

The Evolving Instructional Proficiencies of the Academic Librarian: An Attitudinal Study of Academic Library Administrators' Perceptions of Necessary Instructional Skills

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Introduction

The nature of the library profession is one of change. Librarians who have been in the profession for several decades have seen tremendous change as the print-only world evolved to a multimedia and digital world. In recent years change seems to come even more quickly, with Web 2.0 technologies multiplying rapidly. Traditionally, academic librarians have tried to integrate ourselves into the teaching and learning process on our campuses using existing skill sets in instruction. More recently, in response to the great changes in the way information and education are disseminated and delivered, librarians have broadened our skill sets, such as by incorporating web design skills, new educational technologies, and instructional design principles.

Paralleling the integration of new skill sets into the profession, new positions have increasingly been created, such as instructional design librarian, instructional technology librarian, and e-learning librarian, to name a few. When new positions are created, the administrator signs off on them, and this tacitly implies that he/she values the positions' skills. However, do we know to what extent administrators are aware of and value the new skill sets the librarians involved in the campus educational process are acquiring? The purpose of this research study is to explore the attitudes of today's library administrative leaders toward some of the skill sets needed to fulfill the library's educational role, and begin to provide answers to this question.

Problem Statement

The Association of College and Research Libraries (ACRL) *Environmental Scan 2007* included "Top Ten Assumptions for the Future of Academic Libraries and Librarians." The second assumption was "[t]he skill set for librarians will continue to evolve in response to the changing needs and expectations of the populations they serve, and the professional background of library staff will become increasingly diverse in support of expanded service programs and administrative needs" (2008, p. 4). In terms of the educational role of the library, the rapid changes in the academic library environment have resulted in librarians acquiring not only traditional skills in teaching and presentation, but also skills in educational technology and instructional design. While the latter two are not entirely new in the fields of education and information technology, these skills are being newly adopted by librarians seeking to extend their proficiencies for instructional services.

To what extent do academic library administrators, who may define, determine, or at the very least approve the skills needed by members of their library staffs, value both librarians' traditional skills and their newly adopted skills for providing the instructional services offered

by their libraries? The literature to date has not answered this question. The present research study surveyed a cross section of academic library administrators at large, medium, and small public and private colleges and universities across the United States to learn their attitudes toward the four selected skill sets of teaching, presentation, educational technology and instructional design, for fulfilling the instructional role of their libraries.

Research Questions

The following research questions direct this study.

1. Given the four selected instructional skill sets, two traditional (i.e. teaching and presentation) and two non-traditional (i.e. instructional design and educational technology), which skills and related proficiencies do academic library administrators perceive as most important for fulfilling the instructional role of the library?
 - 1a. To what extent do academic library administrators value the traditional skill sets of teaching and presentation?
 - 1b. To what extent do academic library administrators value the newly adopted skill sets of instructional design and educational technology?

Background & Literature Review

To date, there has not been a study done that has attempted to ascertain the attitudes of library administrators about our profession's instruction-related skill sets. Consequently, a search of the literature returns no results in the library and information science (LIS) profession. However, there are several studies that are of importance within the context of this study's primary research question.

The changing nature of the LIS profession has been discussed and written about quite extensively over the last twenty years. There are numerous articles that have discussed the changing nature of library instruction (Lynch, 2001; Pinfield, 2001; Baker et al., 1992; Hope et al., 2001; Dupuis, 1999), as well as the increasing integration of information technology skills and knowledge into the library profession (Mathews & Pardue, 2009; Zhou, 1996; Xu, 1996). There also have been a number of studies that have looked at job or positional announcements to identify changes in the profession (Clyde, 2000; Xu, 1996; Marion, 2001; Lynch, 2001; Goetsch, 2008).

The studies that have looked at job announcements of new positions or that used position announcements to examine the addition of new skill sets to the profession have indicated that there are two trends pertinent to this study. The first trend is that library instruction and information literacy have increased in importance concurrent with the ascension of the Internet as an increasing primary means by which students access information for their courses (Lynch, 2001; Xu, 1996; White, 1999). A second trend is the integration of information technology skills

that relate to internet technologies and educational hardware and software (Goetsch, 2008; Allen, 2005).

The rise of importance of library instruction, the emphasis on the development of information literacy programs, and the increasing use of technology in instruction have directly impacted the skill sets that academic libraries desire in their new hires. Sheila Corral traces the concept of “hybrid” positions in libraries, particularly with the development of online and technology-based information (2010, p. 3). New job titles have emerged within the traditional reference librarians’ domain, such as distance learning librarian, eLearning librarian, information literacy librarian, instructional technology librarian, etc. The Association of Research Libraries (ARL) SPEC Kit 256, *Changing Roles of Library Professionals*, provides representative position descriptions posted between 1996 and 2000 (Simmons-Welburn, 2000). Among the positions are: In the Distance Education category: Distance Learning Librarian and Electronic and Distance Education Librarian; in the Instructional Services category: Instructional Technologist, Technology Training Specialist, and Instructional Development Librarian. Lisa Allen (2005) analyzed selected academic librarian job announcements for “hybrid” positions involved in the teaching mission of academic libraries, finding instructional design and instructional technology frequently included in position titles (p. 292). Lori A. Goetsch, analyzing job announcements in 1995, 2000, and 2005, found many new job titles, including Instructional Design Librarian, and Electronic and Instructional Services Librarian. (2008). See Table 1. Abilities in instructional design or development, instructional technology, and electronic or digital technologies are apparent.

Table 1. Selected academic librarian position titles for positions that further the teaching mission of the library.

Academic Librarian Position Title	Cited by
Academic and Digital Applications Librarian	Allen, 2005
Distance Learning Librarian	Simmons-Welburn, 2000
Electronic and Distance Education Librarian	Simmons-Welburn, 2000
Electronic and Instructional Services Librarian	Goetsch, 2008
Information Literacy/Instructional Technology Librarian	Allen, 2005
Instructional Design and Instructor Development Librarian	Allen, 2005
Instructional Design Librarian	Allen, 2005; Goetsch, 2008
Instructional Development Librarian	Allen, 2005; Simmons-Welburn, 2000
Instructional Technologist	Simmons-Welburn, 2000
Instructional Technology Librarian	Allen, 2005
Technology Instruction Librarian	Allen, 2005
Technology Training Specialist	Simmons-Welburn, 2000
Web Manager and Instructional Design Librarian	Allen, 2005

