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The Research Library Director's View of Library Education

Opinions of directors of the Association of Research Libraries (ARL) member libraries concerning nineteen competencies were analyzed regarding (1) their importance now and in five years, (2) their need in different positions, (3) their possession by beginning librarians, and (4) adequacy of instruction in library schools. Respondents felt that (1) competency levels need to increase, especially in analytical, statistical, research, and computer-technology skills, (2) the preparation for traditional librarian roles is not appropriate for system/computer specialists, and (3) less than half of their entry-level librarians come to their jobs satisfactorily trained.

At the October 15-16, 1980, meeting of the Association of Research Libraries, the Task Force on Library Education, chaired by Margot B. McBurney of Queens University, Kingston, Canada, distributed accumulated data derived from questionnaires returned by 76 of 111 ARL library directors queried regarding education for research librarians. The study concerned the educational needs of entry-level librarians. It asked several questions; each concerning nineteen competency areas. For each, respondents were asked: (1) the extent to which the competencies are required now and will be required in five years, (2) which of six different position categories require the various competencies, (3) the extent to which they are now possessed at a satisfactory level by beginning librarians, (4) where (or by what process) they are being and should be acquired, and (5) the methods of staff development currently used to improve staff. Unfortunately, the data were not analyzed in depth. Frequency distribution tables were passed out. A brief summary was presented with a short discussion following. A belief that the cumulated opinions of the most important research library administrators in the United States and Canada might be useful to library educators resulted in the following analysis. We believe that an independent appraisal from outside ARL is appropriate, and that it might result in insights both supporting and conflicting with those of a committee of administrators.

The data's weaknesses need to be explicated. (1) Directors do not often choose or supervise newly hired professionals directly, so their perception of the level of the various competencies required within their own libraries may not be accurate. Some directors may have consulted with other staff administrators in order to provide the best possible responses, but others might simply have given the best answers they individually had, even as they recognized that their appraisals might be inaccurate. (2) One-third of the directors did not respond. The extent to which their responses might be reflected in the data collected is unknown. One might theorize that those who care the most about educational preparation of their professional staffs were more likely to respond. (3) The responses are opinions, and they can be expected to deviate from the actual competency needs in their libraries. Educators will also vary regarding the extent to which they believe library schools should match the education they provide to the profile of expectations of administrative practitioners.
AREAS OF COMPETENCY

Before analyzing the data, the areas of competency will be listed and discussed briefly. Nineteen were included. The report called them "skills," but as they clearly include knowledge as well, the more generic term competency is used throughout this report.

1. Research skills.
2. Knowledge of a foreign language.
3. In-depth knowledge of an academic subject.
4. Statistical skills.
5. System analysis skills.
6. Computer programming skills.
7. Online retrieval skills.
8. Knowledge of general bibliography.
12. Basic knowledge of library automation.
15. Knowledge of library issues.
16. Human relations skills.
17. Supervisory skills.
18. Managerial skills.
19. Analytical skills.

Cataloging and classification skills are not included in the list. Presumably, they are intended for inclusion under knowledge of theories of organizing information even though knowledge of theory does not assure skillful application. Also missing is knowledge of library philosophy. Other than these two omissions, the major issues of librarianship seem adequately covered.

Research skills mean more than literature search skills, but some respondents may not have viewed them thusly. Statistical, system analysis, and analytical skills are all useful in research.

McBurney observed that the nineteen competencies cover three areas. "The first seven skills listed include some of the newer or more nontraditional skills which have become significant in libraries, often considered the tools of the library specialist. . . . The last four skills are what I consider to be 'people' skills or, in the broadest sense, the managerial skills."

COMPETENCIES NEEDED BY ENTRY-LEVEL LIBRARIANS, NOW AND IN FIVE YEARS

Asked to check the needs of entry-level librarians, now and in five years, respondents had their choice of six need levels:

1 = required for many positions
2 = highly desirable for many positions
3 = the most important skill for some specialist positions
4 = needed as background for most positions
5 = not important at entry level
6 = not needed.

These levels can be thought of as being somewhat related one to another: that is, they are in order of importance, but the distance between them may not be of the same magnitude. Nonetheless, they lend themselves to the computation of means, which can then be arranged, as we have done in table 1, to indicate relative importance given to the various competencies. The means are given for importance now and in five years but arranged by "now" means. Slight differences should not be given much attention. Note that the lower the number, in table 1, the greater the importance.

Knowledge of general reference and general bibliography are considered required by most respondents. These traditional competencies are followed by several highly desirable competencies, some of which are relatively new to library education. They include human relations skills, analytical skills, library automation, and online retrieval skills.

At the bottom of the rankings are two very different competencies: computer programming skills and knowledge of library history. Their mean values suggest that they are useful as background for most positions. While that may be correct for library history, computer programming clearly falls in category three, important for some specialties.

The mean values described quite well the average importance given to twelve of the
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TABLE 1
IMPORTANCE NOW AND IN FIVE YEARS OF LIBRARY COMPETENCIES

<table>
<thead>
<tr>
<th>Required of many positions</th>
<th>Now</th>
<th>In Five Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Knowledge of general reference</td>
<td>1.47</td>
<td>1.57</td>
</tr>
<tr>
<td>2. Knowledge of general bibliography</td>
<td>1.48</td>
<td>1.70</td>
</tr>
</tbody>
</table>

Highly desirable for many positions

| 3. Human relations skills | 1.76 | 1.69 |
| 4. Analytical skills | 1.84 | 1.82 |
| 5. Knowledge of a foreign language | 1.92 | 1.89 |
| 6. Basic knowledge of library automation | 2.08 | 1.78 |
| 7. Online retrieval skills | 2.40 | 1.90 |
| 8. Knowledge of specialized reference materials | 2.46 | 2.25 |
| 9. Knowledge of theories of organizing information | 2.47 | 2.19 |

Most important skills for some specialist positions

| 10. Research skills | 2.51 | 2.17 |
| 11. In-depth knowledge of an academic subject | 2.58 | 2.27 |
| 12. Knowledge of library issues* | 2.61 | 2.47 |
| 13. Knowledge of collection development theories and practices | 2.62 | 2.41 |
| 14. Supervisory skills* | 2.83 | 2.70 |
| 15. Managerial skills | 3.19 | 2.93 |
| 16. Statistical skills* | 3.21 | 3.08 |
| 17. System analysis skills† | 3.49 | 3.05 |

Needed as background for most positions

| 18. Knowledge of library history* | 4.03 | 3.90 |
| 19. Computer programming skills† | 4.30 | 4.05 |

Importance of average competency | 2.59 | 2.41 |

*Judgments were bimodally distributed, peaking at values 2 and 5.
†Judgments were bimodally distributed, peaking at values 3 and 5.

Top thirteen competencies (all but knowledge of library issues). But the bottom six (items 14 to 19) plus library issues (item 12) had bimodal distributions that reduce the usefulness of their average values considerably.* Two related competencies were knowledge of library issues and library history. They peaked at values 2 and 5. Few respondents thought of knowledge of library issues or library history as valuable background information. Rather, they scored them as either highly desirable or not important. The dichotomy is similar but with higher peaks regarding statistical, supervisory, and managerial skills. The importance of system analysis and computer programming skills also distributed bimodally, but peaked on values 3 and 5. McBurney wondered if these contrasting judgments resulted from differences in needs between larger and smaller research libraries.3 To us, the bimodal distributions suggest a division of ARL directors into a group of traditionally oriented administrators concerned with history and humanistic scholarship and another group that is concerned with modernizing library operations.

The data regarding the four managerial skills were interpreted by McBurney as showing them to be either required or highly desirable. She also observed that one-third to one-half of the respondents considered supervisory and managerial skills not important at the entry level. This disagreement led to the low ranking of these two skills.

ARL directors apparently expect the need for competency to increase in importance in the next five years, since the average competency rose from 2.59 to 2.41. Only two declined at all. The one with the greatest drop is knowledge of general bibliography, and it declined by 0.22. By contrast, eight increased by at least that much. The increases are not equally distributed, and some competencies are thought to be increasing in importance more rapidly than others. The greatest gains are desired in the areas of (1) online retrieval skills, (2) system analysis skills, (3) research skills, (4) in-depth knowledge of an academic subject, and (5) basic knowledge of specialized reference materials.4

The data from which these bimodal distributions were observed were provided by the ARL Task Force on Library Education. We have not reproduced them here, since we view our role as evaluating the data. Those wishing to examine the data directly might contact ARL for copies.
knowledge of library automation. These observations support the evolution in library curriculum toward information science and technology, and it recommends that greater attention be given to teaching research skills. Surprisingly, however, neither analytical nor statistical skills emerged as needing much increased attention.

McBurney, by contrast, interpreted the data as calling for the greatest changes in the areas of (1) in-depth subject knowledge, (2) basic knowledge of library automation, and (3) human relations. We agree regarding the first two, but find no evidence in the data regarding human relations, which already is ranked high in importance. She did not mention online retrieval, system analysis, or research skills, which showed the greatest increases in our computations.

**Competencies Needed for Different Positions**

Administrators were asked to check off the competencies which should be taught in preparation for six different positions that are filled by entry-level librarians. The positions are (1) original cataloging, (2) general reference, (3) subject reference, (4) collection development, (5) supervision of a department library, and (6) systems/computer services. Respondents could check as many positions as they felt appropriate for a given competency. The mean number of tallies given to the average position for the average competency was 35.4. The number of tallies varied from a low of two (computer programming skills needed for positions in collection development and supervision of departmental library) to a high of seventy-two (knowledge of general reference materials needed for general reference positions).

These data serve as a rough indicator of the course work expected of entry-level librarians applying for various positions. Listed below, under each position title, are the five competencies viewed by the largest number of directors as important for that position, the number in parentheses indicating the number of directors.

**Original cataloger**
- Knowledge of general bibliography (62)
- Basic knowledge of library automation (61)

**Knowledge of theories of organizing information (59)**
- Knowledge of a foreign language (53)
- Analytical skills (47)

**General reference**
- Knowledge of general reference materials (72)
- Knowledge of general bibliography (71)
- Human relations skills (61)
- Online retrieval skills (60)
- Knowledge of theories of organizing information (59)

**Subject reference**
- Knowledge of specialized reference materials (70)
- Knowledge of general bibliography (65)
- Knowledge of general reference materials (65)
- Online retrieval skills (63)
- Research skills (60)

**Collection development**
- Knowledge of general bibliography (66)
- Knowledge of general reference materials (57)
- Knowledge of collection development theories and practices (57)
- Knowledge of specialized reference materials (55)
- Research skills (54)

**Supervisor of department library**
- Human relations skills (38)
- Supervisory skills (36)
- Knowledge of general reference materials (36)
- Managerial skills (35)
- Basic knowledge of library automation (34)

**Managerial skills (35)**
- Basic knowledge of library automation (34)

**Systems/Computer services**
- System analysis skills (53)
- Basic knowledge of library automation (52)
- Computer programming skills (49)
- Statistical skills (47)
- Analytical skills (45)

Pearson product-moment correlation coefficients were computed between each of the six categories and are presented in table 2.

Preparation expected for the first four positions is very similar. Subject reference librarians seem to require the greatest preparation, followed closely by general reference librarians. The competencies expected of de-
departmental library supervisors ranked in much the same order, but at a much lower level of expectation.

Preparation for systems/computer services varied from the common pattern, as might be expected. The low and negative values relating systems/computer service expectations with the other position categories suggest that preparation for traditional library positions is not appropriate for this one. The competencies emphasized for this job are only marginally important in the others, and competencies expected for the traditional positions are thought to be of low importance in this one. Possibly the respondents were not adequately aware of the informational needs of people in this job category: that is, their need for knowledge of bibliographical and reference materials might be greater than the directors realize. But if the directors are correct, library educators should give serious consideration to structuring a degree program specifically for systems/computer service specialists.

