often mentioned by respondents. It would be interesting to see what the result would be if a larger group of subjects was asked to comment about the transferability of specific skills related to teaching/instruction.

In studying why people change careers in order to become librarians, Deeming and Chelin (2001) determined five key issues from their survey results: 1) drift versus active choice; 2) previous career; 3) context of life as a whole; 4) influence of other people; and 5) nature of work. Of the 21 second career academic librarians who responded to their survey, many "exhibited traits that link to the concept of the 'learning society': they made full use of their existing skills and knowledge, and sought to build on this." Skills that were noted as being transferable included people skills, organizational skills, communication skills, and general life skills. Again, the relatively small size of the sample used must limit the generalizability of these conclusions.

Lambert and Newman (2012) examined why teachers chose librarianship as a second career through a small qualitative study of ten former certified teachers. Academic librarianship was the preference among this group. The authors suggested that this was most likely due to the intellectual challenge, research opportunities, and relatively higher salaries. The respondents indicated that they participated in reference work and used their teaching skills for information literacy instruction. The majority of respondents had also held administrative roles in the schools and these skills assisted them in taking on leadership roles in the library.

While there is not a great deal of literature on the impact of prior careers on second career librarians, it would appear that second career librarians come from a wide range of occupations and that the majority believe that their first careers have provided them with transferable skills that are applicable to librarianship. Further studies in this area, using larger sample sizes, seem justified.

METHODOLOGY

Earlier studies investigating instructional standards and proficiencies have examined how academic librarians have been prepared to teach through their MLS programs, on the job training or self-teaching (Shonrock & Mulder, 1993; Westbrock & Fabian, 2010), but did not address whether some of these proficiencies may also have been acquired through prior work experience. A second group of studies provided information on first career and second career librarians. Several of these have quantified the number of second career librarians and their former occupations (Luzius, 2006), while others have examined why people choose librarianship as a second career (Deeming & Chelin, 2001; Lambert & Newman, 2012). Whitten and Nozero (1997) looked at the impact of prior careers on second career academic reference librarians. However, none of the studies in this latter group specifically addressed academic librarians who provide instruction and the majority elicited mainly qualitative, but not quantitative, information using a relatively small sample size.

This current study was designed to be primarily quantitative in nature and was aimed specifically at reaching a large sample of academic librarians who provide instruction as one of their main job responsibilities with the purpose of 1) determining the degree to which previous work experience (e.g., a "first career") may have had an impact on a librarian's ability to perform the teaching responsibilities of his/her position and 2) examining the extent to which the MLS degree has prepared academic librarians in the area of instruction. Prior to conducting this study, the author received approval from the Institutional Review Board (IRB) at her university. Additionally, the IRB required the author to seek and document permission to post the survey for the study from the library Listservs that would be involved. The statement of purpose described above was included in an email cover letter to academic librarians who provide instruction with a link to an online survey designed using Qualtrics software. In November of 2015, the survey was sent to four library Listservs: ALA Information Literacy Instruction Listserv (ili-l@lists.ala.org), ALA Library Instruction Round-table Listserv (lirt-l@lists.ala.org), ACRL Framework for Information Literacy for Higher Education Listserv (fla.lists@fsu.edu). A follow-up reminder was disseminated two weeks later and the survey was closed at the end of December 2015.

The survey collected the following demographic information: title of current position, age, gender, degrees earned, and number of years of employment as an academic librarian who provides instruction. Respondents were then asked to select one of three statements which best described their path to becoming an academic librarian who provides instruction and each statement provided a brief description as follows.

- a) I am a first-career academic librarian who provides instruction. (Typically people in this category consider this their first true career even though they may have had other non-library work experience along the way. Normally these individuals will have chosen their career path early on and don't feel they have changed careers at some point in the past.)
- b) I was employed in another library position before becoming an academic librarian who provides instruction. (Typically people in this category worked in a library setting for some period of time before becoming an academic librarian who provides instruction. This includes any level of paid employment in any type of library, but does not include internships or graduate assistantships.) Based on Whitten and Nozero's (1997) earlier research, it was decided to create a separate category for this group instead of including them in the second career category below.
- c) I had a first career(s) in a non-library field before becoming an academic librarian who provides instruction. (Typically people in this category feel that they had at least one other career before switching their career path to becoming an academic librarian who provides instruction.)

Those respondents who selected statement "c" above, meaning they had a first career in a non-library field, were then asked to identify one of 16 general areas that best or most closely matched their first career. These career categories are recognized by the Office of Career, Technical, and Adult Education and the National Association for State Directors of Career Technical Education Consortium (Perkins Collaborative Research Network, PCRN, n.d.). An option to write in a specific job title or brief description was also provided. (If respondents had more than one prior career, they were asked to select the one with the longest duration.)

- · Agriculture, food & natural resources
- Architecture & construction
- · Arts, audio/video technology & communications
- Business, management & administration
- Education & training
- Finance
- Government & public administration
- Health science
- Hospitality & tourism
- Human services
- Information technology
- Law, public safety, corrections & security
- Manufacturing
- · Marketing, sales & service
- Science, technology, engineering & mathematics
- Transportation, distribution & logistics.

All respondents were then asked to what extent their MLS degree program, including related internships and graduate assistantships, had provided them with the 12 categories of skills described in the *Standards for Proficiencies for Instruction Librarians and Coordinators* adopted by ACRL in 2007. These standards, which superseded the 1985 ACRL *Core and Advanced Competencies for Library Instructors & Coordinator*, were developed to create a "common definition for the scope of responsibilities for instruction librarians and coordinators of instruction programs" and are intended to be applicable to any librarian with teaching responsibilities (Association of College and Research Libraries, ACRL, 2007). The skill categories were listed in alphabetical order in the survey and, in some cases, included examples to add clarification:

- Administrative skills
- · Assessment and evaluation skills
- Communication skills
- Curriculum knowledge (e.g., general education programs, college majors/minors, course offerings, IL assignments)
- Information literacy integration skills (e.g., collaboration with faculty and administration)
- Instructional design skills (e.g., determining need, learning outcomes, activities, etc.)
- Leadership skills
- Planning skills
- Presentation skills
- Promotion/marketing skills
- Subject expertise
- Teaching skills.

For this question a five point response scale was employed ranging from 1) not at all, 2) to a small extent, 3) to a moderate extent, 4) to a great extent, and 5) to a very great extent.

Using the same format as the question above and the same five point scale, respondents were then asked to indicate to what extent their work experience, prior to becoming an academic librarian who provides instruction, had equipped them with the 12 categories of skills from the aforementioned standards. (In this case they were asked to exclude internships and graduate assistantships related to the MLS degree as this was included in the previous question.) The last question on the survey was open-ended and asked respondents to provide any additional comments that they felt should be considered in regard to their preparation for a position as an academic librarian who provides instruction. The data was analyzed using various report options in the Qualtrics survey software.

RESULTS AND DISCUSSION

DEMOGRAPHICS

Data analysis was based on responses from 608 surveys with 172 in the first career subgroup (FC), 178 in previous library work subgroup (PLW), and 258 in the second career subgroup (SC). The following results were found in the demographic section of the survey.

Of the 595 respondents who provided their job title, the most frequently listed job titles included the words "reference" and "instruction" (76), followed by titles with the word "reference" alone (45), and titles with a form of the word "instruction" as well as other descriptors (63). 43 of the respondents listed a title containing the word "research" and many of these included the words "research and instruction." The term "information literacy" was found in 39 job titles. The titles above comprise 266 responses, meaning that 329 respondents listed titles other than those already mentioned. This latter group included a variety of titles such as public services, distance/online/elearning, and subject area librarians, as well as several administrative titles including dean, director, head, and coordinator. The diversity of titles for academic librarians who provide instruction (hereafter referred to as ALPI), illustrates the wide range of personnel employed in academic libraries who are involved in teaching.