John Shank's 2006 study of position announcements summarized the literature that shows the increasing demand for computer skills and instruction abilities in academic librarian job descriptions. However he also noted that "Somewhat surprisingly, only 40 percent of the collection [of job announcements] specifically mentioned that candidates should have knowledge of instructional methodologies or learning theories" (p. 522). While position announcements may not reflect this need, other sources have recognized it. Heidi Julien (2005) examined online curricula of ninety-three graduate Library and Information Science programs worldwide. Identifying forty-three syllabi of courses in instruction, she found that "Learning Theory" was included in 64.4% of the syllabi and "Instructional Design" was included in 62.2%. Several sources have discussed the skill set of instructional design (i.e. focused on the processes for creating instructional events) for librarians. As early as 1993, the *Sourcebook for Bibliographic Instruction*, published by the Association of College & Research Libraries, contained a chapter on "Instructional Design" by Mary Ellen Litzinger, which explains and illustrates the elements of the instructional design process. ACRL more recently developed "Standards for Proficiencies for Instruction Librarians and Coordinators" in 2007. This document outlined twelve categories, each listing specific proficiencies. Of interest to this study were the categories of "Instructional design skills," "Presentation skills," and "Teaching skills." Clauden Sproles, Anna Marie Johnson, and Leslie Farison (2008) provide a history of the gradual advance of instruction courses in United States MLIS programs, and their study of program syllabi concluded that while all MLIS instruction courses provide education in some of the ACRL instruction proficiencies, none cover all of them. In addition, they found that the largest number of outcomes or objectives in the syllabi included instructional design skills, the next most common was information literacy integration skills, next teaching skills, and fourth was presentation skills, including using educational technology.

Many academic librarians are recognizing their need to develop new skill sets to meet the demands of their instructional roles. For example, the Blended Librarian Online Community, which now numbers over 4,500 members since its beginning in mid-2004, defines a "blended librarian" as: "An academic librarian 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." (<http://blendedlibrarian.org/FAQ.html>)

The increasing need for librarians to possess **information technology skills** also has been documented by several studies of job announcements. Janie M. Mathews and Harold Pardue's study found that librarian job ads in 2007-08 required a significant number of IT skill sets, specifically including Web development, project management, systems development, and systems applications (2009). Two long-term studies of librarian job announcements were conducted by Yuan Zhou (1996) and Beverly P. Lynch and Kimberly Robles Smith (2001). Zhou's study found that the demand for computer-related skills in academic libraries of all sizes increased from 10.3 percent in 1974 to 88.8 percent in 1994, and that over time advertisements asking for computer skills changed from one skill to multiple skills, especially for public services librarians. Lynch and Smith's 1973-1998 study of librarian job ads found that

The most consistent computer-related skills [mentioned in the 1990s] were broad and general, for example, ‘working with resources in electronic formats’ or ‘knowledge of computerized systems.’ These jobs demanded and expected professionals to have computer skills as part of their general background and preparation. (p. 416)

Likewise, in a study of job descriptions in ARL libraries, Janice Simmons-Welburn reports that “the job descriptions make it clear that in the current employment marketplace for library professionals there is an expectation of higher levels of technological competencies, especially among M.L.S. recipients.” (Simmons-Welburn, 2000, p. 10)

The authors’ surface-level scan of approximately 100 position announcements listed for librarians in 2008 with significant instruction responsibilities found that the majority had some component of educational technology (i.e. focused on the use and application of the technology tools) skills required [add note listing sources checked]. Stephen Pinfield (2001) outlined traditional and changing roles of subject librarians in academic libraries in the UK. He noted that with the increasing development of “online Managed Learning Environments (MLEs),” or as we term them in the United States, Course Management Systems (such as BlackBoard), subject librarians should be involved in the integration of the electronic library into these systems, “along with assisting in the development of educational technology in general” (p. 37). The ARL study in 2000 included, under the Instructional Services category, several representative positions that mentioned instructional technology skills, for example “technical knowledge of instructional and multimedia software” (p. 79), “experience in planning and implementing instructional media and technology in the teaching and learning process” (p. 82), and “must have a second graduate degree related to pedagogy or instructional technologies” (p. 75).

In light of the above findings, this study seeks to fill a gap in the literature with regard to the attitudes of today’s library administrators toward the skill sets needed to fulfill the library’s educational role. The instructional role of librarianship has seen much change in recent years, with many librarians recognizing a need for skills in instructional design, educational technology, and online learning. The principle investigators wanted to measure the attitudes of academic library administrators toward the selected knowledge domains in the context of creating or redefining future or existing librarian positions to fulfill the library’s educational role.

METHODS

This study measured the attitudes of today’s library administrators toward the selected skill sets of Teaching, Presentation, Instructional Design, and Educational Technology for fulfilling the library’s educational role. The study asked academic library administrators what knowledge, skills, and traits they value in candidates for instructional positions in the next five years. The objective was to discover the degree to which current library administrators value the above identified existing (i.e. traditional) and newly emerging skills and traits associated with librarians in instructional positions.

Methodology

A cross sectional, self reporting, attitudinal survey instrument was created to achieve the study's objectives, and Institutional Review Board approval with an exemption was sought and received from the investigators' institution. The total population for the study consisted of all U.S. academic library administrators, including Library Directors, Deans, Associate Deans, or Heads from the 3827 postsecondary degree-granting institutions listed in the "Total number of academic libraries, by level, control of institution, and state:2008." (Phan, 2009, p. 29) The principle investigators targeted a 95% confidence level with a +/- error band of 5% as our goal which required our sample population be approximately 350 library administrators. To identify a sample population from the total population the principle investigators used the National Center for Education Statistics' "Search for Schools, Colleges, and Libraries" site at <http://nces.ed.gov/globallocator/>. The following search criteria were used to create the sample population: post-secondary institutions within a 50-mile radius of the 25 largest Metropolitan Statistical Areas (MSAs) in the United States were selected, resulting in a sample population of 866 academic libraries. E-mail addresses for the dean, director, or head library administrator of each institution's library were then identified and collected through staff listing at the identified institutions' library web sites.

Recipients of the recruitment e-mail were asked to have the person who is ultimately responsible for approving newly created or redefined librarian positions fill out the survey, which the investigators assumed would be a top library administrator. This specification was given so that the administrator would not have an instruction librarian fill out the survey. A pre-survey email alerting recipients that the survey request would be coming was sent a few days ahead, and this succeeded in identifying approximately a dozen incorrect addresses; subsequently administrators at eight institutions were unable to be contacted. The second email message contained a link to an online "implied informed consent" letter, which contained a link directly to the online survey. The investigators did not have any budget available to offer a reward incentive so none was offered.

