

THE IMPACT OF THE MARC AMC FORMAT ON ARCHIVAL EDUCATION AND EMPLOYMENT DURING THE 1980S

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ABSTRACT: During the 1980s, the development of the MARC AMC format allowed archives and manuscript repositories to take advantage of automation on an unprecedented scale. A review of archival position vacancies indicates the increasing extent to which knowledge of the MARC AMC format became a criterion for employment in the 1980s and that employers tended to prefer candidates with pre-appointment knowledge of the format. Most positions utilizing the MARC AMC format were at colleges and universities. A survey of archival education programs reveals that by the end of the decade these programs had made only a limited response in providing training in the MARC AMC format. On-the-job training was the most frequently cited source of training for successful candidates who came to a position with knowledge of the MARC AMC format.

A Machine-Readable Cataloging (MARC) format designed for cataloging books and serials first appeared in the 1960s. This early MARC format helped the Online College Library Center (OCLC) become a reality in 1967, and paved the way for the development and use of shared national bibliographic utilities.¹

This early surge of library automation was driven by the desire to reduce costs by sharing the catalog record for a single title that might be held by many libraries. In archival and manuscripts repositories, however, "shared cataloging" did not apply; each unique body of material required original description and cataloging. Archival repositories had little use for the automated circulation and acquisition systems developed to support activities specific to libraries.²

The turnaround for archival automation came in 1977 when the Society of American Archivists authorized the formation of the National Information Systems Task Force (NISTF) and charged it to seek ways to develop a national database system that would allow archives and manuscript repositories to exchange information about their holdings. The end product of the NISTF was the MARC AMC (Archival and Manuscripts Control) format adopted by the Society of American Archivists and the Library of Congress in 1982.³

Concurrent with the work of the NISTF were significant technical advances in the computer field: the increased capability and decreased cost of microcomputers; the entry of International Business Machines (IBM) into the personal computer field and the subsequent dominance of MS-DOS as the standard operating system; and the availability of a high-capacity hard disk storage for microcomputers.⁴

In January 1984 several archives and manuscript repositories began converting descriptive data to the MARC AMC format and entering them into the Research Libraries Information Network (RLIN) database. OCLC began offering the AMC format in November 1984. The process has continued unabated. The availability of MicroMARC:amc, the stand-alone microcomputer software developed in 1986, helped to assure the acceptance and spread of the MARC AMC format in the United States. Prior to its development, use of the MARC AMC format was limited to members of one of the bibliographic utilities such as OCLC or RLIN. With MicroMARC:amc, however, any repository that could afford approximately \$2,500 for both the IBM-compatible computer and the software was potentially able to produce a database that could be used online locally and that could be exchanged with other institutions.⁵

By 1989 records for over 165,000 individual archival and manuscript collections had been added to RLIN alone. The Library of Congress has begun adding its National Union Catalog of Manuscript Collection (NUCMC) citations. WLN, a bibliographic serving the Pacific Northwest, and UTLAS, based in Toronto and serving institutions primarily in Canada, also accept MARC AMC records. What began as a modest proposal in 1977 became a national phenomenon in the 1980s offering the potential for creating an international database for archives and manuscript holdings in the 1990s.⁶

Such a radical change in the way archives and manuscript repositories report and describe their holdings brought with it some far-reaching implications for the field of archives. The MARC AMC format has provided a framework in which archivists can discuss and teach descriptive practices; allowed the integration of archival and manuscript holdings into the automated public catalogs of the major research libraries, thereby creating opportunities for closer professional bonds between archivists and librarians; provided archives and manuscript repositories with a means to continually update their holdings and maintain better administrative control over their accession records; and provided researchers with an opportunity to retrieve information about the content of archival and manuscript holdings on a scale previously unattainable.⁷

The MARC AMC format also noticeably affected the qualifications for archivists and manuscript librarians. It created a need for archivists who understood the format and who knew how descriptive information could be used within the format's structure. To take advantage of the automation possibilities that became available, the profession had to train its practitioners rapidly. Acceptance of the format meant that midway through the decade of the 1980s a new technical requirement had been added to the criteria for selected archival and manuscript librarian positions.