With regard to age, 43% of the respondents were between ages 20 and 39 and 57% were above age 40. This differed somewhat within the subgroups with 66% of the FC subgroup below age 40, 43% of the PLW subgroup below age 40, and only 28% of the SC subgroup below age 40. The breakdown for gender was 86% female and 14% male and this female to male ratio was essentially the same in each of the three subgroups.

99% of the respondents indicated having an MLS degree or equivalent, 34% also had a non-library master's degree, and 6% had doctorates. The percentage of doctorates was highest in the SC subgroup (9%), lowest in the FC subgroup (1%), and intermediate in the PLW subgroup (5%). With respect to non-library master's degrees, the FC subgroup (27%) and the PLW subgroup (26%) were basically equivalent, while the SC subgroup had the highest percentage (45%).

Regarding years employed as an ALPI, over two thirds (68%) have been in this position ten years or less. Specifically, 41% have one to five years of experience, 27% have six to ten years of experience, 13% have eleven to fifteen years of experience, 9% have sixteen to twenty years of experience, with 10% percent having twenty or more years of experience. This pattern was basically similar in each subgroup.

The following demographic information was only requested from the SC subgroup in which they were asked to select one of 16 general career categories that most closely matched their first career. By far, the highest career category was Education & Training with 45% of the 258 SC respondents indicating this area. This was followed by arts, audio video technology, & communications (8%), business management & administration (8%), marketing, sales & service (8%), and government & public administration (5%). All other career categories were at 4% or less.

COMPARING THE IMPACT OF MLS VS. PRIOR WORK EXPERIENCE ON INSTRUCTIONAL SKILLS

The next section of the survey asked respondents to consider the 12 categories of skills in the ACRL Standards for Proficiencies for Instruction Librarians and Coordinators as they related to their MLS degree and, in a separate question, to their prior work experience. Respondents were

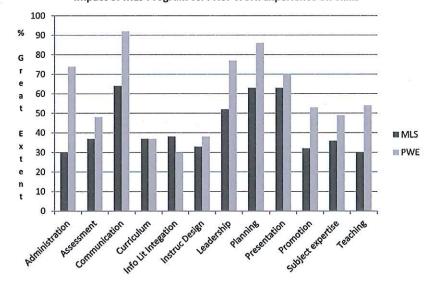
asked to indicate to what extent their MLS degree (or prior work experience) prepared them in these skills. While the five response choices were 1) not at all, 2) to a small extent, 3) to a moderate extent, 4) to a great extent, or 5) to a very great extent, for ease of comparison and discussion, and to permit a more simple statistical analysis, the first two response choices were combined into a single category (hereafter referred to as "small extent"), and the last three categories were combined into a single category (hereafter referred to as "great extent"). Since the number of subjects differed between subgroups, the percentage of respondents, rather than the number of respondents choosing the "great extent" category, was calculated and will be used in any graphs, tables, or further discussion.

Overall, respondents selected the "great extent" category 50.96% of the time, but this differed substantially depending on whether they were being asked about the influence of their MLS degree program on their skills (42.92%) or about the influence of their prior work experience on their skills (59.00%). Therefore, these respondents indicated that their prior work experience influenced their overall skills as an ALPI to a "great extent" more often than did their MLS training.

When looking at each skill category individually and for all three subgroups combined, this same pattern held up in 10 of the 12 categories (see Fig. 1). The only two exceptions to this were the categories of information literacy integration skills (in which the MLS program did seem to have somewhat more of a beneficial effect than prior work experience) and curriculum knowledge (in which the benefits of MLS education and prior work experience were rated as equivalent). In all other skill categories, respondents indicated that their prior work experience provided greater preparation than their MLS degree program. This effect was numerically most evident in the categories of administrative skills, followed by communication skills, leadership skills, teaching skills, planning skills, and promotion skills, but the same pattern could also be seen, albeit to a lesser degree, in assessment skills, presentation skills, instructional design skills, and subject expertise.

COMPARING THE IMPACT OF MLS VS. PRIOR WORK EXPERIENCE BASED ON SUBGROUPS

It seems reasonable that this pattern of greater impact from prior work experience than from MLS training should only hold true consistently for individuals who had substantial prior work experience before becoming an ALPI, which would encompass the PLW and SC subgroups,



Impact of MLS Program vs. Prior Work Experience on Skills

Fig. 1. Percentage of respondents indicating a "great extent" of impact on specific librarian instructional skills as based upon their MLS program versus prior work experience (PWE). (Scores are collapsed across subgroups.)

but not the FC subgroup. Therefore, the three subgroups (FC, PLW, and SC) were looked at separately in this regard. Table 1 shows the percentage of respondents choosing the "great extent" category when asked about the influence of their MLS education and about the influence of their prior work experience. For the PLW subgroup, in all 12 categories of proficiencies, prior work experience received a higher score than the MLS degree. Similarly, for the SC subgroup, the same pattern held up in 10 of the 12 categories, with curriculum knowledge and information literacy integration skills being the sole exceptions. In order to test whether these results were statistically significant a Sign Test was conducted on the combined PLW and SC subgroups. The results indicated that the impact of prior work experience was rated higher more often than the impact of the MLS degree (x^2 [df = 1] = 16.67, p < .001). This difference was statistically significant. But for the FC subgroup, that same pattern occurred in only five of the categories and was actually reversed in seven of the categories (assessment, curriculum knowledge, information literacy integration, instructional design, presentation, promotion, and subject expertise). This latter result for the FC subgroup was not statistically significant (x^2 [df = 1] = 0.33, p > .05). Taken together, these two results of the Sign Test indicate that a prior career or previous library work experience has a measurable positive effect on equipping ALPIs with the skills necessary to perform their duties and apparently, in the opinion of the respondents, this positive effect is more frequently seen by them as greater than the effect of their MLS education.

ANALYSIS OF THE IMPACT OF THE MLS DEGREE ON SKILLS BASED ON SUBGROUP

Another way to look at this same information is presented in Fig. 2 with each graph representing responses regarding a single skill category. In these graphs the percent "great extent" scores for each of the subgroups (FC, PLW, and SC) are first presented regarding the impact of the MLS degree and then presented for the impact of prior work experience (PWE). Thus, the relative influence of the MLS degree versus prior work experience can be visualized. However, these graphs (and the data they represent) also allow one to ask an additional important question: Do the differences observed visually in these graphs between the FC, PLW, and SC subgroups represent statistically significant differences or could they mostly represent chance fluctuations in responding? In order to answer this question, another statistical analysis was necessary.

This statistical analysis involved the use of the chi-square test for independence for the responses regarding MLS influence and then separately for the responses regarding the influence of prior work experience as applied to each of the 12 skill categories. The question asked was whether there was a significant relationship between the

Table 1	
Comparison of impact of MLS degree vs. prior work experience (PWE) based on subgroup	i

Skill categories	First career		Previous library work		Second career	
	MLS	PWE	MLS	PWE	MLS	PWE
Administrative	30	57	31	78	30	82
Assessment	39	25	33	43	38	65
Communication	73	87	64	92	59	94
Curriculum	38	28	28	41	42	40
Info lit integration	39	20	29	37	43	32
Instructional design	41	26	27	33	33	49
Leadership	59	64	51	79	48	83
Planning	70	77	61	83	60	92
Presentation	64	53	62	71	64	79
Promotion/marketing	40	39	31	61	27	56
Subject expertise	36	28	32	44	38	64
Teaching	41	43	20	50	31	63

Note: Scores indicate percent "great extent" of impact on respective skill.

Numbers in bold indicate higher percent of impact (MLS vs. PWE) within each subgroup.

type of subgroup and the number of individuals choosing the "great extent" response versus the "small extent" response. Since a large number (24) of chi-square tests would need to be conducted, a more stringent criterion of significance (alpha = .01) was chosen to guard against potential false positives for statistical significance (i.e., Type 1 errors). When the chi-square was significant (meaning that a result did not simply happen by chance), a Cramer's Phi test was run to determine the strength of any relationships found. A Cramer's Phi value close to .30 or above is typically considered to be a moderately strong effect.

