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IMPACTS OF SCHOLARSHIP AND PUBLICATION ON ENTRY-LEVEL
HIRING: PUBLIC SERVICES APPLICANTS IN ACADEMIC LIBRARIES IN
THE UNITED STATES

A Thesis

Presented to

The Faculty of the School of Information

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Master of Library and Information Science

by

James E. Hicks

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IMPACTS OF SCHOLARSHIP AND PUBLICATION ON ENTRY-LEVEL
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ABSTRACT

IMPACTS OF SCHOLARSHIP AND PUBLICATION ON ENTRY-LEVEL
HIRING: PUBLIC SERVICES APPLICANTS IN ACADEMIC LIBRARIES IN
THE UNITED STATES

by James E. Hicks

This study examines the impact of a single knowledge, skill, and ability
(KSA), specifically research and publication experience, on the hiring decisions of
selection committees for entry-level public services academic librarian positions in
the United States. Current library and information science literature contains few
studies focusing on a single KSA factor. For this study, respondents (n=141) from a
selective sample of 382 institutions of higher education completed an online survey in
January and February 2015. The results show that research and publication
experience had a greater impact on hiring decisions at urban research universities with
large full-time equivalent (FTE) student enrollments, and very large FTE library staff.
Forty-five percent of respondents who hired an entry-level public services librarian in
the previous 5-year period encouraged research and publication as a primary or
secondary duty, and 21% felt its impact on hiring decisions had increased over the
previous 10-year period. However, only 14% of respondents categorized research and
publication experience as extremely or very important when making hiring decisions.
A future investigation of the exact sub-skills associated with research and publication
could illustrate how this KSA is currently utilized in the practice of academic
librarianship.

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TABLE OF CONTENTS

LIST OF TABLES

Introduction

The field of academic librarianship in the United States is changing. Academic librarians are taking on an array of roles and responsibilities that require a broad range of knowledge, skills, and abilities (KSAs). Aspiring entry-level public services academic librarians looking to match their skill set to these positions face a challenge. How can Master of Library Science/Master of Library and Information Science (MLS/MLIS) students or recent graduates make themselves attractive candidates for entry-level public services positions at academic libraries, and what KSAs will help them to thrive in such positions? What do selection committees look for in a candidate? Many MLS/MLIS students gain practical experience through internships or paraprofessional work at academic libraries. Are there other ways to gain skills and experience that will be regarded to be of value by selection committees charged with hiring entry-level public services academic librarians? Do certain types of institutions hire more entry-level public services academic librarians? How can prospective academic librarians stand out among a crowded field of applicants? How can library administrators and staff ensure that new academic librarians have skills that match the roles and responsibilities of an evolving field?

The current Library and Information Science (LIS) literature on hiring at academic libraries in the United States has focused largely on examining data that tracks trends in KSAs sought by selection committees at academic libraries. One very popular method for collecting these data has been through content analyses of job advertisements. Studies have examined specific areas of librarianship and specific types of positions; they have generally offered very broad findings across a range of variables (Reser & Schuneman, 1992; Xu, 1995; Beile & Adams, 2000; Starr, 2004;

Sproles & Ratledge, 2004; Grimes & Grimes, 2008; Choi & Rasmussen, 2009; Wang, Tang, & Knight, 2010; Reeves & Hahn, 2010; Wise, Henninger, & Kennan, 2011; Detmering & Sproles, 2012; Tewell, 2012). These content analyses may have suffered from an over-reliance on the written text of job advertisements, which may not always capture the exact on-the-job performance skills required of public services librarians. This methodology has become less viable as more and more advertisements are posted online, necessitating the complicated and time-consuming task of archiving ephemeral online job postings. Case studies and evaluation research studies of single institutions have examined the hiring process in detail but fail to offer generalizable results due to the granular examination of a single transitional program or process (Womack, 1997; Giesecke & McNeil, 1999; Engel, Huang, & Reiss, 2003; Crowe & Jaguszewski, 2010; Brunner, 2010; Carlson & Garritano, 2010; Woodard & Hinchliffe, 2010; Huff-Eibl, Voyles, & Brewer, 2010; Nutefall & Chadwell, 2012; Feldmann, Level, & Liu, 2013). Other studies have used qualitative interviews and focus group studies to add depth to findings on single institutions or small groups of institutions (Fulough, 2010; Hansson & Johannesson, 2013). Surveys, both print and online, have also been used to capture the views of large numbers of librarians, often through open calls for participation posted on listservs and social media websites (Bajjaly, 2005; Wang & Guarria, 2010; Hodge & Spoor, 2012; Simpson, 2013; Berg, Jacobs, & Cornwall, 2013).

Studies of the trends in desired KSAs for academic librarians show the gradual emergence of skills valued by different sectors of academic librarianship (Reser & Schuneman, 1992; Xu, 1995; Beile & Adams, 2000; Starr, 2004; Sproles & Ratledge, 2004; Bajjaly, 2005; Choi & Rasmussen, 2009; Wang & Guarria, 2010; Wang et al.,

2010; Reeves & Hahn, 2010; Nutefall & Chadwell, 2012; Detmering & Sproles, 2012; Tewell, 2012; Feldmann et al., 2013; Berg et al., 2013). Technical skills, communication skills, and interpersonal skills have been growing in importance for decades as academic librarianship has undergone a sharp transformation sparked by technological change, economic pressures, and shifting institutional priorities. A variety of KSAs are also valued beyond these core skills, but studies that intentionally examined individual KSAs are rare (Xu, 1995; Heinrichs & Lim, 2009). Many studies have also failed to link specific types of positions and specific KSAs to institutional characteristics such as the Carnegie classification, geographic region, full-time equivalent (FTE) student enrollment, FTE library staff, and type of community. This may be because case studies and evaluation research studies track the success or failure of a single program or process, and content analyses of job advertisements tend to lose focus when they gather too broad a data set.

The literature also shows an ongoing hybridization of academic librarianship, which demands that academic librarians have diverse skill sets they can use in a variety of work environments. Identifying individual KSAs of increasing value to selection committees or with multiple applications in completing the day-to-day tasks of academic librarianship would be of use to job candidates and selection committees alike. One KSA that has been minimally investigated is the ability to conduct and publish scholarly research. This KSA is occasionally mentioned under the broader heading of professional development activities, but evaluations of its value appear only as peripheral conclusions in studies covering multiple KSAs (Sproles & Ratledge, 2004; Choi & Rasmussen, 2009; Wang & Guarria, 2010; Detmering & Sproles, 2012; Hodge & Spoor, 2012). Conducting and publishing academic research

in a peer-reviewed publication requires many skills that may contribute to the goals of an academic library. Current trends in the academic librarianship as revealed by the LIS literature include increases in scholarly communication initiatives, data-curation efforts, collaborative research projects, and increased expectations for evaluation and assessment of all programs and practices. An academic librarian with the skills gained through conducting and publishing scholarly research would be well suited to these activities. It is possible that the peripheral status of this KSA in the literature may be related to a more service-oriented view of academic librarianship - one that presumes a role for academic librarians below that of other faculty members. No study has exclusively examined research and publication as a KSA and its impact on hiring decisions for entry-level public services academic librarian positions in the United States. Determining where research and publication fits within the evolving roles and responsibilities of public services academic librarians will contribute to understanding current and future trends in academic librarian hiring practices.

This study used a voluntary, anonymous, multiple-choice, online questionnaire to gather data and draw preliminary conclusions on a variety of KSAs while focusing in particular on scholarly research and publication and how it impacts hiring decisions for entry-level public services academic librarian positions in the United States. The questionnaire was distributed to a stratified sample of university administrators and librarians (by Carnegie classification) to measure the responses of selection committee members charged with hiring an entry-level public services academic librarian in the previous 5-year period (January 2010 – January 2015). The data revealed connections between the impact of research and publication experience on hiring decisions and specific categories of universities, types of positions, and

geographic regions. The study also compared and contrasted the impact of various

common KSAs deemed valuable to selection committees. A measurement of the

perceived trend in the value of research and publication experience on hiring

decisions revealed the institutional characteristics that most closely correlate with

valuing this KSA.

The results of this survey confirm that conducting scholarly research and then

navigating the peer-reviewed publication process is of greater value to larger

universities and those universities at the top of the Carnegie classifications list (those

institutions with many PhDs engaged in research activities) than to smaller

baccalaureate colleges at the bottom of the Carnegie classifications list. It is expected

that the value of research and publication experience may be trending upward to

varying degrees in all Carnegie classification categories as public services academic

librarians continue to adopt a variety of new roles and responsibilities. Correlation to

specific geographic regions, types of communities and selection committee member

job types suggests areas worth further exploration. The evolution of the meaning of

the term entry-level in studies of hiring at academic libraries points to the need for

additional investigation of the KSAs expected of prospective academic librarians

entering the job market for the first time.

<div align="center">**Literature Review**</div>

The Traditional Hiring Model

In a series of case studies examining minimum qualifications for academic

librarians, Womack (1997) pointed out that a standard expectation of hiring

committees is that an applicant's KSAs approximately match the job requirements of

the position being offered. This may seem obvious, but successfully matching the job

duties and responsibilities of a specific position to the KSAs of a particular applicant is not always an easy process.

Several authors have contributed practical essays and best practices guides to the hiring process (Birdsall, 1991; Wheeler, Johnson, & Manion, 2008; Choi & Rasmussen, 2009; Defa, 2012). Birdsall's (1991) oft-cited essay intended for use by library administrators and selection committees tasked with hiring at academic libraries laid out 14 key steps for successfully executing and completing the hiring process. One critical step was when a search committee developed a set of selection criteria based on the job requirements as the basis for the creation of a weighted or unweighted scoring instrument to be used in the initial screening process. The applicants' KSAs were compared to the job's required or desired KSAs and some applicants were disqualified due to lack of skills or experience deemed valuable by the committee.

In addition to the collaborative development of the job description and selection criteria by the selection committee, Duran, Garcia and Houdyshell (2009) recommended the development of a rubric to be used in screening applications according to a system of weighted values for required or desired qualifications. In an observational essay from the dual perspectives of a search committee chair and a prospective applicant, Sproles and Detmering (2010) also included the development of a rating system to rank applicant's qualifications as they relate to the requirements in the job ad.

The use of some kind of screening matrix in which evaluation criteria are developed to help rank candidates is consistently noted in the literature (Birdsall, 1991; Womack, 1997; Lehner, 1997; Wheeler et al., 2008; Duran, Garcia &

Houdyshell, 2009; Sproles & Detmering, 2010; Huff-Eibl et al., 2011; Shaffer, 2011).

A weighted scoring instrument, which puts a numerical value on specific KSAs, may

be used to rank candidates before making the choice of who will reach the interview

phase, or a rubric with detailed descriptions of performance expectations may be

compared to a candidate's KSAs as represented in their resume or interview responses

(Brannon & Leuzinger, 2014). Reasons for choosing one method over the other

include the ability to allow for subjectivity among hiring committee members in the

case of rubrics; and to guarantee a more standardized, efficient process in the case of

weighted scoring instruments.

The only study that appeared to challenge the frequency and commonality of

using screening matrices as part of the hiring process was an anonymous online

survey conducted by Wang and Guarria (2010). Only 37% of respondents (selection

committee members) replied that they used a weighted scoring instrument, but the

study was unclear as to what percentage of respondents used some other type of

screening matrix (e.g. rubrics). The percentage of respondents to the survey who used

a screening matrix of any type was unclear.

The LIS literature shows that most hiring committees chose to create a

uniform screening device of some type to assist selection committee members in

identifying the candidate most qualified for the position. Once evaluated and ranked,

the screening phase of the hiring process represented the endpoint for many

candidates who failed to present evidence of a sufficient number of desired KSAs.

Despite general agreement on the steps involved and the importance of

implementing some system for comparing and ranking applicant KSAs as they relate

to the job description, there is some variety in the hiring process sequence. For

example, Harralson (2001) placed the drafting of the job announcement prior to the development of selection criteria for rating and screening applicants in the evaluation stage. In a paper on best practices for hiring in law libraries, Wheeler, et al. (2008) recommended checking references before evaluating or screening applicants. Despite some variation in the exact sequence of the steps, the LIS literature shows general consistency in the steps involved in evaluating and considering the specific KSAs as they relate to the position being filled.

This standard hiring process has been challenged on several fronts. Some authors have taken issue with the lack of focus on the process of creating job descriptions that more accurately match job descriptions to their fundamental duties and responsibilities. For example, Lehner's (1997) main challenge to the traditional hiring model was rooted in the view that search committees failed to develop sufficiently detailed job descriptions as the basis for the creation of valid selection systems for use in evaluating resumes. Lehner argued that the solution was to incorporate genuine job analysis into the hiring process whereby each aspect of a particular position was examined to identify the required job tasks, responsibilities, knowledge, and skills. Lehner argued that completing such a job analysis could result in more accurate job descriptions and more efficient and relevant selection criteria instruments. Wheeler et al. (2008) also advised a review of all responsibilities and duties associated with the position to get a sense of which KSAs would be necessary to succeed at the job.

A similar view on the importance of creating job descriptions based on precise criteria was investigated by Huff-Eibl et al. (2011) in an evaluation study of the University of Arizona Libraries. In 2004-2005 the University of Arizona Libraries

began the process of developing a competency-based model for creating new library job classifications that would lead to the hiring of more highly skilled librarians with up-to-date KSAs. As a part of the development of this competency-based model an extensive selection matrix was created to ensure that the assessment of current employees and the evaluation of future candidates would be consistent, fair, and oriented towards fulfilling the needs of the institution.

These studies reveal a desire by hiring committees to spend more time creating accurate job descriptions with up-to-date KSAs in order to ensure that the candidate selected truly meets the job requirements. This concern with up-to-date KSAs may be tied to the disruption caused by the technological impact of the rapid growth of the Internet; pervasive access to information; simplified, accessible search engines; and mass content digitization. The past 20 years have seen an explosion of technological progress that has required an updated view of what it means to be an academic librarian and what KSAs are required to be one.

Other studies have found that the hiring process is too lengthy, with unnecessary amounts of time and effort devoted to it. Raschke (2003) claimed that traditional hiring models were too slow and uncompetitive. He recommended creating search committees that move expeditiously through the resume review process; flexibility in required qualifications and experience; effective advertising that utilizes the most current technology; and targeted recruiting efforts. Raschke did not offer clear predictions on the impact of a speedier resume review process on the quality of candidates selected, but did suggest that mistakes made by more risk-tolerant, aggressive selection committees would be made up for by the amount of time and resources saved in the long run. Defa (2012) stressed the importance of updating

and streamlining university hiring policies to allow for flexibility and the ability to complete the hiring process in an efficient and timely manner. Defa also mentioned the negative repercussions of making a bad hiring decision as reason for reviewing and updating the hiring process on a regular basis.

Despite its clear impact on hiring timelines, the process described by Raschke (2003) and Defa (2012) does not eliminate the consideration of KSAs generally. An expedited search may actually increase the value of some KSAs over others as the committee decision-making process common to traditional hiring models may decrease the impact of individual selection committee members holding less powerful positions. Which KSAs benefit from an expedited search process would depend on the relative value placed on different KSAs by different types of selection committee members working independently (i.e. library deans/directors, university librarians, heads of service areas, academic librarians).

In order to avoid long delays caused by the creation and implementation of uniform screening devices, which might result in losing top candidates, Raschke (2003) recommended that selection committee members work independently to review and rank resumes. In addition to Raschke's concerns, another potential negative aspect is the possibility of limited effectiveness in measuring actual job performance skills. Gendron (2010) defined job duties as what someone does at their job, and job competencies as the skills, knowledge and behaviors that are evidenced by daily job performance. Job descriptions written for use in job advertisements may represent a top-down view of job duties rather than an insider's view of the job competencies needed to perform well in the position. If a screening device is based on a hastily or poorly written job description, it may not accurately match the KSAs

needed to fulfill the necessary job competencies and it could mistakenly weed out promising candidates before the interview phase. This would negate the effectiveness of using such a device and suggests that it is quite important to focus carefully and precisely on specific KSAs and their relation to the position throughout the process.

Despite some challenges to certain aspects of the traditional hiring model, there remains a desire by selection committees at academic libraries to accurately match candidates' KSAs to the tasks, duties, and responsibilities of the position. The ability to closely match candidates to positions has been achieved through careful job analysis leading to the identification of essential job duties and responsibilities, and the use of screening devices designed to identify promising candidates and to weed out less qualified individuals based on their KSAs.

Core Competencies

Another method for identifying desired KSAs at academic libraries is through reference to core competencies as designated by national, local or institutional committees. According to Giesecke & McNeal (1999), core competencies are essentially just a set of KSAs that allow an individual to succeed at their job. More recently, Gonzalez (2010) defined core competencies as the KSAs, possessed by individuals, that an organization employs to achieve institutional goals and objectives. Fisher (2001) pointed out that organizations really just want to hire competent people no matter how well they may "fit in" with a group of staff members or the organization as a whole. One way an organization can identify who is competent is to identify which core competencies are of value to the organization and find a candidate who matches them. One broad purpose of core competency documents is to assist in this process.