During the 1980s two surveys examined the relationships among archival education, recruitment, and qualifications. David Bearman briefly reported the findings of his review of archival vacancies appearing in the *SAA Newsletter* during 1985 and 1986.⁸ His results indicated that employers were seeking appli-

cants with knowledge of the MARC AMC format, and that the number of positions asking for automation competence increased between 1985 and 1986. In 1988 Constance B. Schultz published the findings of her survey which examined how well archival education met the needs for state archives. While noting that employers frequently mentioned the need for more technical training for archivists, her survey did not specifically address training and use of automation.⁹

This survey, conducted during the fall of 1989 and spring of 1990, builds upon Bearman's analysis by providing similar data over a longer span of time and expands on Schultz's study by focusing on archival education in one area of automation. This survey fills an informational gap by assessing the impact of the MARC AMC format on archival employment and on the training of archivists. It attempts to answer three basic questions.

1. To what extent has knowledge of the MARC AMC format become a qualification for archival employment?
2. To what extent have archival education programs added MARC AMC format training to their curriculums?
3. To what extent have employers been able to recruit archivists with knowledge of the MARC AMC format?

Survey Methodology

Data for this paper was collected in three phases. The first phase consisted of a position-by-position review of all vacancy announcements appearing in the *SAA Newsletter* from 1980 through 1989. The *Newsletter* was chosen because of its reputation as a clearinghouse for the recruitment of archivists and manuscript librarians, and because it provided the most comprehensive listing of positions from the widest range of institutions.

The data collected during the review of positions included job title, the basic duties of the position, the type of institution advertising the vacancy, the year the position was available, and whether the position listed knowledge of the MARC AMC format as a qualification. It became apparent early in the position review process that one could not always determine whether MARC AMC format knowledge or other automation criteria were required or preferred. While some advertisements clearly distinguished required from preferred qualifications, many did not. Consequently, the survey could not maintain such a distinction. It merely identifies position announcements that ask for candidates with MARC AMC or automation knowledge or skills.

The review of positions excluded internships and research assistantships; positions outside the United States; clerical positions; photographic archives positions for which the technology of photography was the dominant element; senior administrative positions primarily responsible for finance, personnel, and budget in multifunctional agencies; librarian positions; museum curators; preservation specialists; education curators; records management positions; micrographic specialists; teaching positions in public history; oral history positions; sales positions; needs assessment and field survey positions; audiovisual/film librarians; and editorships. Positions for which the search was extended were counted only once. A position search that closed and subsequently was reopened, however, was counted as a new position.

A second data-gathering phase included a survey of fifty-six institutions that offered course work in archival administration or manuscript librarianship, based on a listing in the Society of American Archivists *Educational Directory*. This survey asked if the institution provided instruction in the MARC AMC format; if so, what type of instruction it provided; and when the institution began offering MARC AMC format training. Certain *Directory* listings were excluded: short workshops and institutes, programs at foreign institutions, records management programs, and those offering undergraduate courses only.

The third phase was a survey of the institutions that advertised positions asking for knowledge of archival automation applications and, specifically, knowledge of the MARC AMC format. The institutions and positions surveyed were identified during phase one of the research.

The objective of the third phase was to answer the following questions:

- Did the institution receive applications from candidates with knowledge of the MARC AMC format?
- If the institutions hired candidates with knowledge of the MARC AMC format, what was the source of their pre-appointment AMC format training?
- What was the source of post-appointment training?
- What degrees were held by appointees with AMC format knowledge?
- What types of institutions sought archivists with AMC format knowledge?

Data Analysis

Review of position announcements. The review of archival vacancy announcements in the *SAA Newsletter* from 1980 to 1989 yielded 884 positions for further study (exclusions mentioned above). One hundred eleven (13%) of these specifically asked for knowledge of the MARC AMC format. An additional 152 (17%) sought candidates with knowledge of archival automation applications, but did not specify the MARC AMC format. Thus, a total of 263 positions (30%) had an automation criterion in the position description.

Overall percentages may be misleading, however, because the number of positions asking for MARC AMC or automation knowledge increased dramatically in the second half of the decade. Between 1980 and 1984, only four positions mentioned the MARC format, no more than 3% of the total number of positions in any one year. One of these incorporated duties using the early OCLC format for cataloging manuscripts, another sought only searching capabilities on RLIN, a third recruited a candidate to work on the development of the MARC AMC format, and the fourth was a vacancy for the 1984 pilot MARC AMC conversion project at Cornell University. By 1986, however, 24% of all position vacancies requested knowledge of the MARC AMC format and the demand remained at 18-23% for the remainder of the decade. The number of positions requesting nonspecific archival computer or automation knowledge rose two years earlier in 1984. Many of these were, in all likelihood, positions using MARC AMC since 44% of them were at institutions using the MARC AMC format.

