

Pamela Foreman. Qualifications Needed by Reference Librarians: A Content Analysis and Comparison of Reference Library Job Announcements and Library Science Course Descriptions. A Master's paper for the M.S in L.S. degree. April 2000. 29 pages. Advisor: Diane Sonnenwald.

The study investigates qualifications employers seek in new employees with regards to the position of reference librarian and whether library and information science programs are offering courses that will help students interested in a career in reference librarianship meet employers' expectations and requirements. The investigation is based on a content analysis of 58 job announcements for reference librarians and 60 course descriptions from library science programs. The job announcements and library and information science programs were selected randomly from Northeast, South, Midwest and West regions across the United States using job announcements that were posted on the World Wide Web. Course descriptions were selected using the online course catalog from school. Over half (50%) of the job announcements listed excellent interpersonal skills as required for the job with over a third (33%) listing technological abilities/skills as the next most frequently mentioned qualification. In contrast, only 21% of school course descriptions appeared to emphasize interpersonal skills in the course while collection development skills and technological abilities/skills were emphasized in 36% and 38 % respectively of the courses.

Headings:

Content Analysis

Job Analysis

Reference Librarians

QUALIFICATIONS NEEDED BY REFERENCE LIBRARIANS: A CONTENT
ANALYSIS AND COMPARISON OF REFERENCE LIBRARY JOB
ANNOUNCEMENTS AND LIBRARY SCIENCE COURSE DESCRIPTIONS

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INTRODUCTION

What are the skills and abilities that employers are looking for in a reference librarian? Are students preparing for a career in reference librarianship being properly prepared by accredited library and information science programs to meet employers' needs and expectations? These are the questions that this paper addresses in order to investigate if library school programs are adequately preparing students for careers as reference librarians.

The role of reference librarians may be changing due to a variety of factors. For example, as technology use becomes more and more common place in delivering library services, it is apparent that the use of online database and Internet search engines will most likely continue to increase. Given this scenario, what will become of more traditional library services? Will job duties such as collection development no longer be required? In response to these changes, employer's requirements for reference librarians today may be different from earlier requirements. The emphasis usually placed on providing superior customer service using "people skills" be replaced by human-less service via the Internet or other electronic sources?

It always benefits students to know what a potential employer desires in an employee. Knowing beforehand can assist students in tailoring their library science

education to fit their career goals and increase their chances of finding employment.

Understanding what employers want in an employee can also benefit the library science program by offering the opportunity to see if curricular goals match an employer's desired skills for future employees. By comparing curricular goals to an employer's required and desired qualifications, library science courses can be evaluated to see if they are in tune with today's job market, which in turn may facilitate a high employment rate for their library science graduates. With today's rapidly changing library environment, this evaluation is timely and important.

LITERATURE REVIEW

There have been several articles written that discuss the changing role of the reference librarian with regard to the 21st century. These articles discuss the importance of finding a balance between using traditional print resources versus using newer resources such as the Internet.

In Julia Kelly's and Kathryn Robbin's article, "Changing Roles for Reference Librarians" (1996), they make the observation that technology has changed reference services forever. The arrival of such services as the Internet and web databases have meant new job skills and new job duties for today's and tomorrow's reference librarian. Now more than ever, reference librarians must be able to master technology in order to do their jobs properly.

New technology is not the only area of change affecting reference librarianship, there are also demographic and societal changes. The increased number of foreign born residents in the U.S. means that not all library users will have English as their first language and individuals with disabilities often need special attention when using the library's services.

Circumstances such as these mean that the reference librarian, who is usually the first point of contact in the library, will have to be especially sensitive to the variety of people they will encounter during the course of their job. Reference librarians will need to be able to present a welcoming attitude and demonstrate a commitment to customer service to people with a variety of English language skills (Dawson & McCook, 1996). Reference librarians must also be aware of how patrons search for information. “High end user university faculty, computer literate students—may circumvent the services of librarians, but a larger number of potential users feel more remote and disenfranchised than ever before” (1996, p. 65). The reference librarian must be able to effectively communicate and interact with the user who may not be familiar with the technology, acting as a intermediary between individual (user) and machine (tools used to extract information) (1996). With increased use of technology comes an increased need for better and more comprehensive interpersonal skills.

In 1993, a content analysis of special library job posting showed that this was indeed the case as the study showed that approximately 25% of 100 employers analyzed required good interpersonal skills, 37% required on-line search proficiency, 22% considered a working knowledge of CD-ROMS important and 22% required a working knowledge of the Internet and World Wide Web (Tauraso, 1993).

