

The Academic Library Job Market: A Content Analysis Comparing Public and Technical Services

David W. Reser and Anita P. Schuneman

This study analyzes the differences between public and technical services positions as described in job advertisements. Eleven hundred thirty-three jobs advertised by 480 institutions in 1988 were examined using content analysis to determine differences in the levels of computer skills, foreign-language requirements, previous work experience, educational requirements, and minimum salary offered. Analysis of the data included cross-tabulation and tests to determine statistical significance. Technical services position advertisements require more computer skills and previous work experience and are more than twice as likely to require foreign-language skills. Public services candidates are expected to have more advanced degrees. Minimum salaries advertised for the two groups are nearly equal for lower-level positions, but public services salaries rise faster as administrative responsibilities grow. These differences should be considered by persons preparing for or choosing a specialization.



Public and technical services are the two most common divisions in the organizational structure of academic libraries. Librarians frequently choose one or the other of these specialties and stay within it throughout their careers. A recent survey of library school graduates found that while nearly 30% of the new librarians perceived reference jobs as "most desirable," cataloging and other technical services jobs were desired by only 8% and 8%, respectively.¹ As a result, a well-reported crisis in the recruitment of qualified catalogers and other technical services personnel seems to be in force.² Studies have been initiated to

examine the problem, and a conference was held on how to recruit better new technical services librarians.³ Numerous articles have appeared in the library literature hypothesizing about the low level of technical services recruitment. These articles blame everything from library school curricula and instruction methods to the perceived tedious nature of technical services jobs.

In casually reading job advertisements for academic librarians, the authors observed what they perceived to be substantial differences in the stated job requirements for technical and public services positions. This study grew out of a desire to examine and document

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these differences, differences that may shed some new light on the recruitment problems concerning technical services.

The hypotheses tested in this study are:

- Technical services jobs are more likely to include administrative responsibilities;
- Technical services jobs are more likely to require computer skills;
- Technical services jobs are more likely to require foreign-language skills;
- Technical services jobs are more likely to require previous work experience;
- There will be no difference in the requirement of an American Library Association-accredited degree between public and technical services, but advanced subject degrees will be more often required for public services jobs; and, finally,
- Higher salaries will be associated with public services positions.

METHODOLOGY

To ascertain the qualifications necessary for academic librarians, the authors used content analysis to examine jobs advertised in *American Libraries*, *College & Research Libraries News*, and *Library Journal* during 1988. These professional journals were selected because they all enjoy a wide circulation among librarians and are generally regarded as having the most job advertisements. Professional library positions found in the *Chronicle of Higher Education* were also included after a prestudy revealed that their periodical contained more unique jobs (i.e., advertised in only one source) than the others. Although the journals analyzed are used heavily in advertising professional vacancies, not all jobs are nationally advertised. Regionally or locally advertised jobs are not represented in this study.

Advertisements included were from a college or university in the United States (junior and community colleges were excluded) and advertised for full-time positions (35 or more hours per week). Temporary positions were included only if the appointments were to last at least one year.

After eliminating duplicate announcements (jobs found in more than one jour-

nal, or more than one issue of the same journal), the authors coded each job into various classifications according to pre-defined and mutually exclusive categories. Wherever possible, the categories of analysis were obtained from previous content analysis studies found in the library science literature.⁴ Some categories were based on a preliminary study.⁵ The categories chosen for this study included type of position (job title), geographic region of the institution, presence of administrative duties, computer skills, language skills, previous work experience, educational levels, and salary. The operational definitions for these categories follow in the appropriate discussion sections.

Previous library work experience is more often required for technical services librarians, which means that fewer entry-level jobs are available in this area.

Because the authors shared responsibility for coding the data, a test was performed to determine the rate of intercoder reliability, or the rate at which both coders analyzed the same data in the same manner. The first 50 jobs were analyzed by both authors, and the results were compared. This test revealed a very high (98%) level of agreement. The Statistical Package for the Social Sciences (SPSSPC+) was used to analyze the coded data and to provide the descriptive and inferential statistics used to test the hypotheses.