There has been a steady annual increase in the percentage of archival positions with an automation criterion, from 1% in 1980 to 58% in 1989. Knowledge of automation applications undoubtedly became a significant qualification for archivists and manuscript librarians seeking employment.

Survey of educational programs. The second phase of research sought to determine if the institutions offering archival education had responded to these new automation requirements by incorporating MARC AMC format instruction in their curricula. Of the 56 institutions contacted, 42 (75%) responded. Two institutions indicated that they no longer offered archival education, leaving 40 usable responses.

At the close of the decade, only 22 (55%) of the responding institutions offered MARC AMC format training as part of their curricula. Eleven of these archival education programs were based in history departments, seven were offered through library schools, and four reported being jointly based in history departments and library/information science schools.

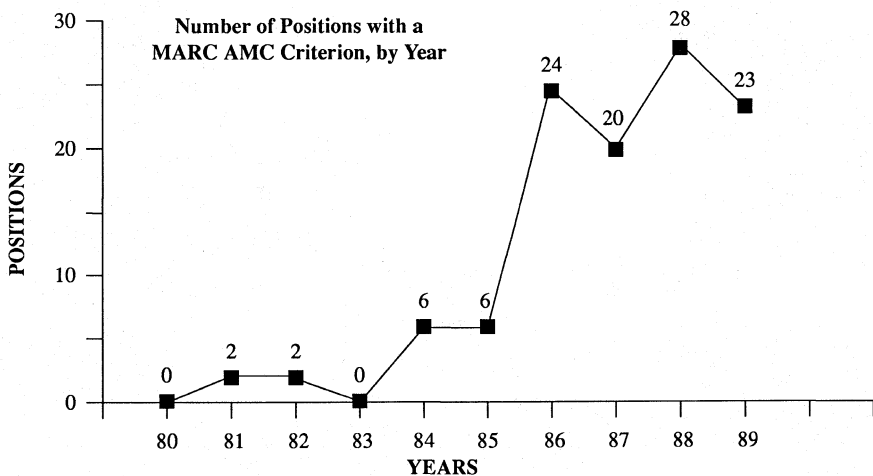


Figure 1

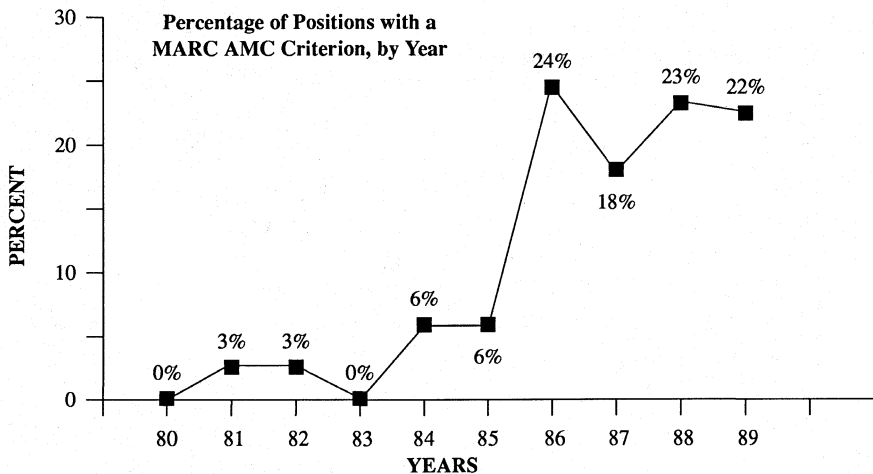


Figure 2

The survey did not attempt to evaluate the effectiveness of MARC AMC format training, but it did ask how the training was accomplished and what automated system was used, if any. One program offered lectures and readings only, five programs offered lectures, readings, and demonstrations, and sixteen programs offered lectures, readings, and hands-on training. The most widely used automated system for AMC format training was OCLC, followed by RLIN and MicroMARC:amc. Other responses included MARCON and library online catalog systems such as NOTIS. Some institutions replied that they used more than one automated system for training, usually OCLC or RLIN along with MicroMARC:amc or MARCON. MicroMARC:amc and similar microcomputer packages were not used extensively in archival education settings.