Further confirmation was found in an article by Joline Ezzell, in which she discussed the numerous changes in library job postings over the course of 25 years. In 1975, a job advertisement listed just a few basic requirements (Ezzell, 1998):

- Assisting with interlibrary loan
- Developing bibliographic guides
- Providing research assistance

By 1985 this list had expanded to include these requirements:

- Experience in online database searching
- Familiarity with microcomputer applications
- Flexibility
- Human relation skills
- Ability to work as part of a team

By 1998, the list of requirements had grown to include these skills:

- Knowledge of HTML
- Experience using the Internet, CD-ROMS, computer hardware, and software
- Demonstrated teaching ability
- Experience with library instruction

It is apparent that by the 1990s, the qualifications that employers were seeking were centered on a reference librarian's ability to communicate effectively and use technology.

It is clear that "as librarianship moves towards the 21st century, librarians must educate themselves to survive in the evolving Information Society" (Nofsinger, 1999, p.9).

In the article, "Training and Retraining Reference Professionals: Core Competencies for the 21st Century," Nofsinger highlights several core competencies for reference librarians.

Communication and interpersonal skills, technological know-how and dedication to customer services are a few of these competencies. The need for reference librarians to be

able to use current and emerging technologies and assist members of the public in using these tools requires both interpersonal abilities and technological knowledge on the reference librarian's part.

Thus the literature suggests that job requirements for reference librarians are changing to include abilities that require knowledge of current technology such as web page design and internet searching and that employers seek job candidates with interpersonal and communication skills as well as technological skills. But which of these qualities and skills are most important to employers? Do library science programs offer courses that teach students what they need to know in order to be successful reference librarians? The secondary purpose of this study is to investigate the courses being offered by library science programs in order to determine if the content of library school courses match employers' job requirements.

METHODOLOGY

Job announcements were selected from a variety of sources in order to more accurately reflect the varying job qualifications across the United States. Job announcements were limited to those positions advertising for reference librarians, either full or part-time. The time frame for the job announcements was limited to those jobs which were posted between February 1999 and April 2000. Some of the resources used include the following sources:

- April 2000 American Libraries' Career Leads at <http://www.ala.org/education/>.
- March 2000 American Libraries' Career Leads at <http://www.ala.org/education/>.
- February 2000 American Libraries' Career Leads at <http://www.ala.org/education/>.
- Academic Librarian Positions from College & Research Libraries NewsNet at <http://www.ala.org/education/> .

This represents a sample of the sources used, a complete list can be found in Appendix A.

Job announcement were selected from four regions in the United States:

Northeast (Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania), South (Maryland, District of Columbia,

Delaware, Virginia, West Virginia, Kentucky, North Carolina, South Carolina, Tennessee, Georgia, Alabama, Arkansas, Mississippi, Louisiana, Texas, and Florida), Midwest (Ohio, Michigan, Indiana, Illinois, Wisconsin, Minnesota, Iowa, Missouri, Oklahoma, Kansas, Nebraska, South Dakota, North Dakota), West (Montana, Idaho, Washington, Oregon, Wyoming, Colorado, Utah, Nevada, New Mexico, Arizona, California, Hawaii, and Alaska).

An attempt was made to obtain a sample of 15 job announcements per region, however for the South and West regions only 14 job announcements for each region were found. A total of 58 job announcements were investigated in this content analysis. The majority of the job announcements were a page in length consisting of one to three paragraphs. The job announcements were also classified according to library type and a final count showed that 22 job announcements came from public libraries, 30 job announcements came from academic libraries, and 6 job announcements came from special libraries.

Once the job selection process was completed, the coding scheme was developed and applied to the job announcement list. This involved creating categories and coding units to apply to each job announcement. The four categories used to analyze the job announcements were Category 1: Interpersonal Skills, Category 2: Collection Development, Category 3: Technological Abilities/Skills, and Category 4: Systems Infrastructure. The interpersonal skills category covered any job qualification or duty required or desired by a library that involved a reference librarian's ability to interact with

library users and other members of the library staff. The collection development category covered duties that involved collection building activities of the library. The technological abilities/skills category involved any job qualification that is required or desired by a library employer that involves a reference librarian to use or have knowledge of certain computer applications. The systems infrastructure category included duties that involved the maintenance or setup of library systems operations such as network administration, systems administration, database administration, and similar operations. Complete definitions for each category and coding units used can be found in Appendix B. An example of how a job announcement was coded can be found in Appendix C.

The coding scheme focused on the presence or absence of a coding unit(s) within a single document. A single document was considered to be a single job announcement. Duplicate occurrences of a single coding unit within a single document were not recorded; only the first occurrence of a coding unit within a single document was noted on the coding sheet in the proper category. After all of the job announcements were coded, the results were tabulated to reflect national percentages, regional percentages and library type percentages for each category.