As a check on the directors' judgments, we queried the heads of systems/computer services in ARL libraries. The same set of competencies were listed in the same order, and the respondents were asked to check as many as they felt should be taught to librarians for entry-level positions in systems/computer services. Of 111 questionnaires distributed, 74 were returned and 70 were usable. Whereas the average director checked 7.1 competencies, the average system/computer head checked 9.7 competencies. If the system/computer heads are the more correct group, as might be assumed from their more intimate involvement in this type of work, the data show that the directors underestimated the number of competency areas needed by this category of beginners. But the ranking of competencies by importance, as measured by the number of checks received, is very similar for the two groups, the correlation coefficient for the pairs of data being 0.95.

While the disagreement is fairly slight, compared to the systems/computer heads, the directors overstated the need for programming skills and knowledge of library history and understated the need among systems/computer specialists for human relations and analytical skills.

**Skills Possessed by Entry-Level Librarians**

Question four asked the survey respondents to rate entry-level librarians in four categories:

1. Most possess the skill to a satisfactory degree
2. About one-half possess the skill to a satisfactory degree
3. Few possess the skill to a satisfactory degree
4. Almost none possess the skill to a satisfactory degree

Considering these four categories as intervals, using the 1 to 4 ratings above, a mean score was calculated for each competency. Table 3 ranks possession of the competencies from most to least satisfactory among entry-level librarians.

The directors rated only two competencies, knowledge of general reference materials and general bibliography, as possessed at a satisfactory level. All the rest were held satisfactorily by no more than half of the current entry-level librarians. Starting with knowledge of specialized reference materials, ARL directors felt that nine competencies were satisfactorily possessed by only about one-half of beginning librarians. Beginning with twelfth-ranked collection development skills, the directors indicated only a few entry-level librarians possessed eight
TABLE 3

COMPETENCY POSSESSION BY ENTRY-LEVEL LIBRARIANS

<table>
<thead>
<tr>
<th>Competency</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most possess skill to a satisfactory degree (1.00-1.49)</td>
<td></td>
</tr>
<tr>
<td>1. General reference materials</td>
<td>1.25</td>
</tr>
<tr>
<td>2. General bibliography</td>
<td>1.29</td>
</tr>
<tr>
<td>About 1/2 possess skill to a satisfactory degree (1.50-2.49)</td>
<td></td>
</tr>
<tr>
<td>3. Specialized reference materials</td>
<td>1.91</td>
</tr>
<tr>
<td>4. Foreign language</td>
<td>1.99</td>
</tr>
<tr>
<td>5. Library issues</td>
<td>2.04</td>
</tr>
<tr>
<td>6. Library history</td>
<td>2.07</td>
</tr>
<tr>
<td>7. Library automation</td>
<td>2.12</td>
</tr>
<tr>
<td>8. Theories of organizing information</td>
<td>2.14</td>
</tr>
<tr>
<td>9. Subject knowledge</td>
<td>2.14</td>
</tr>
<tr>
<td>10. Human relations skills</td>
<td>2.39</td>
</tr>
<tr>
<td>11. Online retrieval skills</td>
<td>2.40</td>
</tr>
<tr>
<td>Few possess skill to a satisfactory degree (2.50-3.49)</td>
<td></td>
</tr>
<tr>
<td>12. Collection development</td>
<td>2.59</td>
</tr>
<tr>
<td>13. Research skills</td>
<td>2.62</td>
</tr>
<tr>
<td>14. Analytical skills</td>
<td>2.63</td>
</tr>
<tr>
<td>15. Supervisory skills</td>
<td>2.91</td>
</tr>
<tr>
<td>16. Managerial skills</td>
<td>3.05</td>
</tr>
<tr>
<td>17. Statistical skills</td>
<td>3.34</td>
</tr>
<tr>
<td>18. System analysis skills</td>
<td>3.34</td>
</tr>
<tr>
<td>19. Computer programming skills</td>
<td>3.49</td>
</tr>
</tbody>
</table>

competencies at a satisfactory level; and forty-eight, thirty-four, and thirty-eight respondents said that almost none satisfactorily possessed the last three on the list (statistical, system analysis, and computer programming skills).

We question whether the administrators responded accurately to this survey question. For example, consider whether all new librarians need to know computer programming, a very specialized skill. It seems more reasonable to expect those few librarians who are hired to program will have a knowledge of computer programming. Suppose a library has 4 positions requiring programming skills among a professional staff of 100. Even that number seems quite high. If all 4 or even 3 had been properly screened when they were hired to assure they could program, the director should have reported that most possess this skill to a satisfactory degree. But only six directors said so, suggesting that they are either hiring incompetent programmers or, more likely, they were reporting the extent to which their professional staff in general can program without regard to need.

We note that competencies traditionally part of library school curricula tend to rank high whereas recent introductions, such as online retrieval, human relations, and statistical skills, are further down. Does this mean that library schools are considered to have added important new components but are not teaching them very well? We do not know.

McBurney's analysis of satisfactory skill attainment agrees with ours, but she sheds no light on her committee's interpretation of what satisfactory attainment means.

WHERE SKILLS ARE ACQUIRED AND WHERE DIRECTORS THINK THEY SHOULD BE ACQUIRED

Asked to check where the competencies of entry-level librarians are acquired and where they thought they should be acquired, respondents had their choice of ten categories:

1. In library school
2. In another academic program before hiring
3. In previous library work experience
4. In previous nonlibrary work experience
5. In formal course work, after hiring
6. On the job
7. At special institutes, conferences, etc., after hiring
8. Through professional activities (e.g., committees)
9. In an internship program
10. Other (e.g., independent study)

Respondents could check as many of the above categories for each competency as they felt applied. The maximum number of checks for any category was seventy-six. In this section we have limited our analysis of the results to category 1, in library school. Results of the analysis are listed in table 4. The data are ranked according to the difference between the number of directors who thought the skills should be acquired in library school and those who thought the skills are acquired in library school.

In every case, more ARL directors felt the competency should be taught in library school than is now occurring, but the unmet differential varies considerably. A small unmet differential is interpreted as meaning that library schools are meeting the expectation of administrators. Most of them are satisfied with library school instruction in library history, specialized reference materials, general bibliography, and general reference materials. They do not expect library schools to provide instruction in foreign languages or academic subjects.

On the other hand, library schools are disappointing large numbers, more than half, of the directors with inadequate instruction in analytical, human relations, statistical, research, online retrieval, managerial, system analysis, and supervisory skills. These are the areas in which they apparently feel library schools need to improve the most. Note how many of these could contribute to improving the evaluation process: analytical, statistical, research, managerial, and system analysis skills.

McBurney came to a similar conclusion. Further, she suggested that library schools might emphasize academic-subject and foreign-language competency in their admissions requirement. Perhaps joint master's degree programs might also help.

Administrators did not agree that managerial and supervisory skills should be learned in library school, but they agreed those skills are not being taught there now. About as many directors felt these competencies should be learned on the job as felt they should be learned in library school. The ma-

<table>
<thead>
<tr>
<th>TABLE 4</th>
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<tbody>
<tr>
<td><strong>SKILL ACQUISITION IN LIBRARY SCHOOL, RANKED BY UNMET DIFFERENTIAL</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Skills</th>
<th>Number of Directors Believing</th>
<th>Number of Directors Believing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Skills Are Acquired in Library School</td>
<td>Skills Should Be Acquired in Library School</td>
</tr>
<tr>
<td>1. Analytical skills</td>
<td>8</td>
<td>58</td>
</tr>
<tr>
<td>2. Human relations skills</td>
<td>4</td>
<td>49</td>
</tr>
<tr>
<td>3. Statistical skills</td>
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<td>50</td>
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<tr>
<td>4. Research skills</td>
<td>21</td>
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<td>5. Online retrieval skills</td>
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<td>69</td>
</tr>
<tr>
<td>6. Managerial skills</td>
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<td>43</td>
</tr>
<tr>
<td>7. System analysis skills</td>
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<td>50</td>
</tr>
<tr>
<td>8. Supervisory skills</td>
<td>4</td>
<td>41</td>
</tr>
<tr>
<td>9. Knowledge of collection development</td>
<td>45</td>
<td>73</td>
</tr>
<tr>
<td>10. Knowledge of library issues</td>
<td>47</td>
<td>72</td>
</tr>
<tr>
<td>11. Computer programming skills</td>
<td>9</td>
<td>26</td>
</tr>
<tr>
<td>12. Knowledge of theories of organizing information</td>
<td>55</td>
<td>72</td>
</tr>
<tr>
<td>13. Basic knowledge of library automation</td>
<td>59</td>
<td>75</td>
</tr>
<tr>
<td>14. Knowledge of library history</td>
<td>61</td>
<td>72</td>
</tr>
<tr>
<td>15. Knowledge of specialized reference materials</td>
<td>63</td>
<td>72</td>
</tr>
<tr>
<td>16. Knowledge of general bibliography</td>
<td>67</td>
<td>75</td>
</tr>
<tr>
<td>17. Knowledge of general reference materials</td>
<td>71</td>
<td>75</td>
</tr>
<tr>
<td>18. Knowledge of a foreign language</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>19. Knowledge of an academic subject</td>
<td>1</td>
<td>2</td>
</tr>
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</table>
The majority felt they are learned on the job or at institutions and conferences after hiring.

The questions regarding where instruction is and should take place are of a different character than the previous ones. Whereas previous questions focused on the requirements of beginning librarian roles, these apply also to the needs of later role assignments. Educators who believe library schools should prepare librarians for middle-management assignments as well as the first month on the job may pay special attention to this section.

**Summary and Conclusion**

A library school must make choices regarding what to emphasize. The short time a school has with its students is too brief to teach everything its faculty might think important. One way to test whether the schools are making good decisions, from the perspective of library directors, is to compute a correlation coefficient between the competency importance and possession scores. When this was done, the correlation was .689, indicating that newly hired professionals generally possess skills and knowledge that the directors believe to be important to their roles. A few discrepancies showed up. Areas of greatest weakness, in order of severity, were: (1) analytical skills and (2) human relations skills. Improving instruction in those areas may call for reductions in others. Those in which competency possession was greater than required are prime candidates for reduction and were: (1) library history, (2) computer programming skills, (3) library issues, and (4) specialized reference materials.

No doubt many will disagree with one or more of these conclusions. For example, computer programming skills are ranked last in both importance and possession. Should instruction really be reduced? The respondent directors may have overestimated how much is occurring now. Moreover, they reported it as of the lowest priority for most position categories but third highest for the systems/computer service specialist. A little programming knowledge seems very satisfactory for all other categories, and the systems/computer heads rank programming instruction less important for these specialists than the directors.

This aspect of the analysis is really more fruitful regarding what aspects should be increased than which might be reduced. The data propose increased instruction now in analytical and human relation skills and during the next five years, in online retrieval skills, system analysis skills, and library automation. In only one area, knowledge of general bibliography, was a declining need suggested. Are library schools to extend the length of their programs? If so, are research libraries prepared to increase salaries to justify the increased investment? Consider also that greater academic subject knowledge is expected in the future. Does that mean a double master’s degree, one in library science and one in an academic subject? There is a slow movement in that direction now. Should library schools also encourage the development of more joint master’s degree programs? Increases in the quantity of education probably will occur but better entry-level salaries will be required to sustain them.

**References**

2. Ibid., p.28–29.
3. Ibid., p.29.
4. Ibid.
5. Ibid.
Eighteenth-Century Short-Title Catalogue: A Medical Model of the Costs of Participation by Specialized Collections

The success of the Eighteenth-Century Short-Title Catalogue/North America depends upon the voluntary contribution of bibliographical records by libraries. Smaller specialized collections often hesitate to participate because they suppose the costs will be high and because they do not realize the importance of their contributions. This paper uses the medical school library rare-book collection as a model to familiarize specialized collections with the ESTC/NA project and the value of their contributions to it. Initial fears are delineated and the management data needed to contradict these fears are provided so that smaller specialized collections can make the decision to participate.