Core competency documents are common among many library organizations and they generally serve to measure the value placed on certain fundamental KSAs by different types of libraries. The Association of Southeastern Research Libraries (ASERL) released *Shaping the Future: ASERL's Competencies for Research Librarians* (2000) to help encourage research libraries to hire qualified staff for research libraries in the United States. The American Library Association (ALA) listed skills and knowledge that MLS/MLIS graduates should possess in its *Core Competencies of Librarianship* (2009). The ALA's Association of College and Research Libraries' (ACRL) document *A Guideline for the Appointment, Promotion and Tenure of Academic Librarians* (2010) presented the minimal KSAs necessary for achieving faculty status as an academic librarian. Finally, though not a US organization, the Canadian Association of Research Libraries (CARL) offered another perspective on academic librarian KSAs in its *Core Competencies for 21st Century CARL Librarians* (2010). In addition to these four documents, many other specialized core competency statements exist for professional organizations in a range of areas related to library and information science (ALA, 2015).

As for specific institutional core competencies, in a systematic survey of Association of Research Libraries (ARL) members, McNeil (2002) found that 25% of the ARL respondents used core competencies to assist in evaluating and hiring library employees. The survey found that these libraries were located at solidly middle-sized and disproportionately state-supported institutions. These core competencies were sometimes created by the institution itself or sometimes blended with national or regional library association core competency documents. These core competencies were "widely viewed as a tool for clarifying common goals for all employees" and

were used for employee assessment, training programs, recruitment, promotions, and retention efforts (McNeil, 2002, p. 8). The significant effort involved in creating core competencies was seen as a reasonable trade-off for gains in these areas.

Whether these documents represent exact measurements of real KSAs of use in today's libraries, or lofty, idealistic visions of where the profession should be headed, they are used as a reference by some administrators and practitioners who serve on selection committees at academic libraries. This means the KSAs that are listed in core competency documents may affect the KSAs that are valued by these selection members. It is important to keep in mind, however, that core competency documents created by national, regional, or specialized library organizations (academic, public, special) may not perfectly match the priorities of an individual institution with its own unique characteristics. In fact, the members of committees who create such core competency documents may be more likely to hold higher positions at academic institutions and may thus create a set of competencies skewed to the needs of their own highly ranked educational institutions. If this is true, the KSAs that receive priority in core competency documents would then favor the needs of institutions with a more active research community.

In his literature review of academic library recruitment from 1990 to 2000 Harralson (2001) stressed that hiring at academic libraries should be done using certifiable and measure standards that will reflect well on the profession at large. This view supports the use of core competencies as guideposts in the hiring process. An example of this is given by Giesecke and McNeil (1999) in their evaluation of the University of Nebraska-Lincoln's transformation into a "learning organization" capable of learning, growing, and adapting to rapid change. They list many core

competencies used not only to recruit staff, but also for performance evaluations and retention efforts. Huff-Eibl et al. (2011) offer a more recent example in their evaluation of the process of moving towards a competency-based hiring and performance management model at the University of Arizona Libraries. This comprehensive effort included new job titles and competency descriptions, the creation of a competency model index, detailed performance goals, and sample interview questions aimed at accurately identifying a prospective employee's competencies as they relate to a position's precise duties and responsibilities. Once an institution identifies such core competencies, they represent a useful framework for describing the KSAs needed to successfully complete the tasks and duties of a given position.

These studies show that the specific KSAs related to a position are identified and ranked by selection committees at academic libraries for use in the screening and hiring process. The question remains as to whether or not scholarly research and publication is considered a valued KSA or core competency at these institutions.

There is some evidence available from both core competency documents and the library and information science (LIS) literature to show an ongoing and consistent desire to encourage and support academic research and publishing of scholarly works as a valued competency for academic librarians. In response to a decrease in the number of students choosing to pursue an MLS degree in the late 1970s and early 1980s, Hudson stressed the need for academic librarians to assume a range of duties and responsibilities more similar to academic faculty members, including a second master's degree, management experience, enhanced communication skills, and research and publication experience (as cited in Harralson, 2001, pp. 43-44). These

KSAs were meant to secure more professional status and job security for academic librarians in the future.

In a similar vein, ASERL (2000) predicted in *Shaping the Future: ASERL's Competencies for Research Libraries (2000)* that academic research libraries would increasingly function as teaching institutions and become more actively involved in instructional and research processes. To fulfill this mission, ASERL's desired competencies for academic librarians included a thorough understanding of the research process.

Some universities have gone even further in promoting a more active research environment among academic librarians on campus. In their examination of the Librarian Development Program at the University of Oklahoma, Engel et al. (2003) found that assigning a mentor helped to orient the participants and guide them in achieving the program goal of conducting quality research and then achieving publication in a peer-reviewed journal. In an evaluation study of the task force assigned to address leadership training and development opportunities at Colorado State University Libraries (CSUL), Feldmann et al. (2013) found that CSUL librarians showed interest in grant writing workshops and research methods classes, among other options, as ways to improve professional growth.

Other recent library organization core competency documents have also stated the value of research and publication as a core competency. The *ALA's Core Competencies of Librarianship (2009)* included research as one of its eight core competencies that should be possessed by an MLS/MLIS graduate, including a fundamental understanding of quantitative and qualitative research methods and the ability to understand and assess the value of ongoing research in the field.

In *A Guideline for the Appointment, Promotion and Tenure of Academic Librarians (2010)* the ACRL indicated a direct need for research skills and publication experience as a prerequisite for advancement within the field and they mention various professional level tasks that contribute to the research mission of the university including scholarly publication specifically. This may be directly related to a growing role for academic librarians in digitization efforts and scholarly communication initiatives that utilize Open Access publishing and institutional repositories.

In a recent environmental scan of trends in academic librarianship and higher education, the ACRL Research, Planning, and Review Committee (2012) discovered a trend toward new publishing paradigms with evolving forms of authoring, publishing, and researching (College & Research Library News, 2012). New models such as open access, digital repository services, and metadata curation and preservation are changing the face of research and publishing. This new environment will require a familiarity with the process of conducting research and achieving publication in this new landscape.

In a general overview of the research base available for evidence-based librarianship (EBL), Koufogiannakis and Crumley (2006) suggest that librarians, administration, and professional associations should shift their focus towards making research and publication a core part of the daily practice of librarianship. CARL sounds a similar note in *Core Competencies for 21st Century CARL Librarians (2010)* when it includes research and contributions to the profession as one of its seven broad competencies necessary to excel as an academic research librarian. The knowledge, skills, and behaviors listed include the ability to write, edit, or review academic

articles or reports; stay on top of current research in the field; and support the research agenda of the university through a working knowledge of basic research methods. The CARL competencies ask research librarians to support the research efforts of their institution and to be active researchers themselves. These core competency documents all point to some value being placed on research skills, though its relative position among other KSAs would vary according to the institutional characteristics of the individual institution.

Though some evidence of the value of research and publication experience for library organizations has been shown to exist, it remains to be seen whether this has impacted actual hiring decisions at academic libraries in the United States. Perhaps these are only broad aspirations that have little impact on real hiring decisions. Examining the continuously evolving roles and responsibilities of today's academic librarians may offer another perspective on what matters most to selection committees. The rapid changes brought on by technological progress and economic pressures has reshaped academic librarianship and created a new kind of "hybrid" academic librarian. An examination of these new hybrid positions should offer additional evidence as to whether research and publication experience is likely to be valued in this new environment.

The Hybridization of Academic Library Staffing

In examining which KSAs are currently of value to selection committees several trends in "hybrid" academic librarian positions have emerged over the past decade. The conditions that have triggered these changes in academic librarianship may be found in the changing economic and technological realities of academic libraries in the United States.

In an examination of academic and public librarian salaries and library staffing expenditures from 2000 to 2009, Davis (2010) found that following the economic downturn, budgets were constricted by staff salary and benefit packages, which resulted in the elimination or consolidation of some positions. Consolidation, in particular, led to the creation of hybrid positions with a broader set of roles and responsibilities than were required in the past. In a similar study of FTE staffing levels at US research university libraries, Stewart (2010) recognized the impact of declining funding at academic libraries and the resulting redefinition of academic librarian roles and responsibilities. Economic realities post-recession have contributed to a new set of budget realities for academic libraries that may have contributed to the creation of these new kinds of hybrid positions.

A second factor impacting the creation of new kinds of academic library positions has been rapid technological change. Lankes (2010) stressed that the mission of academic libraries has been gradually shifting away from providing access to information, and towards building knowledge in the community. Technology is making online and database searching easier and more effective for non-professionals to conduct on their own, so public services librarians will be increasingly focused on other tasks such as instructing patrons on how to critically analyze and evaluate source materials, assisting students and faculty in navigating new publication models, and facilitating scholarly communication. The combination of these economic and technological factors has created new categories of academic librarianship rooted in a desire to adapt and remain a vital part of the academic community.

Several overlapping job titles reflect the evolution of academic librarianship into new categories and job types including embedded librarian, blended librarian,

and feral professional. These three "hybrid" positions will be examined in detail for job duties and responsibilities including any application of scholarly research and publication.

One term used to describe a new type of academic librarian is the *embedded librarian*, partly clarified and more precisely defined by Shumaker and Tyler (2007) at a Special Libraries Association Conference in June 2007. Sometimes called "field librarians," these librarians aim to become active partners in academic departments through physical and organizational proximity to academic faculty and advanced knowledge of their needs. Gibson and Coniglio (2010) saw them as collaborators who assisted in advancing scholarship and research while also engaging in instructional duties. The goal was to become a valued member of a team who could assist in education, research projects, grant writing, and knowledge assets management. Furlough (2010) acknowledged that when it comes to academic librarians, "familiarity with the scholarly research process helps them to 'speak the language' of faculty with whom they work" (p. 216). In making the argument in support of academic librarians playing a more active role in the area of scholarly publishing, Furlough also mentioned institutional repository services and open access journals as potentials areas for growth. These efforts to claim a central role in the creation, curation, and preservation of the scholarly output of academic faculty place the embedded academic librarian squarely in the center of the scholarly production process.

Bell and Shank (2004) defined another hybrid position, the *blended librarian*, as one "who combines the traditional skill set of librarianship with the information technologist's hardware/software skills, and the instructional or educational

designer's ability to apply technology appropriately in the teaching-learning process" (p. 374). This definition emphasized the value of technical and instructional KSAs, but Carlson and Garritano (2010) suggested that a slightly different type of blended librarian "with knowledge and understanding of the production and use of research data instead of instructional design" skills would be of more use to the academy (p. 249). Carlson and Barritano's blended librarian represents a complex, multi-skilled academic librarian with a key role in the knowledge production process.

In a similar vein, Crowe and Jaguszewski (2010) called for "blended or versatile librarians who collaborate with faculty to actively contribute to an institution's research and instructional mission" (p. 127). In their review of the process of identifying and assessing core competencies at the University of Minnesota Libraries, Crowe and Jagszewski examined the professional expectations for academic librarians, which included the need to participate in scholarship and "seek to be a full partner in the educational and research process" (p. 140). They also identified desired KSAs at the University of Minnesota Libraries, which included "a basic understanding of research methodology," experience writing for publication, and the ability to "present information or data in an understandable format" (pp. 156-157). These optimal KSAs for blended or versatile academic librarians were informed by librarian self-assessments, which pointed to a desire by academic librarians themselves to acquire these KSAs, in addition to grant writing and the accurate use of statistics. A single evaluation study at the University of Minnesota Libraries cannot be generalized across all academic libraries, but the professional expectations of a first-tier academic research institution do have value. Determining

whether such views extend beyond this narrow scope to include academic libraries in general remains to be seen.

In addition to the terms *embedded librarian* and *blended librarian*, there is another new term for academic librarians that was triggered by the MLS/MLIS degree itself being called into question as the sole route to professional employment opportunities at academic libraries. Moran, Marshall and Rathbun-Grubb (2010) examined the evolution of the academic library workforce over several decades in an extensive literature review that asked whether academic libraries would continue to hire primarily MLS/MLIS graduates or seek instead to attract a more diversified staff made up of professionals in other fields such as communications, information technology, or management. A similar question was asked by Neal (2006) in a popular and thought-provoking article on a new type of *feral professional*. Neal called into question the relevance of an MLS/MLIS degree focusing on traditional skill sets, and examined a trend toward hiring professionals with "a variety of qualifications, such as advanced degrees in subject disciplines, specialized language skills, teaching experience, or technology expertise" (Neal, 2006, p. 42) to work across a range of professional assignments. He felt these feral professionals would bring fresh outlooks, new styles, and forward-thinking expectations. Neal was giving recognition to a non-MLS/MLIS trend increasingly noted in the LIS literature since the 1990s.

In a content analysis of 539 job advertisements taken from library journals in 1983 and 2003, Starr (2004) found that the MLS/MLIS degree had decreased in importance as a prerequisite for securing a position at an academic library in the US during this time period. Bajjaly (2005) conducted a job recruitment survey which

showed that selection committees for academic, public, and special librarian positions valued post MLS/MLIS work experience, service orientation, and personality more than the specific MLS/MLIS program attended, courses taken, or recency of graduation. This suggests that factors other than an MLS/MLIS degree were increasingly important across a range of positions. In a more recent quantitative analysis of FTE staffing levels at US research university libraries, Stewart (2010) found that while librarian FTE staffing levels had increased only marginally in the time period between 2000 and 2008, non-librarian FTE staffing levels had increased substantially. Stewart concluded that this staff redistribution was a part of a broad transformation of academic libraries across the United States impacting the types of tasks being performed by full-time staff, support staff, and paraprofessionals. Such transformations will likely result in a new set of desired KSAs that could negatively impact the value of the MLS/MLIS degree if the KSAs stressed at MLS/MLIS programs fail to meet the expectations of today's academic library selection committees. MLS/MLIS students interested in a career in academic librarianship need to remain keenly aware of the evolving definition of an academic librarian and the types of skills, knowledge, and abilities that are currently of value.

A desire to experiment with the use of a new kind of non-MLS/MLIS library professional is indicated by the creation of the Council on Library and Information Resources (CLIR) Fellowship Program, which attempts to attract Ph.D. holders from a variety of fields to work at research libraries in the United States. The stated aim of the CLIR Fellowship Program is to prepare "a new generation of librarians, scientists and scholars for work at the intersections of scholarship, teaching and librarianship in the emerging research environment" (CLIR, " Fellowships in Academic Libraries",

2014). Among other opportunities they are tasked with developing new research models and providing insight into the future of scholarship. Brunner (2010) claimed that the current division of labor between academic departments, campus administrative units, research centers, and academic libraries has pigeonholed academic librarians into a service role that impacts their relationship with faculty. These views are backed by the feedback of former CLIR fellows who felt they were able to overcome this limiting role through the utilization of their own substantial research skills while exhibiting comfort working with faculty and the mutual respect that is critical to creating rewarding relationships. Brunner anticipated the creation of a new kind of "scholar-librarian" who could continue to fulfill some of the traditional roles of academic librarianship while also collaborating effectively with faculty and pursuing independent scholarship. This points to an increasing need for academic librarians who are familiar with research methodologies and have experience conducting research successfully and publishing their results in peer-reviewed journals.

Some recent recruitment statistics also support this trend toward a more flexible set of expectations regarding librarian qualifications. In a survey of academic and public libraries Simpson (2013) found that an MLS/MLIS is not consistently a requirement for librarian recruitment and hiring in the United States. In a surprising result, Wanucha (2014) found that of 431 jobs posted on *Library Jobline* only 18% required an MLS/MLIS degree and only 15% preferred one in the year 2013. The remaining 66% of postings either stated that an MLS/MLIS degree was not required or did not mention an MLS/MLIS degree at all. This result must take into account the variety of job types included on Library Jobline (public, academic and special

libraries) and cannot be extended to academic libraries specifically, but it is a surprising finding. The Simpson (2013) and Wanucha (2014) results include both public and academic libraries, but they do add evidence of a trend towards a more flexible view of librarianship generally. In a study focused more precisely on academic libraries Grimes and Grimes (2008) studied over 4000 job advertisements for academic librarian positions listed in *College and Research Libraries* from 1975 to 2005 and found that job listings including an MLS/MLIS requirement had declined significantly over the 30-year period. The authors posited that an increasing demand for skills and knowledge pertaining to new technologies may have contributed to this drop. Despite detailed data collected on distribution of jobs by category (public services, technical services, systems, administration) Grimes and Grimes didn't present results contrasting the MLS/MLIS requirement across job categories. Measuring whether the majority of this decline in MLS/MLIS degree requirements is in fact focused on technical service positions or extends across all types of positions would be quite useful information for applicants seeking different types of academic librarian positions. Is an MLS/MLIS degree still a precondition to securing an entry-level public services position at an academic library in the United States? The literature has not sufficiently answered this precise question.