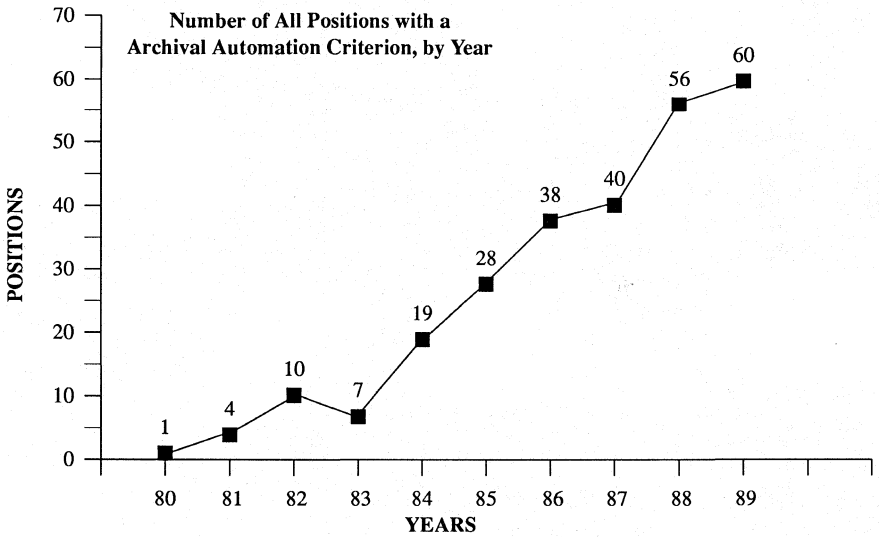


Figure 3

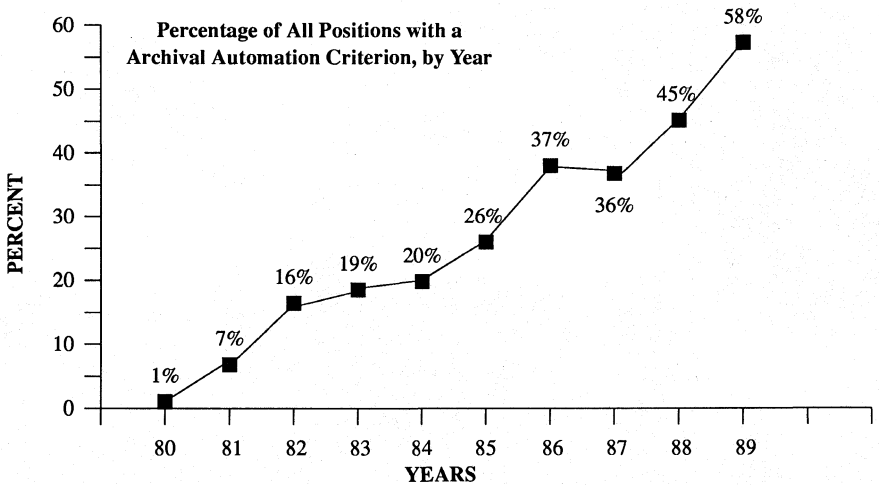


Figure 4

The survey also asked when MARC AMC format instruction was first offered. The earliest offering began in 1985, two began in 1986, six in 1987, and four each in 1988 and 1989. One program projected an offering in 1990 and four programs did not respond to this question. The incorporation of MARC AMC format instruction into archival educational curriculums parallels the increase in the number of archival positions having an AMC format criterion (see figures 1 and 2). It seems that archival education programs attempted to respond to new technical qualifications.

It should be noted, however, that at the close of the decade 45% (18) of the responding programs did not offer any type of MARC AMC format training. Ten of these were based in history departments and seven were in library/information science schools. One program not offering MARC AMC training reported that it was based in the university library. All the programs jointly based in history departments and library/information science schools reported that they offered instruction and training in the MARC AMC format.

Survey of hiring institutions. Further insights on the sources of training appeared as a result of the survey of the institutions that announced archival vacancies. For this survey, 263 questionnaires (one for each position announced) were sent to 190 institutions. One hundred thirty-nine institutions (73%) returned 179 questionnaires (68%). Twelve questionnaires were unusable, leaving a net of 167 positions (63% of the total announced). Of these, 77 were for positions asking specifically for knowledge of the MARC AMC format and 90 were for positions asking for generically described knowledge of archival computer applications. Forty of the 90 were at institutions using the MARC AMC format.