Instrument Design

The investigators searched instruction related librarian job advertisements in 2008 from the following sources, IFLA's *LibJobs*, Educause's *Job Opportunities*, and the *ALA JobLIST*. Results from this search, in conjunction with the *ACRL Standards for Proficiencies for Instruction Librarians and Coordinators*, were used to identify and select the four core knowledge domains needed by librarians for the instruction process: instructional design skills, educational technology skills, presentation skills, and teaching skills. Two traditional skill sets, Teaching and Presentation, have been widely recognized as important skills for instructors for many years. Two newly emerging skill sets, Instructional Design and Educational Technology, have recently been recognized as important in the *ACRL Proficiencies* document and in many professional librarian job announcements and job descriptions.

The survey consisted of ten questions with an additional open comments field at the end. The survey was organized into three sections. The first section included four Likert-type scale

questions that asked the participants to rate the importance, on a scale of 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree), 5 (strongly agree), and “not applicable”, of the necessary or required skills for librarians who participate in the library's instructional process in the domains of instructional design, educational technology, presentation, and teaching (see Appendix A). The second section included one Likert-type scale question that asked participants to rank in order (1 least important - 4 most important) the importance of the following knowledge domains (i.e. instructional design, educational technology, presentation, and teaching) to future newly created and/or redefined positions in your library. The final section consisted of four free text questions focused on: listing any additional skill sets related to these domains you would consider critical to your library's instructional process, listing the name of your institution, listing your position title, listing how many years you have worked as a librarian. The final question surveyed the gender of the library administrator.

A draft of the survey instrument was created in July of 2008 and first sent to a dozen local area academic library administrators to check content validity, and changes were made based on their suggestions. The revised survey was piloted in the Fall of 2008 to a representative group, academic library administrators within a 30-mile radius of the Philadelphia MSA. The results of this survey were analyzed using Coefficient Alpha, which indicated that the survey results were consistent and reliable. Subsequently, no further modifications were deemed necessary and the same survey was sent to academic library administrators in the other 24 MSAs and the larger radius of the Philadelphia MSA in the Spring of 2009.

Results

The survey email was sent to 866 institutions, but eight institutions had undeliverable email addresses, leaving 856 library administrators, including Library Directors, Deans, Associate Deans, or Heads of academic libraries within a fifty mile radius of the top 25 Metropolitan Statistical Areas (MSAs) of the United States. Of these, 374 participants clicked through the email link to go to the online survey. From this self-selected group a total of 318 respondents filled out the survey, giving a response rate of nearly 37%. This response rate is consistent with acceptable response rates for surveys administered online (<http://www.utexas.edu/academic/diia/assessment/iar/teaching/gather/method/survey-Response.php>) The final results of the survey were again analyzed using Coefficient Alpha, a measure of consistency of responses. A level of .7 or higher is considered good, and the alphas reported for each section and overall were all above .8.

The survey did not require respondents to answer every question, and consequently the numbers of those answering specific questions varied slightly. The first four question sections had 314-318 respondents, the fifth question section had 282-309, and demographic questions and optional comments had various numbers of respondents. Gender of respondents were 192 female (61%) and 125 male (39%). The American Library Association reported in 1999 a ratio among academic library directors of 57% female to 43% male (Lynch, 1999), while the Association of Research Libraries reported a 2009-2010 ratio of 60% female to 40% male library directors, and a ratio of 61% female to 39% male for associate directors (ARL, 2010). The

present survey's results are comparable to these ratios. Of the 312 who listed their position title, nearly all were among the targeted group of library administrators, with only one listing "reference librarian." This respondent's survey results were not included because he or she did not match the survey's participant criteria. Respondents were asked to give their institution name, and 304 did so. Tables 2 and 2a show the Carnegie Classifications of these institutions. Respondent institutions closely matched the national percentages for Associates and Baccalaureate Colleges – Diverse Fields. Overrepresentation in other areas may speak to an interest in this topic by library administrators at those institutions.

Table 2. Carnegie Classifications of Respondent Institutions

Carnegie Classifications*	Respondent Institutions	Respondent Institution percent	Carnegie Institutions	Carnegie Institutions percent
Associate's	82	27.2%	1212	27.7%
Baccalaureate Colleges--Arts & Sciences	34	11.3%	287	6.5%
Baccalaureate/Associate's Colleges	3	0.9%	120	2.7%
Baccalaureate Colleges--Diverse Fields	24	7.9%	360	8.2%
Master's Colleges and Universities (smaller programs)	13	4.3%	128	2.9%
Master's Colleges and Universities (medium programs)	27	8.9%	190	4.3%
Master's Colleges and Universities (larger programs)	53	17.5%	345	7.9%
Doctoral/Research Universities	16	5.3%	84	1.9%
Research Universities (high research activity)	17	5.6%	103	2.3%
Research Universities (very high research activity)	17	5.6%	96	2.2%
Special Focus Institutions†	15	4.9%	806	18.4%
(Not classified)	1	0.3%	26	0.6%

*This list does not include for-profit institutions (nationally 13.7%) or Tribal Colleges (nationally 0.7%)

†Special Focus Institutions include arts, business, engineering, faith, health, law, medical, technology, and other.

Table 2a. Institution Control

	Respondent Institutions Number & Percentage Distribution	
Private, NFP	163	53.44%
Private, FP	0	0%
Public	142	46.55%

NFP=not for profit; FP=for profit

The first four survey questions asked “When thinking about the necessary or required skills for librarians who participate in the library’s instructional process, please rate the importance on a scale of 1 (strongly disagree) to 5 (strongly agree) for each of the following” and included several skills under each of four knowledge domains: instructional design skills, educational technology skills, presentation skills, and teaching skills. Among the Instructional Design skills, those skills that referred to theories of instruction and theories of learning, both with specific examples, received far less support than those that were simpler statements. Specifically, 95% of respondents agreed or strongly agreed to the importance of “Ability to define learning outcomes,” 89% agreed or strongly agreed to the importance of “Ability to create a lesson plan,” and 85% agreed or strongly agreed to the importance of “Ability to share with colleagues instructional theories and practices.” In contrast, only 54% and 58%, respectively, agreed or strongly agreed to the importance of “Ability to apply theories of instruction” and “Ability to apply theories of learning,” and 36% and 31%, respectively, selected neutral to these questions. See Table 3.