The slow downward trend in MLS/MLIS degree requirements compels us to ask why an academic library might choose to hire a non-MLS/MLIS candidate. Is it related to the type of position? The answer probably lies in specialized skill sets that may or may not be developed by current MLS/MLIS graduates. One such set of skills is clearly technological. Many studies have tracked the growing value of technological skills for academic librarians since the early 1990s (Xu, 1995; Beile &

Adams, 2000; Starr, 2004; Choi & Rasmussen, 2009; Wang et al., 2010). Many of these highly technical positions may now be looked upon as support positions that do not necessarily require an expert knowledge of librarianship. Information technology (IT) and systems positions with titles such as systems administration, library technology specialist, and library technician may increasingly be filled by non-MLS/MLIS candidates, though all MLS/MLIS programs will continue to stress the importance of acquiring basic technological skills and some will offer much more technical specializations. These types of positions are not of direct interest to this investigation, but the trend may represent a splintering that impacts the structural integrity of the profession. What highly specialized KSAs can a public services academic librarian offer to match those being offered by technical service academic librarians? Do these KSAs include research and publication experience? Which types of institutional characteristics describe libraries where research and publication experience is highly valued by selection committee members? These questions have yet to be addressed by the literature.

A second specialized skill set more closely linked to public services positions involves subject knowledge in a specific field and extensive research skills and experience. A prime example of these skills being utilized at academic libraries is offered by the CLIR Fellowship, which attracts fellows with specific subject knowledge and research experience to work as subject specialists, liaison librarians, or field librarians. Gibson and Coniglio (2010) feel that such liaison librarian positions require diverse skill sets, including the ability to work on research teams; engage in knowledge assets management and stewardship; and collaborate closely with faculty and students involved in research projects. Brunner's (2010) concern that

academic librarians might get trapped in a service role rather than work with faculty as active collaborators is validated in part by the growth in non-MLS/MLIS academic librarians. Specific technical, subject knowledge, and research skills may be acquired by acceptable candidates with or without an MLS/MLIS degree in this evolving employment landscape. These visions of a new breed of library professional increase the need for current MLS/MLIS students and recent graduates to strongly consider what KSAs are going to be most valued by academic libraries in the future and how to tailor their own skill set to match the needs of specific types of academic libraries.

Trends in Research on Academic Librarian KSAs

Academic library selection committees consider, rank, and compare the KSAs of job candidates during the hiring process and these KSAs ideally reflect the actual job duties, tasks, and responsibilities of the position. Recent economic pressures and technological trends have put pressure on the field of academic librarianship that has created new "hybrid" positions that require more specific sets of KSAs. Which KSAs have been of value to academic libraries over the past few decades and do they include research and publication experience? A close examination of the literature will reveal if there is any evidence of research and publication experience as a valued KSA.

Broad trends in KSAs desired by selection committees over the past few decades include the growing importance of technological skills, and the consistent need for excellent communication and interpersonal skills. More recent trends in academic librarian KSAs, as highlighted by research over the past five years, include organizational transformations at institutions of higher education, the rise of e-science, the growth of new avenues of scholarly communication, greater value placed

on previous experience for entry-level academic librarians, and an increasing need for academic librarians to handle a broader range of responsibilities. Examining these two broad, long-term trends and five recent trends will move us closer to understanding the current focus of the literature around desired KSAs for entry-level public services academic librarians.

Broad trends in research on academic librarian KSAs. A fair amount of research has been conducted over the years on trends in KSAs of value to academic libraries and the purpose of such research has usually been to inform MLS/MLIS job-seekers of employer expectations, allow administrators to keep abreast of industry-wide trends, and measure the impact of various factors on required and desired KSAs. The broadest of trends revealed by research on academic librarian KSAs has roughly mirrored the major division in library services: technical services vs. public services. Some KSAs are of more use in technical service positions and others are more useful in public services positions. Reser and Schuneman (1992) used a content analysis of 1133 job advertisements to identify and analyze the differences between public and technical services and found, as might be expected, that tech services required more computer skills, while public services were more likely to need an advanced subject degree in addition to the MLS/MLIS. Many other studies through the ensuing years have recognized the growing value of technical skills for academic librarians (Xu, 1995; Beile & Adams, 2000; Nesbeitt, 2003; Starr, 2004; Choi & Rasmussen, 2009; Heinrichs and Lim, 2009; Wang et al., 2010; Reeves & Hahn, 2010). The literature shows a consistent need for specialized technical skills extending over the past few decades. These skills are likely to continue to be a highly valued, especially in technical service jobs.

Another broad trend in the research focuses on academic librarian jobs in general, but applies more to public services positions than to technical services. In addition to a second MA degree, several studies have noted that public services positions increasingly require excellent interpersonal and communication skills. Starr (2004) noted a dramatic trend towards demanding communication skills for academic librarians in a content analysis of job ads between the years 1983 and 2003. Reeves and Hahn (2010) found that personal attributes such as communication skills, service orientation, and personality traits such as cooperation and creativity have increased in value in their content analysis of job ads published or posted online between 2006 and 2009. In a best practices literature review Shaffer (2011) found that among many other KSAs an 'outgoing personality' was highly valued. In a similar result, Wise et al. (2011) found that Australian academic libraries increasingly valued interpersonal and communication skills at their institutions as well.

These broad trends dividing technical and public services librarians reveal an interesting dichotomy. Technological skills have become increasingly discrete and require ongoing professional development efforts by technical service librarians to remain adept at handling new software, tools and technologies. Meanwhile, public services librarians are taking on an even broader range of tasks that include actively communicating and interacting with patrons, faculty, and administrators on a daily basis through instruction, collaboration, evaluation, outreach, and scholarly communication initiatives. These new tasks require the kind of interpersonal and communication skills mentioned above. The bottom line, noted by Beile and Adams (2000) over a decade ago, is that academic library jobs are becoming both more specialized and more complex. These broad KSAs apply across a swath of job titles

and categories of academic librarianship, but aside from the skills mentioned across the literature broadly (technical, communication, interpersonal), which other KSAs are valued and what impact do they have on hiring decisions at academic libraries? A closer look at the most recent trends in desired KSAs as illustrated in the literature should help us to extract more examples of valued KSAs from the literature.

Recent trends in research on academic librarian KSAs. One recent area of coverage in the literature is organizational transformations at institutions of higher education. In a literature review of recent staffing trends at academic libraries Gremmels (2013) noted that the primary drivers for recent organizational transformations at academic libraries have included both technological and economic factors. The study predicted a shift toward the use of more paraprofessionals for front-line reference service and the outsourcing of much of the technical service work, which will leave greater expectations for highly educated and versatile professional public services academic librarians. A similar conclusion was drawn in Applegate's (2010) study of competencies for librarians and support staff, which found that a clear delineation of professional librarian jurisdiction from support staff jurisdiction has become increasingly important. The study saw professional librarians as those who were adept at managing people and collections, understood the history and theory of librarianship, were expert at assisting and educating patrons, and had the ability to conduct research in the hopes of moving the profession forward. Earning the right to claim a clearly delineated jurisdiction places even higher demands on public services librarians in terms of versatility and adaptability. Will increasing skills and experience related to academic research and publication contribute to this claim and

add to the building of a zone of professional jurisdiction for public services academic librarians?

As part of the conclusion of his quantitative analysis of FTE staffing levels at academic libraries, Stewart (2010) predicted an ongoing redistribution in staffing as part of a broader transformation in academic libraries involving new service delivery models; shifting librarian roles in education, scholarly communication, and data curation; and support activities such as marketing, fundraising, and systems. He predicted that this transformation was likely to continue through the end of the decade.

Recent evaluation studies have charted efforts to realign and restructure academic libraries to offer new services while becoming more active partners in the university's research and instructional mission. Crowe and Jaguszewski (2010) investigated the University of Minnesota Libraries' restructuring around new core competencies aimed at analyzing gaps in current KSAs and improved professional development and hiring strategies for the future, while Nutefall and Chadwell (2013) described the Oregon State University Libraries' realignment toward new services in the areas of digital publishing and scholarly communications. These studies offer evidence of large-scale efforts to transform academic libraries to better fit the needs of higher education institutions in the 21st century. Such transformations will require prospective academic librarians to track which KSAs are in demand under these new systems and create skill sets that are responsive to this changing environment. If the transformation involves a greater level of involvement in digital publishing, research support services, or scholarly communication initiatives, prospective applicants would be wise to acquire matching skills.

A second recent trend in the literature related to valued KSAs is the growth of e-science. As information and communication technologies have increased in size and scope, a massive cyberinfrastructure has made the accessing of widely distributed data sets possible. This means that research can now be conducted by accessing valuable data sets from multiple, interdisciplinary sources in order to test a hypothesis. This new e-science method of conducting research requires significant data curation and preservation efforts at research institutions around the world. Academic librarians are uniquely situated to contribute to these efforts as both creators and stewards of data sets being generated and shared through the networks provided by this networked cyberinfrastructure. Carlson and Garritano (2010) studied these new models of research support at the Purdue University Libraries and concluded that librarians in charge of building and maintaining these collections of data sets would need to have good communication skills, creativity and flexibility, and a willingness to take risks in their efforts to support and contribute to faculty research and spur new projects through grant proposals. This suggests that skills and experience related to research and grant writing would be valued in such positions.

A third area of recent research has been in the areas of scholarly communication initiatives by academic librarians and in-house publishing at academic institutions. More than a decade ago, in reflecting on emerging roles for research libraries in the digital age, Lougee called for academic libraries to move away from being managers of scholarly output and towards being more active participants in scholarly communication processes (as cited in Gremmels, 2013, p. 240). The term *scholarly communication* refers to "the entire process of creating, distributing and accessing scholarship and research" (Furlough, 2010, p. 220).

An example of the growing trend toward more active participation in this process by academic libraries is shown by Nutefall and Chadwell (2012) who conducted a case study of the realignment of the Oregon State University (OSU) Libraries in 2009-2010 in which support for the knowledge creation process through digital publishing and scholarly communication support were key components. As mentioned previously, a new Center for Digital Scholarship and Services was created at the OSU Libraries to centralize these efforts.

In a separate empirical study of two Swedish higher education institutions, Hansson and Johannesson (2013) used personal logs and focus group interviews to identify levels of support for scholarly publishing by academic librarians. Though not a study of US universities, the results mirror those above in finding that there is a trend towards academic librarians being more proactively involved in the research process as integrated members of research teams with special responsibilities in the areas of information provision; data storage and curation; and publication strategies. Hansson and Johannesson saw evidence of this trend in the increased involvement in "digital repository development and Open Access publishing" (p. 232).

Mercer (2013) also confirmed a trend toward academic librarian involvement in Open Access publication through an analysis of the publication efforts of US academic librarians in the United States. Mercer found that nearly half of all scholarly articles in the US, written by academic librarians, were available in Open Access as of 2011. In support of this trend toward making research results freely available through Open Access publishing, Furlough (2010) noted a desire by academic libraries to challenge the power and control of commercial scholarly publishers by offering more collaborative services and the utilization of technologies

that will drive future research and publishing efforts at academic institutions. These efforts will require a new breed of academic librarian more comfortable speaking the language of academic faculty members in the area of research and publication. These new types of positions related to digital repository development, data curation, Open Access publishing, and collaborative research and publication will require a broad range of skills and varying levels of technological expertise.

Another trend in the recent literature indicates an increasing expectation for entry-level candidates at academic libraries to have acquired some previous experience before applying for a position. This expectation has been growing over the past few decades. In a content analysis of entry-level job advertisements published in American Libraries over a 20 year period Sproles and Ratledge (2004) found that employers were seeking "well-rounded and experienced entry-level applicants" (p. 22), while Bajjaly (2005) tracked a trend toward valuing post-MLS/MLIS work experience over the specific MLS/MLIS program attended. In an exploratory study of librarian job advertisements in Australia, Kennan, Willard and Wilson (2004) found that among new librarian jobs a decade ago, the majority required experience. These studies suggest a very real need for entry-level public services academic librarian candidates to acquire work experience in the field before seeking a position.

More recent evidence of this trend exists as well. In service of reviewing and updating the MLS/MLIS curriculum at the University of Maryland iSchool, Reeves and Hahn (2010) conducted a quantitative content analysis of over a thousand job advertisements and concluded that getting practical experience before applying for entry-level positions was advisable. In a survey of selection committee members,

Wang and Guarria (2010) discovered that "demonstrated performance of job requirements" was in high demand (p. 74). Additionally, Tewell (2012) conducted a content analysis of 1385 job advertisements posted from 2010 to 2011 and found that only 20% of academic librarian jobs are truly entry-level. He defined an entry-level position as one that required an MLS/MLIS degree, "one or fewer years of experience" and "no experience or duties that entry level librarians typically do not possess" (p. 412). The inclusion of up to one year of experience in Tewell's definition of "entry-level" recognized the increasing expectation that entry-level applicants would acquire some practical experience before applying for a position. His study also found that more than 57% of job advertisements required more than one year of experience and that over 16% required duties and experience not typically possessed by entry-level applicants. In suggesting future research in this area, Tewell (2012) felt that a survey or qualitative study measuring which types of experience mattered most to selection committees would be of great value. What kinds of experience or project work matter most to selection committees when considering the previous work experience of a candidate?

The lone dissenting voice with regards to the importance of previous experience for entry-level candidates comes from Hodge and Spoor (2012) who investigated the hiring and interview process for entry-level academic librarian positions by surveying selection committee members and concluded that new MLS/MLIS graduates need not necessarily worry about lack of experience when interviewing for entry-level librarian positions. This conclusion was based on the belief that hiring committees would take many factors into account when seeking the best fit for their institution. Despite this advice, a previous section of their study did

state that survey respondents (selection committee members) had recommended that applicants seek out "internships, part-time jobs or volunteer work ... while still in school ... as any form of experience is better that none" (p. 158).

With the increasingly complex and varied nature of public services academic librarian positions, it appears to be a near consensus that an MLS/MLIS graduate should invest time and effort into acquiring some practical experience in preparation for a competitive job market. Ascertaining which types of academic libraries are more likely to value such previous experience would clearly contribute to job seekers knowledge base in a positive way. And beyond identifying where previous work experience is valued most, the question remains whether time spent on conducting scholarly research and achieving publication in a peer-reviewed journal is also considered to be a valuable kind of experience that impacts hiring decisions.

A final trend in the recent LIS literature is indicated by growth in the expectation that academic librarians have exceptionally diverse skill sets. Two decades ago, Bechtel (1994) foresaw the need for more flexible staffing options at academic libraries and the growing need for "generalist librarians". She predicted a more holistic approach to academic librarianship that included a broader knowledge of library service in general, in addition to expert knowledge in several areas of librarianship. She felt that this balance of broad and deep knowledge would add enthusiasm and energy to the field. Lewis (2010) predicted continuing demands for varied technical and subject knowledge requirements in the coming decade, and in a content analysis of job advertisements focusing on the roles and responsibilities of entry-level academic reference positions, Detmering and Sproles (2012) noted that current entry-level reference positions have a "strikingly diverse and complex range

of responsibilities" (p. 543). These diverse roles and responsibilities are identified from a broad perspective, but the authors acknowledge the need for future research into these KSAs and how they vary when contrasted with specific institutional characteristics such as institution type (Carnegie classification), staff size, or geographic location. This reflects a gap in the literature with regards to a deeper analysis of KSAs as they relate to institutional characteristics. Wang and Guarria (2010) conducted an online survey that examined some of the desired KSAs for academic librarian positions and collected data on institutional characteristics with the KSAs desired by specific types of institutions but failed to contrast the two. Examining desired KSAs as they relate to specific institutional characteristics will fill a gap in the current research and offer valuable conclusions of real value to first-time job seekers, selection committee members, and those in charge of planning the transformation of academic libraries more broadly.

Due to developments in the field, academic libraries now have entirely new areas of academic librarianship and concomitant specialist positions to match. Metadata librarians catalog materials in a networked environment applying standards to the "disorderly world of user-generated metadata and distributed, reusable Web content" (Clair, 2010, p. 271). Data research scientists "build and maintain collections of digital research data sets" and enable others to more easily "conduct research and educational activities using collections of digital data through consultation, collaboration, and coordination" (Carlson and Garritano, 2010, p. 253). Outreach librarians actively engage in promoting and marketing the library and its services to patrons and faculty alike, including the ability to conduct citation analyses of previously published papers for faculty members seeking tenure. Reference

librarians design information literacy lessons, evaluate their effectiveness, and instruct students in better approaches to successful completion of research projects. Liaison or subject librarians offer enhanced services such as research project collaboration and faculty assistance with evolving scholarly communication patterns. These many different roles require a broad range of skills, some of which overlap, and provide a common set of skills of use in many positions. In addition to the broad trends in technological and interpersonal skills mentioned above, experience conducting scholarly research and publishing results represents a relevant skill at some level across a range of positions. How is that skill perceived by selection committee members? How does it impact their decision to hire a candidate for an entry-level public services position? These questions have not been answered by the LIS literature to date.

Conclusion

This examination of the research literature has covered hiring at academic libraries and how KSAs factor into the process; the development and implementation of both broad core competencies and narrow sets of KSAs based on job analyses; the evolution and hybridization of academic librarian positions; and research studies investigating the KSAs most desired by selection committees at academic libraries in the United States.

Research shows that attaining specific KSAs of value to selection committees will move a candidate through the hiring process by ensuring that they survive the resume screening phase. Successfully clearing the various hurdles in the hiring process can be best achieved by discovering which KSAs will best identify candidates

of value to both individual selection committee members and selection committee panels working as a group.

Core competency statements offer a general view of KSAs valued by the profession including scholarly research and publication experience, but specific institutions or selection committee members may or may not agree about the relative value of this particular KSA. The literature presents several broad, long-term trends that show the increasing importance of acquiring technological, communication and interpersonal skills, but beyond these broad categories, the literature is less clear as to which KSAs would add significant weight to an application for an entry-level public services academic librarian position.