Out of the 167 positions available, 111 (66%) attracted candidates with knowledge of the MARC AMC format. Eighty (48%) of the 167 positions were filled by candidates having pre-appointment knowledge of the MARC AMC format. As illustrated in figure 5, in 1986 there was a significant increase in the number of appointees with pre-appointment knowledge of MARC AMC. For those positions specifically requesting knowledge of the MARC AMC format,

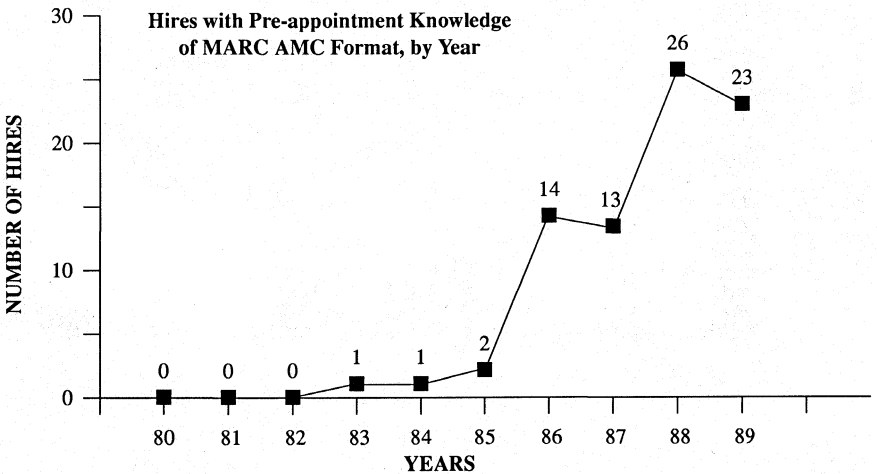


Figure 5

72% of the applicants claimed that knowledge. Employers filled 59% of the positions with candidates having pre-appointment knowledge of the AMC format. While many other factors obviously affected the actual selection of successful candidates, it appeared that applicants with pre-appointment knowledge of the AMC format were available and were selected for a majority of the positions with a specific MARC AMC criterion.

Sources of training. The sources of pre-appointment AMC format training were varied (see fig. 6). Many replies indicated more than one source of AMC format training. On-the-job training led all other sources. A significant number of respondents, however, indicated they received their training in library schools. Surprisingly, only seven of the fourteen library schools with archival education programs listed in the 1986 *SAA Education Directory* reported providing AMC training. This would imply either that some library schools not listed in the *Education Directory* are now offering archival/manuscript specializations, or that the graduates of a few schools are repeatedly among the successful applicants for these positions. The large number of on-the-job training responses implies that institutions use experienced staff to train employees rather than enrolling them in formal programs, most likely off-site.

On-the-job training was also the most frequent source of postappointment training. Workshops, however, showed strongly in this area. Indeed, if OCLC-sponsored workshops, RLIN contract workshops, SAA workshops, and workshops sponsored by regional archival organizations were categorized as one source, the workshop would have been the leading source of postappointment training.

Degrees held prior to appointment. Degrees held by successful applicants with pre-appointment knowledge of the MARC AMC format confirmed the strong showing of library schools as an institutional training source. Of the 80 hires with pre-appointment knowledge of the MARC AMC format, 54 (67%)