INTRODUCTION

The Eighteenth-Century Short-Title Catalogue (ESTC) is an international bibliographical project to identify and locate all titles published in the British Isles and the colonies and all titles published in the English language anywhere in the world during the eighteenth century. The initial database, estimated to contain 150,000 items, is at the British Library. The National Endowment for the Humanities and the Andrew W. Mellon Foundation are funding the North American part of this project (ESTC/NA) at Louisiana State University. This unit, founded in 1979 and directed by Henry L. Snyder, is matching records, recording holdings, and entering new cataloging for titles owned by North American libraries. More than 300 such libraries were participating in this project as of December 1981. In July 1981, ESTC/NA reported that it had processed 333,700 records and was processing 3,000 submitted titles per week. This rate is expected to increase after the initiation of searching of the British Library tapes deposited in the Research Libraries Information Network (RLIN) as the matching procedure.3

The original ESTC project was initiated in 1976 at a conference sponsored by the British Library and the National Endowment for the Humanities. The goal of the project was the development of a new tool for historical research. The plan was for a catalog to "... fulfill one important function of historical bibliography—the nourishment of historical disciplines."4 The ESTC is now well under way, carrying on and extending the tradition of Wing,5 and Pollard and Redgrave.6

The roles of those older catalogs were to identify titles and to locate them in a few libraries in a union list. The ESTC is expanding the location function by the inclusion of a far greater number of recording libraries. Another expansion is the use of a complete descriptive record rather than a short title in
the identification—making this in reality a long-title catalog. The ESTC should therefore be of great value to future historians as a bibliographically organized union catalog.

Although this mass collocative function is indeed valuable, emphasis should be placed on Alston and Jannetta's estimate that "a very high proportion of the items which ESTC will record will be represented by fewer than five copies." Even more important, the ESTC is expected to record a lot of previously unknown material, and the North American contribution of such material is proving to be greater than expected. In addition, access to the ESTC records will be easier than access to earlier short-title catalogs because the British Library is making the record of its holdings available on computer output microfiche (COM). It is projected that a COM file of British Library holdings will be available in 1983, with worldwide holdings following in 1986 or 1987. The British Library is depositing its magnetic tape in RLIN; North American locations will be available there.

Thus, the catalog will be a great boon to scholars, uncovering new resources, locating them in a researcher's own country or in a nearby state, or even a local library. In times of tight travel budgets, the location of a copy nearby becomes an invaluable service. However, full value of this reference tool is dependent upon full participation by libraries everywhere. Our use of the medical school library rare-book collection as a model for specialized collection contributions began with an examination of the list of participants in those earlier short-title catalogs, Wing and the STC. We found that only a few medical libraries were named as individual participants—the Cushing and Fulton libraries at Yale, the New York Academy of Medicine, the UCLA Biomedical Library—although others doubtlessly did contribute, as did our sample library, the Owen H. Wangensteen Historical Library of Biology and Medicine, under the name of their university libraries. It is important to scholarship in medical history that more medical libraries participate in the ESTC. While we are pleased to report that the National Library of Medicine, the largest medical rare-book collection in North America, is submitting an estimated 7,000 titles to the ESTC, we feel that to serve scholarship well, every medical rare-book collection should submit records.

**Medical School Library Participants in ESTC**

After the Wangensteen Library decided to participate, we became interested in how many other medical libraries were doing so. To identify other participating medical school collections, a brief questionnaire was sent in November 1981 to 119 medical school libraries identified by matching entries in the Association of American Medical Colleges' *Medical School Admission Requirements 1982-83,* and the *Directory of Health Sciences Libraries in the United States, 1979.* One hundred nine, or 92 percent, of the questionnaires were returned. Of these 109 responses, 83 libraries (or 76 percent) replied that they had a medical rare-book collection. Of the 83 libraries possessing such a collection, a surprisingly small number, 37 (or only 45 percent), are currently planning to submit records to ESTC.

The range of estimates of records to be submitted by these 37 libraries is from 1 to 7,000. Figure 1 shows estimations of how many titles they will be submitting. Of the 37 participants, 5 were unable to provide any estimate of how many records they would be submitting. Of the 32 participants who knew exactly, or were able to estimate their contribution, 50 percent were submitting 150 or fewer records. Ninety percent of the libraries (29) estimated that they were submitting fewer than 1,000 records. As you can see, only three libraries are submitting more than 1,000 records. Please recognize that the small submissions represent contributions equally valuable as those of 1,000 because of the possibility of uncovering a previously unrecorded title, or one previously unrecorded in North America. The estimate of "available in fewer than five copies" by Alston and Jannetta should definitely be kept in mind.

**Medical School Library Nonparticipants in ESTC**

Libraries reporting nonparticipation in ESTC were asked to state a reason. They were asked to check as many conditions that applied to them on a list of four reasons, and
were given space under “other” to specify alternative reasons.

Of the 46 libraries electing not to participate, an astonishing 46 percent checked “haven’t heard of it” as a reason for nonparticipation. This occurred despite the appearance since 1976 of a book and of more than 20 newsnotes or articles in library journals describing the ESTC project.

“Other” was checked by 38 percent of the respondents and most of the specific reasons revealed a basic misunderstanding of the purpose of the ESTC or its collecting activities. For example, two libraries reported that they were not asked to participate in ESTC, even though invitations are not required and all libraries may participate; indeed, all are encouraged to do so. More disturbing, 70 percent of those checking “other” (or 25 percent of the total of nonparticipants) indicated in one way or another that their reasons for nonparticipation were that they had “too few books.” There is no such thing as a contribution too small for this bibliographic project.

We wished to demonstrate that these factors were not as great as might be anticipated and thereby encourage more medical librarians to submit records. To do this, we recorded the amounts of time used for the different steps of the project as carried out at the Wangensteen Library.

Records may be submitted to ESTC/NA in one of four ways; the options for submissions are:

1. A photoreproduction of the title, supplemented with some collation information.
2. An ESTC record card (BIBSLIP) for each title, following the guidelines given by the British Library staff.
3. Reproduction of regular library cataloging for eighteenth-century items, providing the cataloging contains all the requisite data. NUC symbol on all cards.
4. A printed catalog of the collection, providing it contains the requisite data.12

These submissions are then recorded at ESTC/NA as verified or unverified. In order to be verified, the library must supply ”requisite data,” which is a complete transcription of title, edition statement and imprint, complete pagination, and size or format; all these must match file records, currently those prepared by the British Library.13

At the Wangensteen Library, our actual procedure was to identify ESTC items in the chronological card file, which is composed of
copies of main-entry cards. The cards were pulled, jacketed for future identification, photocopied five to a page, and refiled. We then cut apart the photocopies of these cards and put them in call-number order. We used these slips to pull books from the shelves. The title page was photocopied, and a main-entry catalog card attached to it. We were then able to reshelve the books and mail in the records. A combination of options one and three were used for several reasons. Option one is rated by ESTC as easiest to match for a verified record. We added option three because we had on hand the photocopy of the cards used to pull the books, and those cards contained the required collation. The photocopied title page, together with the photocopied cataloging, provided enough evidence for a good match, and would probably enable many of our records to be entered as verified, thus reducing the number of questions that might come back to us from ESTC.

The procedure took a total of 53 hours to complete 1,285 titles. Table 1 shows the time required for various steps of the project. This averages out to 2½ minutes per title. At the University of Minnesota professional librarian salary rate of $0.92 per hour, it theoretically cost $525.76 for the project, or $.41 per title. Obviously there are portions of the project that can be done by paraprofessional and/or student help, and the costs could thereby be reduced considerably. Photocopying costs were $128.50 for title pages, and approximately one-fifth that (or $25.70) for photocopying the chronological cards, for a total of $154.20. The project’s actual cost was substantially reduced because we used volunteer help. Unskilled volunteer labor (spouses and children) worked out well in the Wangensteen Library ESTC project also. We can recommend the submitting methods we used as a volunteer project, or perhaps a friends-group or library-school-student project, because professional help is required only for step one, the identification of titles for submission. The methods used were fast and inexpensive. It would cost a small library submitting 100 titles only 5 hours staff time and a mere $12.00 in photocopy costs.

According to an informal report, another contributor, John C. Attig at Pennsylvania State University, recorded the amount of time it took student and professional staff to use ESTC options one and two. Those times required are shown in table 2. At 3.6 minutes per title for option one, and 5.1 minutes per title for option two, both of these methods took longer to perform than the 2.5 minutes per title that the Wangensteen Library took. In addition, both options one and two require more professional time than the method we used. However, neither option took a prohibitive amount of time.

It should be noted, of course, that there are other variables to consider that could either increase or decrease costs. For example, one variable that would increase costs (because it would increase professional staff time used), would be the identification of titles to submit from a shelflist instead of from the relatively smaller chronological-by-date-of-publication file. On the other hand, using option three, and submitting only a photocopy of the complete cataloging on the card in our chronological file, would have decreased both our staff time and our photocopying costs considerably.

CONCLUSION

We began our paper by describing the Eighteenth-Century Short-Title Catalogue project and underlining the importance of participation by as many libraries as possi-

<table>
<thead>
<tr>
<th>Step</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning, reading directions</td>
<td>50 minutes</td>
</tr>
<tr>
<td>Identify &amp; pull cards from chronological file</td>
<td>4 hours, 45 minutes</td>
</tr>
<tr>
<td>Photocopy cards</td>
<td>3 hours</td>
</tr>
<tr>
<td>Jacket &amp; refile cards</td>
<td>4 hours, 25 minutes</td>
</tr>
<tr>
<td>Cut apart photocopy &amp; put in Dewey order</td>
<td>10 hours, 5 minutes</td>
</tr>
<tr>
<td>Pull books from stacks</td>
<td>9 hours</td>
</tr>
<tr>
<td>Photocopy &amp; staple</td>
<td>15 hours, 45 minutes</td>
</tr>
<tr>
<td>Reshelve books</td>
<td>5 hours</td>
</tr>
</tbody>
</table>

TABLE 1
Wangensteen ESTC Project—Actual Time Spent

According to an informal report, another contributor, John C. Attig at Pennsylvania State University, recorded the amount of time it took student and professional staff to use ESTC options one and two. Those times required are shown in table 2. At 3.6 minutes per title for option one, and 5.1 minutes per title for option two, both of these methods took longer to perform than the 2.5 minutes per title that the Wangensteen Library took. In addition, both options one and two require more professional time than the method we used. However, neither option took a prohibitive amount of time.

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**TABLE 2**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulling books from shelves (student worker)</td>
<td>1.2 minutes per volume (ca. 2 titles per vol.)</td>
</tr>
<tr>
<td>Photocopying title page (student worker)</td>
<td>1 minute per title</td>
</tr>
<tr>
<td>Adding collation &amp; notes to title (professional cataloger)</td>
<td>2 minutes per title</td>
</tr>
<tr>
<td>Completing a BIBSLIP (professional cataloger)</td>
<td>4.5 minutes per title</td>
</tr>
</tbody>
</table>

ESTC method 1: requires steps 1-3
ESTC method 2: requires steps 1 and 4

3.6 minutes per title
5.1 minutes per title


We believe we have also demonstrated that the expense of a specialized rare-book collection’s participation in the ESTC is far less than anticipated and should be no bar to participation for any library. As for those critical contributions by the small libraries—contributions that are truly needed—the costs are insignificant, while the additions to the bibliographic base are not.

We hope that removing these apprehensions will encourage more specialized collections to participate. The value of the ESTC to future scholars is, of course, unable to be measured in any quantitative, objective way. Yet we are certain that its value subjectively and qualitatively will be immeasurable.

**REFERENCES**

1. Judith Singleton to the authors, Jan. 20, 1982.
Requirements and Benefits for Academic Librarians: 1959–1979

This study examines job advertisements for academic librarians published in three journals between 1959 and 1979. It attempts to discover basic changes in the requirements demanded of, and benefits offered to, job candidates over this time period. Announcements were analyzed in terms of their requirements for education, experience, qualifications, and responsibilities and their offers of salary and faculty status. The study concludes that, although academic librarians were expected to bring more to their jobs in 1979 than in 1959, salaries in real dollars showed no appreciable increase, and faculty status was not explicitly offered in most cases.