Table 3. Instructional Design Skills

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	strongly disagree	disagree	neutral	agree	strongly agree	N/A
Ability to define learning outcomes	4 1%	2 1%	9 3%	92 29%	211 66%	0 0%
Ability to create a lesson plan	4 1%	3 1%	26 8%	112 35%	173 54%	0 0%
Ability to apply theories of instruction (e.g., Gagne's Nine Events of Instruction)	4 1%	26 8%	113 36%	117 37%	53 17%	5 2%
Ability to apply theories of learning (e.g., Behaviorism, Cognitivism, Constructivism)	6 2%	25 8%	99 31%	131 41%	55 17%	2 1%
Ability to share with colleagues instructional theories and practices	4 1%	10 3%	34 11%	127 40%	141 45%	0 0%

In the area of Educational Technology skills, the strongest support was for “Ability to integrate appropriate technology” (99% agreed or strongly agreed), “Ability to utilize online/web-based technologies” (98% agreed or strongly agreed), and “Ability to adopt emerging instructional technologies (e.g. Web 2.0)” (94% agreed or strongly agreed). The lowest support was for “Ability to create multimedia digital learning objects” to which only 66% of respondents agreed or strongly agreed and 28% selected neutral. See Table 4.

Table 4. Educational Technology Skills

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	strongly disagree	disagree	neutral	agree	strongly agree	N/A
Ability to adopt emerging instructional technologies (e.g., Web 2.0)	1 0%	3 1%	16 5%	121 38%	177 56%	0 0%
Ability to integrate appropriate technology	2	1	1	86	228	0

	1%	0%	0%	27%	72%	0%
Ability to utilize online/web-based technologies	2	0	6	75	235	0
	1%	0%	2%	24%	74%	0%
Ability to create multimedia digital learning objects	2	16	90	141	69	0
	1%	5%	28%	44%	22%	0%
Ability to use multimedia digital learning objects	3	4	37	150	123	0
	1%	1%	12%	47%	39%	0%
Ability to manage instructional technologies	1	10	43	128	133	2
	0%	3%	14%	40%	42%	1%
Ability to train others in use of instructional technologies	1	12	53	141	108	0
	0%	4%	17%	45%	34%	0%

The four Presentation skills listed received almost universal agreement as to their importance, with 98-99% of respondents indicating they agreed or strongly agreed that all the presentation skills were important. See Table 5.

Table 5. Presentation Skills

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	strongly disagree	disagree	neutral	agree	strongly agree	N/A
Ability to articulate ideas clearly	2	0	2	17	294	0
	1%	0%	1%	5%	93%	0%
Ability to present and deliver content in diverse ways	2	1	2	72	237	0
	1%	0%	1%	23%	75%	0%
Ability to use classroom technologies effectively	1	1	4	75	233	0
	0%	0%	1%	24%	74%	0%
Ability to effectively use voice, eye contact, and body language	1	1	3	68	241	0
	0%	0%	1%	22%	77%	0%

Similarly, among the Teaching skills listed, 94-96% of respondents agreed or strongly agreed that all four skills were important. See Table 6.

Table 6. Teaching Skills

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	strongly disagree	disagree	neutral	agree	strongly agree	N/A
Ability to create a learner-centered teaching environment	2	1	17	114	183	1
	1%	0%	5%	36%	58%	0%
Ability to meet student learning needs (e.g., learning styles)	3	0	14	122	179	0
	1%	0%	4%	38%	56%	0%
Ability to provide students with appropriate feedback/assessment	3	1	11	110	191	0
	1%	0%	3%	35%	60%	0%
Ability to facilitate classroom communication	1	1	9	87	219	0
	0%	0%	3%	27%	69%	0%

Question five asked respondents to “rank in order (1 least important – 4 most important) the importance of the following knowledge domains to future newly created and/or redefined positions in your library.” The mean scores on this scale of 1-4 for the four knowledge domains were as follows: Teaching skills 3.20; Presentation skills 2.85, Educational Technology skills 2.14; Instructional Design skills 1.98. See Table 7.

Table 7. Please rank in order (1 least important – 4 most important) the importance of the following knowledge domains to future newly created and/or redefined positions in your library.

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	1	2	3	4
Instructional design skills	125 43%	78 27%	50 17%	35 12%
Educational technology skills	74 26%	127 44%	55 19%	31 11%
Presentation skills	34 12%	47 17%	128 45%	73 26%
Teaching skills	37 12%	32 10%	72 23%	168 54%

Discussion

In an environment where change is constant and long standing institutions are no longer able to take for granted their relevance or very existence, academic libraries are challenged to continue to meet our institutions’ needs and justify our significance to our administrators, faculty, and students. A critical component of this change process is having a skilled workforce capable of doing newly emerging job duties and responsibilities. As demonstrated in the aforementioned literature review, the educational role of the academic library has been expanding and evolving over the past decades, and positions associated with that role have likewise expanded and evolved with new job duties and responsibilities accordingly. Today’s library administrators play a critical role in funding and approving these new or redefined positions. The attitudes (i.e. bias) of high level library administrators is significant because their associated bias will shape and inform their decisions about funding and approving new or redefined positions to accomplish the library’s expanding educational role. This research study sought to lay the foundation for better understanding the extent to which current library administrators’ views of the selected instructional skills impact the approval of new or redefined librarian instructional positions. This is important because by being better informed about our current administrators’ perceptions our profession can gain valuable insight into the people who are in key positions to influence the future direction of the profession.