Technical service jobs are becoming increasingly specialized and require librarians in this service area to keep abreast of constantly changing tools and technologies and this sector may trend toward more non-MLS/MLIS employees in the future. Meanwhile, new "hybrid" positions have emerged in the public services sector that challenge traditional models of academic librarianship in this area. In addition to higher levels of collaboration requiring extensive interpersonal and communication skills, research shows that there is a growing need to display additional expertise in other areas such as instruction, marketing and promotion, management, data curation, scholarly communication, and program evaluation and assessment. In addition to its value as a KSA in and of itself, the ability to conduct scholarly research and experience navigating the publication process is a KSA that enhances several of the other KSAs listed above. Despite its apparent value, this KSA has remained largely unexamined in the research on hiring at academic libraries. When included at all, it has been listed in previous studies on academic librarian

KSAs under the headings of scholarship, or professional development. These vague or catch-all categories have not given this KSA an identifiable place among the KSAs traditionally examined in studies on the KSAs of value to academic library selection committees.

This study examines how this KSA factors into hiring decisions for entry-level public services positions at academic libraries by asking selection committee members for their opinions directly through an online survey. Information on institutional characteristics (Carnegie classification, FTE student enrollment, FTE library staff size, geographic region, type of community), job titles, selection committee member job types, previous experience requirements, MLS/MLIS degree requirements, and perceived trends in the value of this KSA will be gathered to allow for comparisons across a range of variables. The goal is to illuminate the current value of research and publication experience to selection committee members when hiring for entry-level public services academic librarian positions. This will show where this KSA stands and whether it is worth pursuing as an important step in the process of achieving employment in this field.

Though not comparable to the broad and growing importance of technical skills or communication/interpersonal skills, research and publication experience may have some as yet unmeasured weight at academic libraries in the United States and it is likely to have even higher value at larger doctoral-granting/research universities. Certain types of selection committee members (administrators, academic librarians) may value it more or less depending on their preference for supporting either broad institutional goals or specific job competencies. Without the benefit of longitudinal

statistics, measuring a trend in the perceived value of research and publication experience to selection committee members will be difficult to assess.

A study that measures whether or not research and publication experience is important to selection committee members charged with hiring entry-level public services librarians at academic libraries in the United States will fill a gap in the research literature that will be of value to job-seekers, academic librarians, administrators, and faculty alike. The realities of a new era in academic librarianship demand a more careful examination of this fundamental and relevant KSA and its place and purpose within the ongoing transformation of the field.

Methodology

Methodology Selection

In selecting a methodology for this study, several possibilities were considered. The most popular method for studying hiring practices and academic librarian Knowledge, Skills and Abilities (KSAs) has been a content analysis of job advertisements listed in print or online. White and Marsh (2006) defined content analysis as "a systematic, rigorous approach to analyzing documents obtained or generated in the course of research" (p. 22). Harper (2012) conducted a critical review of 70 Library and Information Science (LIS) research studies that collected and analyzed job advertisements going back to the early 1970s and found that the method had only increased in popularity over that 40-year period. As a result, many content analyses of academic librarian job advertisements are available in the LIS literature. Their popularity has been largely due to the ease with which the data can be culled from print or online sources. Very broad samples can be collected and analyzed from existing print periodicals, online journals, or websites. In addition,

archived, historical sources make comparisons across many years relatively easy to conduct.

Though quite popular in the past, content analyses are currently waning in popularity due to a decrease in the availability of stable sources of job ads. Reeves and Hahn (2010) pointed out that although past issues of periodicals that contained job ads are still available, a higher and higher percentage of job advertisements are being posted temporarily on job sites or listservs. These posted ads disappear after a few weeks and are not archived for easy retrieval. This means researchers are now responsible for archiving this data, significantly complicating the process and requiring much more time and effort.

In addition to these access and storage issues, researchers have had other concerns with this approach. Xu (1996) showed concern for the minimal number of coders engaged in analysis and the strong possibility of coding error when so much data is being processed. Harper (2012) took issue with content analyses due to the use of purposive sampling, the lack of sufficient pilot studies, and the minimal use of inferential statistics. Finally, the language used in the advertisements is not always perfectly clear and may not accurately match the actual job performance skills necessary to succeed at the job. Selection committee members or administrators are tasked with tailoring the job ad to precisely match the KSAs needed for the position, but they may not always be successful due to the long and complicated collaborative process of hiring. A method that allows for more direct interaction with individual selection committee members may have a better chance of measuring the KSAs they find most valuable for these positions.

Another possible approach is to conduct evaluation research or do a series of case studies of an organizational transformation or new approach to hiring and evaluating staff at a small number of institutions. This would favor qualitative methodologies such as focus groups or interviews. The advantage of such an approach is that the researcher can measure one set of standards for hiring librarians at a single institution or a small number of institutions. This may reveal favored core competencies or changing priorities in desired KSAs at a few institutions of higher education and could be suggestive of broader transformations underway. The disadvantage of evaluation research is the narrow scope of the data collected and the possibility that local economic, political, or institutional issues may inordinately affect the hiring priorities at a single institution. The results of the study would need to include many limitations and would be of more illustrative value than as an indication of broad trends.

Several studies of hiring practices and desired KSAs at academic libraries have used print or online surveys to gather data from individuals. These studies use closed and/or open-ended questions and either qualitative or quantitative analysis techniques (or both). This methodology allows for the more direct questioning of individual respondents that is missing from a content analysis of job descriptions (often created by committee) while maintaining the ability to collect data from a broad set of respondents. There is an opportunity to capture a more nuanced set of responses from the individuals involved in the entire process from the creation of the job description to the final hiring decision. Surveys also have the advantage of being much easier to conduct due to the existence of convenient online survey instruments.

One disadvantage of this method of data collection is related to choices made concerning sampling methods that can lead to scattershot data collection. The ease of posting calls for participation to listservs and social media sites must be weighed against the eventual watering down of conclusions due to the broad swath of respondent types. Respondents who reply to an open call for participation in a survey could make up a very different sample than one intentionally selected and invited to participate. One factor is the sense of formality that comes from being selected and invited as opposed to the casual nature of an open call for participants. Another factor is the type of respondent who chooses to volunteer to join a study as compared to those who may require direct contact and encouragement. How respondents are selected, contacted, and recruited for participation may affect the quality of results. A sample deliberately collected through careful selection and direct invitation to participants should differ significantly from a convenience sample of participants recruited through listservs and social media sites.

The overly broad nature of content analysis of job advertisements and the increasing existence of ephemeral job postings online has made this a less attractive option for this study. Content analyses of job advertisements are also increasingly likely to require much larger budgets and staff time commitments. Alternately, a series of qualitative interviews aimed at getting highly descriptive data would offer fascinating insights into the process at one or several institutions, but would not offer a snapshot of desired KSAs for entry-level public services librarians across the United States. Surveys have their own set of disadvantages, but with a carefully controlled sample, this method should offer reasonably strong evidence of what KSAs are

currently desired by individual selection committee members and how research and publication experience fits into hiring decisions.

Study Population

In studies of the evolution of desired KSAs at academic libraries the most common population has been selection committees. This population was typically studied through the analysis of the job advertisements produced by selection committees to attract and hire new librarians. Other studies have interviewed selection committee members directly or conducted surveys to collect their views. The advantage of this population is that they know the current needs at the institution where they are employed and can be expected to accurately reflect institutional priorities. This study examined the viewpoints of administrators, librarians, and faculty at universities in the United States who served on a selection committee for an entry-level public services position at an academic library in the United States within the last five years (January 2010 to January 2015). The university libraries were selected from the Carnegie Classification of Institutions of Higher Education (CCIHE) Basic Classification listings[1]. The sample included doctoral-granting/research universities, including both doctoral programs in research specialties and professional practice, master's colleges and universities, and baccalaureate colleges. The sample did not include institutions that offered only associate's degrees, tribal colleges, or special focus institutions that had a high concentration of degrees in a single field. Deselection of these areas decreased the

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[1] "On October 8, 2014, the Carnegie Foundation for the Advancement of Teaching announced that it transferred responsibility for the Carnegie Classification of Institutions of Higher Education to Indiana University Bloomington's Center for Postsecondary Research. The Classification will continue to retain the Carnegie name after the Center for Postsecondary Research takes over responsibility on Jan. 1, 2015" (Carnegie Foundation for the Advancement of Teaching, 2010). The new website for the Carnegie Classification basic classification list can be found at http://carnegieclassifications.iu.edu/lookup_listings/standard.php. This interim site will remain available until the Carnegie Classification of Institutions of Higher Education moves to its new home at the Indiana University Bloomington Center for Postsecondary Research.

number of very small universities in the sample and improved the overall response rate among universities that had student bodies of over 1000 students. This also ensured that the sample included more universities with a diverse array of degrees available. These decisions were made on the assumption that such universities were more likely to have a larger library workforce and more frequent hiring.

Sampling Design

The sampling frame for this study was the Carnegie Classification of Institutions of Higher Education Standard Listings (Basic Classification) (2010). A stratified sample was selected from three types of universities: doctoral-granting/research universities, master's colleges and universities, and baccalaureate colleges. A systematic sample with a random start was drawn from each of the nine Basic Classification subcategories (Table1).

Table 1

Carnegie Classification of Institutions of Higher Education - Basic Classification
· RU/VH: Research Universities (very high research activity)
· RU/H: Research Universities (high research activity)
· DRU: Doctoral/Research Universities
· Master's L: Master's Colleges and Universities (larger programs)
· Master's M: Master's Colleges and Universities (medium programs)
· Master's S: Master's Colleges and Universities (smaller programs)
· Bac/A&S: Baccalaureate Colleges--Arts & Sciences
· Bac/Diverse: Baccalaureate Colleges--Diverse Fields
· Bac/Assoc: Baccalaureate/Associate's Colleges
Note. From 2010 Carnegie Classification - National Center for Education Statistics, IPEDS Fall Enrollment (2009).

The sampling ratio was calculated according to a percentage representing the total enrollment of the institutions in each subcategory rather than as a percentage representing the number of institutions in each subcategory. Table 2 shows the large disparity between the total number of institutions in the doctoral-granting/research

universities subcategories and their total enrollment (297 institutions/49% of total

enrollment) as compared to baccalaureate colleges (810 institutions/12% of total

enrollment).

Table 2

Institution Percentage and Enrollment Percentage

Carnegie Class.	Institutions	Inst. %	Enrollment	Enroll. %
RU/VH	108	6%	2,809,581	24%
RU/H	99	5%	1,746,651	15%
DRU	90	5%	1,228,846	10%
RU Subtotal	297	16%	5,785,078	49%
Master's L	413	23%	3,503,396	29%
Master's M	185	10%	785,985	7%
Master's S	126	7%	367,219	3%
Master's Subtotal	724	40%	4,656,600	39%
Bac/A&S	271	15%	460,036	4%
Bac/Diverse	392	21%	664,939	6%
Bac/Assoc	147	8%	298,300	2%
Bac Subtotal	810	44%	1,423,275	12%
Total	1831	100%	11,864,953	100%

Note. Class. = Classification; Inst. = Institution; Enroll. = Enrollment;
RU/VH = Research Universities (very high research activity); RU/H =
Research Universities (high research activity); DRU = Doctoral/Research
Universities; Master's/L = Master's Colleges and Universities (larger
programs); Master's/M = Master's Colleges and Universities (medium
programs); Master's/S = Master's Colleges and Universities (smaller
programs); Bac/A&S = Baccalaureate Colleges - Arts & Sciences;
Bac/Diverse = Baccalaureate Colleges - Diverse Fields; Bac/Assoc =
Baccalaureate/Associate's Colleges. From 2010 Carnegie Classification -
National Center for Education Statistics, IPEDS Fall Enrollment (2009).

A systematic sampling of the institutions listed in the three subcategories that did not

consider enrollment levels would skew the sample heavily towards smaller

institutions with smaller enrollments. These institutions have smaller collections,

smaller staff sizes, and a less active research base.

An example of the kind of sample that might result from a random convenience sample is demonstrated by a study conducted by Wang and Guarria (2008), which employed an anonymous survey across multiple listservs to gather data on the hiring process for academic librarians. The sample of respondents for this study (N=242) was split quite evenly with 31% of respondents in each of the three main Carnegie classifications (research universities, master's colleges and universities, baccalaureate colleges). The remaining 7% were from two-year associate colleges. The resulting sample was heavily focused on smaller institutions with smaller staff sizes due to the use of an open call for participation rather than a systematic sample.

In a study of academic library staffing Applegate (2007) used two National Center for Education Statistics databases (Compare Academic Libraries/ALS and the Integrated Postsecondary Educational Data Service (IPEDS)) to show that the majority of academic librarians have more than 24 colleagues and almost half of academic librarians are employed by doctoral-granting/research universities (RU). In another study of academic library staffing through the period of the great recession of 2008-2010, Regazzi (2012) found that large libraries had been dramatically expanding the number of academic librarians employed since 1998 and, despite significant staff reductions at smaller institutions, had managed to hold steady through the recessionary period.

In light of these facts about random, open calls for participation and national academic library staffing trends, three different sampling ratios were employed to randomly select and invite institutions from the three broad categories (RU/Master's/Bac) based on enrollment percentages in order to avoid any imbalance

caused by the large number of small institutions. The following formula was used to take a systematic sample of institutions from each of the nine subcategory lists. The number of institutions in each subcategory was divided by the subcategory population size (total population multiplied by the enrollment percentage of the subcategory) to get the sampling interval (rounded to the nearest whole number). A random start was employed for each subcategory and the sampling interval was used to extract the subcategory sample from the sampling frame.

Total sample size was originally set at 200 institutions, but was later increased to 400 once a successful first round was initiated. This means that the total sample was extracted from the sampling frame in two rounds, each with a sample size of 200.

Data Collection Instrument

As the first step in the design of the data collection instrument an informal survey was distributed to a non-probability convenience sample of 17 faculty members of an ALA- accredited MLS/MLIS program in April 2014 (Appendix E). Perhaps due to the informal nature of the questionnaire and the short time frame for response (2 weeks), only five respondents answered the four open-ended questions. Despite the low response rate (29%), the responses revealed several points that helped shape the design of the data collection instrument. Respondents indicated that the importance of research and publication experience varies significantly according to the size of the university, the type of position, and the research environment of the individual university. This reinforced the view that collection of data on institutional characteristics would allow for more accurate placement of this KSA among other important KSAs impacting the hiring process.

Another key observation was that research and publication experience was becoming more and more critical and would help to set a candidate apart as a more active and engaged applicant. This view supports the idea that some selection committee members find research and publication experience a highly desirable KSA for a potential new library staff member.

Online Questionnaire Formulation

The questionnaire consisted of 17 mostly closed-ended questions with a few open-ended responses included for the inclusion of specific job title descriptions or additional suggestions (Appendix A). The design of the questionnaire included adopting and adapting a variety of job categories and KSAs used across many previous studies for the formulation of the key question on the impact of a variety of common KSAs on hiring decisions at academic libraries. The result was a melding and redefining of the KSAs listed in three different studies into 12 specific KSAs to be used for comparison (Sproles and Ratledge, 2004; Detmering and Sproles, 2012; Hodge and Spoor, 2012). The exact wording used to describe these categories is original. In addition, the response choices about levels of importance were altered slightly from the author's original version to a version that exactly matched those in Wang and Guarria (2010) to allow for easier comparative analysis. SurveyMonkey ™ was chosen as a reputable company offering online survey implementation and analysis services.

The research proposal and online questionnaire were submitted to the San Jose State University Human Subjects Institutional Review Board (IRB) and in early December 2014 the proposal was registered and received exempt status. The primary data for this study was collected in January and February of 2015 through an

anonymous, voluntary, online questionnaire completed by selection committee members from randomly selected universities in the United States. The anonymous nature of the data collection method was of critical importance because there were potential issues regarding privacy in the areas of employment and hiring practices. Clearly stating the voluntary and anonymous nature of the study, as required for IRB approval, also likely helped to improve response rates and increased the likelihood of receiving forthright responses.

Definition of terms. The first question of the survey asked whether the respondent had served on a selection committee (hiring committee/search and screen committee) for an entry-level public services position at their academic library in the time period from January 2010 to January 2015. To define the parameters of the term *entry-level position* the definition used by Tewell (2012) in his content analysis of entry-level job advertisements was adapted and simplified. Tewell defined an entry-level position as one requiring an ALA-accredited MLS/MLIS degree, requiring one or fewer years of experience, and not requiring "experience or duties that entry-level librarians typically do not possess," (p. 412) such as supervisory or administrative experience. Tewell chose to amend previous stricter definitions of entry level (Reser & Schuneman, 1992; Sproles & Ratledge, 2004; Reeves & Hahn, 2010; Detmering & Sproles, 2012) by allowing for some experience in the form of short-term internships or pre-professional experience as a required or desired aspect of an entry-level position. Previous content analyses of entry-level job advertisements generally defined entry-level as requiring no experience, but Tewell was correct that such an assumption would be less valid in the current academic librarian job market. The decision to use this slightly broader definition in which jobs that require up to a year

of experience are considered as entry-level was also made in the hopes that more respondents would be able to participate in the study under a more flexible and realistic guideline.