Professional literature of the past twenty years has outlined certain trends that have had a good deal of impact on the academic librarian’s work environment. The financial climate changed markedly with the ample budgets of the fifties and sixties shrinking to austerity levels by the seventies. A more democratic concept of education produced a broader-based student body; a larger proportion of college students was drawn from the adult working population. Trends in curriculum emphasized individual research skills at both the undergraduate and graduate levels. Modern technology invaded the campuses; computers assumed more and more of the routine chores formerly performed by humans. Published material not only increased exponentially, but also became international in scope and variable in form.

All of these changes had implications for the academic librarian. As a result of budgetary problems, fewer professionals were employed, and paraprofessionals began to perform the libraries’ more routine duties. The use of paraprofessionals resulted in a recognition that the professional’s contribution was intellectual rather than clerical in nature. The changing student body and the research-oriented curriculum called for librarians to develop bibliographic instruction programs and to perform more in-depth reference work. The international growth of publication meant that librarians needed foreign-language proficiency. The technology explosion gave librarians new opportunities for service, but also required that they master unfamiliar skills like online searching and microforms management. Since collection development took place under budgetary constraints in order to support a research-oriented curriculum, librarians were often expected to have a strong subject background and to initiate and maintain close ties with faculty who could assist them in their selections from an ever-increasing amount of material. Formerly, librarians had been expected to collect, preserve, and organize collections of books. In the last few years, however, they have come to assume additional roles: communicator, information specialist, manager, and scholar.

If the perceptions in the literature are accurate, more is being demanded now of academic librarians than when libraries were simply depositories of books. If more is required, it follows that more should be offered in compensation. The purpose of this study is to ascertain whether empirical evidence supports the belief that academic librarianship has changed in terms of the requirements de-
manded of, and the benefits offered to, its practitioners, and if it has, to attempt to pinpoint some of the changes.

Specifically, the study examines three hypotheses:

1. Librarians are expected to bring more to their jobs in education, experience, and qualifications.
2. The nature of the librarian's work has expanded in scope and complexity.
3. Librarians are being offered more in return for meeting these higher standards.

**Method**

A study of job advertisements was initiated with the goal of ascertaining whether these notices supported the three hypotheses listed above.

Five years, 1959, 1964, 1969, 1974, and 1979, were chosen to represent the twenty-year span from 1959 to 1979. The years chosen were evenly spaced to reflect fluctuations in the job market and to indicate when certain changes began to appear. Three journals were used as sources of job announcements: Library Journal, ALA Bulletin/American Libraries, and College and Research Libraries/College and Research Libraries News. All postings for academic librarians from the journals and years listed were extracted and analyzed. Advertisements were used only once even if they appeared in more than one publication. A notice was selected for inclusion only if the job title or responsibilities implied that the position advertised was not primarily administrative or technical in nature. Notices selected were analyzed in terms of job type, education, qualifications, responsibilities, status, and salary.

The type of job could sometimes be discerned by its title (catalog librarian, for example), but when the title was vague, a type was assigned by examining the responsibilities listed in the advertisement. The education component was broken down into two groups: the type of library degree specified and the type of subject master's degree required. Those persons seeking professional library employment were assumed to be college graduates. Qualifications and responsibilities were noted as they appeared, and were included regardless of whether they were listed as required, desired, or preferred. Status was noted as faculty, civil service, or a professional/academic classification between the two. The last component noted was the salary or range of salaries for each position.

After all of the data was accumulated, it was broken down into variables and coded so that it could be punched onto Hollerith cards. Nine job types emerged as the data were analyzed. When the word librarian was used without specified job responsibilities, or when widely diverging responsibilities such as cataloging and reference were expected of one person, general librarian was used as the job type. A subject specialist was defined as a librarian with a strong subject background whose responsibilities cut across the traditional public and technical services boundary. Branch head was included as a job type because many positions combined administrative and library duties and thus fit into the scope of this study.

Library education was grouped into four categories: unspecified library coursework, a bachelor's degree in library science, a general MLS, or an ALA-accredited master's. The next variable, the subject master's degree, was broken into two categories depending on whether or not the announcement specified a subject. The same principle was applied to library experience. A distinction in coding was made on the basis of whether the advertisement asked for general or specialized library experience. In all cases, 0 was the code used to indicate that a variable was not mentioned in the notice.

The next eight variables dealt with the qualifications that candidates needed to bring to the job. Some of these variables are self-explanatory, but others will need definition. Computer expertise encompassed training or experience with computers, bibliographic utilities, or databases for information retrieval. Subject background or training included an undergraduate degree or graduate work short of the master's in a particular subject. A-V knowledge was a wide-ranging category, including knowledge, training, or experience with audiovisual machinery, media production, or the bibliographic control of multimedia materials. Specific library expertise meant specialized knowledge of library practices and was expressed with phrases like "knowledge of AACR" or "experience with LCSH." Com-
municative ability concerned skill in relating to faculty, students, and co-workers. Administrative or supervisory ability had to do with experience or training in personnel, budgeting, planning, or business management. Each of these variables was coded with a 0 if the qualification was not desired, and a 1 if it was.

The next variable, sex, indicated whether the employer specified a preference for a man or a woman for the job. Zero indicated no preference; 1 was the code for a man, and 2 for a woman.

Successive variables were concerned with job responsibilities. Some definition will again be necessary. Processing and acquisitions were distinguished by the fact that the former had to do with the handling of books after their arrival at the library, and the latter was concerned with preorder searching, verification, and order-file maintenance. Collection development entailed choosing individual titles, and more importantly, developing a focused, well-directed plan for the growth of the collection as a whole. Bibliographic instruction included formal courses, orientation activities, and production of guides and bibliographies. A-V work meant handling audiovisual machines as well as multimedia products. Computer work included design or use of automated library operation systems, information-retrieval systems, or bibliographic utilities. Administrative duties encompassed planning, budgeting, and management. Personnel work, defined as training and supervision of employees, was separated from administrative duties. Variables such as work in a specialized subject or work with specialized materials were indicated in addition to other duties. Phrases like "reference with government documents" or "cataloging musical scores" illustrate why these distinctions became necessary.

The final variables had to do with benefits. Status was divided into civil service, professional/academic, and faculty categories. Salary was coded as it appeared in the job advertisement. If a range of salaries was specified, only the minimum was coded, since it was the only one that could be determined with any certainty. A standardized salary was calculated by using a computer program to divide each salary by the consumer price index for the year in which it was offered. The result was that the salaries were adjusted to account for inflation and were expressed in 1967 dollars, giving a basis for comparison among the years in the study. From this point on, when the word salary is used, it will refer to the standardized salary. Variables were deliberately kept general, since fragmenting them would have resulted in too few cases per category for findings to be meaningful.

Appropriate statistical tests using SPSS (Statistical Package for the Social Sciences) were chosen and applied to the data in an attempt to verify the hypotheses. After the tests had been performed on individual variables, several variables were combined for testing by summing their scores. For example, a new variable, E score, was formed by adding the scores for library education and subject master's, to obtain a total score for education. Qualification and responsibility scores were treated in the same way to obtain variables Q score and R score. Statistical tests were then run on these combined variables, and all findings were analyzed.

**FINDINGS**

A CROSSTABS statistical program was run to determine the number and types of positions advertised each year. The results of this test appear in table 1. One thousand two hundred fifty-four academic library positions were announced in the five years studied. The highest proportion of positions, 28.7 percent, was advertised in 1969. The proportion of advertisements seeking general librarians came down through the years from a high of 20.5 percent in 1959, to a low of 10.0 percent in 1979. The demand for catalogers was the highest in total; 28.9 percent of all jobs advertised were for catalogers. (Cataloging positions accounted for the highest percentages of jobs advertised in 1959, 1964, and 1969, and the second-highest percentages in 1974 and 1979.) The demand for catalogers was the highest in total; 28.9 percent of all jobs advertised were for catalogers. (Cataloging positions accounted for the highest percentages of jobs advertised in 1959, 1964, and 1969, and the second-highest percentages in 1974 and 1979.) The demand for technical-services librarians remained fairly steady throughout the twenty-year study, but the numbers of circulation librarians needed, never a very high percentage, decreased during the period. This decline was to be expected since circulation is one function that has largely been given over to para-professionals. Demand for reference librarians was steady until 1979, then it took a jump
TABLE 1

<table>
<thead>
<tr>
<th>TYPES OF POSITIONS BY YEAR</th>
<th>1959</th>
<th>1964</th>
<th>1969</th>
<th>1974</th>
<th>1979</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>General librarian</td>
<td>38</td>
<td>46</td>
<td>39</td>
<td>29</td>
<td>25</td>
<td>177</td>
</tr>
<tr>
<td></td>
<td>20.5%</td>
<td>17.3%</td>
<td>10.8%</td>
<td>15.0%</td>
<td>10.0%</td>
<td>14.1%</td>
</tr>
<tr>
<td>Cataloger</td>
<td>58</td>
<td>88</td>
<td>112</td>
<td>43</td>
<td>61</td>
<td>362</td>
</tr>
<tr>
<td></td>
<td>31.4%</td>
<td>33.1%</td>
<td>31.1%</td>
<td>22.3%</td>
<td>24.4%</td>
<td>28.9%</td>
</tr>
<tr>
<td>Technical services</td>
<td>20</td>
<td>35</td>
<td>52</td>
<td>23</td>
<td>28</td>
<td>158</td>
</tr>
<tr>
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<td>10.8%</td>
<td>13.2%</td>
<td>14.4%</td>
<td>11.9%</td>
<td>11.2%</td>
<td>12.6%</td>
</tr>
<tr>
<td>Circulation librarian</td>
<td>14</td>
<td>14</td>
<td>19</td>
<td>1</td>
<td>5</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>7.6%</td>
<td>5.3%</td>
<td>5.3%</td>
<td>0.5%</td>
<td>2.0%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Reference librarian</td>
<td>31</td>
<td>50</td>
<td>55</td>
<td>34</td>
<td>76</td>
<td>246</td>
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<tr>
<td></td>
<td>16.8%</td>
<td>18.8%</td>
<td>15.3%</td>
<td>17.6%</td>
<td>30.4%</td>
<td>19.6%</td>
</tr>
<tr>
<td>Subject specialist</td>
<td>14</td>
<td>24</td>
<td>62</td>
<td>45</td>
<td>33</td>
<td>178</td>
</tr>
<tr>
<td></td>
<td>7.6%</td>
<td>9.0%</td>
<td>17.2%</td>
<td>23.3%</td>
<td>13.2%</td>
<td>14.2%</td>
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<td>Branch head</td>
<td>6</td>
<td>8</td>
<td>18</td>
<td>8</td>
<td>16</td>
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</tr>
<tr>
<td></td>
<td>3.2%</td>
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<td>4.1%</td>
<td>6.4%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Rare-book or special-</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>8</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>collections librarian</td>
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<td>0.6%</td>
<td>4.1%</td>
<td>2.0%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Bibliographic-instruction</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>librarian</td>
<td>1.1%</td>
<td>0%</td>
<td>0.3%</td>
<td>1.0%</td>
<td>0.4%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Total positions advertised</td>
<td>185</td>
<td>266</td>
<td>360</td>
<td>193</td>
<td>250</td>
<td>1,254</td>
</tr>
<tr>
<td>each year</td>
<td>14.8%</td>
<td>21.2%</td>
<td>28.7%</td>
<td>15.4%</td>
<td>19.9%</td>
<td>100%</td>
</tr>
</tbody>
</table>

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upward from 17.6 percent to 30.4 percent. The demand for subject specialists started to go up in 1969 and peaked in 1974, with emphasis on subject specialization in the literature. Branch heads were never heavily represented in the study since they were included only if a substantial portion of their responsibilities were not administrative; but the number of branch head openings fitting this criterion showed a slight trend upward. Rare-book/special-collection librarians and bibliographic-instruction librarians were included because there were a few announcements for these types of positions; but neither category was heavily represented.