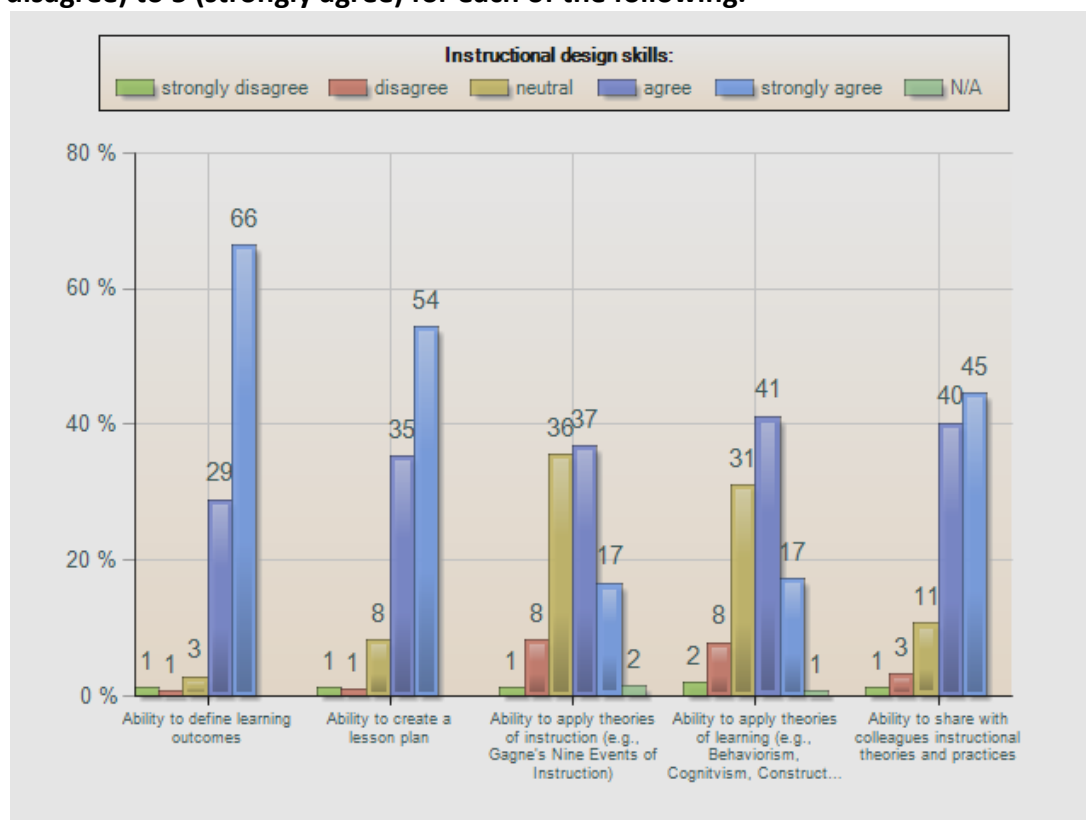
Instructional Design Skills

As discussed in the above survey results, participants had clear preferences when rating the importance of the skill sets associated with instructional design skills (see Chart 1). There was

consensus by a large majority of administrators (95% with a mean of 4.58) that the “Ability to define learning outcomes” was a necessary/required skill. This is not terribly surprising given the emphasis in the past decade in higher education to assess the impact of education on student learning. Learning outcomes are critical to the instruction process for determining how to gauge and measure students’ success in learning.

The “Ability to create a lesson plan” and the “Ability to share with colleagues instructional theories and practices” also scored high: 89% (mean 4.40) and 85% (mean 4.21) respectively. It is interesting that the remaining skills, the “Ability to apply theories of instruction” (mean 3.60) and the “Ability to apply theories of learning,” (3.64) rated the lowest given the fact that these skills are foundational knowledge for the teaching and learning process. Additionally, respondents did value the “Ability to share with colleagues instructional theories and practices” which could not occur if the position did not already have the required foundational knowledge of the two identified skill sets that scored the lowest in this domain.

Chart 1. When thinking about the necessary or required skills for librarians who participate in the library’s instructional process, please rate the importance on a scale of 1 (strongly disagree) to 5 (strongly agree) for each of the following.



Educational Technology Skills

The attitudes of administrators toward necessary educational technology skills for instruction librarians were biased toward the ability to utilize (mean 4.70), integrate (mean 4.68), and adopt (mean 4.47) learning technologies as reflected in the report results (see Chart 2). This

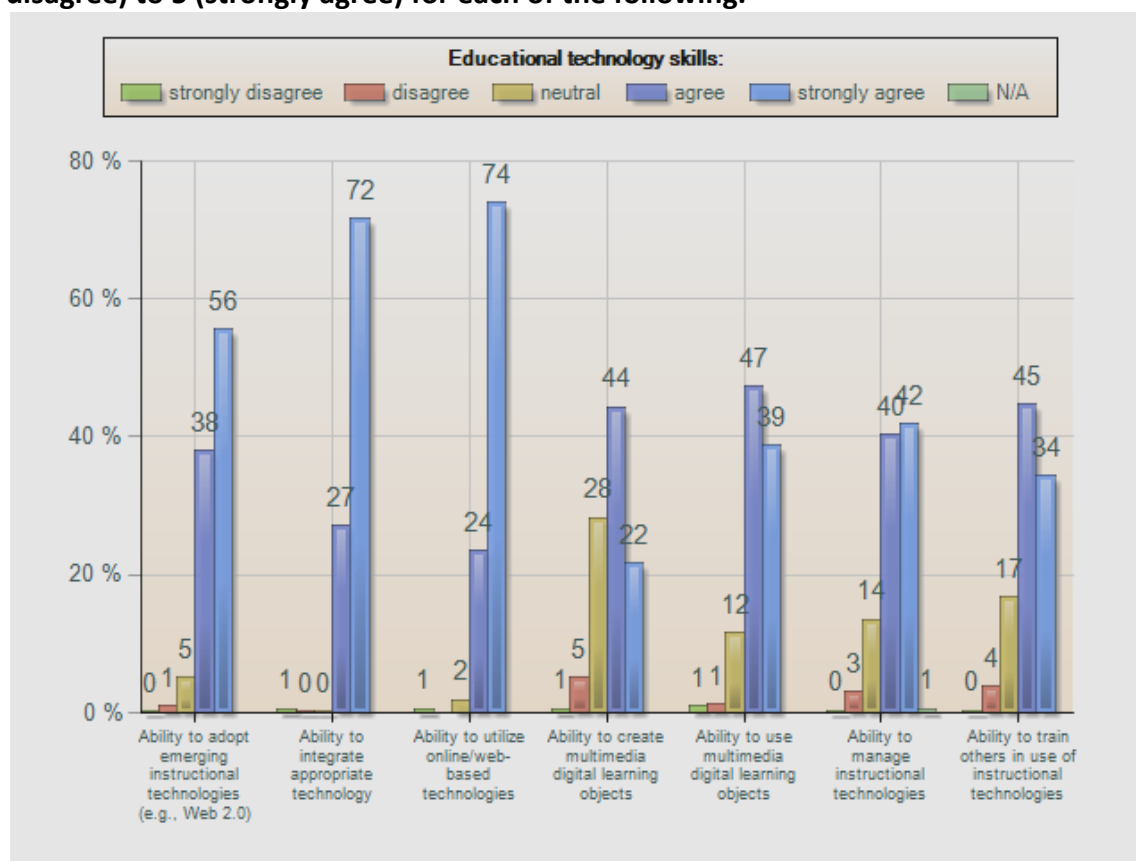
bias may be a result of the belief that technology is a key driving force in disruptive change within our profession. Therefore, administrators see these skill sets as vital for librarians to possess in order to keep up with and innovate within the field. The very high mean (4.70) for the librarian's "Ability to utilize online/web-based technologies" may be indicative of the increasing importance of the Internet in the educational role of the academic library both with distance education and traditional residential students who are increasingly taking online or Hybrid courses at their institutions.