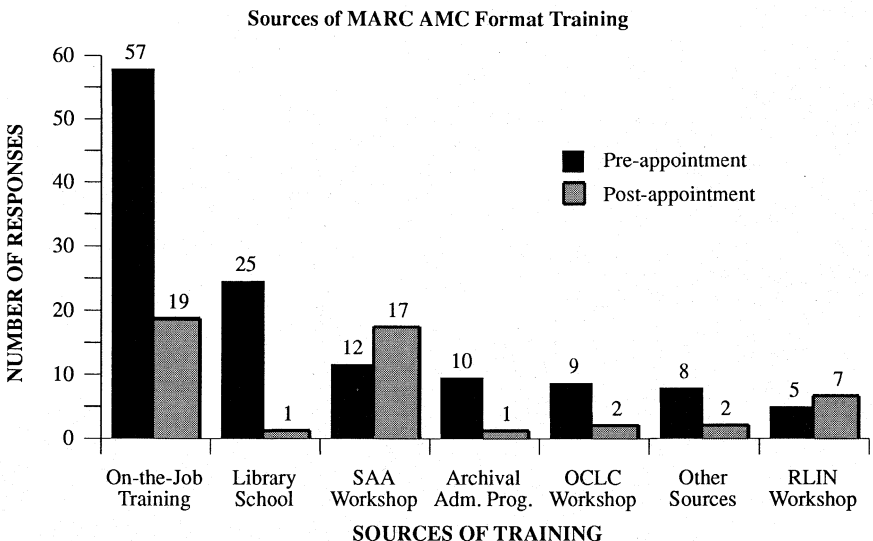


Figure 6

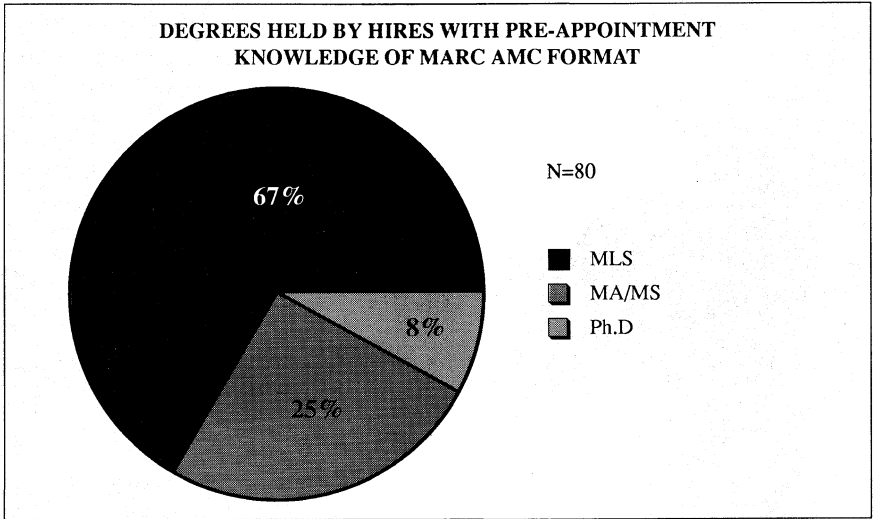


Figure 7

held the MLS degree. Twenty-four of the MLS holders had a second masters degree and two also held the Ph.D. Twenty successful candidates (25%) had an MA or MS only and six (8%) held the Ph.D only.

It is, of course, possible that some of those holding an MLS degree may have received their MARC AMC format training on-the-job. The survey instrument did not ask respondents to order their training chronologically when they indicated more than one source. Still, the source-of-training data collected reveals a predominant association of pre-appointment MARC AMC format knowledge with holders of an MLS degree.