For this study, the requirement of an MLS/MLIS as a prerequisite for defining a job as entry-level was dropped entirely. The literature has shown that some positions at academic libraries are being filled by non-MLS/MLIS candidates (Grimes & Grimes, 2008; Shaffer, 2011; Strothman & Ohler, 2011; Simpson, 2013) and if any of these positions are entry-level public services positions they should also be included in the study. In addition, Tewell's (2012) requirement that applicants lack supervisory or administrative experience will also be cut from the definition used in this study. A significant number of librarians receive their MLS/MLIS degree after 40 years of age (Lewis, 2010) and such applicants could possess a range of skills and experience, yet still be applying for an entry-level position. Selection committees are aware of the age and experience range of new hires and may value and seek out those with such experience. This leaves the simplified definition of *entry-level position* used in this study as one that requires either no experience or one year or less of experience.

A second term that required definition was *public services librarian*. Keeping in mind that virtually all academic librarian positions require some technical skills and familiarity with technological tools, public services librarian was defined as one whose duties are majority public services in nature. This means that less than 50% of their tasks are technical and they serve a majority public service function.

Data Collection Process

In December 2014 a sample size of 200 universities was selected and the number of institutions to be extracted from each Carnegie classification was calculated according to the enrollment percentages in that category. This total sample size was later doubled and the process was repeated using the same technique for a total of 400 universities and colleges selected. The decision to double the sample size was made following the successful completion of the first round of sampling. The sample size and sampling interval for each Carnegie Classification category were calculated according to the formula in the sampling design section above and a random start was employed for each category (Table 3). A random start number was applied to each category list and the sampling interval was used to select the sample.

Table 3

Institution %, Enrollment %, Sample Size, and Sampling Interval

Carnegie Class.	Inst.	Inst. %	Enrollment	Enr. %	Sample Size	Sample Int.
RU/VH	108	6%	2,809,581	24%	47	2
RU/H	99	5%	1,746,651	15%	30	3
DRU	90	5%	1,228,846	10%	21	4
RU Subtotal	297	16%	5,785,078	49%	98	-
Master's L	413	23%	3,503,396	29%	59	7
Master's M	185	10%	785,985	7%	13	14
Master's S	126	7%	367,219	3%	6	20
Master's Subtotal	724	40%	4,656,600	39%	78	-
Bac/A&S	271	15%	460,036	4%	8	35
Bac/Diverse	392	21%	664,939	6%	11	35
Bac/Assoc	147	8%	298,300	2%	5	29
Bac Subtotal	810	44%	1,423,275	12%	24	-
Total	1831	100%	11,864,953	100%	200	-

Note. Class. = Classification; Inst. = Institution; Enr. = Enrollment; Int. = Interval; RU/VH = Research Universities (very high research activity); RU/H = Research Universities (high research activity); DRU = Doctoral/Research Universities; Master's/L = Master's Colleges and Universities (larger programs); Master's/M = Master's Colleges and Universities (medium programs); Master's/S = Master's Colleges and Universities (smaller programs); Bac/A&S = Baccalaureate Colleges - Arts & Sciences; Bac/Diverse = Baccalaureate Colleges - Diverse Fields; Bac/Assoc = Baccalaureate/Associate's Colleges. From 2010 Carnegie Classification - National Center for Education Statistics, IPEDS Fall Enrollment (2009).

Once the sample was randomly extracted from the sample frame, in two rounds of 200 each, the selected university names were transferred to an Excel spreadsheet. The website for each university library in the sample was carefully examined for contact information, which was added to the spreadsheet. The primary contact was a library director, library dean, or university librarian. If a contact email address could not be located for one of these positions, a head of a service area or academic librarian was found instead. Over 90% of initial contacts were top administrators such as library

directors, university librarians, or deans as their contact information was easily available with a little searching. A few universities seemed to have either no physical campus or were located in an urban or suburban office space. These were likely universities oriented towards continuing education or strictly online education programs. Some had no physical library. Other universities had no contact emails for specific staff at the library or only internal email systems. Wherever possible a contact email for a library staff member was located for inclusion in the study. The first group of 200 universities yielded 190 contact emails and the second group of 200 universities yielded 192 contact emails for a total of 382 viable contact emails from the attempted sample of 400.

A SurveyMonkey ™ Select account was opened in January 2015 and the data collection instrument was transferred to the online survey implementation platform. A data collection period of one month from January 11, 2015 to February 10, 2015 was set and the data collection period opened on January 11, 2015.

The first set of 190 requests for participation (Appendix B) were sent out as blind carbon copy (Bcc) emails in groups of 10 or fewer. The requests for participation included a link to the survey webpage and a request to either fill out the survey or forward it to an appropriate person who had served on a selection committee for an entry-level public services position in the last five years. Three instances of typos in the contact email addresses were corrected and resent. Two emails were rejected by the server or were undeliverable for technical reasons. Due to the anonymous nature of the survey there was no way to confirm whether or not a particular contact had completed the survey, so on January 23, 2015 reminder emails (Appendix C) encouraging participation by the deadline were sent to all selectees who

had not specifically sent an email opting out of the study. In a study of course and teaching evaluation surveys, Nulty (2008) found that survey response rates were boosted by providing incentives and/or using reminder emails. The inclusion of this reminder email was meant to maximize participation and improve response rates.

The second round of 192 new requests for participation was also sent out on January 23, 2015. There were only two requests rejected by the server or undeliverable due to technical reasons from this second group. A final reminder email was sent out to the second round of selectees on February 3, 2015. The data collection period closed on February 10, 2015 and the survey implementation tool was closed down.

During the data collection period several respondents contacted the primary researcher (author) either through automated response emails or with direct concerns. The majority of responses were automated response emails that generally referred to being out of the office temporarily. The direct concern emails fell into a few categories. Some contacts had retired or changed positions and recommended a new contact. In these cases, the new contact email was put to use immediately. Other emails announced the completion of the survey or a lack of interest or ability to participate. One email asked for clarification on the parameters of the study, which was provided promptly. Another respondent expressed confusion about the numeration of the survey. Apparently, when respondents answered "No" to the first contingency question (Question1) and then automatically skipped to the final "general information" questions a SurveyMonkey ™ function had renumbered the final eight survey questions, causing some confusion for at least one respondent. In response to this issue, the request for participation and reminder emails were changed slightly to

more accurately match the survey and avoid any further confusion. A final

respondent emailed with additional information more accurately capturing the details

of the hiring practices at their institution.

<div align="center">**Results and Analysis**</div>

Of the 382 selectees contacted during the 1-month data collection period there

were 161 responses to the survey for a preliminary response rate of 42%. Eighteen

incomplete surveys were deleted. In addition to the incomplete surveys, there was

one respondent who answered "no" to the final request to allow the data collected in

this voluntary, anonymous survey to be published and shared. Another respondent

did not answer this final question. These two surveys were also deleted. This left a

total of 141 fully or nearly complete surveys for a final response rate of 37%. In a

meta-analysis of 39 studies comparing Web and mail surveys, Shih and Fan (2008)

found that the average response rate for online surveys was 34%, so 37% was

considered a reasonably good response rate for an online survey.

Respondents

General respondent characteristics. The survey collected general

information about all respondents' job titles, category of university (Carnegie

classification), FTE student enrollment, FTE library staff, geographic region, and type

of community (Appendix A).

More than half of respondents (53%) categorized themselves as library

directors, but due to the lack of a category for "dean" many respondents checked the

"Other" box and filled in "dean", "associate dean", "assistant dean" or "interim dean".

Other respondents checked "Other" and filled in "head of a service area", "assistant

director", "administrator", or "vice provost/director". By adding the assistant director

and vice provost to the director category and the dean positions to the university

librarian category the general job categories were maintained, with one additional

category added for respondents who filled in "administrator" (Table 4).

Table 4

General Respondents - Job Title (N=141)

Job title	%, n
Library director/Asst. LD	53%, 75
University librarian/Dean	25%, 36
Head of specific service area	13%, 18
Academic librarian	6%, 9
Faculty member/ Professor	1%, 2
Administrators	1%, 1
Administrative positions	79%, 112
Non-administrative positions	21%, 29

The adjusted results show a sample weighted towards administrators (80%) as would

be expected given that the primary contact information gathered from university

library websites was for primarily library directors, library deans and university

librarians.

Respondents were asked to identify what category of institution they worked

for in two separate questions. Respondents were asked if they worked at a doctoral-

granting/research university, a master's college or university, or a baccalaureate

college. In a separate question respondents selected the exact Carnegie classification

category of their institution. A link to the official Carnegie classification category list

was included. The responses for these two questions were roughly equivalent (Table

5).

Table 5

General Respondents - Institution

Institution	Q 11 %, n	Q 12 %, n
Research universities	44% , 61	44% , 62
Master's colleges and universities	36% , 49	35% , 49
Baccalaureate colleges	18% , 25	15% , 21
unable to answer	2% , 3	6% , 8

Note. Q = Question. Question 11 (N=138); Question 12 (N=140).

The small discrepancy in responses may have been caused by some respondents' unfamiliarity with the Carnegie classification system and their own institution's rank within that system. To ensure the most accurate analysis possible, the more specific question on Carnegie classifications was used to make comparisons across categories of institution for this study.

This breakdown of respondents by Carnegie classification is very close to the selective sample percentages that were calculated based on enrollment (Table 2). The difference of only a few percentage points indicates that the selected method for maximizing the opportunity to find respondents who were on a selection committee for an entry-level public services academic librarian position in the past five years was successful. This was based on an assumption that larger institutions with larger FTE student enrollments, larger FTE library staff members, and a more active research base would hire more entry-level public services librarians.

Data on full time equivalent (FTE) enrollment size of respondents' institutions showed that a large percentage of respondents worked at universities with very large student bodies (Table 6).

Table 6

General Respondents - FTE Student Enrollment (N=138)

FTE student enrollment	%, n
10,000 or more	42% , 58
3000 - 9,999	29% , 40
1,000 - 2,999	24% , 33
fewer than 1,000	5% , 7

Despite the bias towards larger FTE enrollments, the FTE library staff at respondents' workplaces is quite average at 50% with over 25 staff members and 50% with less than 25 staff members (Table 7). This result is quite close to Applegate's (2007) finding that the majority of academic librarians have more than 24 colleagues.

Table 7

General Respondents - FTE Library Staff (N=140)

FTE library staff	%, n
more than 300	4% , 5
100 - 300	16% , 23
25 - 99	30% , 42
less than 25	50% , 70

A closer examination of the data revealed something interesting about staff sizes at research universities. Universities with very large FTE student enrollments (10,000+) were mostly research universities (79%) with the rest being master's colleges and universities (19%) and baccalaureate colleges (2%). When only research universities with very large FTE student enrollments (10,000+) were examined, the study found that 40% of these universities had FTE library staff of under 100 employees. When examined in even more detail, the study showed that only the top two levels of Carnegie classifications (RU/VH & RU/H) had a significant percentage

of universities with over 100 FTE library staff members and only the top category

(RU/VH) had a large majority above this threshold (Table 8).

Table 8

General Respondents - Carnegie Classification / FTE Library Staff Size (N=140)

	more than 300 %, n	100 to 300 %, n	25 to 99 %, n	less than 25 %, n
RU/VH	13% , 4	61% , 19	13% , 4	13% , 4
RU/H	0% , 0	24% , 4	76% , 13	0% , 0
DRU	7% , 7	0% , 0	43% , 6	50% , 7
Master's L	0% , 0	0% , 0	33% , 8	67% , 16
Master's M	0% , 0	0% , 0	17% , 2	83% , 10
Master's S	0% , 0	0% , 0	31% , 4	69% , 9
Bac/A&S	0% , 0	0% , 0	15% , 2	85% , 11
Bac/Diverse	0% , 0	0% , 0	17% , 1	83% , 5
Bac/Assoc	0% , 0	0% , 0	0% , 0	100% , 2
unable to answer	0% , 0	0% , 0	25% , 2	75% , 6

Note. RU/VH = Research Universities (very high research activity); RU/H = Research Universities (high research activity); DRU = Doctoral/Research Universities; Master's/L = Master's Colleges and Universities (larger programs); Master's/M = Master's Colleges and Universities (medium programs); Master's/S = Master's Colleges and Universities (smaller programs); Bac/A&S = Baccalaureate Colleges - Arts & Sciences; Bac/Diverse = Baccalaureate Colleges - Diverse Fields; Bac/Assoc = Baccalaureate/Associate's Colleges.

Research universities do have the largest FTE library staffs, but it remains to be seen

if this then translates into the hiring of more entry-level public services academic

librarians.

The geographic regions represented in the study were fairly well balanced

across the Midwest, Northeast, and South, with a smaller percentage in the West

(Table 9).

Table 9

General Respondents - Geographic Region (N=139)

Geographic region	%, n
Midwest	27% , 37
Northeast	25% , 35
South	31% , 43
West	14% , 20
unable to answer	3% , 4

The final general information question asked about the type of community in which the university campus was located. The respondent population was roughly one-half urban, one-quarter suburban, and one-quarter rural (Table 10).

Table 10

General Respondents - Type of Community (N=140)

Type of community	%, n
Rural	24% , 33
Suburban	26% , 37
Urban	49% , 68
unable to answer	1% , 2

When responses for types of communities were compared with responses for geographic region some clear differences emerged. The largest percentage of rural universities (nearly 50%) were in the Midwest, the largest percentage of suburban universities (over 40%) were in the South, and the largest percentage of a more well distributed set of urban universities were in the Northeast (31%) (Table 11).

Table 11

General Respondents - Geographic Region / Type of Community (N=137)

	Midwest %, n	Northeast %, n	South %, n	West %, n	unable to answer %, n
Rural	48% , 16	21% , 7	27% , 9	3% , 1	0% , 0
Suburban	16% , 6	19% , 7	41% , 15	19% , 7	5%, 2
Urban	21% , 14	31% , 21	28% , 19	18% , 12	1% , 1

Specific subgroups of respondents. The main subgroups to examine in detail were the respondents who answered either "yes" or "no" to Question 1, which asked whether they had served on a selection committee for an entry-level public services academic librarian position in the past five years. Whether a respondent answered "yes" or "no" to Question 1, they still answered the seven general information questions at the end of the survey and these responses will allow us to contrast these two groups (Appendix A).

Contrasted respondents. Of the total number of respondents (N=141), 68% (n=96) had served on a selection committee for an entry-level public services academic librarian position in the previous five years (January 2010 - January 2015). The remaining 32% (n=45) had not served on a selection committee for such a position in this time period. The survey instructions given in the request for participation email asked that the initial contact forward the email to another staff member in the case where they did not serve on such a selection committee. The primary contact was almost always either a library director, dean, or university librarian who would probably be a part of any selection committee for a new position. We will now examine the differences in institutional characteristics of those who did or did not hire an entry-level public services librarian in the past five years.

When contrasting the two groups, there was a noticeable difference in the balance between administrator and non-administrator respondents who did or do not hire an entry-level public services academic librarian in the past five years (Table 12).

Table 12

Contrasted Respondents - Job Titles (N=141)

Job title	Q 1 – Yes %, n	Q 1 - No %, n	Q 1 – Total %, n
Library director/ Asst. LD	52%, 50	54%, 25	53%, 75
University librarian/Dean	24%, 23	28%, 13	25%, 36
Head of specific service area	17%, 16	4%, 2	13%, 18
Academic librarian	6%, 6	7%, 3	6%, 9
Faculty member/ Professor	1%, 1	2%, 1	1%, 2
Administrators	0%, 0	2%, 1	1%, 1
Administrative positions	76%, 73	87%, 39	79%, 112
Non-administrative positions	24%, 23	13%, 6	21%, 29

Note. Q = Question; Asst. = Assistant; LD = Library Director. Question 1 Yes (n=96); Question 1 No (n=45).

When considering Carnegie classification categories of universities for all respondents (Table 5), the largest percentage of total respondents (44%) worked at research universities, which make up the top three categories (RU/VH, RU/H, DRU), the second largest (35%) were from master's colleges and universities (Master's L, Master's M, Master's S), and the smallest group (15%) were from baccalaureate colleges (Bac/A&S, Bac/Diverse, Bac/Assoc). Percentages closely match the enrollment percentages that shaped the selective sampling method (Table 2) and any differences can be partly explained by the 6% of respondents who were not sure of their Carnegie classification. When divided by "yes" or "no" responses to Question 1, respondents that hired an entry-level public services academic librarian were most likely to come from master's colleges and universities, despite the larger number of

research universities in the stratified sample based on enrollment percentages. By

contrast, those who did not hire for such a position in the last five years were very

likely to be from research universities, in excess of the percentage of research

universities in the sample (Table 13). This despite that fact that research universities

in the top two Carnegie classification categories (RU/VH & RU/H) have much larger

FTE library staff sizes on average (Table 8).

Table 13

Contrasted Respondents - Carnegie Classifications (N=140)

| | Q 1 – Yes %, n | Q 1 - No %, n | Q 1 - Total %, n |
Carnegie classification			
Research Universities	40% , 38	55% , 24	44% , 62
Master's Colleges and Universities	42% , 40	20% , 9	35% , 49
Baccalaureate Colleges	12% , 12	20% , 9	15% , 21
unable to answer	6% , 6	5% , 2	6% , 8

Note. Q = Question. Question 1 Yes (n=96); Question 1 No (n=44).