In contrast, administrators do not place the same value in librarians' "Ability to manage instructional technologies" (mean 4.21). This finding may well have some interesting implications for how our current administrators view the academic library role within its larger institution. For example, as documented in the past two decades there has been a trend to merge information technology services and libraries (Dougherty, 1987; Herro, 1998; Hardesty, 2000). In light of this trend, do many library administrators see the management of learning technologies (e.g. Learning Management Systems such as Blackboard) outside the domain of the librarian?

Administrators clearly do not perceive the librarian's "Ability to create multimedia digital learning objects" as important in relation to the other educational technology skills sets (mean 3.81). They do place a slightly higher value on the librarian's "Ability to use multimedia digital learning objects" (mean 4.21). These findings are interesting in light of the fact that librarians across the country have been creating hundreds (if not thousands) of library instruction tutorials over the course of the past decade (see A.N.T.S. - Animated Tutorial Sharing Project <http://ants.wetpaint.com/> and PRIMO – Peer-Reviewed Instruction Materials Online <http://www.acrl.org/apps/primo/public/search.cfm>). The staff labor, time, and costs are not insignificant and the question arises, may a disconnect exist between library staff and their administrators with regard to the perceived importance of librarians creating these types of resources?

Chart 2. When thinking about the necessary or required skills for librarians who participate in the library's instructional process, please rate the importance on a scale of 1 (strongly

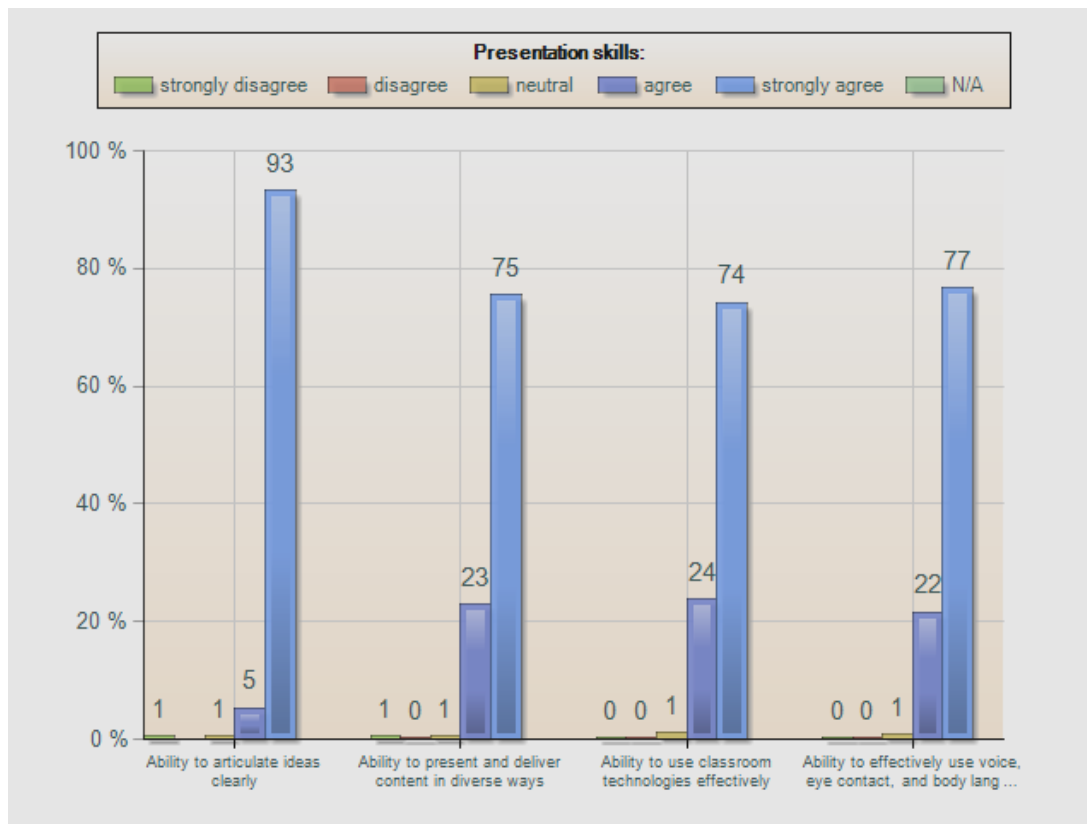
disagree) to 5 (strongly agree) for each of the following.



Presentation Skills

Administrators agreed in much greater consensus about the necessary skills librarians need in the domain of presentation and, therefore there is less variance within the range of this domain ($SD = .09$) (See Chart 3). The majority of participants highly value each skill set under presentation. However, the “Ability to articulate ideas clearly” (mean = 4.9) was the top rated skill in this group. This result is not surprising given the fact that it very difficult to find any recent job postings for instruction librarian positions that do not list good communication skills as an important or necessary component of the position.

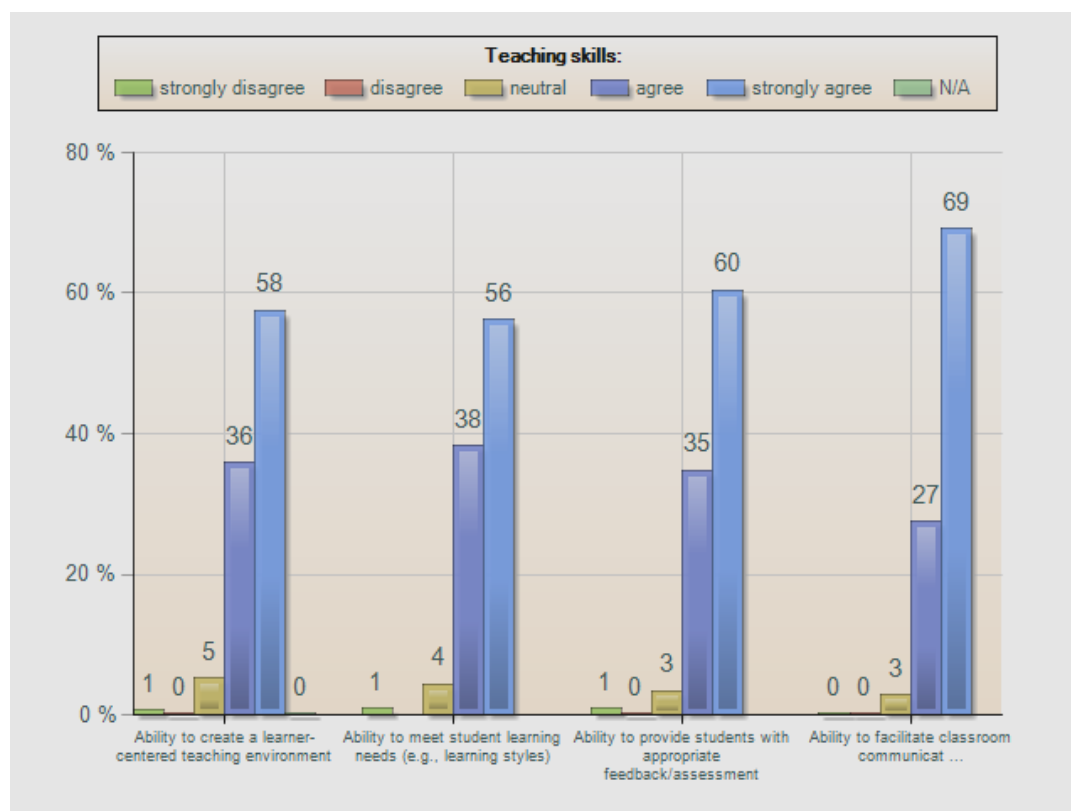
Chart 3. When thinking about the necessary or required skills for librarians who participate in the library’s instructional process, please rate the importance on a scale of 1 (strongly disagree) to 5 (strongly agree) for each of the following.