CROSSTABS was also used to discover the number of advertisements asking for certain qualifications each year. Table 2 details the type of library education required. In 1959, 72.9 percent of the postings mentioned library education only in very general terms if they mentioned it at all. Only 26.0 percent of the candidates were specifically asked for an MLS, with or without ALA accreditation. This number rose steadily throughout the years until 1979, when 97.6 percent of the advertised positions required the library science master's degree. The figure for an ALA-accredited MLS also rose between 1959 and 1969, but then in 1974 took a jump from 13.3 percent to 52.3 percent, with another jump occurring in 1979 when 77.2 percent of jobs advertised required an ALA-accredited MLS.

The number of candidates asked for a subject master's degree, noted in table 3, did not rise as steeply as those needing the MLS, but here also a steady rise could be discerned, from .5 percent in 1959 to 27.6 percent in 1979.

The number of candidates asked for library experience (summarized in table 4) likewise rose, with an especially dramatic increase noted between 1969 and 1974 in the percentage of positions requiring specialized experience (from 15.0 percent to 40.9 percent). By 1979, 68.4 percent of all academic library job notices were asking for some kind of experience.

Figures for individual qualifications and responsibilities appear in tables 5 and 6. The general trend was for the percentages to go...
### TABLE 2
**Library Education Required by Year**

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>None listed</td>
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<td>116</td>
<td>115</td>
<td>27</td>
<td>4</td>
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<tr>
<td>Unspecified library degree</td>
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<td>69</td>
<td>26</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>BLS</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>MLS (unaccredited)</td>
<td>39</td>
<td>48</td>
<td>171</td>
<td>61</td>
<td>51</td>
</tr>
<tr>
<td>ALA-accredited</td>
<td>9</td>
<td>33</td>
<td>48</td>
<td>101</td>
<td>193</td>
</tr>
</tbody>
</table>

### TABLE 3
**Positions Requiring a Subject Master's Degree**

<table>
<thead>
<tr>
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<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>184</td>
<td>264</td>
<td>349</td>
<td>148</td>
<td>181</td>
</tr>
<tr>
<td>Any subject</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>17</td>
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</tr>
<tr>
<td>Specific subject</td>
<td>0</td>
<td>1</td>
<td>8</td>
<td>28</td>
<td>40</td>
</tr>
</tbody>
</table>

### TABLE 4
**Positions Requiring Library Experience**

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>115</td>
<td>148</td>
<td>239</td>
<td>70</td>
<td>79</td>
</tr>
<tr>
<td>Any</td>
<td>50</td>
<td>83</td>
<td>77</td>
<td>44</td>
<td>33</td>
</tr>
<tr>
<td>Specialized</td>
<td>20</td>
<td>35</td>
<td>54</td>
<td>79</td>
<td>138</td>
</tr>
</tbody>
</table>

### TABLE 5
**Qualifications Required by Year**

<table>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign language</td>
<td>38</td>
<td>48</td>
<td>45</td>
<td>44</td>
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<tr>
<td>Computer expertise</td>
<td>0</td>
<td>0</td>
<td>11</td>
<td>11</td>
<td>103</td>
</tr>
<tr>
<td>Subject background</td>
<td>20</td>
<td>32</td>
<td>67</td>
<td>55</td>
<td>81</td>
</tr>
<tr>
<td>A-V knowledge</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>Teaching experience</td>
<td>2</td>
<td>2</td>
<td>7</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Specific library expertise</td>
<td>10</td>
<td>10</td>
<td>24</td>
<td>21</td>
<td>52</td>
</tr>
<tr>
<td>Communication ability</td>
<td>2</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>34</td>
</tr>
<tr>
<td>Administrative ability</td>
<td>1</td>
<td>6</td>
<td>5</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>0.5%</td>
<td>2.3%</td>
<td>1.4%</td>
<td>7.3%</td>
<td>11.2%</td>
<td></td>
</tr>
</tbody>
</table>
upward, with notable increases between 1974 and 1979 in computer expertise, communicative ability, administrative ability, computer work, and administrative duties. The number of postings requiring reference, faculty liaison, personnel work, and work with specialized subjects also increased between 1969 and 1974, while the number of notices mentioning bibliographic instruction rose dramatically in 1974 and again in 1979. In the case of only one variable, teaching library science, was the percentage lower in 1979 than it was in 1959.

An analysis of variance using the program ONEWAY was performed to indicate whether there were statistically significant differences among the mean salaries paid in each year of the study. This test, utilizing the Scheffe procedure, found that there were no statistically significant differences between mean salaries paid in 1959 and 1979 and between those paid in 1964 and 1974. For the five years studied, three salary groups emerged: the “low salary” years (1959 and 1979), the “middle salary” years (1964 and 1974), and the “high salary” year (1969). Figure 1 graphs the progress of salaries from 1959 to 1979. Salaries in real dollars rose sharply between 1959 and 1969 and then fell. Although 1979’s salary was higher than 1959’s, the analysis of variance showed no statistically significant difference between salaries of the two years. In practical terms, this means that librarians in 1979 were not much better off financially than they were in 1959.

Findings on faculty status were less clear. Table 7 shows the numbers and percentages

---

### TABLE 6

**Responsibilities Required by Year**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference</td>
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<td>45</td>
<td>51</td>
<td>85</td>
<td>133</td>
</tr>
<tr>
<td></td>
<td>18.4%</td>
<td>16.9%</td>
<td>14.2%</td>
<td>44.0%</td>
<td>53.2%</td>
</tr>
<tr>
<td>Cataloging</td>
<td>24</td>
<td>20</td>
<td>38</td>
<td>47</td>
<td>78</td>
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<tr>
<td></td>
<td>13.0%</td>
<td>7.5%</td>
<td>10.6%</td>
<td>24.4%</td>
<td>31.2%</td>
</tr>
<tr>
<td>Circulation</td>
<td>22</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>21</td>
</tr>
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<td></td>
<td>11.9%</td>
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<td>7.8%</td>
<td>8.4%</td>
</tr>
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<td>Processing</td>
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<td>1</td>
<td>8</td>
<td>16</td>
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<td>6.4%</td>
</tr>
<tr>
<td>Acquisitions</td>
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<td>12</td>
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<td>25</td>
<td>21</td>
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<tr>
<td></td>
<td>4.9%</td>
<td>4.5%</td>
<td>5.6%</td>
<td>13.0%</td>
<td>8.4%</td>
</tr>
<tr>
<td>Collection development</td>
<td>1</td>
<td>18</td>
<td>36</td>
<td>59</td>
<td>102</td>
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<td></td>
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<td>6.8%</td>
<td>10.0%</td>
<td>30.6%</td>
<td>40.8%</td>
</tr>
<tr>
<td>Bibliographic instruction</td>
<td>4</td>
<td>3</td>
<td>6</td>
<td>28</td>
<td>84</td>
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<tr>
<td></td>
<td>2.2%</td>
<td>1.1%</td>
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<td>33.6%</td>
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<tr>
<td>Faculty liaison</td>
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<td>5</td>
<td>24</td>
<td>28</td>
<td>45</td>
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<td>1.9%</td>
<td>6.7%</td>
<td>14.5%</td>
<td>18.0%</td>
</tr>
<tr>
<td>Teach library science</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td></td>
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<td>0.4%</td>
<td>0.8%</td>
<td>1.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>A-V work</td>
<td>2</td>
<td>2</td>
<td>7</td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td></td>
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<td>0.8%</td>
<td>1.9%</td>
<td>4.1%</td>
<td>7.6%</td>
</tr>
<tr>
<td>Computer work</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>9</td>
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<td>0%</td>
<td>2.2%</td>
<td>4.7%</td>
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<td>Administrative duties</td>
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<td>23</td>
<td>21</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>2.7%</td>
<td>4.9%</td>
<td>6.4%</td>
<td>10.9%</td>
<td>20.8%</td>
</tr>
<tr>
<td>Personnel work</td>
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<td>9</td>
<td>15</td>
<td>27</td>
<td>46</td>
</tr>
<tr>
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<td>0.5%</td>
<td>3.4%</td>
<td>4.2%</td>
<td>14.0%</td>
<td>18.4%</td>
</tr>
<tr>
<td>Specialized subject</td>
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<td>7</td>
<td>15</td>
<td>60</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>0.5%</td>
<td>2.6%</td>
<td>4.2%</td>
<td>31.1%</td>
<td>32.0%</td>
</tr>
<tr>
<td>Specialized materials</td>
<td>27</td>
<td>32</td>
<td>57</td>
<td>32</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>14.6%</td>
<td>12.0%</td>
<td>15.8%</td>
<td>16.6%</td>
<td>24.0%</td>
</tr>
</tbody>
</table>

---

**Requirements and Benefits / 455**
of positions offering faculty status by year. Considering the amount of agitation for faculty status since 1959, a steady rise in these percentages could be expected, with a majority of positions offering faculty status by 1979. However, the percentage totals fluctuated from year to year and never went above 52 percent. Either librarians are not attaining faculty status in the numbers generally believed, or faculty status has become so widespread that employers feel that they no longer need to mention it in a job posting. The truth probably lies somewhere in between.

The library experience and subject master's variables were tested with analyses of variance that proved inconclusive, so they were broadened and retested. Both of these variables had been designed to include three categories depending on how specific the experience or degree requirement was. For the second tests, each variable included only two categories dependent simply on whether or not the variable was required. T-tests were run on these variables to determine whether experience or a subject master's degree indicated a higher salary. Findings of these tests are summarized in tables 8 and 9. From these tables, it can be discerned that experience was a fairly stable indicator of higher salary while a subject master's degree indicated a higher salary only in the last two years, the time period when more employers were asking for this qualification.

Figure 2 graphs $E$, $Q$, and $R$ scores (the scores that combine all education, qualifications, and responsibilities into three separate variables) for each year. In all three cases, analyses of variance found statistically significant differences between earlier and later years, with the predominant trend being a steady rise in the scores between 1959 and 1979.

The program SCATTERGRAMS was run in an attempt to discover whether there was any relationship between salaries and $E$, $Q$, and $R$ scores. The three variables were broken down by year and tested, and statistically significant results were noted in table 10. What was sought were statistically signifi-

### TABLE 7

<table>
<thead>
<tr>
<th>Positions Offering Faculty Status by Year</th>
<th>1959</th>
<th>1964</th>
<th>1969</th>
<th>1974</th>
<th>1979</th>
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<tbody>
<tr>
<td>Number</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage</td>
<td>45.9</td>
<td>27.4</td>
<td>51.4</td>
<td>38.3</td>
<td>44.8</td>
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### TABLE 8

<table>
<thead>
<tr>
<th>Significant Findings for T-Tests Measuring Salary by Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean salary of inexperienced group</td>
</tr>
<tr>
<td>Mean salary of experienced group</td>
</tr>
<tr>
<td>T-value</td>
</tr>
<tr>
<td>T-significance</td>
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</table>
TABLE 9
SIGNIFICANT FINDINGS FOR T-TESTS
MEASURING SALARY BY SUBJECT MASTER’S DEGREE

<table>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
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<td>degree</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
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<td>Mean salary of</td>
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<tr>
<td>group with</td>
<td></td>
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<td>degree</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>T-value</td>
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<tr>
<td>T-significance</td>
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</tr>
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</table>

TABLE 10
CORRELATIONS BETWEEN SALARIES AND E, Q, AND R SCORES BY YEAR

<table>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>E score</td>
<td>.22574*</td>
<td>.14221</td>
<td>.05096†</td>
<td>.02022</td>
<td>.01271†</td>
</tr>
<tr>
<td>Q score</td>
<td>.41000</td>
<td>.16810</td>
<td>.0172</td>
<td>.36908</td>
<td>.14751</td>
</tr>
<tr>
<td>R score</td>
<td>.38158</td>
<td>.14560</td>
<td>.00156</td>
<td>.00019</td>
<td>.02085</td>
</tr>
</tbody>
</table>

*Significant positive correlations, in other words, cases where the salary went up with the score. Qualifications seemed to be the most important indicator of a higher salary; a higher Q score meant a significantly higher salary in 1959, 1974, and 1979. Education followed with a higher E score meaning a higher salary in 1964 and 1969. In both cases, however, only a little variation in salary was accounted for by education (as indicated by the $r^2$ figures). Also, this variable showed no statistically significant results in the last two years, perhaps because educational requirements became more standardized. Since candidates were asked for a similar education, the salary offered depended on other factors. R score was the least indicative of the three job aspects; a higher R score was equated with a higher salary in 1964 only.