FINDINGS

A total of 1,133 positions were identified and analyzed. By far, the largest number, almost half, were reference positions. The next-largest category, cataloging, accounted for 22.8% of the total positions (see table 1).

The classification of these positions into categories of public or technical services was based largely on classifications used in previous content analyses.⁶ Six hundred ninety-eight positions, or 62%, were public services, and 435, or 38%, were technical services.

TABLE 1
POSITIONS ADVERTISED,
BY JOB TITLE

Job Title	No.	%
Reference	560	49.4
Head of Public Services	42	3.7
Bibliographic Instruction	37	3.3
Circulation	37	3.3
ILL	17	1.5
Other	5	0.4
Total Public Services	698	61.6
Cataloging	259	22.9
Head of Tech Services	69	6.1
Acquisitions	54	4.8
Serials	26	2.3
Preservation	15	1.3
Other	12	1.1
Total Tech Services	435	38.5
Totals	1,133	100.1

TABLE 2
POSITIONS ADVERTISED, BY REGION

Region	No.	%
North Atlantic	326	28.8
Midwest	293	25.9
Southeast	239	21.1
West	275	24.4
Totals	1,133	100.1

The geographic location of each opening was coded to the state level. The state with the largest number of positions was New York, with 126 (10%); Texas was the distant runner-up, with 79 positions (6%). The state with the fewest advertisements was Alaska—no jobs in the state meeting the profile for this state were advertised in these publications during 1988. The states were combined into the geographic regions used by the *ALA Survey of Librarian Salaries*.⁷ As table 2 shows, the North Atlantic region offered the largest number of positions and the Southeast the fewest.

Each position advertised was analyzed for the presence of administrative duties (defined as the head or assistant

head of a unit, department, section, etc.). Administrative duties were found in 436, or 39%, of the jobs. The breakdown by division shows that 46% of the technical services positions had some type of administrative duties, while only 34% of the public services positions did. This finding suggests that those working in technical services in academic libraries are more likely to have administrative responsibilities as part of their regular job duties. Findings for the variables concerning computer skills, foreign languages, previous work experience, educational requirements, and salary are reported in the following sections.

COMPUTER SKILLS

As academic libraries become more dependent on computerized activities, the degree to which institutions advertise for librarians with computer skills becomes an important concern. For this study, "computer skill" was defined broadly to include knowledge of, or experience with, any of a wide variety of computer applications, including bibliographic utilities, online database searching, CD-ROM, and other microcomputer uses.

Statistically significant differences between public and technical services were found when such skills were examined (see table 3). More than half (52%) of the technical services positions required computer skills, while only one-third (33%) of the public services jobs had this requirement.

These figures demonstrate a much greater demand for this skill among technical services librarians. Considering the extent to which libraries have automated, however, it is surprising that so few positions in either division required computer skills.

Combining the "required" and "preferred/desired" categories yields another perspective: 79% of the technical services positions requested computer skills, compared to 64% for public services. A similar analysis conducted in 1985 by David Block found that 59% of technical services positions requested computer skills, and only 33% for public services.⁸ Comparing the current study's

TABLE 3
COMPUTER SKILLS, BY DIVISION

	Public Services		Technical Services		Total	
	No.	%	No.	%	No.	%
Not stated	243	34.8	90	20.7	333	29.4
Preferred	222	31.8	119	27.4	341	30.1
Required	233	33.4	226	52.0	459	40.5
Totals	698	100.0	435	100.0	1,133	100.0

$\chi^2 = 42.8$; $df = 2$; $p < .01$

TABLE 4
FOREIGN LANGUAGE REQUIREMENTS, BY DIVISION

	Public Services		Technical Services		Total	
	No.	%	No.	%	No.	%
Not stated	587	84.1	273	62.8	860	75.9
Preferred	64	9.2	64	14.7	128	11.3
Required	47	6.7	98	22.5	145	12.8
Totals	698	100.0	435	100.0	1,133	100.0