The methodology used to analyze the schools was very similar to that of the job announcements. Schools were selected on the basis of region and ALA accreditation. Three schools each were randomly chosen from the Northeast, South, Midwest, and West regions for a total of 12 schools analyzed in this content analysis. Five courses including their course descriptions were selected from each school on the basis of whether they were

listed as required courses in the school catalog or admission requirements for that library science program. Required courses were chosen for two main reasons: (1) to make sure that courses analyzed were ones that every student was required to take as part of defining the core or foundation of their library science education and (2) to minimize bias by looking at courses not specifically geared toward any student's particular interest. A total of 60 course descriptions were analyzed.

The coding scheme focused on the presence or absence of a coding unit(s) within a single document. A single document was considered to be a single course description. Duplicate occurrences of a single coding unit within a single document were not recorded; only the first occurrence of a coding unit within a single document was noted on the coding sheet in the proper category. The same categories were used to analyze the course descriptions as were used to analyze the job announcements. After the coding was completed, the percentages were calculated for each category (national) and then for each category within a region (regional). Examples of how course descriptions were coded can be found in Appendix D.

FINDINGS

The results of the content analysis for the job announcements indicate that employers are looking for job candidates who possess primarily interpersonal skills (50%) and secondarily technological abilities/skills (33%) (see Figure 1). Skills or duties that involve collection development were at 14 % and systems infrastructure duties were at 3% (see Figure 2).

Looking at the results by region (see Figure 2), 54 % of job announcements in the Northeast wanted employees who were well versed in interpersonal skills, while in the South 40% of employers desired this quality. The other regions, the Midwest (56%) and the West (54%) showed percentages very similar to that of the Northeast region for interpersonal skills. Employers desired employees with technological skills in 34% of the job announcements for the Northeast, 44% in the South, 25% in the Midwest and 28% in the West. Qualifications dealing with collection Development and Systems Infrastructure followed the trend seen in the national statistics showing under 20% for collection development and under 5% for systems infrastructure for all regions.