CONCLUSIONS

In terms of the hypotheses, therefore, several conclusions can be drawn. The notices indicated that librarians did have to bring more to their jobs, especially in the realm of education. There was strong evidence that the basic educational requirement for entry into librarianship had become more structured and stringent. Strong evidence also supported the idea that library experience was increasingly necessary to obtain a post as an academic librarian. Some evidence did
back up the idea that other qualifications were more necessary in 1979 than in 1959, but this evidence was weaker than that supporting the increased requirements for education and experience.

The second hypothesis concerned changes in responsibilities. The study indicated that no individual responsibility outweighed another at any time. There was a statistically significant difference between 1959 and 1979 for the combined responsibility scores, and these scores did show a continuous rise, but the range of scores was very narrow.

The third hypothesis was that benefits were improving in response to new demands. Benefits were studied mainly in terms of salaries, since status proved to be unreliable as an indicator of the value placed on various job aspects. Salaries followed the general cycle of wealth and scarcity in higher education by rising and then falling. Experience and a second master's degree were the only qualifications that commanded higher salaries; no responsibilities were more highly rewarded than others.

Little empirical research has been conducted regarding the changes in academic librarianship, and much remains to be examined. Perhaps a study could be made, using careful safeguards of privacy, to compare the qualifications and responsibilities listed in the advertisements with those of the persons eventually filling the openings. Such a study could aid readers and writers of job announcements as well as providing a more accurate assessment of the condition of academic librarianship. Another research line might be to compare librarianship's condition with that of other professions. An especially interesting project might be a comparison of librarianship with other professions in which women predominate.

A good deal of literature has been published about the role of the academic librarian and the changes in academic librarianship. This literature speculates and offers opinions, but little supporting evidence is provided for any conclusions. It is hoped that this study will be a first step in providing that evidence.
KEVIN L. COOK

Varying Levels of Support Given to Government Documents Departments in Academic Libraries

Documents departments in eighty-eight academic libraries belonging to the Association of Research Libraries (ARL) were surveyed. Data collected on departmental staffing and budget were compared to ARL data for the entire library. Other data collected concerned equipment and the types of publications housed in the department. Bivariate correlation analysis showed no significant correlation between the resources available to the documents department and those of the library as a whole. Suggestions for increasing the visibility of the department are given.

INTRODUCTION

In these times of retrenchment, libraries must find methods to utilize available resources more effectively. For almost 700 academic libraries, one method is to participate in the U.S. Government Printing Office (GPO) depository system. The congressionally designated libraries in the GPO system can elect to receive any of more than 5,300 categories of publications free of charge. This system, created by Congress in 1895, allows a library to receive as many as 40,000 publications each year from all departments and branches of the U.S. government. These publications cover such diverse topics as gardening information from the Department of Agriculture, technical reports from the Nuclear Regulatory Commission, and results of investigations into current problems written for congressional committees. Most publications found in an academic library's government publications collection are received through the GPO system. However, other nations, many intergovernmental organizations, and several state governments have similar depository systems to distribute publications that they produce.

In return for receiving these publications, depository libraries are required to provide resources, such as staff and space, needed to make the information accessible. However, not all libraries provide resources at an adequate level. An advisory committee to the U.S. Congress Joint Committee on Printing, which oversees the GPO depository program, mentions this variation in support.

For example, the Detroit Public Library expends $325,000 annually to maintain its depository collection. This disparity in financial support for the depository program has created variations in the quantity and quality of service available to citizens because the quality of service is dependent upon local funding levels.

This article examines varying levels of support given to government publications departments in major academic libraries. The survey attempts (1) to determine which resources are allocated to documents departments, (2) to compare the relationships among available resources, and (3) to compare resources allocated to the documents department in relation to those allocated to the entire library.
The hypothesis is that there is no significant relationship between the resources available to a library and the resources available to that library's government publications department.

Librarianship has produced relatively little quantitative research, but there has been so little research in documents librarianship that the lack of it was recognized as a serious problem in a National Commission on Libraries and Information Science (NCLIS) report. Moreover, much of the research that has been done has addressed specific procedural issues, rather than policy issues of concern to all libraries.

Even a basic issue, such as whether to physically integrate or separate government collections from the remainder of the library collection, has been discussed for many years without substantial investigation. Waldo concludes that the "functional problem is the lack of scientific evidence to substantiate the claims of the various approaches" to organizing documents. The debate over organization has been based upon opinion, not upon interpretation of scientific evidence.

DEFINITIONS AND ASSUMPTIONS

Academic GPO depository libraries belonging to the Association of Research Libraries (ARL) are examined in this study because many leading academic libraries belong to ARL, and because these major libraries have important collections of government publications. The study defines the government documents collection or documents department as that system in the library that makes government documents accessible to the public. In some institutions, this could include parts of the acquisitions, cataloging, and serials units—which sometimes process documents—as well as the unit that uses government publications in reference work. Government publications, government documents, or more simply, documents, are defined as those materials integrated into the government publications collection of the library. This broad definition helps allow for varying practices among documents departments.

The study assumes that support for a department can be measured in terms of indicators, such as materials budget or number of librarians working in the department. For example, a patron using a documents department employing three librarians, one of whom specializes in international documents, may have a different chance of finding a given European Communities publication than would a patron in a department where one librarian is responsible for all government publications.

A second assumption is that documents are worthy of receiving resources from the library. Fry refers to government publications as a "major source of information in practically every field of endeavor." Government publications are inexpensive to obtain with depository status and are frequently accessible through indexes, thus reducing some cataloging expenses. Government publications are often more current than any other information available and are frequently the only sources for obtaining some types of information. In congressional hearings, for example, one may examine testimony of expert witnesses that could be found in no other sources. Government-sponsored research reports, at the forefront of research in many fields, are often available only in government publications.

Also, this article assumes a documents department in which at least some government publications are housed in, and serviced from, a separate documents collection. Although some libraries have physically integrated documents collections—in which documents are cataloged, classified, and shelved with other library materials—the separate collection is more common and is often recognized as a superior arrangement.

LITERATURE REVIEW

A substantial amount of literature exists that details budgetary problems of libraries. However, little of it discusses the effective utilization of free depository distribution systems as a means of supplementing low materials budgets. Because so few accurate, relevant comments on documents are in the mainstream of general library literature, the problem of ignorance of documents generates more ignorance of documents.

General literature concerning government documents indicates that documents are "discriminated against" and little used. This claim is largely unsubstantiated but is widely accepted. One possible cause of this
could be Nakata's needed "image changes," to reflect documents as sources of current information, rather than being archival in nature.

A survey was used in this study because survey research can give a general profile of a large number of libraries. Surveys use quantitative techniques, thus enabling readers to compare their individual circumstances more concretely, as well as constructing a firmer foundation for subsequent research. Many previous surveys, unlike this survey, have not attempted to test hypotheses, or to validate conclusions by testing statistical significance.

Two surveys related to the problem questioned here are those of Julien and Shearer. Shearer sampled two academic GPO depositories in each state, neither of which were regional depositories nor law or medical libraries. His purpose was to "identify the real state of the art of federal depository collection administration." Shearer's questionnaire, sent to documents departments, consisted of fourteen questions. Of these, eight were yes or no questions, and six were multiple-choice questions. Shearer examined staffing, processing of documents, and departmental relations with the director of the library.

Julien's purpose was "to study existing methods of organizing and administering depository collections." She selected thirty-five academic depositories on the basis of size, location, and the length of time the library had been used as a depository. Two open-ended questions were asked, and the remaining thirty-eight were chiefly multiple choice. Staffing, equipment, and procedures were emphasized.

**Methodology**

This study differs from the previous two in that it utilized the data gathered to test a hypothesis. Because the population of this study—ARL member academic libraries—is relatively small, the entire population can be examined, eliminating problems of inference and estimates from a sample to a population.

This study also differs from previous studies in that interval data, rather than nominal data, are used. More powerful statistical procedures can be used with data at this level of measurement than with nominal-level data. The data gathered by the survey questionnaire provided information from documents departments; figures from ARL Statistics provided comparable data for the library as a whole.

Data were analyzed using three procedures in the Statistical Package for the Social Sciences (SPSS). The Frequencies procedure was used to obtain a frequency distribution and statistics for twenty-four of the thirty-one variables. The remaining seven variables were measured by data taken from ARL Statistics.

To obtain Pearson product-moment correlation coefficients for two-variable combinations of the thirty interval-level variables, the Pearson Corr procedure was used. The Crosstabs procedure analyzed the single nominal-level variable, GPO depository status, and paired it with the other variables.

The questionnaire was divided into sections labeled Resources, Equipment, and Physical Allocation of Materials (see appendix I). These sections were sent to the documents librarians at the ARL libraries included in the study. A pretest sent to four libraries revealed no major weaknesses in the questionnaire. Minor changes were made and the first mailing to the eighty-four remaining libraries followed in early May 1980. Three weeks were allowed for responses; then a follow-up request, containing another copy of the questionnaire, was sent to those persons who had not responded to the first mailing.

A higher response rate would have been desirable, but some libraries may have lacked ready access to some of the necessary information, such as the percentage of documents housed in the documents department, and so declined to respond. Also, several incomplete questionnaires were returned, yet they provided some usable data. These were included in the analysis to obtain maximum benefit from the data, and they account for the varying numbers of responses in the tables.

**Reliability and Validity of Data**

While the questionnaire response rate was lower than expected, an acceptable degree of reliability and validity is likely. Most of the questions in the study were objective and
concrete (such as the number of student hours assigned to the documents department or the number of volumes in the library). Similar questions, such as asking the number of full-time equivalent (FTE) professional, nonprofessional, and student staff, were used to obtain multiple measures of some variables. While there are doubtless other measures of resources that were not used in this study, several measures were taken. The nature of the questions made the responses easy to code, and this coding was checked at various points before the data were analyzed.

Validity of the data is based largely on face validity. Questions were direct and the responses were objective. Knowledgeable people examined the questionnaire and found the questions reasonable.

**Frequency Distributions**

Questions concerning staffing show the number of student hours assigned weekly to documents departments varied from 0 at one library to 300 in another, as shown in table 1. All responding libraries had at least one FTE nonprofessional staff member working in the documents department. The maximum value reported was ten nonprofessionals at one library. These data are presented in table 2. However, there were fewer professional librarians than nonprofessional staff found in documents departments. Two respondents had no professional staff, and two other departments had less than one FTE. At the other end of the range, two libraries reported that they had seven professional staff. Table 3 presents the frequency distribution for responses to this question.