$\chi^2 = 75.6$; $df = 2$; $p < .01$

results with Block's reveals that the demand for these skills is increasing in both divisions. The more rapid increase shown in public services may be because widespread use of automation in the form of bibliographic utilities for technical services work has been the norm for many years, while only recently have online databases and other computer applications become available for reference use. Other librarians writing on the effect of automation agree that technical services has experienced the earliest and greatest impact.⁹

FOREIGN LANGUAGE

The advertisements were also examined to determine the foreign-language requirements. Any mention of foreign languages, whether "required" or "preferred/desired," and the level of skill requested were coded. Significant differences between the divisions were found. As hypothesized, technical services positions were more likely to require these skills than public services—more than three times as likely. Only 7% of the public services jobs required a foreign lan-

guage, compared to 23% of the technical services positions (see table 4).

This finding suggests that those working in technical services in academic libraries are more likely to have administrative responsibilities as part of their regular job duties.

Although foreign-language skills have been a component in several content analysis studies,¹⁰ only Block examined the differences between public and technical services. Further analysis of the data in his study of academic library job announcements reveals that 39% of the technical services positions requested foreign-language skills, compared to 19% of public services positions. Block's data include announcements that either require or prefer a foreign-language skill. Analyzed in a similar way, the current study found that 37% of technical services advertisements mention foreign-language skills, compared to the 16% for public services. While there is some variance in the

TABLE 5
LANGUAGE SKILL LEVEL, BY DIVISION

	Public Services		Technical Services		Total	
	No.	%	No.	%	No.	%
Not stated	39	35.1	58	35.8	97	35.5
Working	25	22.5	47	29.0	72	26.4
Reading	41	36.9	53	32.7	94	34.4
Fluent	6	5.4	4	2.5	10	7.7
Totals	111	100.0	162	100.0	273*	100.0

$\chi^2 = 3$; $df = 3$; $p > .01$ (not significant)

* Total does not add up to 1,133 because levels were analyzed only for the 273 positions which had foreign language requirements.

positions coded and the source of the advertisements, the figures are remarkably similar. The greater demand for these skills by both divisions in 1988 may suggest a trend toward an increased need for librarians to have a knowledge of foreign languages. Both studies show that technical services librarians are much more likely to need a foreign language. This is probably because general reference service in academic libraries is, for the most part, delivered in English. Academic libraries collect materials in many languages, however, so technical services librarians need skills in these languages in order to process the materials.

None of the earlier content analysis studies reported data on the level of language skill requested. For this study, three skill levels were used—fluent, reading, and working. These levels have been defined by Barbara I. Dewey.¹¹ Cross-tabulations show no statistically significant differences between skill levels specified for public and technical services. Nevertheless, the findings are interesting. Sixty percent of the positions requesting fluent knowledge of a foreign language were in public services. At the working knowledge level, the findings are reversed (see table 5). A possible explanation for this finding is that, in technical services, working knowledge of a language may be adequate to provide access to the material, while in public services, any direct contact with speakers of other languages demands a higher skill level.

WORK EXPERIENCE

Each job advertisement was analyzed to determine if previous work experience was mentioned, and then was classified as "work experience required," "work experience preferred/desired," or "no work experience or none stated." For inclusion in the last category, the announcements (1) had no work experience mentioned in the advertisement; (2) had a statement specifying that no experience was necessary; or (3) were labeled "entry level." These classifications are similar to previous content analysis studies.¹²

Some of the job announcements specified the type or level of experience required or preferred (i.e., professional or paraprofessional, specialized or general), but since there was little consistency in the manner in which libraries phrased this information, no attempt was made to distinguish the type of experience when coding for this study.

The findings indicate that minimum qualifications for 18% of all positions advertised could be met by those with no previous experience, 31% had experience desired or preferred, and more than half required some previous library work (see table 6). The heavy bias toward experience-required positions might be attributable to some institutions being reluctant to advertise nationally for entry-level positions.