The question is why a disproportionate number of respondents from research

universities have not hired an entry-level public services academic librarian in the

past five years (January 2010-January 2015). The answer may lie in the definition of

entry-level used for Question 1. The definition used for this study included the

requirement that the position require either no experience or one year or less of

experience. This definition may have been too narrow to include some entry-level

public services positions at research universities. This issue will be covered in more

detail in the discussion section. In addition, 43% of baccalaureate colleges answered

"no" to Question 1, which could be directly related to the smaller FTE library staff

sizes at baccalaureate colleges where 86% of respondents reported having FTE library

staff of less than 25.

FTE student enrollment numbers at institutions of respondents who had or hadn't hired an entry-level public services academic librarian in the past five years indicated no large difference between the two subgroups (Table 14).

Table 14

Contrasted Respondents - FTE Student Enrollments (N=138)

FTE enrollment	Q 1 - Yes %, n	Q 1 - No %, n	Q 1 - Total %, n
10,000 or more	43% , 41	39% , 17	42% , 58
3,000 to 9,000	28% , 26	33% , 14	29% , 40
1,000 to 2,999	24% , 23	23% , 10	24% , 33
less than 1,000	5% , 5	5% , 2	5% , 7

Note. Q = Question. Question 1 Yes (n=95); Question 1 No (n=43).

Comparison of FTE library staffing for subgroups who hired or didn't hire an entry-level public services librarian did not show any consistent variation either (Table 15).

Table 15

Contrasted Respondents - FTE Library Staff (N=140)

FTE library staff	Q 1 – Yes %, n	Q 1 - No %, n	Q 1 - Total %, n
more than 300	2% , 2	7% , 3	4% , 5
100 to 300	19% , 18	11% , 5	16% , 23
25 to 99	27% , 26	36% , 16	30% , 42
less than 25	52% , 50	46% , 20	50% , 70

Note. Q = Question. Question 1 Yes (n=96); Question 1 No (n=44).

There are some variations for the geographic regions in which respondents had or hadn't hired an entry-level public services academic librarian in the past five years (Table 16).

Table 16

Contrasted Respondents - Geographic Regions (N=139)

	Q 1 – Yes %, n	Q 1 - No %, n	Q 1 - Total %, n
Geographic region	%, n	%, n	%, n
Midwest	29% , 28	21% , 9	27% , 37
Northeast	21% , 20	35% , 15	25% , 35
South	35% , 34	21% , 9	31% , 43
West	12% , 11	21% , 9	14% , 20
unable to answer	3% , 3	2% , 1	3% , 4

Note. Q = Question. Question 1 Yes (n=96); Question 1 No (n=43).

There was a greater tendency for universities in the Midwest and South regions to hire and a greater tendency for universities in the Northeast and West regions not to hire such a candidate.

Primary respondents. The primary group of respondents under examination in this study were the respondents who served on selection committees that hired entry-level public services academic librarian positions in the United States in the past five years (January 2010 – January 2015). The selective sample of 382 university library contacts garnered 141 responses of which 97 were in this select group.

The central question of this study is what impact various KSAs has on hiring decisions for entry-level public services positions at academic libraries. Respondents ranked 10 valuable KSAs in terms of their impact on the selection committees hiring decisions (Appendix A). The following list ranks the KSAs according to the weighted average (M) of their responses to the question with the following point values assigned to their responses: extremely important (5), very important (4), moderately important (3), slightly important (2), and not important at all (1) (Table 17).

Table 17

Primary Respondents - KSAs Ranked by Weighted Rating Scale

Rank	KSAs (knowledge, skills & abilities)	M
1	Communication	4.75
2	Technology	4.46
3	Interpersonal	4.36
4	Collaboration	4.25
5	Teaching	3.40
6	Evaluation and Assessment	3.06
7	Marketing	2.71
8	Leadership	2.46
9	Research and Publication	2.20
10	Second Language	1.55

Note. M = Mean.

In the review of the literature two broad trends in desired KSAs emerging over the past few decades. One was the trend toward valuing technological skills and the other was an increasing need for excellent communication and interpersonal skills. The first was generally applicable to technical service jobs, but these results make clear how important this KSA is for any type of job, including those in the public services sector. Technology (rank=2) is pervasive and impacts on all activities and all other KSAs. The second broad trend is also supported by these results as communication (rank=1) and interpersonal skills (rank=3) also rank at the top of the list. These KSAs are more traditionally valued in public services positions, though they are certainly valued to varying degrees in all types of positions. The ability to collaborate and work as a member of a team (rank=4) is also a KSA that could be closely associated with communication and interpersonal skills. After we account for these four skills tied to broad trends in KSAs that are found across the LIS literature, there is a sharp drop in importance as ranked by respondents. The top four KSAs are all ranked as extremely or very important on average, but teaching, evaluation and assessment, and

marketing are only moderately important. Leadership, research and publication, and a second language round out the list as slightly important KSAs on average.

The second question on the survey was an open-ended question about the exact job title of the entry-level public services position. A total of 86 job titles were collected (Appendix D). The most common job types were identified through a textual analysis. Many job titles covered two or more types of work (i.e. Reference/Instruction Librarian), so the results of this analysis may overlap among categories. The most common type of job was Reference Librarian with 28% of jobs including the word "reference". The second most common type of job was Instruction Librarian ("instruction", "teaching", "information literacy") with 17% of jobs including these terms. There were also a range of jobs related to technology ("digital", "e-resource", "electronic", "Web", "Systems") and these covered another 17% of jobs. The remaining jobs covered a wide variety of terms including "science", "information" "outreach", "research", "collection(s)," and "assistant". The job titles and textual analysis match quite well with the desired KSAs (Table 17). Reference librarians require excellent communication and interpersonal skills, instruction librarians need teaching skills, and technology skills are of use in a wide range of positions. The remaining terms cover a broad range of areas including subject area specializations like "science" or "humanities" and specific KSAs like "outreach" or "research".

Only jobs that required one year or less of work experience were considered to be entry-level for the purposes of this study. The survey results show that 30% of entry-level public services positions required up to a year of work experience and

60% preferred some work experience. Only 10% had no requirements for work

experience (Table 18).

Table 18

Primary Respondents - Work Experience Requirements (N=97)

Work experience	%, n
some work experience required (one year or less)	30% , 29
some work experience preferred, but not required	60% , 58
no work experience required	10% , 10

Several authors have suggested that applicants for entry-level positions would be

better off gaining some practical work experience before applying for a position. This

study confirms this view by showing that 90% of selection committee members for

entry-level public services academic librarian positions state that they either prefer or

require some work experience from their applicants.

For entry-level public services positions as defined by this study, 87% of

respondents stated that they required an MLS/MLIS degree and an additional 10%

preferred one. Only 3% did not require an MLS/MLIS degree (Table 19).

Table 19

Primary Respondents - MLS/MLIS Requirements (N=97)

MLS/MLIS degree requirements	%, n
required MLS/MLIS	87% , 84
preferred MLS/MLIS, but not required	10% , 10
MLS/MLIS not mentioned as a requirement	3% , 3

The results show some encouragement for conducting scholarly research and

publishing in peer-reviewed journals with 45% of respondents considering it either a

primary or secondary duty (Table 20).

Table 20

Primary Respondents – Encouragement for Research and Publication (N=97)

Encouragement for research and publication	%, n
required (a primary duty)	20% , 20
strongly encouraged, but not required (a secondary duty)	25% , 24
mildly encouraged, but not required (a tertiary duty)	27% , 26
neither encouraged nor required (prof. development only)	28% , 27
actively discouraged (a distraction from primary duties)	0% , 0

Over half of respondents (56%) stated that research and publication

experience was not a factor in hiring decisions. The remaining 43% believed that it

has some value during the screening phase, the interview phase, or both (Table 21).

Table 21

Primary Respondents - Research and Publication Value in Hiring Process (N=96)

Hiring process phase	%, n
screening phase	13% , 12
interview phase	9% , 9
both the screening and interview phase (approx. equal weight)	21% , 20
not a factor in hiring decisions	56% , 54
unable to answer	1% , 1

Only 31% of respondents examined publications listed in an applicant's

resume for journal quality at some point in the hiring process (Table 22).

Table 22

Primary Respondents - Publications Quality Check (N=97)

Are publications examined for quality?	%, n
Yes, during the screening phase	14% , 14
Yes, after the screening phase, but prior to the interview phase	17% , 16
No, publications are not examined carefully for quality	32% , 31
No, because applicant publications do not impact my decision	35% , 34
unable to answer	2% , 2

This figure (31%) is less than the number of respondents who felt that research and

publication experience was of value during the hiring process (43%) (Table 20). This

suggests that there are some respondents who value research and publication

experience in the hiring process, but do not examine the quality of applicant

publications in detail. This may be because they do not feel it is necessary or worth

the additional time and effort given its weight in the decision process, or because they

are just too busy to spend time on examining publication quality.

Respondents were asked to describe the trend over the past ten years in the

impact of research and publication experience on hiring decisions at academic

libraries (Table 23).

Table 23

Primary Respondents - Impact of Research and Publication (N=97)

10 year trend in impact on hiring decisions	%, n
becoming more impactful	21% , 20
remaining relatively stable in level of impact	38% , 37
becoming less impactful	25% , 24
unable to answer	16% , 16

Among those respondents who were on a selection committee for the hiring of an

entry-level public services academic librarian in the past five years (January 2010 –

January 2015) 21% felt that during the past 10 years (January 2005 – January 2015)

the impact of research and publication on hiring decisions at academic libraries had

increased. Another 25% felt that this KSA had decreased in level of impact on hiring

decisions, while 38% felt it had remained unchanged in level of impact. A significant

percentage of respondents (16%) were unable to answer, which may have been an

indication that they did not consider research and publication to have any impact on

hiring decisions at their universities. This conclusion is strengthened by the fact that

when only the responses of this subgroup (unable to answer) are examined the study

finds that none of the respondents felt that research and publication experience was an

extremely or very important KSA, and 63% (n=10) felt it was not important at all. In addition, 75% (n=12) said it was not a factor in hiring decisions.

It is important to consider that among the subgroup of respondents who felt that the impact of research and publication on hiring decisions had remained stable there may be some who felt that the impact of this KSA was initially zero and remained unchanged.

Discussion

Applicants for academic librarian positions in the United States must demonstrate various qualifications and skills to maximize their opportunity to secure employment. This study used a systematic sample of online survey respondents to investigate the impact of various applicant KSAs on the decision making process of selection committee members charged with hiring entry-level public services academic librarians in the United States. In addition to comparing 10 important KSAs that impact hiring decisions, the influence of previous work experience and an MLS/MLIS degree were also considered. Particular focus was placed on discovering the impact of one KSA: scholarly research and publication experience. The results of the study revealed several findings worth further consideration.

Specific definitions for the terms *entry-level* and *public services* set the parameters for which respondents would be included in the study. The selectees were asked in the first question whether they were on a selection committee for an entry-level public services academic librarian in the past five years (January 2010 – January 2015). *Entry-level* was defined for this study as either requiring no experience or requiring one year of experience or less. This was the only stipulation. This broad

definition represented the culmination of a gradual broadening of the term in the LIS

literature covered in this study (Table 24).

Table 24

Evolution of the Term Entry-Level in the Literature

Study	Definition of Entry-level Position
Reser & Schuneman (1992)	* the position be labeled as "entry-level" * no mention of required work experience * a statement stating no work experience required
Sproles & Ratledge (2004)	* the position be labeled as "entry-level" * no mention of required work experience * no experience or duties impossible for entry-level librarians to gain (supervisory or administrative)
Reeves & Hahn (2010)	* the position be labeled as "entry-level" * no mention of professional work experience * no experience or duties impossible for entry-level librarians to gain
Detmering & Sproles (2012)	* the position be labeled as "entry-level" * no mention of professional work experience * no experience or duties impossible for entry-level librarians to gain
Tewell (2012)	* requires an MLIS degree * requires one or fewer years of experience * does not require experience or duties that entry-level librarians typically do not possess (supervisory, administrative, etc.)

The requirements that a job advertisement state explicitly that it is "entry-level" and

that it does not require any work experience were eventually dropped by Tewell

(2012). In addition, Tewell accepted up to a year of work experience to match

employer expectations of some internship or pre-professional work experience, but

kept the prohibition of any supervisory or administrative experience used in previous studies (Sproles & Ratledge, 2004; Reeves & Hahn, 2010). For this study, the term *entry-level* was broadened even further to include selection committee members in the survey who hired candidates without an MLS/MLIS, as well as those who had acquired various kinds of experience before seeking employment as a librarian. The assumption was that new academic librarians could have gained valuable experience in the past, given that some academic librarians enter the field as a second career. This view of the significance of experience gained in previous careers demands a definition of work experience that goes beyond the experience gained in an academic library setting. Previous experience has been described in librarian job advertisements as professional, non-professional, specialized or general (Reser & Schuneman, 1992). Other studies have labeled experience as either professional or non-professional (Reeves & Hahn, 2010). Required experience can and does include work experience gained outside of the profession. How this impacts the definition of "entry-level" and how we define a new or first-time academic librarian is an issue worth further exploration.

Despite the broadening of the term *entry-level* for this study, there is some evidence that the chosen parameters of this term may have been too narrow to capture all the data available on the value of research and publication experience for first-time academic librarians. A total of 55% of respondents who had not hired an entry-level public services librarian in the past five years were from research universities, despite the fact that research universities were only 44% of the total sample. By contrast, 42% of respondents who did hire an entry-level public services librarian in the past five years were from master's colleges and universities, despite this group only

representing 35% of the total respondent population (Table 13). It is possible that research universities are more likely than master's colleges and universities or baccalaureate colleges to demand very highly qualified entry-level candidates or, put another way, may hire only candidates that are not so easily categorized as entry-level. Previous research supports this conclusion. Tewell (2012) reported that 57% of job advertisements in his study of entry-level positions required more than one year of experience.

Focusing on respondents from research universities (n=62) reveals that 39% of these respondents answered "no" to Question 1 indicating that they had not hired an entry-level public services academic librarian in the past five years. This compares to only 18% of respondents from master's colleges and universities (n=49) answering "no". This is an unusual result given that research universities have much larger FTE staff sizes than all other categories of universities (Table 8). It is possible that these results represent the advanced hiring expectations of research universities and what they consider to be "entry-level". A decade ago, Paulson (2003) worried about the difficulty of finding entry-level positions at academic libraries because of increasing requirements for a second Master's degree and the types of work experience typically gained by older applicants during their first or second careers. This study may have revealed some evidence of this difficult reality at the upper end of the Carnegie classification scale. The fact that research universities with larger FTE student enrollments and larger FTE library staff may be underrepresented due to the parameters of the term entry-level must be considered when assessing the results presented here. A significant percentage of academic librarians enter librarianship after 40 years of age (Lewis, 2010) and if research universities are hiring these first-

time academic librarians with their varied skills sets and experiences, these research universities should also be included in an investigation of which KSAs have the greatest impact on hiring decisions for first-time public services academic librarians. Future investigations of the desired KSAs for new academic librarians should take care to include a more nuanced definition of entry-level to avoid the loss of valuable data.

With the existence of new or evolving job titles and hybrid positions, the term *public services* was also defined in a way that would allow for a flexible interpretation of the term *entry-level public services academic librarian*. The term *public services* was defined as any position in which the duties and responsibilities of the employee are less than 50% technical in nature [A majority public service function]. In responses concerning the impact of various KSAs on hiring decisions, the study showed that among respondents who were on a selection committee that hired an entry-level public services academic librarian in the past five years, technology was considered to be an extremely or very important KSA by 88% of respondents (M=4.46). This shows that even in public services positions, technology is pervasive and skills in this area have a strong impact on hiring decisions. A textual analysis of the exact job titles for these entry-level public services positions (Appendix D) revealed that at least 17% had titles that included words suggesting technical responsibilities as a part of the job.

One of the trends noted in the LIS literature has been an indication of a gradual decrease in the MLS/MLIS requirement for academic librarian jobs in the United States (Starr, 2004; Bajjaly, 2005; Grimes and Grimes, 2008; Simpson, 2013). In a longitudinal content analysis, Grimes and Grimes (2008) tracked a gradual

decline in the MLS/MLIS as a prerequisite for applying at an academic library from 1990 through 2005. According to Grimes and Grimes, by 2005 only 58% of all advertised jobs listed an MLS/MLIS requirement, but when the job advertisements were separated into job categories (public services, technical services, head of service area, systems, and special collections) the study found that the public services category was the sector most likely to require an MLS/MLIS.

With 87% of primary respondents for this study requiring an MLS/MLIS degree and an additional 10% preferring one, the results of this study support the resiliency of the MLS/MLIS requirement when it comes to entry-level public services positions. Grimes and Grimes (2008) found that the MLS/MLIS is of more value in positions that include core functions in public, technical, and administrative areas, while highly specialized areas such as systems or special collections were less likely to require an MLS/MLIS degree. This study supports that conclusion.