Figure 1. Job Announcements: National Percentages

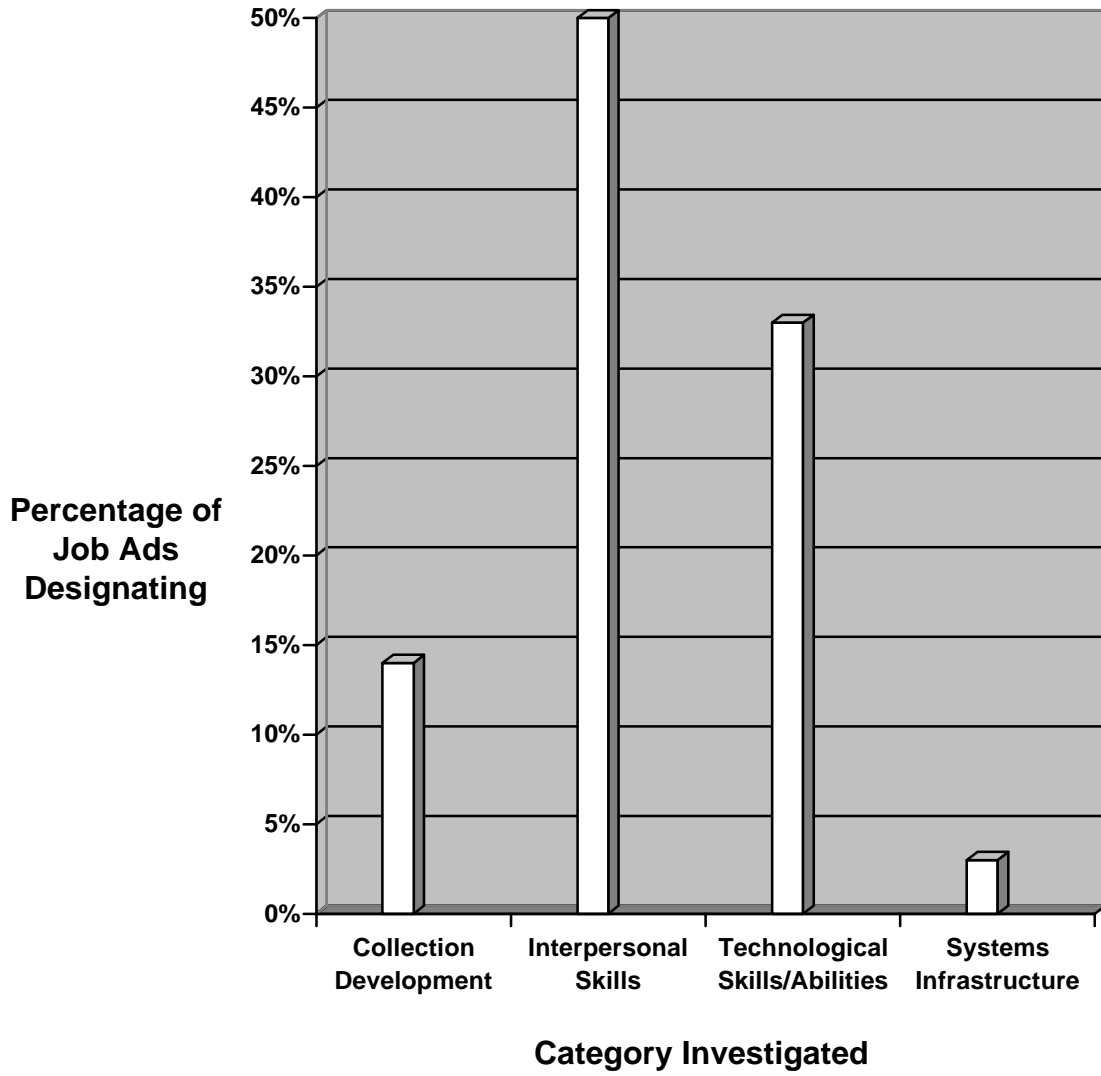
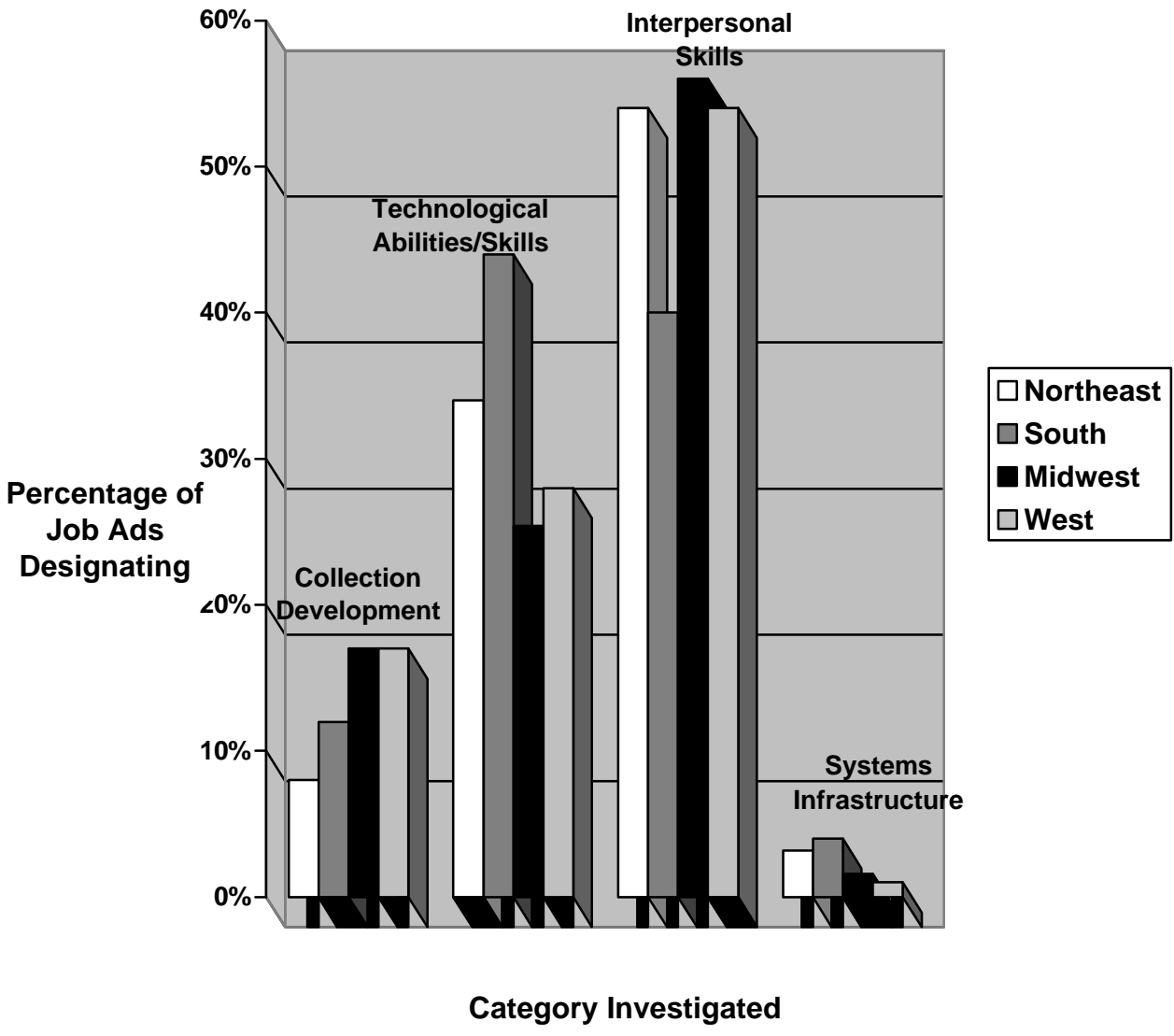


Figure 2. Job Announcements: By Region



In the school course descriptions, the figures show different results from the job announcements content analysis. As illustrated in Figure 3, overall the categories of collection development and technological abilities/skills were emphasized in 36% and 38% of the courses respectively. Interpersonal skills were stressed 21% of the time and systems infrastructure was represented 5% of the time.