The cross-tabulation comparing public and technical services reveals that tech-

TABLE 6
PREVIOUS WORK EXPERIENCE, BY DIVISION

	Public Services		Technical Services		Total	
	No.	%	No.	%	No.	%
None or not stated	132	18.9	69	15.9	201	17.7
Preferred	238	34.1	115	26.4	353	31.2
Required	328	47.0	251	57.7	579	51.1
Totals	698	100.0	435	100.0	1,133	100.0

$$\chi^2 = 12.5; df = 2; p < .01$$

nical services positions are more likely to require experience and that a smaller proportion of technical services than public services positions can be considered entry level.

Perhaps this can be explained by comparing the two most represented positions in public and technical services—reference and cataloging. While basic skills are needed by both for entry-level positions, the complex collection of rules involved in cataloging require that more time be spent training a cataloger than training a beginning reference librarian to learn the collection he or she will serve. A beginning cataloger will probably require supervision longer than a beginning reference librarian. This greater investment of time is a substantial economic incentive to seeking catalogers with solid work experience.

This need for previous library work experience should be an important consideration for library school students choosing a specialization. Two recent studies of library and information science students examined library work experience prior to graduate study. Kathleen M. Heim and William E. Moen found that 34% of students had full-time library experience, although only 13% had experience in four-year colleges or universities.¹³ Richard C. Pearson and T. D. Webb found that only 17% of library school students had major library experience (full-time or near full-time) when they began their graduate programs.¹⁴

EDUCATIONAL REQUIREMENTS

As expected, this study found that most (98%) professional positions in

public and technical services at academic institutions require a master's degree in library science (M.L.S.) from an ALA-accredited program. This finding can be related to an earlier study which tracked the M.L.S. requirement for twenty years, showing that the need for an ALA-accredited degree has grown dramatically since 1959, although it should be noted that this study examined all academic library jobs, not just public and technical services.¹⁵ Other recent studies have found that the M.L.S. requirement (either accredited or unaccredited) is found in more than 90% of the academic, public, and special library job advertisements.¹⁶ Findings such as these may have led to Phyllis J. Hudson's conclusion that "the ALA-accredited MLS degree is universally recognized as the basic requirement for entry into academic librarianship."¹⁷

A cross-tabulation of the data concerning the M.L.S. requirement found no statistically significant differences between public and technical services. However, statistical differences were found when considering requirements for advanced degrees, defined as subject master's, law, or doctoral degrees. In fact, advanced degrees were required for the public services positions analyzed in this study five times more often than for technical services positions (see table 7). This finding, which confirms the hypothesis, is not surprising considering the need for subject specializations for many reference positions. From examining the advertisements, it was evident that many more public services positions included a component of book selection or

TABLE 7
ADVANCED DEGREE REQUIREMENTS, BY DIVISION

	Public Services		Technical Services		Total	
	No.	%	No.	%	No.	%
None or not stated	484	69.3	381	87.6	865	76.3
Advanced preferred	173	24.8	49	11.3	222	19.6
Advanced required	41	5.9	5	1.1	46	4.1
Totals	698	100.0	435	100.0	1,133	100.0

$$X^2 = 51.4; df = 2; p < .01$$

collection development in a specific subject area. Libraries seek to hire individuals with academic qualifications in those areas. Some have noted that it has become almost routine for academic librarians to have advanced degrees in addition to the M.L.S. and that this requirement could become mandatory in the future.^{18,19} In a survey of 30 academic research libraries, Sheila Creth and Faith Harders found that even those libraries that did not require an advanced degree

used it as a screening device because the libraries believed it "a good indicator of promise in scholarship and subject mastery required for promotion and tenure."²⁰

MIMUMUM SALARY

Certainly one of the most important elements in a job advertisement from the perspective of a job seeker is the salary. For the purposes of this study, "salary" has been defined as the minimum salary figure listed in the advertisement. Although some previous studies of job advertisements used the midpoint of stated salary ranges as the figure for analysis, only 28% (316) of the jobs analyzed in this study specified a range in the advertisements; while a minimum salary figure was present in 85% (960) of the advertisements (see table 8).