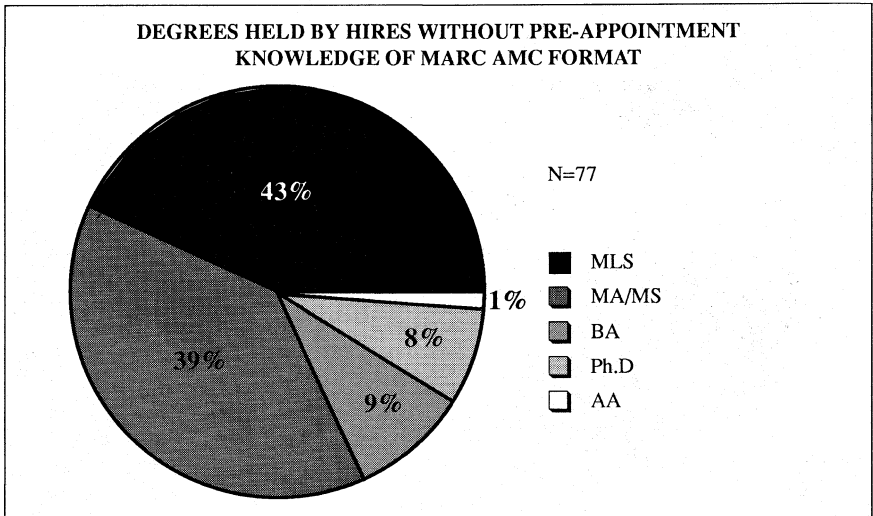


Figure 8

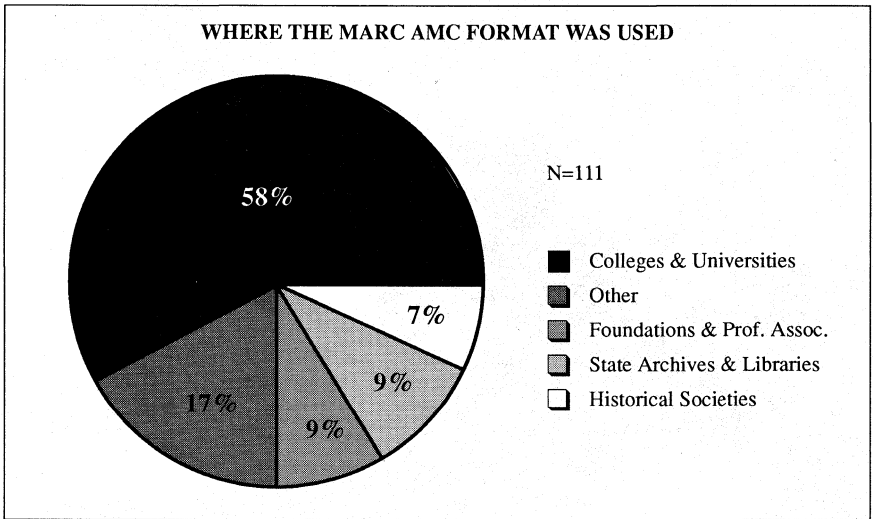


Figure 9

Types of institutions seeking candidates with knowledge of MARC AMC and/or automation in general. Colleges and universities accounted for more than half (58%) of the MARC AMC format positions. State archives and libraries tied with foundations and professional associations at 9%. Historical societies offered 7% of the MARC AMC positions and all others (federal agencies, museums, county/municipal archives, public libraries, religious denominations and private businesses) made up the remaining 17% (see fig. 9). The distribution of positions with a general automation criterion is relatively similar (see fig. 10).

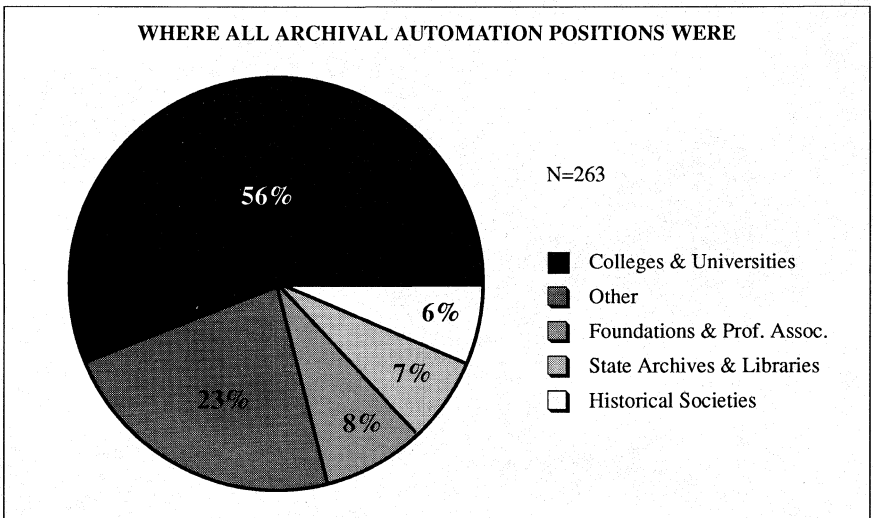


Figure 10

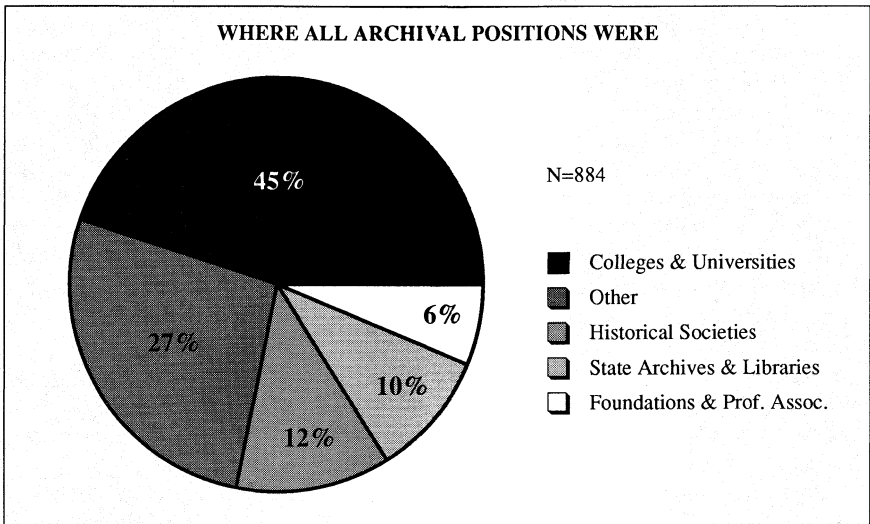


Figure 11

For comparative purposes, 45% of the 884 archival positions reviewed for this survey were at colleges and universities (see figure 11); 12% were at historical societies; 10% at state archives and libraries; 6% at foundations and professional associations; and the remaining 27% percent were at other institutions employing archivists.