By region the figures differed showing that collection development was emphasized in 57% in the courses in the Northeast, 47% in the South, 32% in the Midwest, and 19% in the West (see Figure 4). Technological Abilities were stressed in 29% in the course descriptions in the Northeast, 19% in the South 58% in the Midwest and 44% in the West. Interpersonal skills were stressed in 14% of the course descriptions in the Northeast, 24% in the South, 10% in the Midwest and 31% in the West. Systems infrastructure did not show up in any of the course descriptions analyzed for the Northeast or Midwest and was stressed in 10% of the course descriptions in the South and 6% in the West.

Figure 3. School Course Descriptions: National Percentages

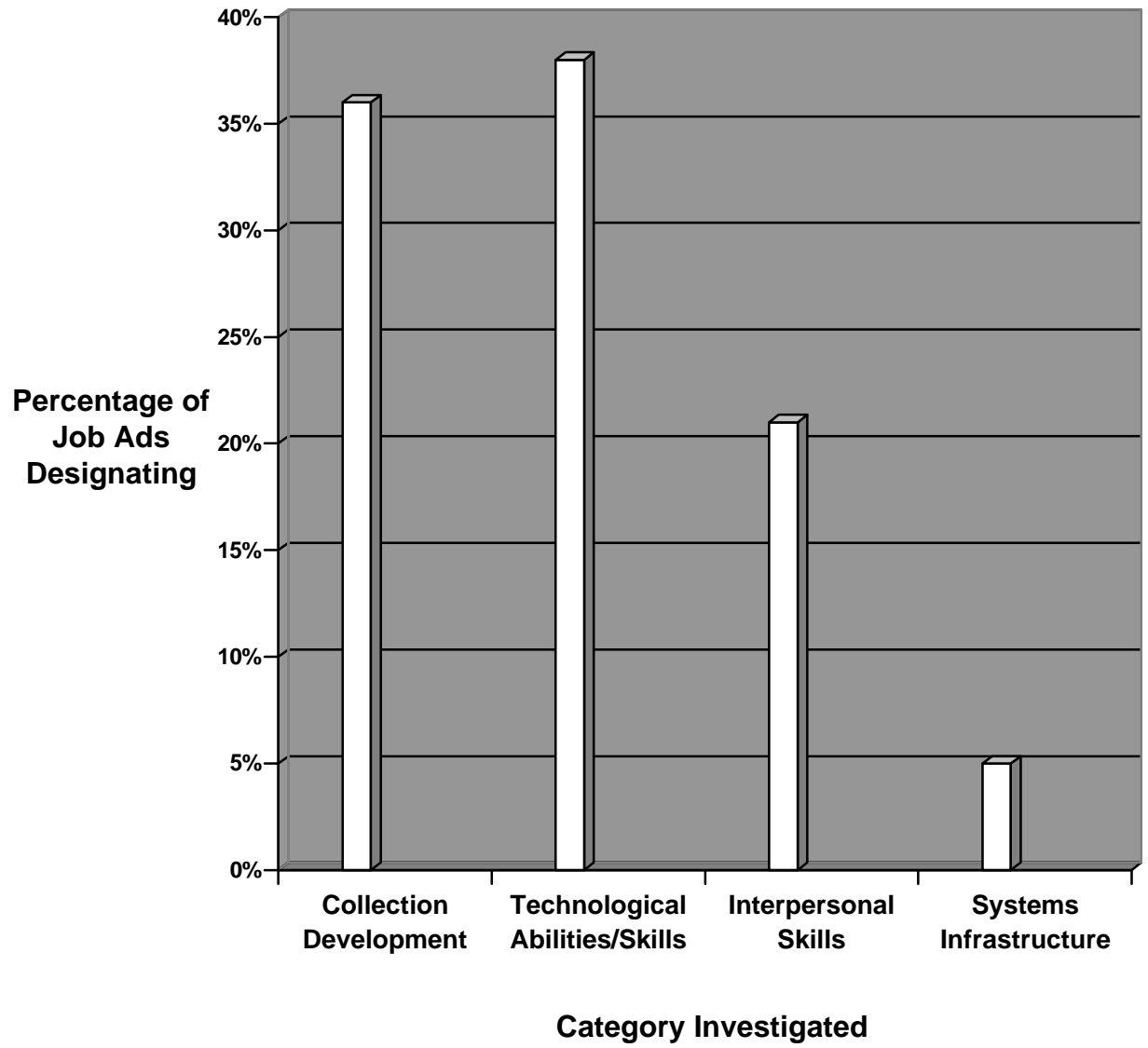
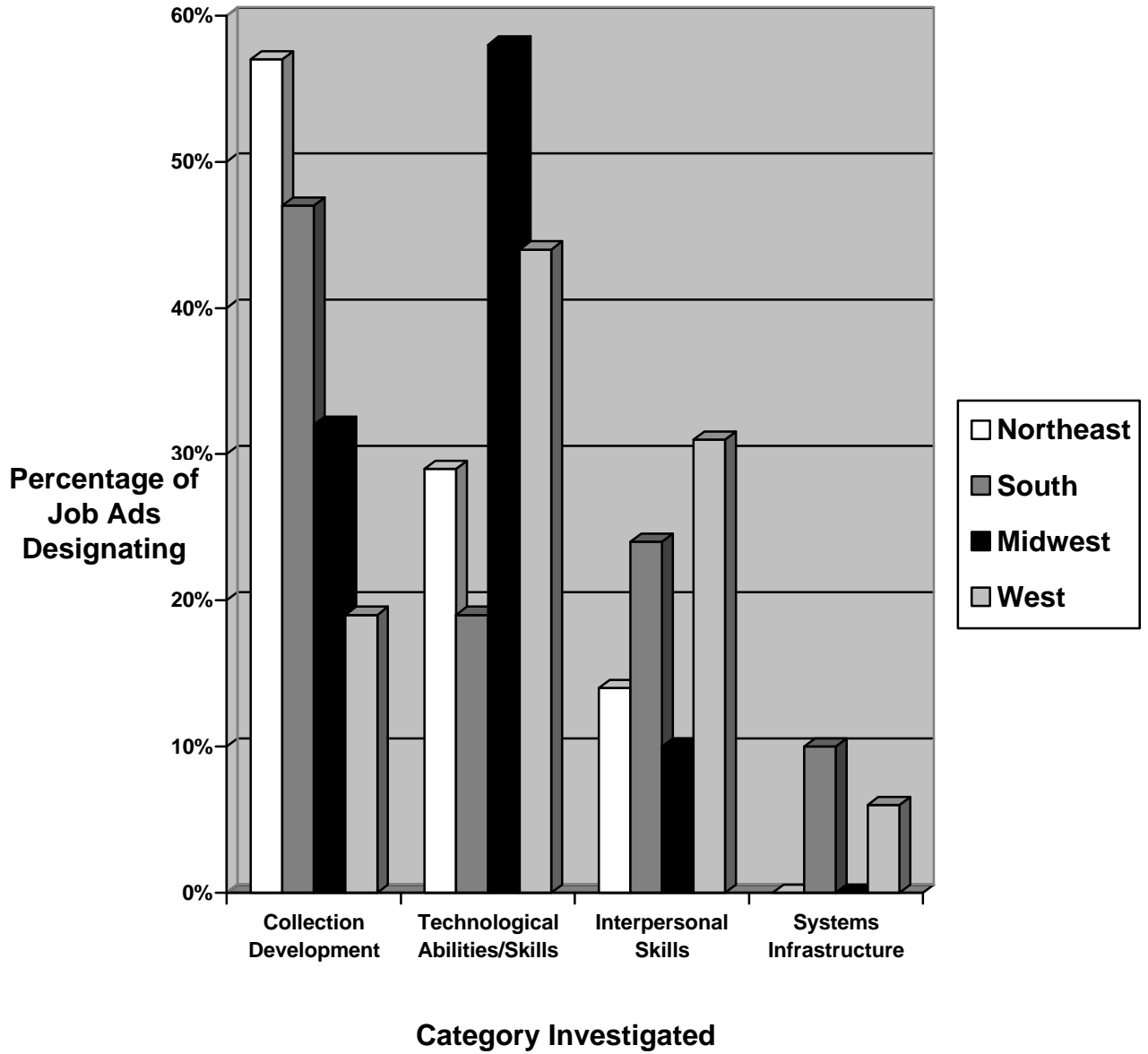


Figure 4. School Course Description: By Region



DISCUSSION AND CONCLUSION

By comparing the job announcement results and the course description results, there appears to be a disconnect between what library schools are teaching and what employers want in future reference librarians. Employers mention interpersonal skills most frequently as the skills an employee should possess followed by technological abilities and skills, collection development and systems infrastructure. Schools on the other hand, are stressing collection development and technological abilities and skills in their courses followed by interpersonal skills.