Regarding how the respondents rated the extent of the effect of their MLS degree education on each of the 12 categories of skills, no significant differences were found between subgroups FC, PLW, and SC for 11 of the 12 categories (see Table 2). This was as expected. What this result means is that regardless of their prior work background, the respondents all rated the beneficial influence of their MLS training about equally. The sole exception to this finding was the category of teaching skills in which significant differences between the three subgroups were noted (chi-square = 16.96; p < .001). The reason for this finding is not immediately obvious. The FC subgroup rated the benefits of their MLS program on their teaching skills more favorably than did the PLW and SC subgroups. This could simply be a statistical fluke or perhaps it suggests something about the nature of the MLS curriculum experienced by the FC subgroup as compared to the PLW and SC subgroups. For example, it is possible that respondents in the FC subgroup completed their MLS degree more recently than respondents in the other two subgroups. As previously mentioned in the literature review (Walter, 2008), there has been an increase in the inclusion of instruction/teaching skills in the MLS curriculum in recent years. The demographic results did indicate that the average age of the FC subgroup as a whole was below that of the other groups, but this does not necessarily mean they earned their MLS degree more recently. Unfortunately, this survey did not collect data on the specific date an individual earned his/her MLS degree so such an explanation for this result must remain speculative for the time being.

The findings most relevant to this study, however, focused on the responses of the three subgroups when asked to rate the impact of their prior work experience. In contrast to the results regarding the MLS degree (where almost no significant differences between subgroups were found) statistical analyses regarding the effect of prior work experience indicated significant differences in 11 of the 12 skill categories and the direction of the effect was the same in all cases (see Table 3). Those who had prior work experience (subgroups PLW and SC) consistently indicated significantly greater benefits from their prior careers than the FC subgroup which had a much more limited work history. Additionally, in nine of the twelve skill categories the SC subgroup had the highest scores followed by the PLW subgroup. In three categories (curriculum design, information literacy integration skills, and promotion skills) the PLW subgroup outscored the SC subgroup. But in all cases, the FC subgroup indicated the lowest scores with the least positive impact of prior work experience. (Note that this was essentially the opposite of the pattern of results for the previous MLS degree question in which the FC subgroup had the lowest scores in only one of the 12 skill categories.) The one case in which the differences were not statistically significant was the communication skill category. The direction of the findings was, however, as expected, with SC scoring highest (94%), followed by PLW (92%), followed by FC (87%). These very high scores (the highest for any skill category) may have contributed to a ceiling effect which may have precluded demonstrating statistically significant differences between the groups.

Overall then, the results of the chi-square analysis clearly demonstrate that, in the opinion of the respondents, prior work experience, be it in the library itself or in a separate non-library career, does provide significant relevant skill set benefits for individuals seeking a position as an ALPI.

A Cramer's Phi test was run following the significant chi-square test results in order to determine the relative strength of the



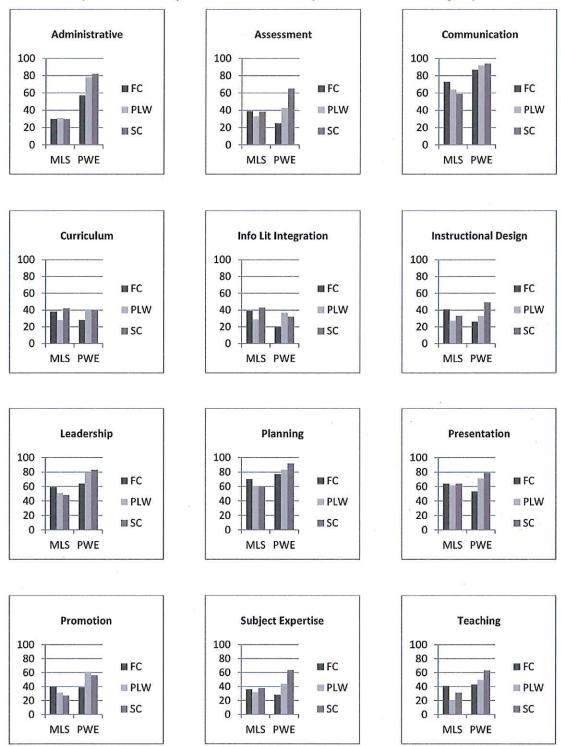


Fig. 2. Percentage of respondents indicating a "great extent" of impact on specific librarian instructional skills based upon their MLS or prior work experience (PWE) according to subgroup (PC = first career; PLW = previous library work; SC = second career).

relationships between the extent of impact ratings and the prior work history for each subgroup (FC, PLW, SC) for each skill category (see Table 3). The strongest relationships were seen in the cases of Assessment Skills followed by Subject Expertise. (Phi coefficients of .30 and above indicate moderately strong relationships in which there are relatively few exceptions to the pattern of the relationship.) The next strongest relationships were on the borderline between weak and moderate in strength (with Phi coefficients between .20 and .29). In descending order of strength these were administrative skills, curriculum knowledge, presentation skills,

Table 2 Impact of MLS program on librarian instructional skill categories: means (percent great extent) and statistical results.

Skill categories	FC	PLW	SC	Chi-square	p value	Cramer's Phi
Administrative	30	31	30	.06	NS	.01
Assessment	39	33	38	2.35	NS	.06
Communication	73	64	59	8.66	NS	.12
Curriculum	38	28	42	8.51	NS	.12
Info lit integration	39	29	43	8.43	NS	.12
Instructional design	41	27	33	8.40	NS	.12
Leadership	59	51	48	5.51	NS	.10
Planning	70	61	60	5.04	NS	.09
Presentation	64	62	64	.33	NS	.02
Promotion/marketing	40	31	27	7.34	NS	.11
Subject expertise	36	32	38	1.21	NS	.05
Teaching	41	20	31	16.96	**	.17

Note: df = 2 in all cases; N.S. = >.01; * = p \leq .01; ** = p \leq .001 FC = first career; PLW = previous library work; SC = second career

instructional design skills and leadership skills. Slightly weaker in strength were the relationships regarding teaching skills, planning skills, promotion skills, and information literacy integration skills. (The communications skill relationship did not yield a statistically significant chi-square result, as discussed earlier.)

It might have been expected to find these results of the Cramer's Phi test, given the heterogeneous nature of the backgrounds of the respondents in this survey. Nearly half of the respondents were in the second career subgroup and came to this study with a wide variety of prior work experiences as indicated by them in the survey. The other two subgroups (previous library work and first career) may have been somewhat more homogeneous, but also undoubtedly had substantial variation in their prior work histories. Given this variability of background, it should be expected that there would be similar variability when asking whether a specific individual's work history (e.g., in retail sales) prepared that person with, for example, curriculum knowledge, needed in their current position as an ALPI. Such variability would naturally decrease the consistency (and strength) of the relationship being measured, resulting in, at best, only weak to moderately strong relationships indicated by the Cramer's Phi analysis. If a future study could be run using a more homogeneous sample (e.g., including only those whose prior career involved a background in teaching), one might expect to see stronger relationships in some skill categories (e.g., teaching skills or curriculum knowledge) and perhaps less strength in other skill categories (e.g., administrative skills or promotion skills).

Table 3	
Impact of prior work experience on librarian instructional skill categories: means (percent	
great extent) and statistical results.	

Skill categories	FC	PLW	SC	Chi-square	p value	Cramer's Phi
Administrative	57	78	82	32,49	**	.24
Assessment	25	43	65	64.06	**	.34
Communication	87	92	94	6.19	N.S.	.11
Curriculum	28	41	40	32,57	**	.24
Info lit integration	20	37	32	12.37	•	.15
Instructional design	26	33	49	23.40	**	.20
Leadership	64	79	83	22.61	**	.20
Planning	77	83	92	18.44	**	.18
Presentation	53	71	79	30.13	**	.23
Promotion/marketing	39	61	56	16.86	**	.17
Subject expertise	28	44	64	42.11	**	.30
Teaching	43	50	63	17.26	**	.18

FC = first career; PLW = previous library work; SC = second career

Note: df = 2 in all cases; N.S. = >.01; $* = p \le .01$; $** = p \le .001$

QUALITATIVE RESPONSES

The final open-ended question in the survey asked the librarians to make any additional comments regarding the training of ALPIs. Many respondents cited specific instances in which skills learned in a previous career aided them in their role as an ALPI.