Conclusions

The 1980s saw a widespread increase in the demand for knowledge of automation applications in archival settings. By the end of the decade, at least 58% of all archival positions advertised required or preferred archival automation skills, and the proportion was still increasing.

Archival training programs in academic institutions have responded to the need to train graduates in the use of the MARC AMC format. That response, however, has been limited. Only 55% of the programs offered training in the MARC AMC format, and only 40% offered hands-on training using an online cataloging tool. Respondents most frequently cited library schools as the institutional source of pre-appointment training for the MARC AMC format. On-the-job training, however, was prevalent. Workshops and on-the-job training constituted the most common sources for postappointment training. Few institutions used stand-alone software programs such as MicroMARC:amc and MARCON for instructional purposes.

A majority of the positions using the MARC AMC format were at colleges and universities. Candidates with pre-appointment knowledge of the MARC AMC format were readily available for those positions. Employers with positions having a MARC AMC format criterion chose applicants with pre-appointment knowledge of the MARC AMC format in 59% of the cases and tended to hire candidates with the MLS degree.

If we assume that one of the objectives of an archival educational program is to prepare its graduates for employment in the archival profession, it follows that incorporating MARC AMC format training in the curriculum is necessary. Not to do so may limit a graduate's competitiveness in many of the positions available. Graduates of archival administration programs that do not offer MARC AMC format training might find that completing a MARC AMC workshop would increase their competitiveness. Such additional training would be especially helpful to those lacking the MLS degree and seeking employment in a college or university setting.

If the preponderance of successful applicants have both the MLS and pre-appointment knowledge of the MARC AMC format, and if the majority of advertised archival positions are at colleges and universities, what kinds of generalizations can be made about the education of archivists? What is the appropriate degree to have? What type of institution is best suited to provide automation training? The survey cannot really answer those questions, although one could speculate.

Survey respondents identified library/information science schools as the leading institutional source of MARC AMC format training. One might conclude that library/information science schools are most likely to have the faculty and facilities for automation training. But survey results also indicate that programs based in history departments outnumber library/information science schools in offering MARC AMC format training. Archival administration programs jointly based in history departments and library/information science departments consistently offer MARC AMC format instruction and flexibility in degree choice as well. The available data does suggest that archival administration program graduates with dual MLS/MA degrees and knowledge of the MARC AMC format would be highly competitive in the archival employment market.

The survey data more clearly reveals that acceptance of the MARC AMC format by the archival community has added a technical requirement to archival employment that was not there in 1980. On-the-job training and workshops undoubtedly will continue as postemployment and postgraduate sources of MARC AMC format training. It remains an obligation of the archival education programs, however, to produce graduates able to meet the qualifications of entry-level employment. The need to meet the automation requirements of the 1980s has added a challenge to archival education for the 1990s.

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NOTES

1. Anne J. Gilliland, "The Development of Automated Archival Systems: Planning and Managing Change," *Library Trends* 36 (Winter 1988): 520-21.
2. *Ibid.*, 521.
3. Lisa B. Weber, "Educating Archivists for Automation," *Library Trends* 36 (Winter 1988): 504; and Richard H. Lytle, "An Analysis of the Work of the National Information Systems Task Force," *American Archivist* 47 (Fall 1984): 358-63.
4. Gilliland, "Archival Systems," 519-22; and Frederick L. Honhart, "MicroMARC:amc," *OCLC Micro* 3 (June 1987): 14-16.
5. Gilliland, "Archival Systems," 519-22; Honhart, "MicroMARC:amc," 14-16; "RLIN AMC at the Five-Year Mark," *The Research Libraries Group News* 18 (Winter 1989): 4-7; and H. Thomas Hickerson, "Archival Information Exchange and the Role of Bibliographic Networks," *Library Trends* 36 (Winter 1988): 559-60.
6. "RLIN AMC at the Five-Year Mark," 4-7; Hickerson, "Archival Information Exchange," 559-60; and Lisa B. Weber, "Archival Automation: The MARC AMC Format," *SAA Newsletter*, May 1987, 13.
7. Gilliland, "Archival Systems," 519-21; Weber, "Archival Automation: The MARC AMC Format," 13; and Weber, "Educating Archivists for Automation," 501.
8. "The Recruitment of Archivists," *SAA Newsletter*, November 1986, 9.
9. "Analysis of the Marketplace for Educated Archivists: State Archives as a Case Study," *American Archivist* 51 (Summer 1988): 320-25.

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