A comparison of the regional results for the job announcements for the category of interpersonal skills shows that the Northeast, West and Midwest each have percentages over 50% while the South shows a percentage of a little over 40%. This indicates that the Northeast, West and Midwest consider interpersonal skills to be very important but the South considers these to be less important. It appears that job candidates applying for positions in these three regions should be prepared to demonstrate strong interpersonal skills. In the category of technological abilities/skills, the results by region indicate that the Northeast, West and Midwest show percentages under 35% while the South shows 44%. It is interesting that job announcements in the Northeast, West, and Midwest

regions showed high percentages in interpersonal skills, but much lower percentages in technological abilities/skills. The South on the other hand had nearly equal percentages in these two categories, showing that both interpersonal skills were sought about as much as technological abilities/skills. None of the job announcements indicated that collection development or systems infrastructure was very important in terms of the job skills that job candidates should possess.

A comparison of the school course descriptions by region shows very different results from the regional comparison of job announcements. In the Northeast, collection development and technological abilities/skills are emphasized as the most important followed by interpersonal skills and systems infrastructure. The south region shows courses concentrating mostly on collection development while technological abilities/skills, interpersonal skills, and systems infrastructure are not nearly as stressed. In the Midwest and West, technological abilities/skills are well above the percentages for the other three categories.

A final comparison of the regional job announcements and the regional course descriptions yields an interesting pattern. Job announcements show a general pattern of ascending order of importance for collection development, technological abilities/skills, and interpersonal skills, respectively. While the school course descriptions show a general pattern of descending order of importance for collection development, technological abilities/skills and interpersonal skills, respectively. The importance of systems infrastructure was negligible for both job announcements and school course descriptions.

So while schools are teaching students how to develop library collections and operate the new technology, it appears that employers seek potential employees who

possess more “people skills.” Perhaps this is so they can effectively interact with peers, or assist library users in using this new technology. This is speculation because without direct feedback from other reference librarians using questionnaires or surveys, it is hard to know what a reference librarian’s job actually entails. Another limitation of this study was the time frame over which course descriptions and job announcements were collected. It would have been more conclusive if perhaps a span of several years had been used in order to see if a pattern or trend emerged in terms of what schools taught and what employers required in employees. Or perhaps limiting the study to one geographic area would have been a good idea to see any differences or similarities were occurring over the years. Another limitation is that no intercoder reliability testing was done to validate the coding scheme and coding technique.

In general, I was somewhat surprised by the results of my study. Before conducting this study, I thought that technological abilities would far outweigh all other qualifications in today’s increasingly sophisticated job market. Instead the data illustrate that employers want employees who are skilled in the art of communicating with the public and colleagues. So what does this mean for library science programs? Perhaps it is an indicator that library science schools should pay closer attention to what employers seek and require in an employee in order to ensure their students will be well prepared for a career in reference librarianship. Perhaps it is a means for student to gauge what types of classes they should take prior to graduation to better their chance for employment.

Future research directions include conducting interviews or surveys with reference librarians and library school instructors for a more in depth look at this situation, and/or a more comprehensive content analysis that looks at more course descriptions and more job announcements over a longer period of time to capture a more comprehensive picture of the education and hiring requirements of reference librarians.

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- Tauraso, M. (1996). *The Qualifications Sought by Special Library Employers: A Content Analysis of Job Advertisements*. Unpublished master's paper, University of North Carolina at Chapel Hill, Chapel Hill, NC.

Appendix A

Complete List of Job Announcements Resources

- American Libraries Late Job Ads Online at <http://www.ala.org/education/>.
- April 2000 American Libraries' Career Leads at <http://www.ala.org/education/>.
- March 2000 American Libraries' Career Leads at (<http://www.ala.org/education/>).
- February 2000 American Libraries' Career Leads (<http://www.ala.org/education/>).
- Academic Librarian Positions from College & Research Libraries

NewsNet at <http://www.ala.org/education/>.

- Library Job Posting on the Internet at
<http://webhost.bridgew.edu/snesbeitt/libraryjobs.htm>.
- The Mountain Plains Library Association: MPLA Jobline Posting at
<http://www.usd.edu/mpla/jobline>.
- Pacific Northwest Library Association Mailing List Archive at
<http://archive.wln.com/pnla/index.html>.
- Northeast Massachusetts Regional Library System Jobs page at
<http://www.nmrls.org/jobs/>.
- New Hampshire Library Job Line at <http://www.state.nh.us/nhsl/ljob>.
- LORI Jobs Discussion Group at <http://lori.state.ri.us/jobs>.
- Western Massachusetts Regional Library System at
<http://www.wmrls.org/wmrls/job.html>.

- University of Rhode Island Graduate School of Library and Information Studies (URI-GSLIS) at <http://www.uri.edu/artsci/lsc/JL.html>.
- Library & Information Science JobSearch at <http://carousel.lis.uiuc.edu/~jobs/>.