These frequency distributions indicate that there are large variations in the resources allocated to documents departments. Table 4 illustrates the materials budget allo-

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Frequency Distribution for Weekly Student Hours Assigned to the Documents Department</th>
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</thead>
<tbody>
<tr>
<td>Hours</td>
<td>Absolute Frequency</td>
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<td>0-19</td>
<td>10</td>
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<td>20-49</td>
<td>22</td>
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<tr>
<td>50-79</td>
<td>17</td>
</tr>
<tr>
<td>80-99</td>
<td>8</td>
</tr>
<tr>
<td>100-300</td>
<td>10</td>
</tr>
<tr>
<td>N</td>
<td>67</td>
</tr>
<tr>
<td>Missing</td>
<td>21</td>
</tr>
</tbody>
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\[ \bar{x} = 60.19 \]

\[ M_o = 49.80 \]

\[ M_d = 40.00 \]

\[ 60.00 \]

\[ s = 50.00 \]

\[ \text{range} = 300.00 \]

<table>
<thead>
<tr>
<th>TABLE 2</th>
<th>Frequency Distribution for FTE Nonprofessional Staff in Documents Department</th>
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</thead>
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<td>Staff</td>
<td>Absolute Frequency</td>
</tr>
<tr>
<td>0-2.00</td>
<td>34</td>
</tr>
<tr>
<td>3-5.99</td>
<td>28</td>
</tr>
<tr>
<td>6-10.00</td>
<td>5</td>
</tr>
<tr>
<td>N</td>
<td>67</td>
</tr>
<tr>
<td>Missing</td>
<td>21</td>
</tr>
</tbody>
</table>

\[ \bar{x} = 2.99 \]

\[ M_o = 2.55 \]

\[ M_d = 2.00 \]

\[ s = 1.86 \]

\[ \text{range} = 9.00 \]

<table>
<thead>
<tr>
<th>TABLE 3</th>
<th>Frequency Distribution for FTE Professional Staff in Documents Department</th>
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</thead>
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<td>Staff</td>
<td>Absolute Frequency</td>
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<td>29</td>
</tr>
<tr>
<td>2-3.99</td>
<td>29</td>
</tr>
<tr>
<td>4-7.00</td>
<td>9</td>
</tr>
<tr>
<td>N</td>
<td>67</td>
</tr>
<tr>
<td>Missing</td>
<td>21</td>
</tr>
</tbody>
</table>

\[ \bar{x} = 2.15 \]

\[ M_o = 1.59 \]

\[ M_d = 1.00 \]

\[ s = 1.46 \]

\[ \text{range} = 7.00 \]

<table>
<thead>
<tr>
<th>TABLE 4</th>
<th>Frequency Distribution for Documents Department Materials Budget</th>
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</thead>
<tbody>
<tr>
<td>Budget ($)</td>
<td>Absolute Frequency</td>
</tr>
<tr>
<td>0-4,999</td>
<td>13</td>
</tr>
<tr>
<td>5,000-19,999</td>
<td>16</td>
</tr>
<tr>
<td>20,000-178,536</td>
<td>19</td>
</tr>
<tr>
<td>N</td>
<td>48</td>
</tr>
<tr>
<td>Missing</td>
<td>40</td>
</tr>
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\[ \bar{x} = 25,851.00 \]

\[ M_o = 12,050.00 \]

\[ M_d = 5,000.00 \]

\[ s = 4,895.61 \]

\[ \text{range} = 178,536.00 \]
cated to documents collections. Three libraries had no funds specifically marked for documents collections, while another library had over $175,000 allocated to its documents department. Next highest were three depart­ments having budgets of $85,000. There was also wide variation in the amount of space occupied by documents departments. The maximum was 23,000 square feet. These data are summarized in table 5. Table 6 shows data for six different types of micro­forms equipment located in the documents department. Other equipment in the department is reported in the frequency distribution labeled table 7.

**TABLE 5**

**FREQUENCY DISTRIBUTION FOR SQUARE FEET IN DOCUMENTS DEPARTMENT**

<table>
<thead>
<tr>
<th>Square Feet</th>
<th>Absolute Frequency</th>
<th>Adjusted Frequency (%)</th>
</tr>
</thead>
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<tr>
<td>0-6,999</td>
<td>18</td>
<td>38.3</td>
</tr>
<tr>
<td>7,000-13,999</td>
<td>18</td>
<td>38.3</td>
</tr>
<tr>
<td>14,000-23,000</td>
<td>11</td>
<td>23.4</td>
</tr>
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<td>N</td>
<td>47</td>
<td>100.0</td>
</tr>
<tr>
<td>Missing</td>
<td>41</td>
<td>46.6</td>
</tr>
</tbody>
</table>

Data related to the proportion of publications housed in the documents department are presented in table 8. One department reported housing no U.S. GPO depository publications, while eleven had 100 percent of the library's depository publications. Seven departments had none of the library's non-GPO depository publications, while twelve reported holding 100 percent.

The data are quite different for publications from governmental units smaller than states, such as county or local publications. Forty libraries had none of these substate publications in their documents departments, and only one library reported having all substate publications housed in the documents collection. Similarly, twenty-one departments housed no state publications, while one held all of the library's state documents. Foreign national publications were not housed in thirty-five of the departments that responded, but two departments housed 100 percent of the library's publications falling into this category. Fourteen documents departments contained no publications of international intergovernmental organizations (IGOs), such as the United Nations, but six departments held all of their library's IGO publications.

These frequency distributions demonstrate again the many different ways in which government publications are handled by libraries. In general, U.S. federal publications are housed in documents departments more often than other types of publications.

The year in which the survey libraries were designated GPO depositories is shown in table 9. Dates ranged from 1859 to 1969. In fact, eleven of the ARL libraries did not become GPO depositories until 1960 or later. Sixteen of the libraries are regional GPO depositories (18.2 percent) while the remaining seventy-two (81.8 percent) had selective status.

**BIVARIATE CORRELATION ANALYSIS**

**Regional and Selective Status**

Neither departmental resources, library resources, nor the types of publications received were correlated with the depository status of the library. In other words, a regional GPO depository, with responsibilities beyond those of a selective depository, apparently had no effect on the resources of the library as a whole (including staffing), on the distribution of publications in the library, or on indicators of the resources available to the documents department. Perhaps patterns of handling federal publications were well established by 1962, when the depository law was changed to allow the establishment of regional depositories. Another explanation could be that ARL libraries select a high percentage of documents, making them comparable to regionals in some respects. Nevertheless, regionals have responsibilities, including permanent retention of all publications distributed through the system, interlibrary loan service, and advising other depositories in the area, which place different demands upon those libraries serving as regional depositories. It seems unlikely that regionals could meet these demands if they were supported at the same levels as selective depositories.
### TABLE 6
**FREQUENCY DISTRIBUTION FOR MICROFORMS EQUIPMENT IN DOCUMENTS DEPARTMENT**

<table>
<thead>
<tr>
<th>No. of Units</th>
<th>Microfiche Readers</th>
<th>Adjst. Freq. (%)</th>
<th>Microfilm Readers</th>
<th>Adjst. Freq. (%)</th>
<th>Microopaque Readers</th>
<th>Adjst. Freq. (%)</th>
<th>Microfiche Reader-Printers</th>
<th>Adjst. Freq. (%)</th>
<th>Microfilm Reader-Printers</th>
<th>Adjst. Freq. (%)</th>
<th>Microopaque Reader-Printers</th>
<th>Adjst. Freq. (%)</th>
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<tr>
<td>0</td>
<td>7</td>
<td>13.0</td>
<td>28</td>
<td>53.8</td>
<td>27</td>
<td>51.9</td>
<td>44</td>
<td>84.6</td>
<td>47</td>
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<td>15</td>
<td>28.8</td>
<td>16</td>
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<td>9.6</td>
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<tr>
<td>2</td>
<td>12</td>
<td>22.2</td>
<td>7</td>
<td>13.5</td>
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<td>11.5</td>
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<tr>
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<td>7.7</td>
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<td>5.6</td>
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<td>99.9</td>
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<td>99.9</td>
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<td>40.9</td>
<td>36</td>
<td>40.9</td>
</tr>
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</table>

$\bar{x} = 2.22$, $\bar{X} = 0.67$, $\bar{X} = 0.77$, $\bar{x} = 0.17$, $\bar{X} = 0.10$

$M_x = 1.67$, $M_x = 0.43$, $M_x = 0.46$, $M_x = 0.09$, $M_x = 0.05$

$s = 1.89$, $s = 0.86$, $s = 1.11$, $s = 0.43$, $s = 0.30$

$\text{range} = 7.00$, $\text{range} = 3.00$, $\text{range} = 2.00$, $\text{range} = 1.00$, $\text{range} = 1.00$

### TABLE 7
**FREQUENCY DISTRIBUTION FOR EQUIPMENT IN DOCUMENTS DEPARTMENT**

<table>
<thead>
<tr>
<th>No. of Units</th>
<th>Photocopier</th>
<th>Adjst. Freq. (%)</th>
<th>Computer Terminal</th>
<th>Adjst. Freq. (%)</th>
<th>Printing Computer Terminal</th>
<th>Adjst. Freq. (%)</th>
<th>Bibliographic Network Terminal</th>
<th>Adjst. Freq. (%)</th>
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</thead>
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<td>88.2</td>
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<td>48</td>
<td>92.3</td>
<td>46</td>
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<td>36</td>
<td>40.9</td>
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$\bar{x} = 0.14$, $\bar{X} = 0.23$, $\bar{x} = 0.10$, $\bar{X} = 0.14$

$M_x = 0.07$, $M_x = 0.06$, $M_x = 0.04$, $M_x = 0.06$

$s = 0.40$, $s = 0.89$, $s = 0.36$, $s = 0.80$

$\text{range} = 2.00$, $\text{range} = 6.00$, $\text{range} = 2.00$, $\text{range} = 2.00$
The strongest correlation was between library-materials budgets and the number of student hours. There were two comparisons in which a given resource in different libraries were varied enough to prevent drawing conclusions based on availability of equipment.

**Library Resources**

It would be reasonable to expect that the more resources a library has, the more resources the library's documents department would have. Table 11, however, shows that this is not true. Only twelve comparisons of resources yielded $r^2$ values greater than .20. Of these, five were moderate $r^2$ values greater than .30. The strongest correlation was between library-materials budgets and the number of professional documents staff. Professional documents staff was also weakly correlated to current serials expenditures. There were two comparisons in which a given resource in the documents department was correlated with that same resource in the library. The

**Documents Department Resources**

When comparing the fifteen indicators of documents department resources with each other, sixteen pairs yielded a Pearson's $r^2$ value greater than .20. Eight of those sixteen with a coefficient of .30 or greater are reported in table 10, which summarizes correlations between the various indicators of resources in documents departments. The number of student hours was moderately correlated to nonprofessional staff and professional staff in the department, and to the number of cathode-ray terminals in the department. Professional staff was correlated with student hours and with nonprofessional staff. Correlations between various kinds of equipment were low, and the practices in different libraries were varied enough to prevent drawing conclusions based on availability of equipment.

**TABLE 9**

**FREQUENCY DISTRIBUTION FOR YEAR LIBRARY WAS DESIGNATED A GPO DEPOSITORY**

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<thead>
<tr>
<th>Year</th>
<th>Absolute Frequency</th>
<th>Adjusted Frequency (%)</th>
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<td>Before 1900</td>
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<tr>
<td>1900–1929</td>
<td>34</td>
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<td>1930–Present</td>
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$\bar{X} = 1911.10$

$M_x = 1907.00$

$M_y = 1907.00$

$s = 29.25$

range = 110.00
### TABLE 10
Comparisons among Documents Department Resources Using $r^2$

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<tr>
<th>Indicators</th>
<th>Student Hours</th>
<th>Non-Prof. Staff</th>
<th>Prof. Staff</th>
<th>Materials Budget</th>
<th>Microfiche Readers</th>
<th>Microfilm Readers</th>
<th>Microfiche Rdr.-Prntrs.</th>
<th>Cathode-Ray Terminals</th>
<th>Bib. Net Terminals</th>
<th>Printing Terminals</th>
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documents materials budget was correlated to the library-materials budget \( (r^2 = .32, p < .001) \), and the number of student hours assigned to the department was correlated to the student hours in the library \( (r^2 = .32, p < .001) \). The number of professionals and nonprofessionals working in the library has no apparent correlation to the number of staff in the documents department.

From this, one could conclude that the staffing in the documents department is quite independent of staffing in other areas of the library, and that factors outside the scope of this study have greater influence on staffing. For example, this study was not able to take into account various means used by individual libraries to process and service documents. Some libraries may use methods less demanding of staff time. Another variable not measured in this study is the staffing of other library departments. Some departments may employ staff members at the expense of other library departments. Implicit in this statement is the concept that some departments may possess greater power than other departments. This possibility was not addressed in this study.

A higher correlation exists between staffing in other parts of the library and the materials budgets. There were \( r^2 \) values from .24 to .40 between the number of the three types of documents department staff and the library materials budget. While it appears that there is some relationship between materials budgets and library staffing outside the documents department, there are factors other than the resources available to the library as a whole that determine what resources are available in the documents collection. Materials budgets allocated to other departments may have an effect on the budget of the documents department. Distribution of power in the library could affect resource allocation.