By far, the greatest number of examples of transferable instructional skills was provided by former teachers in such areas as English, philosophy, and history, as well as by former public school librarians. One respondent remarked that, "Prior teaching experience in a subject discipline (first-year writing) made the transition quite easy... my first career was crucial." A former college English teacher said, "I have years of experience designing and assessing student work, whether exercises, tests, group activities, or research papers." A similar sentiment was expressed by a high school history teacher who said "teaching information literacy and developing a library instruction program would have been much harder without that first degree and experience in education." Public school librarians also remarked about their ability to employ transferable instructional skills (e.g. curriculum design, instructional design, presentation, assessment, and classroom management) once they became ALPIs: "I worked as a public school librarian (elementary school level) ... much of what I did in the public school environment transferred to the higher education environment, particularly lesson planning and design and presentation skills."

Careers outside of education have also provided librarians with useful skills for teaching. As one librarian noted, experience in the corporate world can help one to "think on one's feet," "adapt to new conditions," and "communicate" in verbal and written forms. Communication, along with presentation skills, was also mentioned by several librarians who were formerly in such diverse areas as sales, marketing, and performing arts. Retail sales and restaurant settings provided one librarian with "excellent skills in customer service, marketing, and media literacy." A former copy editor remarked that this type of work "has a lot of interesting overlap with being a public services academic librarian. Fact checking requires information literacy skills... because they prepared me to think about where information comes from and its credibility."

Other comments in the open-ended response section of the survey pertaining to the MLS curriculum, on the job training, professional development, and the benefits of non-library degrees also appeared to support the findings of previous studies (Albrecht & Baron, 2002; Shonrock & Mulder, 1993; Westbrock & Fabian, 2010). In general, a large portion of librarians in all three subgroups commented on the absence of coursework related to preparation for instruction in their MLS programs. ("instruction is the one area where my MLS program was really lacking"). In many cases, for those programs that did offer instructional content in the curriculum, these courses were electives and not offered on a regular basis; as one librarian stated, "my MLS program offered an information literacy course which was not required for graduation, and not offered every semester. I didn't take this course for scheduling reasons, although I wanted to." However, there were a smaller number of comments indicating that some MLS programs did provide a good foundation in how to be an effective instructor and several librarians pointed to graduate assistantships and internships as being very helpful in this area: "My graduate program included many instruction specific courses and opportunities to teach - without those, it would not have prepared me for the classroom." Many of the respondents recommended that a course on teaching be offered on a regular basis and be required of all librarians regardless of their focus in librarianship: "I understand that not all library programs are created equal, but there should be at least one required course on information literacy instruction." Others went further and suggested that there should be several courses related to teaching that would include the topics of instructional design (backwards design), assessment, learning theory, psychology of learning, emerging instructional technologies, active learning, and collaborating with faculty.

In addition, several respondents remarked that they were not aware that teaching might be a likely possibility as they moved into academic librarianship and that this is a point that needs to be emphasized in library school. ("When I attended school for my library degree, I did not see the need for a course related to library instruction... yikes, what a mistake, much of what we do is to instruct.") On the other hand, several librarians remarked that one could not and should not expect to learn all there is about teaching in a two-year graduate program and that one must "learn by doing." ("I don't blame library school for not preparing me to be a great instructor and think that we as librarians often have very unrealistic expectations about how much a 36 credit master's degree can prepare one for the many challenges one will encounter over the course of a career and then end up bitterly complaining about the failures of library school.") These types of statements were tempered by those who believed that MLS programs should, at the very least, provide a solid foundation in pedagogy: "I definitely believe MLIS programs could stand to provide more instructional design and learning theory education as well as a better understanding of the communication skills needed in an actual working environment."

On the job training was cited over and over again as the means by which librarians were able to hone their skills as teachers with comments such as "my library school didn't provide any courses on teaching or instructional design. I wish it had; I learned everything on my own or on the job" and "my MLS classes gave me theory and some familiarity with the profession but I truly feel I learned on the job." Several librarians mentioned observation of colleagues and working with mentors to be a very important part of on the job training: "I learned almost everything about teaching, information literacy, instructional design, etc. from an instruction librarian who mentored me when I got my first professional position in a library."

The importance of professional development and opportunities for continuing education, in the form of attending conferences, webinars, workshops, and academic teaching and learning seminars, as well as reading books and articles, was also emphasized by a number of the respondents. Several praised their participation in the ACRL Immersion program as being particularly beneficial: "experience, conferences, research, and the ACRL Immersion program helped me develop my teaching skills." Another librarian learned how to teach in a post graduate course in instructional communication stating, "it is critical that librarians seek out continued education to build these skills."

It is interesting to note that several librarians commented on the instructional skills they had gained through non-library bachelor's, master's, and doctoral degrees, although some did not necessarily pursue a career in that particular field of study. One would expect that a degree in education would be at the top of the list in this group, but other areas such as English, communications, educational psychology, sociology, and philosophy were also mentioned. ("When I worked on my second master's degree, I taught credit courses in literature and writing. This was really good preparation for teaching library instruction and working with undergraduates!" and "I was a graduate teaching assistant teaching my own course for two years while getting my PhD in sociology... this experience gave me first-hand insight into the information literacy needs of students...") In most cases, required internships and teaching assistantships in these programs provided these respondents with noteworthy teaching experience and this is an area that might be worth further investigation.

LIMITATIONS

While this study had a number of strengths, it also had some limitations that need to be considered when determining the validity of any conclusions that may be drawn from it,

The sample for this study was a convenience sample and not a random sample based on the way the survey was distributed using email requests to Listservs. Because the basic purpose of the study (to examine the impact of an earlier career on the skills of ALPIs) was described in the email, it likely attracted librarians who would be interested in this topic and may have led to a higher percentage of librarians with a former career responding to the survey. Fortunately, a fairly large number of individuals who did not have a prior career also responded to the survey providing a useful comparison group.

In the demographic section of the survey, in an attempt to maintain the respondents' anonymity, a number of questions regarding personal identifying information were not included such as specific library school or current place of employment. However, as mentioned earlier, it would have been helpful to ask for the date that respondents received their MLS degree in order to see if the curriculum, as far as the inclusion of instructional content, changed over time.

In designing the survey, it was difficult to describe various career pathways in a limited number of categories. Some guidelines were provided and respondents were asked to select one of three possible scenarios that best matched their work history. However, from the comments received, it became clear that some of the respondents did not find this an easy task. There may been some issues regarding respondents' interpretations of some of the terms used in the survey. Thus, for example, the term "career" was not extensively defined because it was felt that no matter how specific the stated parameters, no single definition could encompass all possible situations. For example, two people with the same work history may think, in one case, that they have had a first career while the other may see it as "only a temporary job." Also the survey did not ask respondents to differentiate between career training/education and actual employment in that career. In other words, if someone earned an M. Ed but was never employed as a teacher, would that count as a career in teaching? Additionally, respondents were asked to include their library school internships and graduate assistantships when responding to the MLS degree preparation question (but not the work experience question); however, some respondents may not have followed these directions as seems to be indicated by a few of the comments. Skill categories were open to interpretation as well, and although examples were provided for three of the categories, there was no extensive description given for the other nine categories. Additionally it may have been useful to include an open-ended question for second career librarians asking them to describe specific transferable instructional skills from their first career. Fortunately, some of these individuals did provide a number of examples of this nature in the open-ended question at the end of the survey.

Finally, there were some limitations regarding the statistical analysis of some of the data. When using frequency data, only a limited number of types of statistical analysis are appropriate. The chi-square technique was chosen for this purpose. However, one of the requirements of that technique is that expected frequencies in the categories need to be greater than 5. Unfortunate-ly, only a small number of respondents chose the category "very great extent" in a number of instances making it impossible to meet this requirement. For this reason, it was necessary to combine the five response choices into two dichotomous categories ("small extent/not at all" versus "moderate, great, or very great extent").