Appendix B

Category 1: Interpersonal Skills

Definition: This category covers any job qualification or duty required or desired by a public, academic or special library that involves a reference librarian's ability to interact and work with library patron and/or co-workers. This category addresses the ways in which a reference librarian should meet the needs of a library's community using communication and human relation skills.

Examples of Phrases Indicating Interpersonal Skills

- customer service
- bibliographic instruction
- instructing
- interpersonal
- teaching
- reader's advisory
- public relations
- human relations
- team
- friendly
- flexible
- flexibility
- outreach
- communication skills
- assistance
- assist
- assisting
- training
- advising
- reference interview
- people skills
- educate
- community

Appendix B

Category 2: Collection Development

Definition: This category involves library activities that require a reference librarian to be involved in the collection building activities of the library such as selecting and evaluating books for purchase by the library in order to meet curricular and research needs of faculty, students and other members of the public.

Examples of Phrases Indicating Collection Development Activities

- collection development
- research needs
- curricular needs
- materials selection
- evaluate
- evaluating
- evaluation
- select
- selecting
- collection building
- selection

Appendix B

Category 3: Technological Abilities/Skills

Definition: This category involves any job qualification or duty that is required or desired by library employers. This also involves a reference librarian's ability to use or have knowledge of computer applications such as web searching, internet searching, online searching, and web page creation. This category does not involve or include basic computer applications such as word processing or typing.

Examples of Phrases Indicating Technological/Abilities Skills

- HTML
- CD ROM
- Internet searching
- Web searching
- Online searching
- Database searching
- Javascript
- Coding
- WWW
- World Wide Web
- Mark up language
- Computer instruction
- Searching
- Electronic resource(s)
- Software
- Metadata
- Navigation
- Database design
- Database development
- Digital
- PC skills
- Computer skills
- Web page development
- Web page creation
- Web site development
- Internet
- Database construction
- Web page design

Appendix B

Category 4: Systems Infrastructure

Definition: This category involves activities that involve the maintenance or setup of library systems operations such as network administration, systems administration, database administration, and similar operations.

Examples of Phrases Indicating Systems Infrastructure Activities

- Database administration
- Systems administration
- Network administration
- LAN
- TCP/IP
- Protocol
- Computer hardware
- Networking

Appendix C

Example of a Coded Job Announcement *

Posted: 2/7/2000

Position:

Part-Time Reference Librarian

Duties:

Research information requests using print and non-print sources. Assist library patrons with information searches and with use of library equipment. Assist with collection development. Collect and maintain appropriate statistics. Prepare written bibliographies and reading lists. Other duties as required.

Qualifications:

ALA-accredited MS in Library and Information Science or eligibility for certification as Provisional Librarian. Good oral and written communication skills, knowledge of reference skills and resources. Computer skills/experience required. Prior public library reference experience desirable.

Hours:

15 - 20 hours per week, including evenings, Saturdays and Sundays in rotation.

In this job announcement the coding terms and phrases have been highlighted in grey. As each term or phrase appears for the first time in the document it is marked on the coding sheet in the appropriate category. Three categories are represented in this job announcement: Interpersonal Skills (assist and communication skills), Technological Abilities/Skills, (computer skills) and Collection Development (collection development). Duplicate appearances of a term or phrase were not counted.

**Identifying information has been deleted for privacy reasons.*

Appendix D

Example of Coded Course Descriptions from One School *

Core Courses

Management of Library and Information Services (*I and II, SS, 3*) Introduction to the process, principles, practices, theories and case studies in the administration, management and supervision of libraries and information services. Focus on management functions: planning, organizing, staffing, directing, controlling.

Collection Development (*I and II, 3*) Introduction to process, practices, and problems of collection building, maintenance, and evaluation regardless of format or subject of material, type of institutional setting, or **community** or client group served.

Reference and Information Services (*I and II, 3*) Practical experience in the use of basic information sources with readings and discussion on the philosophy and administrative aspects of reference work.

Organization of Information (*I or II, 3*) Theory and practice of organizing information following national and international standards; focus on bibliographic information. Emphasizes the understanding and application of cataloging and classification principles, standards, tools, bibliographic utilities and networks.

Introduction to Information Science and Technology (*I, II, or SS, 3*) Introduction to the organization, retrieval, and analysis of information and the technologies used to control the manipulation and dissemination of information in library and information settings.

In these course descriptions the coding terms and phrases have been highlighted in grey. As each term or phrase appears for the first time in a single document, in this case a single course description, it is marked on the coding sheet in the appropriate category. Two categories are represented in these course descriptions: Interpersonal Skills (community), and Collection Development (evaluation, collection development and collection building). Duplicate appearances of a term or phrase were not counted.

**Identifying information has been deleted for privacy reasons*