Teaching Skills

Not unlike presentation skills, teaching skills possessed a very small standard deviation (.07) (See Chart 4). Again, this may be indicative of the near universal consensus of the high value of the listed skill sets as they relate to the teaching domain. In this category as in the previous one, one skill set stood slightly apart from the rest. The “Ability to facilitate classroom communication” skill rated the highest with a mean score of 4.64. The fact that both this category and the previous have communication related skills as their two highest ranked may again be further evidence that today’s administrators place a great deal of value in communication skills. Because this domain had the smallest standard deviation of all the surveyed domains, the principle investigators did not find any significance in the fact that both the “Ability to create a learning-centered teaching environment” (mean = 4.49) and the “Ability to meet student learning needs” (mean = 4.49) scored the lowest in the teaching domain.

Chart 4. When thinking about the necessary or required skills for librarians who participate in the library’s instructional process, please rate the importance on a scale of 1 (strongly disagree) to 5 (strongly agree) for each of the following.



Ranking the Four Domains

The final Likert-scale question asked participants to rank in order of importance the four skill domains identified in this research study. The results of this question are not ambiguous. The administrators had clear opinions as to which are most important. The clear favorite of the four domains was teaching. Over fifty percent of the participants selected this as the most important skill domain. More than three quarters of the participants gave teaching either a rating of 3 or 4. As discussed earlier, this domain had the highest mean (at 3.2) of the grouping. The second highest ranked domain was presentation with a mean of 2.85. Only 26% of administrators gave this domain the highest ranking of 4, but over 70% did give it a rating of either 3 or 4.

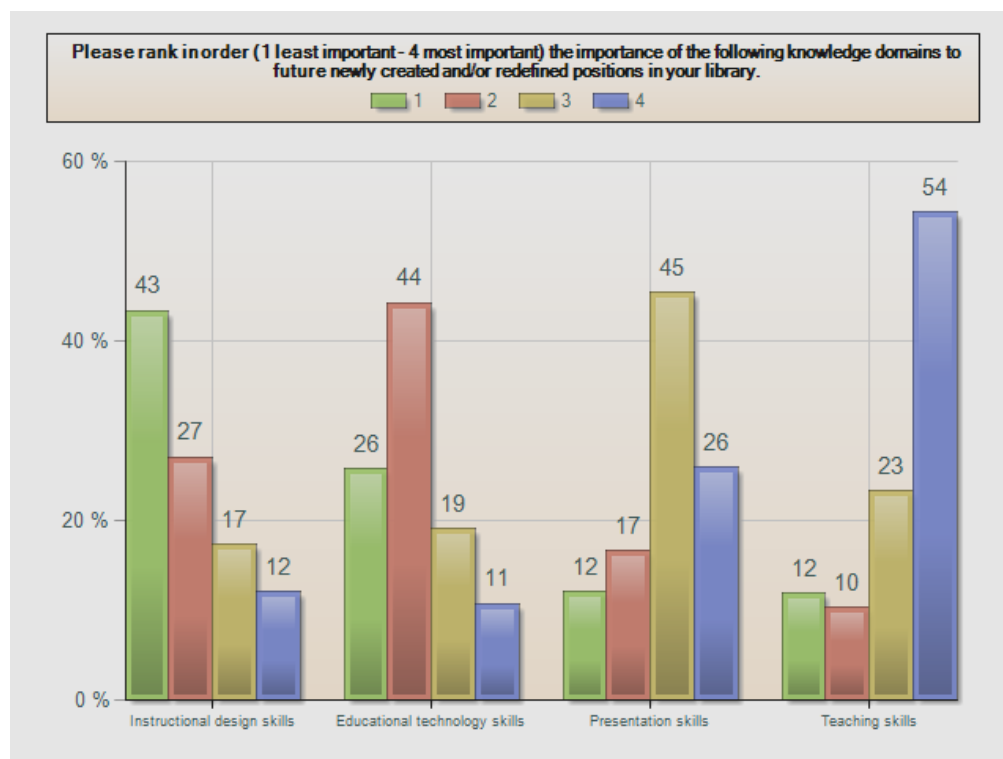
These two traditional skill domains have been a part of the profession for several decades and the administrators filling out the survey have very positive attitudes toward these domains. This result seems to be consistent with the belief that people are most comfortable with what they are used to and have a great deal of experience with. The two nontraditional skill domains scored significantly lower with educational technologies receiving a mean score of 2.14. The educational technologies domain had only 11% of survey participants give it the top score and not even a third (30%) of participants gave it either a score of 3 or 4. The lowest scoring domain (instructional design skills) received a mean score of only 1.98. The instructional design domain had 43% of administrators select it as the least important of the knowledge domains. Nearly three quarters (70%), of respondents gave this domain a rating of either 1 or 2.

These results raise some interesting questions. The teaching domain focuses more on classroom based instruction skills. It is well documented how librarians struggle with increasing the relatively small amount of in-class time faculty give them to meet with their students. In contrast, instructional design focuses more on the design and development of either an instructional process or product. This skill set facilitates the development of instruction not only in the classroom but also outside the classroom. As instruction increasingly moves online in a Hybrid or online course format it would seem that traditional classroom based teaching skills will play a less significant role than instructional design skills. Also, from the results it almost appears to be an inverse relationship between teaching and instructional design skill domains in the eyes of the administrators. This is somewhat surprising given the fact that instructional design skills are based on the foundations of cognitive learning theories and instructional strategies.