Another requirement of the chi-square technique is that responses must be independent of each other. This requirement was met when comparing the subgroups to one another on each separate measure (looking at the MLS influence or the work experience influence separately), but would not be met if we were to attempt to directly compare a subgroup's MLS degree responses to that same subgroup's work experience responses. What this means is that even though the comparison of the relative influence of the MLS degree versus prior work experience on the librarians' instructional skills seems quite apparent numerically in Table 1, it cannot be claimed that those differences are statistically significant (except insofar as the Sign Test analysis indicated that it would be highly unlikely for this pattern of results to occur strictly by chance). It can, however, be claimed that the differences between the subgroups (the first career subgroup versus the other two subgroups) were both numerically and statistically demonstrated when focusing on the impact of prior work experience (but not when examining the impact of the MLS degree) and this comparison was the main purpose of the current study. These results therefore do clearly support the hypotheses stated in the introduction, that extensive prior work experience (i.e., a prior career) would lead to higher ratings of instructional skill preparedness compared to those without such experience.

RECOMMENDATIONS FOR FURTHER RESEARCH

The present study examined respondents' opinions of the role of both their MLS education as well as their prior work experiences as to how those factors prepared them with the skills needed for a career as an ALPI. It seemed clear that the MLS education did not often appear to provide a high level of preparation for instruction in a number of areas. At the same time, the results indicated that a prior career could significantly influence the level of preparation for instruction in several areas.

A report from the National Center for Education Statistics revealed that in fiscal year 2000, academic libraries made 432,000 presentations to groups, serving 7.5 million individuals (Carey, Justh, & Williams, 2003); by fiscal year 2010, these numbers had increased to 520,122 and 9,656,402 respectively (Phan, Hardesty, Hug, & Sheckells, 2011). Given the fact that the number of presentations by librarians has continued to steadily grow in recent years, it is important that the librarians are well prepared with the skills necessary to adequately provide instruction.

While earlier studies (Shonrock & Mulder, 1993; Westbrock & Fabian, 2010) focused on the influence of MLS degree programs, on the job training, and professional development in acquiring the needed skills, the current study added a new component of prior work history which also deserves to be considered. Continuing to determine where librarians learned their instructional skills, whether during their education, prior work experience, on-the-job, or through professional development will be worth the effort. A follow up study should include a direct comparison of these four categories asking respondents to give a numerical weighting (perhaps on a scale of 0 to 100) indicating to what extent each of those categories contributed to their current proficiency for each specific skill set. While the current study has given us indications of where weaknesses are most evident, this more direct comparison would provide a more precise picture, perhaps even suggesting specific ways to alleviate these weaknesses.

It should be noted that the ACRL Instruction Section Revision Task Force is currently working on a revision of the *Standards for Proficiencies for Instruction Librarians and Coordinators*. The new format will include the roles of advocate, coordinator, learner, teaching partner, instructional designer, leader, and teacher and each role will contain a description of related strengths (Harrington, 2015). It would be interesting to examine how these strengths compare to the former proficiencies utilized in the current study. It was noted in the present study that there were considerable differences in the respondents' evaluation of how prepared they were with certain specific skills and it will be important to relate these findings to this new system when designing further studies. In this regard, it is also important to note that the data collected in the present study was subjective in nature, based on the opinions of the respondents as to how their prior work experiences and educational history enhanced their current skills as instructional librarians. While these opinions are of course important it would be valuable to support these results with objective evidence as well. Perhaps in future studies, it might be possible to create an evaluation instrument that these librarians would distribute to either their students or to colleagues who observe their teaching. This might be difficult to do, but might be worth the effort in providing an objective measure of the respondent's skill level.

CONCLUSIONS

The results of this study appear to be in agreement with many of the findings of previous research. From the outset, it is clear from the high number of responses to this voluntary survey that the preparation of academic librarians who provide instruction is an area of interest and possible concern to a large number of librarians. In agreement with previous studies (Shonrock & Mulder, 1993; Westbrock & Fabian, 2010), the majority of the respondents in the present study did not feel that their MLS degree program provided them with even a moderate extent of instructional skill preparation in most areas; these included administrative skills, assessment skills, curriculum knowledge, information literacy integration skills, instructional design skills, promotion skills, subject expertise, and teaching skills (see Fig. 1). Previous research has already shown that these skills may be supplemented by either on the job training and/or professional development. Many of the comments made by respondents in the current study supported these same findings. What the current study has added to this picture is the understanding of the importance of the role of prior work history as seen by those with previous non-instructional library work experience (PLW subgroup) or those with prior careers in a non-library field (SC subgroup). When directly compared to a comparison/control group of individuals who did not have a substantial prior career (FC subgroup), these respondents made it clear that, in their opinion, their prior work experiences provided a significant advantage in their role as academic librarians who provide instruction. This finding was statistically significant for every skill category that was being examined, save one, communication. But even in that instance, the SC and PLW subgroups also indicated a numerically higher degree of preparation than the FC group (see Table 3).

An interesting question to ask next would be to determine what factors (MLS education, on the job training, professional development, or prior work experience) have the greatest influence in preparing academics librarians for their role as instructors. The results of the current study suggest that in at least 10 of the 12 skill categories of the ACRL standards, prior work experience may indeed have a greater impact than the MLS education. While this finding was based on numerical comparisons, rather than statistical test results, the consistency of the pattern of these findings provides reasonably convincing evidence (see Table 1). However, as alluded to under recommendations for future research, it would be preferable to directly compare all possible factors in a single study so that their relative importance and their specific value could be determined.

The future of the MLS degree and the components of the curriculum continue to receive attention in the literature. A report focused on reenvisioning the MLS degree, published by the College of Information Studies at the University of Maryland, includes "the ability to facilitate learning and education either through direct instruction or other interactions" as one of 11 core competencies for future information professionals (Bertot, Sarin, & Percell, 2015).

It is hoped that the information provided in the current study and by future studies such as those that have been recommended in this paper will inform this process by indicating which skills are essential to be included in MLYMPLS degree programs and which skills can be acquired through other avenues. In addition, those in a position to make decisions about hiring should be cognizant of the benefits of transferable skills gained through prior work experience and provide opportunities for potential employees to explain how the skills they have acquired from a prior career match those needed in the position to which they are applying. It is only by taking into account all the factors that play a part in developing a librarian's expertise in teaching that we can ensure the highest quality of information literacy instruction for all students.

ACKNOWLEDGMENTS

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Appendix A. Survey of Academic Librarians Who Provide Instruction

Q1 You are being asked to participate in a research study to learn more about the preparation of academic librarians who provide library instruction as one of their main job responsibilities. The purpose of this study is to: 1) Determine the degree to which previous work experience (e.g. a "first career") may have had an impact on a librarian's ability to perform the responsibilities of his/her position as an academic librarian who provides instruction and 2) Examine the extent to which the MLS degree has prepared academic librarians in the area of instruction/teaching. Thank you in advance for your participation!

Q2 Please enter the title of your current position:

Q3 Age:

- O 20-29
- O 30-39
- **O** 40-49
- O 50-59
- **O** 60-69
- O 70+
- Q4 Sex:
- O Male
- O Female

Q5 Degrees earned: Check all that apply

- Bachelors
- □ Masters (MLS or equivalent)
- Masters (non-library): Specify subject area ______
- Specialist
- Juris Doctorate
- Doctorate: Specify subject area _____
- Other: Please specify

Q6 How many years have you been employed as an academic librarian who provides instruction?

- O 1-5
- O 6-10
- O 11-15
- O 16-20
- O 21+

Q7 Which of the statements below best describes your path to becoming an academic librarian who provides instruction?