The 13% (n=13) of primary respondents who did not require an MLS/MLIS degree (Table 19) had some interesting similarities in respondent characteristics. Over 66% of respondents who did not require an MLS/MLIS were from research universities and 75% were from universities with FTE student enrollments of over 10,000. Of the 11 job titles for positions that did not require an MLS/MLIS degree, three were science-related and three were technology-related. These results support the findings of Grimes and Grimes that some specialist categories of academic librarian positions in universities with high levels of research activity do not require an MLS/MLIS degree. This also supports the decision not to require an MLS/MLIS degree for the definition of entry-level public services position used in this study.

There is a need to consider the current parameters of public services academic librarianship when examining entry-level hiring in future studies.

As the KSA being closely examined by this study, research and publication was of primary interest. When answering the survey question on the impact of various KSAs on hiring decisions, only 14% of primary respondents found research and publication experience to be an extremely or very important KSA. In fact, over one-third (34%) felt it was not important at all. When responses to this question were weighted according to a 5-point rating scale there were additional differences in institutional characteristic subgroups worth noting. To calculate a weighted average based on multiple responses the following point values were used: extremely important (5), very important (4), moderately important (3), slightly important (2), or not important at all (1) (Table 25).

Table 25

Value of Research and Publication - Institutional & Respondent Characteristics

Institutional and respondent characteristics	N or n	M
All respondents	N=97	2.20
Respondent - Administrative	n=73	2.15
Respondent - Non-administrative	n=23	2.35
Research universities	n=38	2.29
Master's colleges and universities	n=40	2.25
Baccalaureate colleges	n=12	1.92
FTE enrollment - 10,000 or more	n=41	2.46
FTE enrollment -3,000 to 9,999	n=26	1.85
FTE enrollment - 1,000 to 2,999	n=23	1.87
FTE enrollment - fewer than 1,000	n=5	3.00
FTE staff - more than 300	n=2	3.50
FTE staff - 100 to 300	n=18	2.06
FTE staff - 25 to 99	n=26	2.54
FTE staff - less than 25	n=50	2.02
Midwest	n=28	2.14
Northeast	n=20	2.05
South	n=34	2.18
West	n=11	2.73
Rural	n=23	2.04
Suburban	n=32	2.13
Urban	n=39	2.36

Note. M = Mean.

When it comes to the impact of the research and publication KSA on hiring decisions, there are a few institutional and respondent characteristics that point to institutions where research and publication experience may be have a greater impact on hiring decisions. Hiring committee members who are not in administrative positions tend to value research and publication slightly more. It is difficult to speculate based on such a small sample size, but this could be an indication of the difference between a top-down perspective of job duties as defined by administrators vs. a task-oriented view of job competencies as seen by non-administrative personnel. If so, this would

indicate a need to focus more directly on the views of non-administrative respondents in a future study to discover if research and publication experience is of increasing value in performing the tasks involved in the practice of public services academic librarianship.

Research universities and master's colleges and universities had a slightly stronger tendency to value research and publication as a factor in hiring for entry-level public services positions than baccalaureate colleges. There is a possibility that research universities may be underrepresented in the sample of those who have hired an entry-level public services librarian in the past five years due to the parameters of the term entry-level used in this study. Given their FTE library staff size and high level of interest in research activities, they should have a stronger tendency to value research and publication as a factor in hiring. The inclusion of more research universities that had hired first-time academic librarians with more than one year of previous experience could alter the results of this study. Further studies would be necessary to discover if research universities actually hire true entry-level public services librarians and whether the term entry-level needs to be redefined in the current academic librarian job environment.

Larger universities with higher FTE enrollments also tend to have a higher value for research and publication in hiring decisions, though the data also revealed an interesting result concerning institutions with less than 1000 FTE students enrolled. The weighted average for this small group (n=5) was 3.00, indicating a large increase in the value of this KSA as compared to the average of all respondents (2.20). This could be an anomaly caused by the small sample size of this subgroup, or it could indicate that further study of the value of this KSA at smaller institutions is

warranted. The average response for institutions with over 10,000 FTE student enrollment (2.46) is unsurprising as there would be more space for specialization in larger universities and more tenure-track academic librarians who would need to utilize research and publication skills. Grimes and Grimes (2008) report that the percentage of tenure track academic librarian jobs has increased from just 6% in 1975 to 33% in 2005. This increase in tenure opportunities would result in more academic librarians conducting academic research and publishing scholarly papers on a regular basis.

The results for FTE library staff are also inconsistent. The highest weighted average for any subgroup (3.5) is indicated for primary respondents from institutions with FTE library staff of 300 or more, but this result is based on only 2 respondents. Some of the other respondents from the largest universities may have been lost due to the definition of entry-level as defined by this study. The remaining categories of this group returned inconsistent results and do not reveal a trend in the value of this KSA attached to an institution's library staff size.

The four geographic regions showed results close to the average except for the West (2.73), which also had the smallest sample size (n=11). Finally, urban campuses (2.36) were slightly more likely to value this KSA when making hiring decisions. This result is likely tied to the fact that many universities near the top of the Carnegie classification scale exist in urban environments. Over 64% of respondents from research universities were located in urban environments with another 24% in suburban and only 10% in rural communities (2% were unable to answer).

Taken as a whole, these results would suggest that research and publication experience has a greater impact on hiring decisions at urban, research universities with very large FTE student enrollments and very large library staffs in the western region of the United States. Still, only 14% of primary respondents felt that research and publication experience was an extremely or very important KSA when it came to its impact on hiring decisions. It ranked 9th out of the 10 KSAs on the ranked weighted averages list, above only second language (Table 17). Despite this relative lack of importance, the results can be viewed in another way. Much as technology is a KSA that pervades and impacts many other KSAs, the skills gained through research and publication experience may be indicated within other KSAs. Research and publication experience and familiarity with the research process in a variety of formats would contribute to instructional program evaluation and assessment, marketing research, institution-wide statistical analyses, grant proposals, digital publishing efforts, scholarly communication initiatives, and collaborative efforts with faculty who are conducting and publishing research. It would definitely contribute in some way to other KSAs on this list, such as Evaluation and Assessment, Teaching, and Marketing. As such it may have a deeper value that contributes to a candidate's skill set in a variety of other ways. The value of the tangential skills associated with research and publication experience may not be fully considered or appreciated by all selection committee members. Perhaps additional questions on the survey will capture some sense of the value of research and publication experience for selection committee members.

Primary respondents were asked to what degree scholarship and publication in peer-reviewed journals was encouraged for public services librarians at their

institutions. A total of 45% of respondents considered research and publication as either a primary or a secondary duty (Table 20). When responses to this question are compared by respondent Carnegie classification there is a clear evidence of a connection between higher-level research universities and levels of encouragement for conducting research and publishing scholarly works (Table 26).

Table 26

Carnegie Classification / Research and Publication Encouragement (N=96)

	Primary duty - required (n=20)	Secondary duty - strongly encouraged (n=24)	Tertiary duty - mildly encouraged (n=26)	neither encouraged nor required (n=26)
RU/VH (n=18)	28%	33%	22%	17%
RU/H (n=11)	36%	18%	27%	18%
DRU (n=9)	22%	33%	22%	22%
Master's L (n=20)	30%	30%	20%	20%
Master's M (n=8)	25%	0%	25%	50%
Master's S (n=12)	0%	42%	33%	25%
Bac/A&S (n=8)	12.5%	12.5%	25%	50%
Bac/Diverse (n=3)	0%	0%	0%	100%
Bac/Assoc (n=1)	0%	0%	100%	100%
unable to answer (n=6)	0%	16.5%	67%	16.5%

Note. RU/VH = Research Universities (very high research activity); RU/H = Research Universities (high research activity); DRU = Doctoral/Research Universities; Master's/L = Master's Colleges and Universities (larger programs); Master's/M = Master's Colleges and Universities (medium programs); Master's/S = Master's Colleges and Universities (smaller programs); Bac/A&S = Baccalaureate Colleges - Arts & Sciences; Bac/Diverse = Baccalaureate Colleges - Diverse Fields; Bac/Assoc = Baccalaureate/Associate's Colleges.

Over fifty percent of primary respondents in the top four categories on the Carnegie classification scale responded that they require or strongly encourage research and publication at their institutions as a primary or secondary duty. This group represents

35% of the respondents who have hired an entry-level public services position in the past five years (N=97, n=34). Given this reasonably high level of encouragement for research and publication as a primary or secondary duty, the question remains as to why this KSA is not more highly valued during the hiring process. It is puzzling that only 14% of primary respondents rank research and publication experience as extremely or very important during the hiring process, but 45% require or strongly encourage it as a job duty. One possibility is that administrators, who make up 76% of the respondents who hired an entry-level public services librarian, are not comfortable exhibiting less than enthusiastic support for research by their staff when filling out a questionnaire such as this survey. This general support for research and publication may not extend into the specific time when hiring decisions must be made based on a variety of KSAs. Alternately, the expectation for extensive research and publication activity may not begin until after being hired. This could be as a part of the advancement process for tenure track positions, or as a part of ongoing assessment and evaluation efforts in instruction, marketing, collection development, or statistical analysis of user services.

A separate survey question asked primary respondents if previous research and publication experience was of value to the applicant at different phases of the hiring process. A majority 56% of select respondents stated that research and publication experience was not a factor in hiring decisions, while 43% believed that it had value during the screening phase, the interview phase, or both (Table 21). More specifically, of those who found this KSA to be of value, 29% felt it was primarily of use during the screening phase. This means that for this group of respondents it would be a factor in weeding out candidates prior to the interview phase. Another

22% felt that it would be of most value during the interview phase when a candidate might be able to use their knowledge of research methodology or past experience conducting research and navigating the peer-reviewed publication process to demonstrate their suitability for the position. The final 49% of respondents who valued this KSA during the hiring process felt that it was equally valuable during the screening and interview phases.

These figures of 43% of primary respondents who stated that research and publication had some value during the hiring process and 56% of primary respondents who felt it had no impact at all roughly match the percentage of respondents that felt that research and publication was a primary or secondary duty (45%) vs. those that felt it was a tertiary duty or solely of use for personal professional development (55%) (Table 20). This reinforcement of the respondents into two distinct groups is interesting. Nearly half of primary respondents felt that research and publication was either a primary/secondary duty or felt that this KSA could be of some value in the screening or interview phases of the hiring process. While these numbers indicate real value for research and publication experience at academic libraries generally, this study presents no evidence of a strong impact on hiring decisions specifically.

One of the key questions in this survey asked for the primary respondents' opinions of the trend in the impact of research and publication experience on hiring decisions at academic libraries. Careful examination of the various subgroups should reveal which types of universities, geographic areas, and job types tend to value or dismiss this KSA.

Twenty-one percent of primary respondents felt that during the past 10 years (January 2005 – January 2015) the impact of research and publication on hiring

decisions at academic libraries had increased, 25% felt that this KSA had decreased in level of impact on hiring decisions, while 38% felt it had remained unchanged in level of impact. (16% of respondents were unable to answer) (Table 23).

The most interesting groups of respondents for this question are those that believed there was a positive or negative ten-year trend in the impact of this KSA on hiring decisions. These two groups were fairly evenly distributed (n=20, n=24) between those who saw an increase in the impact of research and publication and those who saw a decrease in the impact of this KSA. A careful examination of which types of respondents are found in each category should help to pinpoint what caused such balanced disagreement among nearly half the respondents in this group. Tables 27 and 28 contrast these two groups. Table 27 shows the various characteristics of respondents who believe that the impact of research and publication experience on hiring decisions is increasing (n=20). The percentages in parentheses represent total respondents who were on a hiring committee for an entry-level public services position in the past five years (N=97).

Table 27

Impact of Research and Publication on Hiring Decisions is Increasing
n=20, (N=97)

Institutional and respondent characteristics	% (%)
Respondent - Administrative	70% (79%)
Respondent - Non-administrative	30% (21%)
Research universities	55% (44%)
Master's colleges and universities	30% (35%)
Baccalaureate colleges	10% (15%)
FTE enrollment - 10,000 or more	70% (42%)
FTE enrollment -3,000 to 9,999	15% (24%)
FTE enrollment - 1,000 to 2,999	15% (24%)
FTE enrollment - fewer than 1,000	0% (5%)
FTE staff - more than 300	5% (4%)
FTE staff - 100 to 300	25% (16%)
FTE staff - 25 to 99	40% (30%)
FTE staff - less than 25	30% (50%)
Midwest	15% (27%)
Northeast	25% (25%)
South	50% (31%)
West	10% (14%)
Rural	10% (24%)
Suburban	30% (26%)
Urban	60% (49%)

Respondents who believe that there is an upward trend in the impact of research and publication experience over the past ten years (January 2005 – January 2015) are more likely to be non-administrative than the average respondent. They also tend to be from research universities with very large FTE student enrollments and medium to large FTE library staffs. They are more likely to be located in urban areas in the South or Northeast. Of course the type of community could be directly associated with the Carnegie classification as research universities tend to be located in more urban environments.

By contrast, the respondents who believe that the impact of research and publication experience on hiring decisions is decreasing over a ten-year period have

quite different characteristics (n=24) (Table 28). The percentages in parentheses

again represent total respondents who were on a hiring committee for an entry-level

public services position in the past five years (N=97).

Table 28

Impact of Research and Publication on Hiring Decisions is Decreasing
n=24, (N=97)

Institutional and respondent characteristics	% (%)
Respondent - Administrative	87% (79%)
Respondent - Non-administrative	13% (21%)
Research universities	25% (44%)
Master's colleges and universities	50% (35%)
Baccalaureate colleges	12.5% (15%)
FTE enrollment - 10,000 or more	29% (42%)
FTE enrollment -3,000 to 9,999	46% (24%)
FTE enrollment - 1,000 to 2,999	12.5% (24%)
FTE enrollment - fewer than 1,000	12.5% (5%)
FTE staff - more than 300	0% (4%)
FTE staff - 100 to 300	12% (16%)
FTE staff - 25 to 99	21% (30%)
FTE staff - less than 25	67% (50%)
Midwest	50% (27%)
Northeast	12.5% (25%)
South	25% (31%)
West	12.5% (14%)
Rural	46% (24%)
Suburban	29% (26%)
Urban	25% (49%)

Respondents who believe that there is a downward trend in the impact of research and

publication experience over the past ten years (January 2005 – January 2015) are

more likely to be administrative than the average respondent. They tend to be from

master's colleges and universities with medium-sized FTE student enrollments and

small FTE library staffs. They are more likely to be located in rural communities in

the Midwest or South. Their tendency to be from rural communities exceeds the

average by a significant amount.

Despite the probability of the loss of some respondents due to the parameters of the term *entry-level* used in this study, the remaining research universities in this study still represent a significant portion (70%) of the respondents who see the impact of research and publication experience on hiring decisions increasing over a ten year period (Table 27). Research universities also represented 50% of respondents who felt research and publication was a primary or secondary duty, probably due to its importance for tenure-track promotion. These research universities tend to have higher FTE student enrollment, higher FTE library staff and are primarily located in more urban communities than smaller master's colleges and universities and baccalaureate colleges at the lower end of the Carnegie classification scale. These smaller, rural campuses with lower FTE student enrollments and smaller FTE library staff do not see an increase in the impact of this KSA on hiring decisions over a ten-year period. When examined in detail, more than 60% of respondents who saw a decrease in the impact of this KSA, and who were able to identify their Carnegie classification, came from the bottom four categories of the Carnegie classification scale (Master's S, Bac/A&S, Bac/Diverse, Bac/Assoc).

Several possible hiring trends are suggested by these findings. If trends in academic librarianship tend to be led by the research universities and largest master's colleges and universities then there is some evidence that the impact of research and publication on hiring decisions for entry-level public services positions could continue to grow. If changes percolate up from the grassroots across campuses of all types and sizes, then there is evidence that this KSA may continue to be viewed as a peripheral skill. The more likely reality is that the needs of different types of academic libraries will continue to differ and the skills required for each environment

may vary according to the individual specialization of the each position and the priorities of the individual institution. This means that a specific, but sizeable, number of potential employers will continue to value this KSA and want to hire employees who can utilize it once engaged in the day-to-day tasks of a public services academic librarian, but it may not impact hiring decisions for entry-level public services positions across all institutions.

Conclusion

The results of this study do not support the view that the impact of research and publication experience on hiring decisions for entry-level public services academic librarian positions in the United States is rising across all Carnegie classifications. This study has found that the impact of research and publication experience on hiring decisions for entry-level public services academic librarian positions is slightly higher at institutions ranked higher on the Carnegie classification scale, despite the possible loss of a number of respondents from research universities due to the limitations of the definition of *entry-level* used in this study. The study showed less impact for research and publication experience on hiring decisions at smaller universities and colleges. A large percentage of respondents to the survey (45%) stated that they considered research and publication to be a primary or secondary duty for academic librarians at their institutions. This may indicate that selection committee members see some value for this KSA in the performance of job duties. Despite this fact, the relative position of this KSA as compared to the other nine KSAs examined in this study was low. This could be an indication that research and publication experience is only valued after hiring has occurred and that it is under appreciated or devalued at hiring time. Or it could indicate that it is still emerging as

90

a KSA of relative importance in the hiring of academic librarians for new hybrid positions. Future studies may contribute to answering some of these questions.