The resulting salary data have certain limitations. First, the salaries listed in the advertisements are presumably only guidelines. In many cases, the actual salary would be higher after negotiations between employer and employee. Second, the data should not be compared with salary data found in listings such as the *ALA Survey of Librarian Salaries*, the *ARL Salary Survey*, or Carol L. Learmont and Stephen Van Houten's *Library Journal* article, "Placements and Salaries," all of which are annual surveys based on actual salaries.²¹ Finally, because of the lack of conformity in reporting benefits packages in the advertisements, no attempt was made to adjust the minimum salary figures for nonwage benefits, which should also be of great concern to the job seeker. Because the percentage of advertisements for positions carrying a less-than-12-month appointment was

TABLE 8
MEAN MINIMUM SALARIES,
BY POSITION
(IN DESCENDING ORDER)

Position	No.	Mean Salary (\$)
Head of Public Services	32	31,260
Other Public Services	4	29,699
Head of Technical Services	54	26,820
Preservation	13	24,958
Acquisitions	44	23,830
Circulation	26	23,616
Other Technical Services	11	23,522
Cataloging (Multi-format)	154	22,837
Reference	485	22,656
Serials	21	22,493
ILL	17	22,327
Bibliographic Instruction	30	22,272
Cataloging (Serials)	26	22,181
Cataloging (Monographs)	43	21,193

TABLE 9
SALARY COMPARISONS

	Title	No.	Mean Salary (\$)	Standard Deviation (\$)
Pair 1	Head of Public Services	42	31,260	9,325
	Head of Technical Services	69	26,820	7,596
Pair 2	Reference (with admin. duties)	149	26,756	4,670
	Cataloging (with admin. duties)	69	25,545	4,724
Pair 3	Reference (no admin. duties)	411	21,233	3,370
	Cataloging (no admin. duties)	190	21,168	2,946

very small, there was no attempt to adjust salary figures for 9- and 10-month appointments to 12-month figures.

In order to make comparisons between public and technical services more meaningful, three subgroups from each division were identified and compared (see table 9). Catalogers and reference librarians were chosen for comparison because they compose the largest segment of their respective divisions; the other two pairs were selected because they represent a logical career progression from the original pair. The findings indicate that cataloging and reference positions without administrative duties have mean salaries that are nearly identical. For the same positions with administrative duties, the reference advertisements average more than \$1,200 more per year. For heads of public and technical services divisions, the mean minimum salary for public services heads was more than \$4,400 higher. Although the comparative rise in public services salaries as levels of administrative responsibility grow is evident from examining the means, t-tests show that they are not significantly different, probably due to the high standard deviations found. A possible explanation for this disparity may be the size of technical services departments and the number and level of employees supervised. Many technical services departments are traditionally smaller than public services departments and tend to rely heavily on paraprofessional employees. More research is needed to determine if these or other factors are responsible for the salary differences.

CONCLUSION

This study determined that there are statistically significant differences in the requirements for nationally advertised public and technical services positions in academic libraries. As hypothesized, technical services positions are more likely to include administrative responsibilities than are public services. Technical services jobs are also more likely to require foreign-language skills and computer skills. While public services positions are more likely to require advanced subject degrees in other academic areas, both public and technical services require an ALA-accredited M.L.S. degree at equally high levels. One of the most important findings is that previous library work experience is more often required for technical services librarians, which means that fewer entry-level jobs are available in this area.

There are statistically significant differences in the requirements for nationally advertised public and technical services positions in academic libraries.