- O I am a first-career academic librarian who provides instruction. Typically people in this category consider this their first true career even though they may have had other (non-library) work experience along the way. Normally these individuals will have chosen their career path early on and don't feel they have changed careers at some point in the past.
- O I was employed in another library position before becoming an academic librarian who provides instruction. Typically people in this category worked in a library setting for some period of time before becoming an academic librarian who provides instruction. This includes any level of paid employment in any type of library, but does not include internships or graduate assistantships.
- O I had a first career(s) in a non-library field before becoming an academic librarian who provides instruction. Typically people in this category feel that they had at least one other career before switching their career path to becoming an academic librarian who provides instruction.

(Skip logic: For those who selected the last response above)

Q8 Indicate the general area below that best or most closely matches your first career and then add a more specific description/title in the text box.

If you have had more than one previous career, please select the one with the longest duration.

- O Agriculture, Food & Natural Resources
- O Architecture & Construction _____

O Arts, Audio/Video Technology & Communications

O Business, Management & Administration _____

- O Education & Training _____
- O Finance _____
- O Government & Public Administration
- O Health Science _____
- O Hospitality & Tourism _____
- O Human Services
- O Information Technology
- O Law, Public Safety, Corrections & Security
- O Manufacturing _____
- O Marketing, Sales & Service
- O Science, Technology, Engineering & Mathematics
- O Transportation, Distribution & Logistics

Q9 To what extent did your MLS degree program (including related internships and graduate assistantships) equip you with the skills* below.

(*The Standards for Proficiencies for Instruction Librarians and Coordinators, ALA 2008.)

	Not at all	To a small extent	To a moderate extent	To a great extent	To a very great extent
Administrative skills	0	0	0	0	0
Assessment and evaluation skills	0	0	•	•	o
Communication skills	o	0	0	0	0
Curriculum knowledge (e.g., general education programs, college majors/minors, course offerings, IL assignments)	0	0	0	0	0
Information literacy integration skills (e.g., collaboration with faculty and administration)	0	0	0	0	o
Instructional design skills (e.g., determining need, learning outcomes, activities, etc.)	0	0	O .	0	o
Leadership skills	0	0	0	0	0
Planning skills	0	0	0	0	0
Presentation skills	0	0	0	0	0
Promotion/Marketing skills	0	0	o	0	o
Subject expertise - List subjects in text box below (if applicable)	0	0	0	0	o
Teaching skills	0	0	0	0	0

Q10 To what extent did your work experiences, prior to becoming an academic librarian who provides instruction, equip you with the skills* below. Do not include internships and graduate assistantships related to your MLS degree. (*The Standards for Proficiencies for Instruction Librarians and Coordinators, ALA 2008.)

	Not at all	To a small extent	To a moderate extent	To a great extent	To a very great extent
Administrative skills	0	0	0	0	0
Assessment and evaluation skills	0	0	•	0	o
Communication skills	0	0	0	о	o
Curriculum knowledge (e.g. general education programs, college majors/minors, course offerings, IL assignments)	0	0	0	0	o
Information literacy integration skills (e.g., collaboration with faculty and administration)	0	0	0	0	o
Instructional design skills (e.g., determining need, learning outcomes, activities, etc.)	0	0	0	0	o
Leadership skills	0	0	0	0	0
Planning skills	. 0	0	0	0	0
Presentation skills	0	0	0	- O	0
Promotion/Marketing skills	0	0	о	0	0
Subject expertise - List subjects in text box below (if applicable).	0	0	0	0	o
Teaching skills	0	0	0	0	0

Q11 Please provide any additional comments that you feel should be considered in regard to your preparation for a position as an academic librarian who provides instruction:

Q12 Click on the right arrow below to submit your survey responses. Thank you!

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Journal of Academic Librarianship

https://www.journals.elsevier.com/the-journal-of-academic-librarianship

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#194

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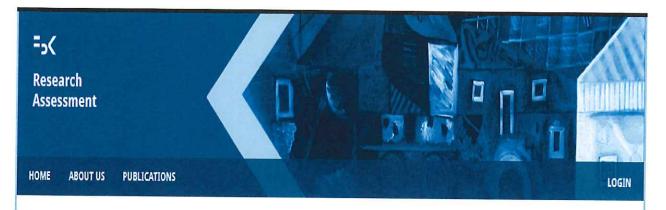
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Home

Journal Citation Ranking and Quartile Scores

Based on Impact Factor (IF) data, the Journal Citation Reports published by Thomson Reuters (see also here) provides yearly rankings of science and social science journals, in the subject categories relevant for the journal (in fact, there may be more than one).

Quartile rankings are therefore derived for each journal in each of its subject categories according to which quartile of the IF distribution the journal occupies for that subject category. Q1 denotes the top 25% of the IF distribution, Q2 for middle-high position (between top 50% and top 25%), Q3 middle-low position (top 75% to top 50%), and Q4 the lowest position (bottom 25% of the IF distribution). For example, the 2009 Impact Factor for the *ACM TRANSACTIONS ON SENSOR NETWORKS* is 1.938. Thus, the journal ranks 32-nd (out of 116 journals, Q2 quartile) in the subject category *COMPUTER SCIENCE, INFORMATION SYSTEMS*, while it ranks 11-th (out of 76 journals, Q1 quartile) in the subject category *TELECOMMUNICATIONS*.

Unfortunately, papers cannot be easily associated to a single ISI subject category (at least, not always), and one has therefore to consider the full range of quartile rankings of the journal. Following this line, a **quartile score** (indeed, a discrete distribution) is associated to any paper published in IF-ranked journals by uniformly distributing a unitary mass over the quartile rankings of the journal

in which the paper was published (for that year). So, for example, papers published in 2009 in the *IEEE TRANSACTIONS ON ROBOTICS* are given a quartile score of [Q1=1, Q2=0, Q3=0, Q4=0], since in the (unique) subject category *ROBOTICS* the journal ranks 2-nd out of 16 journals. On the other hand, a paper published in 2008 in *COMPUTER METHODS AND PROGRAMS IN BIOMEDICINE* would be given a quartile score of [Q1=0, Q2=1/2, Q3=1/4, Q4=1/4], since the journal ranks 41-st out of 94 journals (Q2) in *COMPUTER SCIENCE, INTERDISCIPLINARY APPLICATIONS*, 35-th out of 84 (Q2), in *COMPUTER SCIENCE, THEORY & METHODS*, 40-th out of 52 (Q4) in *ENGINEERING, BIOMEDICAL*, and 14-th out of 20 journals (Q3) in *MEDICAL INFORMATICS*.

Quartile scores can finally be cumulated for all the papers published in a given year, providing synthetic views such those reported here.

IRIS In Evidence (archive) The Team

MENU

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⊐ . kuumat	The Preparation of Academic Librarians Who Provide Instruction: A Comparison of								
Journal Academic Librarianship	First and Second Career Librarians								
	Bryan J								
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Netherlands	25	
South Africa	22	
India	20	~

Jacalyn E. Bryan Associate Professor, Reference & Instruction Librarian Saint Leo University

LIBRARY PUBLICATIONS

Refereed Journal Articles:

- Bryan, J. (2016). The preparation of academic librarians who provide instruction: A comparison of first and second career librarians. *Journal of Academic Librarianship*, 42(4), 340-354.
- Bryan, J. (2014). Critical thinking, information literacy, and quality enhancement plans. *Reference Services Review*, 42(3), 388-402.
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Bryan, J. and Karshmer, E. (Writers/Executive Producers). (2011). *SLU 100 Introduction to Library Resources* [Video recording]. Tampa, FL: Buckshot Productions.