This study has indicated several promising areas for additional research. Answering the question of precisely what types of work experience are typically required for first time public services academic librarians at universities and colleges would help to clarify the current expectations of employers across the field. The existence of various types of professional and non-professional work experience of value to selection committee members at academic libraries makes it difficult to ascertain what kinds of experience are usually sought at specific types of academic libraries. It would be worth investigating the current, accurate definition of *entry-level position* and how MLS/MLIS graduates and first-time academic librarians can best prepare to meet evolving expectations.

The small differences in the views of research and publication by administrators and non-administrators should be explored further to discover if there is a gap between the KSA expectations (job duties) of administrators and the KSA realities (job competencies) of academic librarians. Do non-administrator academic librarians tend to see research and publication experience as a valuable KSA of use in their jobs? A study that elucidated the exact sub-skills associated with research and publication and then revealed how they were manifested in the daily tasks of a public services academic librarian could offer evidence of the pervasive and useful nature of this KSA within a variety of contexts.

A final area that is worth exploring is suggested by the gap between the 44% of respondents who saw some value for research or publication experience in the screening or interview phase of the hiring process (Table 21) and the 31% who

indicated that they examined resumes in detail for journal/publication quality (Table 22). This gap suggests that some selection committees may be failing to assess whether publications given as evidence of this KSA were properly peer-reviewed. Some open access journals operate on a fee-based model that can in extreme cases lead to a degradation of quality and a threat to the peer-review system. This danger can be addressed through careful monitoring at all levels of the knowledge creation and dissemination process including the hiring process at institutions of higher education.

Several lists focusing on journal quality are available and could be utilized to assist in checking journal quality. Harzing (2015) has compiled the Journal Quality List, now in its 53rd edition, since 2000. It is designed to help authors find reputable journals for their own articles and papers, but could be used to evaluate publication quality generally. The Ulrichsweb Global Serials Directory (2015) is an easy-to-use database that can be accessed to quickly identify refereed journals. Beall (2015) has also compiled a list of questionable, scholarly open-access journals and publishers engaged in predatory publishing at the Scholarly Open Access website. The list is updated regularly and highlights the worst offenders operating on the dark side of academic publishing. Future research that anonymously tracked levels of publication quality as presented in resumes for academic librarian positions could shed a light on this troubling trend and alert authors and potential employers alike to the scope of the problem.

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Appendix A

Online Survey

Message to participant

Thank you for agreeing to participate in my thesis study on the hiring of academic librarians in the United States. The results of the study will better prepare MLS/MLIS graduates for their job search efforts and add to the scholarly conversation on the evolving roles and responsibilities of academic librarians. This survey is entirely anonymous and voluntary. There will be no identifying information collected about you, your library, your institution, or your staff. If at any time you decide you do not want to participate you may simply stop filling out the survey. By clicking "Yes" for question 17 at the end of the questionnaire you are consenting to participate in the study and share the anonymous data collected. The data collected may subsequently be published as generalizable knowledge and presented to other professionals or academics.

Online Questionnaire

1. Did you serve on a selection committee (hiring committee/ search and screen committee) for an entry-level public services position at your academic library in the time period from January 2010 to the present? If you have served on more than one hiring committee for an entry-level position since January 2010, please choose the most recent case.

    Note:
- Entry-level position shall be defined as either requiring no experience or requiring one year of experience or less.
- Public services positions shall be defined as positions in which the duties and responsibilities of the employee are less than 50% technical in nature. [A majority public service function.]

□ Yes (Please continue with Questions 2-17 below)
□ No (Please complete Questions 10-17 below)

Please consider the most recent selection committee you served on and answer all the questions below in relation to that specific case.

2. What was the exact title of the entry-level public services position?

3. How would you assess the following 10 applicant KSAs (Knowledge, Skills, Abilities) in terms of their impact on the selection committee's hiring decision for this entry-level public services position? Please select one answer for each KSA.

Ability to utilize technology successfully through the use of basic hardware, software, and/or technological tools and applications.

□ extremely important

□ very important
□ moderately important
□ slightly important
□ not important at all
□ unable to answer

Experience with leadership through supervisory experience and/or project management.

□ extremely important
□ very important
□ moderately important
□ slightly important
□ not important at all
□ unable to answer

Experience conducting scholarly research and publishing results in peer-reviewed journals.

□ extremely important
□ very important
□ moderately important
□ slightly important
□ not important at all
□ unable to answer

Experience designing lesson plans and teaching a class of students.

□ extremely important
□ very important
□ moderately important
□ slightly important
□ not important at all
□ unable to answer

Experience promoting and/or marketing a product or service.

□ extremely important
□ very important
□ moderately important
□ slightly important
□ not important at all
□ unable to answer

Experience collaborating successfully as a part of a team.

□ extremely important

□ very important
□ moderately important
□ slightly important
□ not important at all
□ unable to answer

Ability to communicate efficiently and effectively in written and spoken form.

□ extremely important
□ very important
□ moderately important
□ slightly important
□ not important at all
□ unable to answer

Experience evaluating or assessing instructional sessions, programs, services or collections.

□ extremely important
□ very important
□ moderately important
□ slightly important
□ not important at all
□ unable to answer

Ability to exhibit emotional intelligence and successfully create and maintain interpersonal relationships.

□ extremely important
□ very important
□ moderately important
□ slightly important
□ not important at all
□ unable to answer

Ability to speak a second language.

□ extremely important
□ very important
□ moderately important
□ slightly important
□ not important at all
□ unable to answer

Other (Please add any essential KSA that impacted your hiring decision, but wasn't included or emphasized sufficiently in the categories above.)

□ extremely important
□ very important
□ moderately important
□ slightly important
□ not important at all
□ not necessary to add an additional KSA

4. Did this entry-level public services position require previous work experience? Please select one answer.

□ some work experience required (one year or less)
□ some work experience preferred, but not required
□ no work experience required
□ unable to answer

5. Is scholarship and publication in peer-reviewed journals by public services academic librarians encouraged at your institution? Please select one answer.

□ required (a primary duty)
□ strongly encouraged, but not required (a secondary duty)
□ mildly encouraged, but not required (a tertiary duty)
□ neither encouraged nor required (personal professional development only)
□ actively discouraged (a distraction from primary duties)
□ unable to answer

6. At what phase of the application process is previous research and publication experience of the most value to the applicant? Please select one answer.

□ screening phase
□ interview phase
□ both the screening and interview phase (approximately equal weight)
□ not a factor in hiring decisions
□ unable to answer

7. In your role as a selection committee member, do you examine publications on an applicant's resume in detail for journal/publication quality? Please select one answer.

□ Yes, during the screening phase
□ Yes, after the screening phase, but prior to the interview phase
□ No, publications are not examined carefully for journal/publication quality
□ No, because applicant publications do not impact my decision
□ unable to answer

8. How would you describe the trend over the past ten years in the impact of research and publication experience on hiring decisions at academic libraries? Please select one answer.

□ becoming more impactful
□ remaining relatively stable in level of impact
□ becoming less impactful
□ unable to answer

9. Was an MLS/MLIS degree required or preferred for this entry-level public services position? Please select one answer.

□ required MLS/MLIS
□ preferred MLS/MLIS, but not required
□ MLS/MLIS not mentioned as a requirement
□ unable to answer

Please answer these last few questions about you and your academic institution.

10. Which of the following most closely matches your job title?

□ library director
□ university librarian
□ head of specific service area
□ academic librarian
□ faculty member / professor
□ other – Please specify.

11. Which of these categories best describes your university? Please select one answer.

□ Doctoral-granting / Research University (more than 20 research doctoral degrees
   awarded)
□ Master's Colleges and Universities (more than 50 Master's degrees awarded)
□ Baccalaureate Colleges (less than 50 Master's degrees awarded)
□ unable to answer

12. What is your university's Carnegie Classification? (listings of universities available at http://carnegieclassifications.iu.edu/lookup_listings/ institution.php) Please select one answer.

□ RU/VH: Research Universities (more than 20 research doctoral degrees &
   very high research activity – Level 1)
□ RU/H: Research Universities (more than 20 research doctoral degrees &
   high research activity – Level 2)
□ DRU: Doctoral/Research Universities (more than 20 research doctoral   degrees)
□ Master's L: Master's Colleges and Universities (200+ MA degrees)
□ Master's M: Master's Colleges and Universities (100-199 MA degrees)
□ Master's S: Master's Colleges and Universities (50-99 MA degrees)
□ Bac/A&S: Baccalaureate Colleges--Arts & Sciences (less than 50 MA degrees
   awarded, more than 50% of BA degrees are arts and sciences)

□ Bac/Diverse: Baccalaureate Colleges--Diverse Fields (less than 50 MA degrees
   awarded, less than 50% of BA degrees are arts and sciences)
□ Bac/Assoc: Baccalaureate/Associate's Colleges (BA degrees represent
   10-50% of undergraduate degrees awarded)
□ unable to answer

13. What is your student full-time equivalent (FTE) enrollment? Please select one
answer.

□ 10,000 or more FTE enrollment
□ 3,000 to 9,999 FTE enrollment
□ 1,000 to 2,999 FTE enrollment
□ fewer than 1,000 FTE enrollment
□ unable to answer

14. How many FTE library staff are employed by your institution? Please select one
answer.

□ more than 300
□ 100 to 300
□ 25 to 99
□ less than 25
□ unable to answer

15. In which geographic region of the United States is your institution located?
Please select one answer.

□ Midwest
□ Northeast
□ South
□ West
□ unable to answer

16. How would you describe the location of your campus? Please select one answer.

□ Rural
□ Suburban
□ Urban
□ unable to answer

17. Do you consent to allow all data collected in this voluntary, anonymous
questionnaire to be published and shared?

□ Yes
□ No

Appendix B

Request for Participants

Subject Line: Study on the hiring of entry-level academic librarians

My name is James Hicks and I am currently attending the San Jose State University School of Information. I'd like to invite you to participate in my thesis study on the hiring of academic librarians in the United States. You have been randomly selected from 1831 academic libraries to take part in this anonymous, voluntary study. The results of the study will better prepare MLS/MLIS graduates for their job search efforts and add to the scholarly conversation on the evolving roles and responsibilities of academic librarians. It would be greatly appreciated if you could forward this email to one participant from your institution who has served on a selection committee for an entry-level public services academic librarian position since January 2010. The participant may be a library director, university librarian, academic librarian, head of a specific service area, or faculty member (including yourself). "Entry-level" is defined as requiring one year or less of experience (including internships, part-time work or volunteer work). "Public services" is defined as a position in which the duties or responsibilities of the employee are less than 50% technical in nature [A majority public service function]. If your institution has not hired an entry-level public services academic librarian since January 2010, please answer "No" for Question 1 of the survey and take a couple of minutes to answer a few multiple choice questions about your institution. Your answers will still provide valuable data for the study.

Participating respondents will complete a short, 17-question, multiple-choice, online questionnaire (SurveyMonkey link below). The survey is completely anonymous and participation indicates consent to allow the data to be published and shared. There will be no identifying information collected about you, your library, your institution, or your staff. The data will be collected during January and February of 2015. You will receive one additional reminder email. I apologize for the inconvenience, but the fully anonymous design of the study does not allow for differentiation between respondents and non-respondents. Thank you for your patience.

The primary investigator for this study is James Hicks. I can be reached at xyz@xyz.com or 123-456-7xxx. This study has been approved by the San Jose State University Institutional Review Board, which can be reached at 987-654-3xxx.

You can access the anonymous, self-administered, multiple-choice questionnaire using the link below. It should take no longer than 10 or 15 minutes to complete. Thanks so much for your time.

Sincerely,
James Hicks

San Jose State University School of Information

SurveyMonkey Survey Link: https://www.surveymonkey.com/s/VR6Q9VF

Appendix C

Reminder Email

       My name is James Hicks and I am currently attending San Jose State University School of Information. I contacted you one week ago about participation in my thesis study. This is just a short reminder to random selectees who have not yet completed the online questionnaire examining the hiring of academic librarians in the United States. The results of this study will better prepare MLS/MLIS graduates for their job search efforts and add to the scholarly conversation on the evolving roles and responsibilities of academic librarians.

       If you have already completed the survey, I apologize for the reminder and thank you for your time. If you haven't had the chance to complete the short, anonymous, multiple-choice questionnaire, it would be greatly appreciated if you could forward this email to one participant from your institution who has served on a selection committee for an entry-level public services academic librarian position since January 2010. The participant may be a library director, university librarian, academic librarian, head of a specific service area, or faculty member (including yourself). If your institution has not hired an entry-level public services academic librarian since January 2010, please answer "No" for Question 1 of the survey and take a couple of minutes to answer a few multiple-choice questions about your institution. Your answers will still provide valuable data for this study.

Thanks again.

Sincerely,

James Hicks

San Jose State University School of Information

Survey Monkey Survey Link: https://www.surveymonkey.com/s/VR6Q9VF

Appendix D

Entry-Level Public Services Position Titles

Respondent	Response Text
1	Information Services Librarian
2	Science Librarian
3	Campus Librarian
4	Instruction Specialist
5	Electronic Access and User Experience Librarian
6	Science Reference & Instruction Librarian
7	Distance Education Librarian
8	Reference/Instruction Librarian
9	Digital Services Librarian
10	Reference Librarian
11	Business Reference Librarian
12	Undergraduate Education Librarian
13	Business Liaison Librarian
14	Digital Services Librarian
15	Research & Instruction Librarian
16	Humanities Librarian
17	Assistant Librarian
18	Art Collection Public Services Librarian
19	Assistant Librarian
20	Assistant Librarian
21	Electronic resources librarian
22	assistant librarian
23	multiple
24	Distance Education Librarain
25	Reference Librarian
26	Web/STEM Librarian
27	Reference/Government Information Librarian
28	Regional Campus Librarian
29	Emerging Technologies Librarian
30	Instruction Librarian
31	Reference Librarian
32	Distance Learning and E-Resources Librarian
33	Reference/Instruction Librarian
34	Undergraduate Outreach Librarian/Assitant Prof
35	Collection Development Librarian (position has siginficant ref and instruction work also)
36	Collection development librarian
37	Technical Services Librarian
38	Electronic Services Librarian
39	Reference and Instructional Librarian I
40	Digital Services and Reference Librarian
41	library reference assistant

42	University Archivist/Librarian
43	Reference Librarian
44	Reference Librarian
45	Social Science Teaching and Faculty Outreach Librarian
46	Outreach/Marketing Librarian
47	"Writing and Information Literacy in the Disciplines" grant funded position
48	Outreach Librarian
49	Reference Assistant
50	Reference Librarian
51	Instruction Librarian
52	Public Services Librarian
53	College Librarian for Liberal Arts and Information Literacy
54	Instruction Librarian
55	Information Services Librarian
56	Reserve librarian. I recall
57	Reference Librarian
58	Circulation Assistant
59	Information services librarian
60	Undergraduate Learning Librarian
61	Access Services Librarian
62	Undergraduate Engagement Librarian
63	Access Services Librarian
64	Special collections cataloger
65	Part-time Reference Librarian
66	Reference and Instruction Librarian
67	Reference Librarian
68	Chemical Information Specialist, Assistant Professor
69	Reference Librarian
70	Agricultural Sciences and Digital Initiatives Librarian
71	Research Librarian
72	Reference Librarian
73	Science reference librarian
74	Access Services Librarian
75	public service librarian
76	Electronic Resource Librarian
77	Information Librarian / Electronic Resources Management
78	Reference/Instruction librarian
79	Science Librarian
80	Online Learning/Instructional Design Librarian
81	Systems Librarian
82	3 positions: Architecture Library Specialist and Technical Reference Librarian
83	Instructional Technology Librarian
84	Access services librarian
85	librarian
86	Reference Librarian/Subject Specialist

Appendix E

Informal Survey

Subject Line: SJSU-SLIS student: Informal Qualitative Survey

My name is James Hicks and I'm currently enrolled in the San Jose State University School of Library and Information Science. As a step in the development of my thesis research proposal I was hoping you might answer a few questions to help me gather some qualitative data. My thesis will investigate the impact of research and publication experience on hiring for academic librarian positions. The attached short questionnaire is being conducted using nonprobability, convenience sampling of SJSU-SLIS faculty who are likely to have experience serving on an academic library selection committee. It will be used to clarify and refine the direction of my thesis research and the development of the data collection instrument. All participants will have full anonymity and the results may be mentioned in the methodology section of my thesis. If you have the time, I do hope you will complete the short questionnaire by the end of April 2014 and send it back to me as at this email address. (xyz@xyz.com). It should only take 5 to 10 minutes. Thanks for your time in either case.

Sincerely,

James Hicks

xyz@xyz.com

Questionnaire

Question 1: Have you ever served on a selection committee charged with hiring an academic librarian? If so, what was the year or time period in which you served on hiring committee(s)?

Question 2: Did the hiring process include a resume or applicant screening phase in which specific criteria were used to narrow the field of applicants? If so, what were the specific criteria used for screening applicants?

Question 3: Was the applicant's previous research and publication experience a factor in either the applicant screening phase or the interviewing phase of the hiring process? How would you categorize the impact of research and publication experience on hiring prospects for an individual applicant?

Question 4: In your opinion, what is the general trend in the importance of research and publication experience for academic librarians?