Surprisingly, educational technologies scored below the presentation skills domain. Despite all the literature about how our profession has been impacted by technological changes over the past two decades and, as a result, has adopted more and more information technology skill sets, it appears that administrators currently do not view educational technologies as critical to the education mission of the library. Yet, the literature is replete with articles discussing new Web 2.0 technologies that libraries are investigating or using to offer a new and innovative service for their institutions.

It may be that academic library administrators, presumably having left frontline public services positions (or even technical services positions) at some point in the past, are not as aware of the relatively recent adoption of instructional design and educational technology skills by librarians seeking to extend their proficiencies in instruction. If this is the case, it is not surprising that they do not seem to value these skill sets as much as traditional teaching and presentation skills, since they may have less understanding of them. In this scenario, librarians involved in instruction may need to be the prime movers of change, rather than their administrators.

Chart 5. Please rank in order (1 least important - 4 most important) the importance of the following knowledge domains to future newly created and/or redefined positions in your library.



Future Directions

The principle researchers sought to measure the attitudes of today's library administrators toward the four previously discussed skill domains in order to begin to better understand the biases of the people who are in critical positions both with their institutions and our profession. Library administrators have the power to greatly influence and determine staffing and funding issues in higher education and, as such, their biases will impact change within our profession. The investigators in this study understood that before our profession can gauge the impact of our administrators it is vital to measure what those biases may be. This survey instrument accomplished the goal of providing base line data that can be used to further understand how today's administrator biases are impacting change within our profession.

As reflected in the survey results, current administrators clearly value the traditional skill domains of teaching and presentation more than the new emerging domains of educational technology and instructional design. The reasons for this are not entirely clear and this survey did not attempt to answer this question. However, it is possible that it is as a result of the fact that current administrators are more comfortable with the traditional skills. If this is the case, there are profound implications for our profession if newly developing skill domains that could be critical for our profession's ability to innovate and remain relevant to future generations are being stymied by the biases of our library administrators.

Moving forward the principle investigators plan to examine the data from this survey further and see if there are relationships between gender and attitudes toward the four educational

domains. Also, the relationship between the number of years within the profession and the administrators' perceptions will be examined. Finally, does the bias of the administrator differ depending on the institutional size and type?

As documented in library literature, our profession is in the midst of a paradigm shift moving from print based to digital based information. This dramatic change is and will continue to impact the academic library. Clearly, it is vital to have highly skilled employees who are able to rapidly adapt with the changes as well as drive the innovations within our field. This study raises a very big question, who is responsible for driving that process. If, as the authors suppose, library administrators are key players in facilitating the hiring of new or redefined positions, then based on our data current library administrators might be restraining change within the education role of the library because of their biases. Does this mean that mid-level managers or public services librarians who see a need for advanced skill sets to move forward with instructional needs of the library will drive this change, despite lack of support from their supervisors? Future studies will need to further explore these questions and today's administrators will need to look within themselves to discover if their biases are hindering or facilitating the adoption of skill domains that may indeed be vital to relevance, impact, and ultimately the very existence of the academic library in higher education.

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Appendix A

Library Administrators' Perceptions of Critical Skills Needed for the Instructional Process.

Page 1 - Heading

When thinking about the necessary or required skills for librarians who participate in the library's instructional process, please rate the importance on a scale of 1 (strongly disagree) to 5 (strongly agree) for each of the following:

Page 1 - Question 1 - Rating Scale - Matrix

Instructional design skills:

	strongly disagree	disagree	neutral	agree	strongly agree	N	/	A
Ability to define learning outcomes	?	?	?	?	?			?
Ability to create a lesson plan	?	?	?	?	?			?
Ability to apply theories of instruction (e.g., Gagne's Nine Events of Instruction)	?	?	?	?	?			?
Ability to apply theories of learning (e.g., Behaviorism, Cognitivism, Constructivism)	?	?	?	?	?			?
Ability to share with colleagues instructional theories and practices	?	?	?	?	?			?

Page 1 - Question 2 - Rating Scale - Matrix

Educational technology skills:

	strongly disagree	disagree	neutral	agree	strongly agree	N	/	A
Ability to adopt emerging instructional technologies (e.g., Web 2.0)	?	?	?	?	?			?
Ability to integrate appropriate technology	?	?	?	?	?			?

Ability to utilize online/web-based technologies	?	?	?	?	?	?
Ability to create multimedia digital learning objects	?	?	?	?	?	?
Ability to use multimedia digital learning objects	?	?	?	?	?	?
Ability to manage instructional technologies	?	?	?	?	?	?
Ability to train others in use of instructional technologies	?	?	?	?	?	?

Page 1 - Question 3 - Rating Scale - Matrix

Presentation skills:

	strongly disagree	disagree	neutral	agree	strongly agree	N / A
Ability to articulate ideas clearly	?	?	?	?	?	?
Ability to present and deliver content in diverse ways	?	?	?	?	?	?
Ability to use classroom technologies effectively	?	?	?	?	?	?
Ability to effectively use voice, eye contact, and body language	?	?	?	?	?	?

Page 1 - Question 4 - Rating Scale - Matrix

Teaching skills:

	strongly disagree	disagree	neutral	agree	strongly agree	N / A
Ability to create a learner-centered teaching environment	?	?	?	?	?	?
Ability to meet student learning needs (e.g., learning styles)	?	?	?	?	?	?
Ability to provide students with appropriate feedback/assessment	?	?	?	?	?	?
Ability to facilitate classroom communication	?	?	?	?	?	?

Page 1 - Question 5 - Ranking Question

Please rank in order (1 least important - 4 most important) the importance of the following knowledge domains to future newly created and/or redefined positions in your library.

	1	2	3	4
Instructional design skills	?	?	?	?
Educational technology skills	?	?	?	?
Presentation skills	?	?	?	?
Teaching skills	?	?	?	?

Page 1 - Question 6 - Open Ended - One or More Lines with Prompt

What additional skill sets related to these domains would you consider critical to your library's instructional process?

- ✎ Instructional design skill: _____
- ✎ Educational technology skill: _____
- ✎ Presentation skills: _____
- ✎ Teaching skills: _____

Page 1 - Question 7 - Open Ended - One Line

Please list the name of your institution:

Page 1 - Question 8 - Open Ended - One Line

Please list your position title:

Page 1 - Question 9 - Open Ended - One Line

How many years have you worked as a librarian?

Page 1 - Question 10 - Choice - Multiple Answers (Bullets)

What is your gender?

- Male
- Female

Page 1 - Question 11 - Open Ended - Comments Box

Please list any additional comments.