LIBRARY PRESENTATIONS:

National/International:

- "Investigating the Threshold Concept of Format: Creating Instruction Kits to Engage Students." Presentation: Georgia International Conference on Information Literacy, Savannah, GA, September 2015. (Co-presenter E. Karshmer)
- "SCVNGR: An App for Mobile Learning and Instruction." Paned discussion: International Higher Education Teaching & Learning Conference, Anchorage, AK, May-June, 2014. (Co-author E. Karshmer)
- "The Chicken or the Egg: Integrating Information Literacy Concepts into Teacher Education Programs." Roundtable: Association of College & Research Libraries Annual Conference, Indianapolis, IN, April 2013. (Co-authors S. Disabato, E. Karshmer).
- "SCVNGR: Everything Old is New Again." Presentation. Association of College & Research Libraries Annual Conference, Indianapolis, IN, April 2013. (Co-author E. Karshmer).
- "Flipping the Classroom:" Using Innovative Techniques and Videos to Engage Students in Information Literacy Instruction." Panel: International Higher Education Teaching and Learning Conference, Orlando, FL, January 2013. (Co-author E. Karshmer).
- "Assessment in the One-Shot Session: Using Pre-and Post-tests to Measure Innovative Instructional Strategies Among First-year Students." Presentation: Workshop in Library Instruction and Use (WILU), Edmonton, Alberta, Canada, May 2012. (Co-author E. Karshmer)

- "Laugh While You're Learning: Using Humor to Teach Information Literacy." Presentation: International Conference on College Teaching and Learning, Ponte Vedra, FL, April 2012. (Co-author E. Karshmer)
- "Using McREL Strategies to Teach Information Literacy." Roundtable: Association of College & Research Libraries, Philadelphia, April 2011. (Co-authors: S. Disabato and E. Karshmer)
- "Building a First-Year Information Literacy Experience: Integrating Best Practices in Education and ACRL Information Literacy Competency Standards for Higher Education." Poster: Association of College & Research Libraries, Philadelphia, March 2011. (Co-author E. Karshmer)
- "VTT Technology for Library Instruction." Presentation: Association of College & Research Libraries, Seattle, March 2009

State/Regional:

- "Guide on the Side: Creating Innovative and Interactive Tutorials." Poster: Florida Library Association, Daytona, March 2016.
- "Bringing the Frames into Focus: Applying Threshold Concepts in Library Instruction." Presentation: Florida Library Association, Daytona, March 2016. (Co-presenters E. Karshmer, D. Fulkerson, M. Marino, A. Brillat, K. Herm)
- "Thinking 'Inside' the Box: Integrating Threshold Concepts with Activity Kits to Engage Students." Florida Library Webinar: Tampa Bay Library Consortium, November 18, 2015.(Co presenter E. Karshmer)
- "Making the Most of Threshold Concepts Lesson Plans: Ideas for Practical Teaching." Webinar Moderator: Florida Library Association, November 10, 2015.
- "Investigating the Threshold Concept of Format: Creating Instruction Kits to Engage Students." Webinar: Florida Virtual Campus - "Tech Talk," September 21, 2015. (Co-presenter E. Karshmer)
- "Innovation in Instruction: Using Threshold Concepts and Kits to Engage Students," Presentation: Florida Library Association Annual Conference, Orlando, May, 2015. (Co-presenter E. Karshmer)
- "Marketing Library Instruction: On Campus and Beyond." Poster: Florida Library Association, Orlando, May, 2015.
- "Bees, Butterflies, and Beetles: Using Threshold Concepts and Kits to Maximize Instruction Time." Presentation: California Conference on Library Instruction, Sonoma State University, Rohnert Park, CA, April, 2015 (Co-presenter E. Karshmer)
- "Critical Thinking and the Library: Mapping the ACRL Information Literacy Standards to a Quality Enhancement Plan." Paper: First Annual Conference on Decision Making Through Values-Based Critical Thinking, Saint Leo, Fl, May 2014.
- "Assessing our Members' Needs: 2013 FLA Survey Highlights." Poster: Florida Library Association Annual Conference, Orlando, FL, May 2014. (Co-authors A. Koclanes, H. Wagner)

Facilitator for Roundtable Event: Florida Library Association, Orlando, May 2013.

"Engaging Students in Information Literacy: The First Year and Beyond." Panel: Florida Library Association, Orlando, April 2012. (Co-authors: A. Carlin, D. Fulkerson, and E. Karshmer)

- "Technology Petting Zoo: Classroom Jeopardy," Presentation: Florida Library Association, Orlando, May, 2011. (Co-author E. Karshmer)
- "Building a First-Year Information Literacy Experience: Integrating Best Practices in Education and ACRL Information Literacy Competency Standards for Higher Education." Presentation: Georgia Conference on Information Literacy, Savannah, GA, October 2010. (Co-author E. Karshmer)
- "Building a First-Year Information Literacy Experience: Integrating Best Practices in Education and ACRL Information Literacy Competency Standards for Higher Education." Presentation: Florida Library Association, Orlando, April 2010. (Co-author E. Karshmer)
- "Fieldwork in the School of Library and Information Science at USF." Poster: Florida Library Association, Orlando, May 2009. (Co-authors: L. Alexander and C. Moon)
- "Creating a First Semester Information Literacy Experience: What They Really Need to Know." Poster: Florida Library Association, Orlando, May 2009. (Co-author E. Karshmer)
- "Going the Distance, Meeting the Need: Using Video Teaching and Teleconferencing Technology to Enhance Library Instruction Services." Presentation: Florida Library Association, St. Petersburg, FL, April 2008. (Co-author E. Karshmer)
- "Nurturing Future Academic Library Leaders: The LIS Fieldwork Experience from Three Perspectives." Poster: Florida Library Association, St. Petersburg, FL, April 2008. (Co-authors: L. Alexander and C. Moon)

In-Service: (Saint Leo University)

- Inaugural Teaching and Research Colloquium. Presentation: The Preparation of Academic Librarians Who Provide Instruction." Saint Leo, FL, August 2016.
- QEP Residents Workshop: Facilitated discussion of "Prepared to Say No: Mastering the Art of Personal Choice" by Richard E. Cytowic, June 26, 2013.
- QEP Faculty Book Club. Facilitated discussion of *Learning to Think Things Through* by Gerald Nosich. Saint Leo, FL, March 2013.
- "LibGuides." Presentation: Technology Showcase. Saint Leo, FL August 2012.
- "Introduction to Library Resources." Presentation: Tampa Education Center, Tampa, FL, August 2012.
- "Library Resources for Graduate Education." Presentation: Graduate Education Curriculum Conference, Saint Leo, FL August 2012.
- "LibGuides." Presentation: Technology Showcase. Saint Leo, FL August 2012.
- "The Use of Non-linguistic Representations in Information Literacy Instruction for First-Year Students." Presentation: Faculty Idol Competition, Saint Leo, FL, March 2012. (Co-author E. Karshmer)
- "Redesign of the SLU 100 Library Session." Presentation: Forum for Teaching and Learning Leading SoTL Projects. Faculty Development Day, Saint Leo, FL, August 2011. (Co-author E. Karshmer)

Library Services



February 24, 2017

Dear FLA Library Research Award Committee,

It is my pleasure to support Jacalyn Bryan's nomination for the Florida Library Association's Library Research Award. In Bryan's 2016 study, *The Preparation of Academic Librarians Who Provide Instruction: A Comparison of First and Second Career Librarians*, she discusses why good instruction skills are becoming more important for academic librarians. Not surprisingly, most of her survey respondents indicated that the MLS did not adequately prepare them for the instructional role of their position. Instead, on-the-job training and previous career experiences were seen as greater contributors to their development as successful information literacy instructors.

As a subject librarian at an academic library, I found this study extremely informative and timely. I regularly participate in the hiring process at our university, and this study has convinced me that I should acknowledge the rich experiences of second-career librarians and that I should provide interviewees with the opportunities to explain how these skills might transfer to teaching college students. Likewise, librarian-professors at MLS programs, who train the next generation of academic librarians, should be mindful of the instruction skills needed by academic librarians and provide courses (or targeted workshops) devoted to instructional design, peer-review teaching practice, and current learning assessment techniques.

In addition, I found Bryan's research study to be a model for how librarians should conduct research. She conducted a survey with a large sample size (608 librarians) and compared her experimental group (second-career librarians) to the control group (first-career librarians). She also proved statistical significance with Chi-square and Cramer's Phi analysis. Additionally, she examined open-ended questions which provided rich qualitative data that supported the statistical data.

Overall, I found this study to be very unique and it will potentially have a significant impact on how academic libraries hire and train new librarians.