If salary should be based on the amount of education, previous experience, and the level and complexity of the skills required for the job, those positions requiring more skills, experience, and education should offer higher salaries. The higher demands for skills and experience for technical services librarians

ans do not seem to be reflected in salary figures. According to James M. Matarazzo, "Our best recruitment tool will be to bring librarians' salaries up to a level where we can attract new and needed members to the profession and retain our experienced members for longer periods of time."²²

Those already recruited to the profession—particularly library school students—as well as librarians considering a change in specialization, need to be aware of these substantial differences between public and technical services. Technical services candidates should realize that they will be more frequently asked for foreign-language skills, computer skills, previous library work experience, and administrative skills than their public services counterparts. In addition, the findings, though not conclusive, suggest that technical services librarians will receive lower salaries than public services librarians as they acquire administrative responsibilities. For definitive answers, more research is needed in the area of salary.

This study clearly shows that, on the one hand, technical services librarians are more frequently asked for skills beyond those traditionally learned in library schools, as well as previous work experience. On the other hand, public services candidates more frequently need advanced degrees in a subject area—degrees that represent a substantial investment of time and money. With

this in mind, library school educators may need to reevaluate the ways in which they recruit and select students for their programs and prepare them for the job market.

These findings should also be of interest to library administrators and personnel officers who face a shortage of qualified applicants for cataloging and other technical services positions. Perhaps the increased requirements for technical services librarians documented in this study reflect the ideal candidates that library managers would like to hire, not what they are willing to accept. Attracting more applicants may require raising salaries or relaxing certain job requirements and expectations. At a recent symposium that addressed recruitment problems for cataloging positions, one library manager suggested that "in academic libraries, unless there is an institutional mandate, do not require a second master's degree, do not require a foreign language . . . do not require anything that is not necessary for the successful execution of the duties of this office."²³

By relaxing requirements, potential candidate pools would grow, and perhaps more library school students could be encouraged to choose technical services specializations, confident that there will be a market for entry-level librarians and a career track that will be professionally and financially rewarding.

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ANNOUNCING

MultiCultural Review

Dedicated to a better understanding of ethnic, racial and religious diversity

If your library is already committed to building a balanced collection of multicultural materials—and increasingly library patrons and school boards are demanding such collections—you know how difficult, time-consuming, expensive, and unsystematic it is to turn to the many special-interest magazines and newsletters that frequently are the only source of guidance.

Now a new journal, **MultiCultural Review**, has been developed that is a comprehensive, authoritative, affordable and efficient tool for reviewing material on and relating to multiculturalism. It seeks to increase awareness and sensitivity to pluralism through a celebration of diverse cultures and common bonds.

Comprehensive

MultiCultural Review provides reviews organized by broad subject categories; each review will contain thorough citation information as well as an evaluative discussion of the material. The **Review** offers columns in each issue on serials and poetry and regular articles and reviews on audio/video products, electronic media, and juvenile materials, as well as numerous other topics.

Authoritative

Editor Brenda Mitchell-Powell has recruited recognized figures from the library and scholarly communities to serve on the Advisory Board for the **Review**, plus other specialists serve as essayists and reviewers. These individuals know the problems involved in creating a useful, representative collection—they've had to do it themselves. Let their expertise work for you in shaping your collection through a subscription to **MultiCultural Review**.

Affordable

Published quarterly, with its inaugural issue in January 1992, you can subscribe to **MultiCultural Review** for a 1-year subscription rate of only \$59. A 2-year rate (\$115) and a 3-year rate (\$167) are also available. Please contact Wendy Brooks at (203) 226-3571 to subscribe or for more information on this important new journal.

What the Experts Say

"I see **MultiCultural Review** as a convenient, respectable and reliable source for librarians and their clientele as well. While libraries are certain to use the journal for selection, its value lies also in the information provided on multicultural bibliography and on multicultural librarianship. This will help to raise our consciousness about key and timely issues that affect another part of society."

—Jessie Carney Smith
University Librarian, Fisk University

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—Stanley W. Lindberg
Editor, The Georgia Review

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