Sincerely,

Digitally signed by Richel Cooke DN: Cm-Bathel Cooke. Co-Horida Guif Coast University.out-Ultrany, cmatherooke@fgcuedu, c-t05 Date: 2017 02:24 09:48:01 - 05:00

Rachel Cooke MA, MLS 2016 FLA Library Research Award Winner University Librarian for Education and Arts Florida Gulf Coast University 239-590-7606, rcooke@fgcu.edu

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February 20, 2017

FLA Library Research Award Committee,

One of the aspects of Ms. Bryan's article that I appreciated was its clear straightforward aim: discovering how academic librarians feel about their preparation to teach, in this case, their ability to deliver library instruction. This discussion echoes a similar issue that other academic classroom teaching faculty might have about their own "training" or background as they are thoroughly immersed in a subject area by the time they earn PhDs in their given areas but not necessarily trained or prepared to teach those subjects along the way.

Using her own personal background as well as her conversations and discussions with colleagues as a starting point and impetus for this study she quickly gets to some pertinent discoveries. Having previously taught dance, she has personally found, and verifies further through her study that attributes such as creativity, improvisation, discipline, instructional design, planning and organization, have already been developed and therefore are more available to her to use in her "second career" as a library instructor. The implications of this are immediately recognizable for not only library directors (those who are responsible for selecting librarians who would be good fits for instruction positions within their libraries), but also for library schools who might do well to pay attention to such factors in their preparation of future academic librarians.

One of the tools that Ms. Bryan used in her study was the ACRL Standards for Proficiencies for Instruction Librarians and Coordinators. This tool not only measured the positive impact on their teaching reported by librarians as far as their previous work experience but it actually also reported how well they felt their MLS programs had prepared them for teaching as well. It's unsurprising to see that many librarians did not feel well prepared by their library school experience to conduct library instruction, which is echoed throughout this article. Communication skill, instructional ability, and planning ability were amongst those looked at as indicators for teaching preparedness, as well as a multitude of other skills broken down to an even finer level.

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Citing several studies, the findings from various examinations of syllabi from information literacy courses were also summarized in Ms. Bryan's research. They indicated that when it comes to preparing to teach a lot of self-teaching and on the job training occurred.

Her article also examines a prominent aspect of the skillset that academic librarians who come to librarianship as a second career bring with them, namely transferrable skills. Using the survey method, a survey was sent out to several library organization listservs: ALA Information Literacy Instruction Listserv (ili-l@lists.ala.org), ALA Library Instruction Roundtable Listserv (lirt-l@lists.ala.org), ACRL Framework for Information Literacy for Higher Education Listserv (acrlframe@lists.ala.org), and the Florida Library Association Listserv (fla.lists@fsu.edu). Looking at twelve categories of skillsets as defined in the *Standards for Proficiencies for Instruction Librarians and Coordinators* adopted by ACRL in 2007, the respondents indicated that their prior work experience influenced their overall skills to a "great extent" more often than did their MLS training. Those same respondents did, however, indicate that their MLS programs did provide them with some benefit as it relates to their ability to teach.

So what does this really tell us? Those who had more significant prior work experience before becoming librarians reported greater beneficial impact when it came to transferable skills acquired. In the survey's open-ended question section, the greatest number of examples of transferable instructional skills was provided by former teachers in such areas as English, philosophy, and history, as well as by former public school librarians. It seems that MLS programs provide some preparation, but not a high level of preparation for teaching.

How does this research benefit the library profession? The obvious answer is that it helps pinpoint key factors that contribute to teaching preparedness, which in turn opens up the possibility of integrating those experiences (and therefore developing the desired skills) into a library school program so that graduates are better prepared to take on teaching responsibilities. If preparing library school students for their teaching assignments is one of the main aims library schools acknowledge and value than greater effort in identifying and incorporating those experiences into their curriculums might be possibly be achieved. It also highlights the importance of transferrable skills to those in positions responsible for hiring librarians in academic librarians. As Ms. Bryan

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recognizes in her conclusion the ultimate aim is that students are given the best information literacy instruction possible.

I think the analysis contained within the research that Ms. Bryan has conducted is clear, sound and well-considered and its conclusions are valuable as a preliminary step in identifying key factors in the development of teaching skills as they related to academic librarianship. The task now would seem to be to further identify and weight exactly what experiences are most crucial and prioritize those for inclusion as a way of developing more effective library school curriculums so that academic librarians are better prepared to deliver the best instructions possible to all the students who deserve their best.

Brent Short

Brent Short

Director of Library Services Saint Leo University

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CANNON MEMORIAL LIBRARY

February 7, 2017



Dear FLA Library Research Award Committee,

University Campus - MC2128 Post Office Box 6665 Saint Leo, FL 33574-6665 Office: (352) 588-8258 Fax: (352) 588-8484

I am pleased to write this letter of support in behalf of Jacalyn Bryan, as she applies for the FLA Library Research Award. Ms. Bryan's research article, "The Preparation of Academic Librarians Who Provide Instruction: A Comparison of First and Second Career Librarians," makes an exceptional impact on librarianship by way of illustrating prior work experience's role in the instruction skill set of librarians. As Ms. Bryan states in her article's conclusion, "it is only by taking into account all the factors that play a part in developing a librarian's expertise in teaching that we can ensure the highest quality of information literacy instruction for all students."

If we are not developing collections or connecting collections to online systems in an academic library, our focus is on teaching research strategies and skills in either a oneon-one format or in a group setting, either online or face-to-face, as well as either synchronously or asynchronously. Students from undergraduate to doctoral level rely on us to teach them how to do research with the tools we purchase and advertise, so they can research for their studies, for their professions, and for their lives as citizens. In analyzing the self-reports of librarians regarding their teaching ability, and in finding that very few teaching proficiencies were taught in MLS curricula, Ms. Bryan's article is a call to action to change MLS curricula at its very root, to include teacher preparation courses. As a second career librarian myself, one who had taught for 10 years before obtaining my MLS, I can attest to the fact that my MLS degree did not prepare me for lesson plans preparation, classroom presentations, and test creation. Thankfully, my first career did prepare me for the philosophy, the discipline, the science, and the art of teaching, considering all of the library instruction and personalized reference service I have provided in my over 15 years as a librarian.

In addition to the article's impact on librarianship, Ms. Bryan's study incorporates a research rigor of the highest caliber; for example, her literature review of studies that have focused on the preparation of librarians in the area of instruction is extremely useful for those who are responsible for the inclusion of content related to the ACRL proficiencies in MLS coursework. The review highlights the studies of the last 20 years of librarians' perceptions regarding their own teaching preparation, as well as the studies of course descriptions/syllabi analyses of library school courses. Ms. Bryan thoroughly looks at the past research and finds "scant research on the impact of prior careers on second career librarians, especially with regard to teaching" and thus fills that gap by conducting her research. With regards to her over 600 survey responses, her research methodology includes both quantitative and qualitative methods. (Prior to sending out her survey, Ms. Bryan sought IRB approval at her university, and she made sure her sample was obtained through a national and state-level library Listserv distribution.) Her statistical analyses involve a chi-square test for independence, for the responses regarding MLS influence versus prior work experience influence, and a Cramer's Phi test to determine the relative strength of the relationships of those influences with the 12 skill categories and the career subgroups.

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Finally, why does the ACRL have proficiency standards if they are not going to be brought to the attention of the MLS degree-seekers? Library and Information Science programs can view Ms. Bryan's work as a positive challenge to look squarely at the graduate curricula of the United States, and, in the near future, to provide substantial opportunities for MLS candidates to develop teaching skills during MLS degree coursework. Until that needed change has been implemented satisfactorily, hiring managers at higher education institutions may need to be even more intentional than ever before about recruiting second career applicants who possess prior careers' transferrable teaching skills and subject backgrounds. Students, who receive instruction from librarians with prior work/teaching experience, will be better educated and better prepared to research and to create new knowledge.

Sincerely,

Carol Ann Moon, M.A., M.A.L.I.S. Professor Reference and Instructional Outreach Librarian