Library staffing, with the exception of student hours, was not related to staffing in the documents department. Similarly, the materials budget allocated to the department was not related to the materials budget of the library. However, the library’s materials budget was related to staffing in the documents department. Possibly the materials budget of the library is a better indicator of the library’s support than the number of staff. The library’s materials budget is subject to greater variations over time than is the number of staff. During a financially lean year, a library might cut its materials budget as an alternative to dismissing staff members. This may make the library’s materials budget a better predictor of the fiscal health of the library, rather than the level at which the library is staffed. It seems unlikely that the lack of relationship between library staffing and documents department staffing is because documents departments are so well staffed. An understaffed documents department cannot function properly. It is possible that such a cycle exists in some documents departments. Patrons may not get satisfactory service because the staff is too busy processing incoming materials; or there may be stacks of unprocessed material because the staff is too busy helping patrons.

Documents departments may contain material from different sources requiring different types of processing, such as state publications and GPO publications. If there are not enough staff members to assign an area of responsibility to each person, or if a few staff members must spread their duties over a large area, there may be no one with expertise in any of the areas. The staff would not have time to obtain in-depth knowledge about any single variety of their publications. While general knowledge is desirable, some degree of specific knowledge about certain materials is often required of the staff.

**Types of Publications Housed**

The percentage of the library’s documents that were housed in the documents department was not correlated to staffing. This would seem to indicate that either servicing a large collection is less demanding than servicing a smaller collection, or that some departments operate more efficiently with fewer staff. Individual library practices could account for some of this discrepancy. For example, documents staff may process and catalog documents that are housed elsewhere in the library. Conversely, the library’s acquisitions and cataloging departments may process publications that are housed in, and serviced from, the documents department. Decentralization of libraries and the existence of branch libraries or of departmental libraries could possibly affect the proportion of publications which are housed in the documents department. While it
would seem that the size of a collection would be related to its staff, this was not shown to be the case. More needs to be known about processing procedures in such situations.

There was a lack of correlation between publications in the department and the entire library's statistics. This corroborates the earlier finding that the percentage of documents housed in the department is not related to resources, such as staffing, of either the department or the library.

There were, however, some correlations indicating that certain types of publications were more likely to be found together in the documents department. The strongest of these correlations ($r^2 = .71$) was between state, substate, and local documents. A moderate correlation ($r^2 = .46$) was found between U.S. depository and nondepository publications. It appears, then, that state and substate publications tend to be found in the same locations.

Types of publications do not appear to be related to other resources of the collection. Similarly, Richardson et al. found little relationship between staffing of a documents department and the level of bibliographic control of U.S. publications in depository libraries as a whole. Richardson found that "increasing professional staff did not increase the total number or the likelihood of specific access points, except for series access." Richardson concluded that the total number of descriptive access points provided for federal publications in all depository libraries was unrelated to staff size. This suggests that staffing is related to neither publications housed in the department, nor to the bibliographic organization of the publications. Richardson did not examine the amount of use a department receives. This could be an important factor because high use might increase the visibility of the department, which in turn could affect the resources made available to the department.

Thus it appears that the hypothesis, that there is not a significant relationship between the resources available to a library and the resources available to that library's government publications department, must be rejected.

**Possible Solutions**

Major decisions made years ago by incum-
such a session. The librarians became so interested that the sessions became regularly scheduled. This led to an exchange program as discussed above. Some librarians are insecure about their knowledge of government publications, but are willing to learn about them.

Some depositories need to inform their director about the activities of the documents department. One ARL library director declined to respond to a questionnaire, saying that his library was not a GPO depository.

**Areas for Further Research**

Since no definitive conclusion can be drawn as to what factors determine the level of resource support a documents department receives, this is an important area for further research. This study has suggested that major factors are not the availability of resources in the library as a whole, or the manner in which documents were housed in the library. Thence the question: What factors contribute toward resource support of the documents department? Research on the budgeting process or on the distribution of power within the library would be relevant to this question.

A related question concerns the effects of staff exchange programs within libraries on support for documents departments. Other means of increasing awareness of the documents departments within libraries should also be investigated and evaluated.

Longitudinal studies might be able to relate changes in levels of support to changes in the environment of the documents collection. Staff changes, additions to facilities, as well as the indicators used in this study should be examined. It would also be possible to compare the support of a documents department at the beginning and at the end of directors' tenures.

Further research should be done to elaborate upon the conclusions of the study, in relation to the level of support given to GPO regional depositories, as opposed to selective depositories. If there actually is little additional support given to a regional library, does this have an effect on the service the public can obtain from that depository?

More needs to be known about the process of resource allocation to documents departments in academic libraries. This information might also be generalized to other library departments, further increasing its usefulness. This study raises questions about the level of support given to GPO regional depositories. It appears that in ARL libraries, regional depositories are not supported differently from selective depositories. Perhaps most importantly, the output of the documents department and its services to patrons need to be examined. This could result in greater access to government information and more effective operation of government publications departments.

**Significance of the Results**

Frequency distributions show that among ARL libraries, a relatively homogenous population, there is a vast disparity in the amount of resources allocated to documents departments. Perhaps by establishing this fact, this study may help justify the receipt of greater resource support. The resources given to the documents department did not appear to be correlated to the resources that were available to the entire library. While the library-materials budget was correlated to documents staff, there was only a moderate correlation between the library-materials budget and the budget in the documents department. Another finding was that regional GPO depositories in academic libraries seem to be supported at the same level as selective GPO depositories.

This study may have raised more questions than it answered, yet it serves as a starting point for future research related to resources allocation and the development of a conceptual framework to examine factors that affect resource allocation for government documents departments.

**References**


APPENDIX 1: LIBRARY RESOURCES QUESTIONNAIRE

Please include any clarification or comments on the reverse side of the questionnaire.

I. RESOURCES

Please complete items 1 through 5 using the same definitions of terms you would use in completing an Association of Research Libraries statistical report.

1. How many student hours per week were allocated to the documents department in 1978-79? ________ Average Student Hours Per Week.

2. How many non-student, non-professional staff were working predominantly in the documents department in 1978-79? ________ Full-Time Equivalent Non-Professional Staff.


4. What was the total materials budget available to the documents department for purchase of documents and related materials excluding equipment and supplies in 1978-79? ________ Materials Budget in Dollars.

5. How many square feet are dedicated to storage, reference, and work areas for government documents? ________ Estimated Total Square Feet.

II. EQUIPMENT

How many pieces of the following types of equipment have been purchased at the request of the documents department for its use?

- Microfiche Reader(s)
- Microfilm Reader(s)
- Micro-opaque Reader(s)
- Photocopier(s)
- Cathode-Ray Computer Terminal(s)
- Microfiche Reader-Printer(s)
- Microfilm Reader-Printer(s)
- Micro-opaque Reader-Printer(s)
- OCLC (or similar bibliographic network) Terminal(s)
- Printing Computer Terminal(s)

III. PHYSICAL ALLOCATION OF MATERIALS

What percent of each of the following types of documents collected by your library are housed in the documents department? (EXAMPLE: If all your library's government documents from all of the following categories are in the documents department, each category would have the answer 100 percent.)

- U.S. GPO Depository Documents
- Other U.S. Documents
- Sub-State and Local Documents
- Documents from States
- Foreign National Documents
- International Intergovernmental Organization Documents
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Research Notes

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Carolyn Pawley 473  Online Access: User Reaction

CAROLYN PAWLEY

Online Access: User Reaction

INTRODUCTION

Since early 1970, professional library literature has published many articles on the closing of card catalogs, and the resulting switch to COM fiche or online catalogs. There have, however, been few articles describing users' reactions to these new types of catalogs. J. Sprecht cited the need for detailed studies of patron use of online systems, 1 and Ben-Ami Lipitz reported that there have been studies on the use of the card catalog, but not the online catalog. 2

A recent article by Carole Weiss Moore 3 describes a study on the use of online systems at four libraries, the results of which indicate that, in most instances, the users adapt to online systems with little or no difficulty. Such was definitely the experience of the University of Guelph Library, one of the four systems studied.

The University of Guelph Library has had an online circulation system since fall 1977.

The card catalog is located on the main floor of McLaughlin Library. Reader services are offered for separate reference collections in three subject divisions: a branch library for veterinary medicine, special collections for government publications, and archives and rare books. COM fiche catalogs (main entry and shelflist) and serial and document catalogs are located in each public service division as a supplement to the card catalog. Terminals are located throughout the library to provide access to the online circulation system and its records.

The online circulation system provides public access to monographs and documents in the collection via call number, author, and title. It also supplies access to an individual’s borrower record. By entering the system, a user is able to determine if an item is charged out and, if so, when it is due back in the library. The user is also able to place a hold on an item by waving the bar code on his I.D. card.

A study of the online system was undertaken in an attempt to examine the attitude of students and faculty, and to provide data for further development.

METHODOLOGY

The study took the form of a printed questionnaire and was distributed at the public terminals during the 1980 fall semester. The purpose of the study was twofold: to determine if the online circulation system was providing user satisfaction; and to gather information for the design of an online cataloging module.

The terminal screen was self-instructional; therefore, no formal instruction was offered. Initial entry into the system...
can be made by choosing one of four approaches: call number, author, title, and borrower inquiry. Each instruction is followed by pressing the send button, and each screen of information provides instructions for the next step. No record of queries regarding the use of the online system was maintained.

The study questionnaire was designed to provide five basic types of information: (1) the status of users and the number of times they used the system; (2) the effectiveness of the instructions on the terminal screen; (3) the convenience of terminal locations; (4) the type of information required by the user; and finally, (5) general comments about the system. Completed questionnaires were collected each day by the public service staff. The rate of return on distributed questionnaires was 10 percent.

**FINDINGS**

As illustrated in table 1, the largest number of returns came from the seventh semester level. As expected, the number of times the system was used rose according to semester level of the user. One hundred percent of the eighth-semester-level students reported using the system eleven times or more. The slight drop at the graduate level, as indicated in table 1, could be due to the fact that many graduate students were new to the university, and thus not familiar with the system.

The majority (94.1 percent) of users found that instructions on the terminal screens were adequate. The largest number of negative replies came from library staff. (See table 2.)

Table 3 shows that of the total number of online circulation users, 68.5 percent, required no assistance, while 31.5 percent asked for help from either library staff or a friend. The percentage requiring assistance appears to indicate that some form of instruction was necessary, and, as a result, classes on the use of the public inquiry system were offered.

Most users found the terminals conveniently located, with only 8.6 percent indicating dissatisfaction. The location of terminals near service points on every floor of the library appeared to be a good decision. (See table 4.)

Thirty-five percent of the users reported having to wait one or two minutes to use a terminal, 37.9 percent reported having to wait three to five minutes, and 16.3 percent had to wait six minutes or longer. Only 10.8 percent reported no wait time. Although careful studies had been made to determine terminal requirements before the system was implemented, an insufficient number of terminals had been provided.

Both tables 4 and 5 will be of value in determining the location and number of terminals required for the complete online cataloging system.

Table 6 confirms the suspicion that the online circulation system was used as a substitute for the card catalog. More than 40 percent reported looking for a specific subject, when, in fact, no subject approach is offered. In place of direct subject-heading access, users were finding that manipulation of the title access provided an acceptable substitute.

Table 7 indicates that 88.1 percent of those surveyed reported successful retrieval of information. Nearly 70 percent of the users re-

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<td>66.7</td>
<td>33.3</td>
<td>0.0</td>
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<td>66.7</td>
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<td>88.1</td>
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<tr>
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<td>57.1</td>
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</tr>
<tr>
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<td>0.0</td>
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</tr>
</tbody>
</table>
TABLE 2

"ARE INSTRUCTIONS CLEAR ENOUGH?"

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<tr>
<th>Status of User</th>
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<th>Row Total</th>
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<td>0.0%</td>
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</tr>
<tr>
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<td>12.9%</td>
<td>15.3%</td>
</tr>
<tr>
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<td>6.9%</td>
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<td>Faculty</td>
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<td>0.0%</td>
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<td>14.3%</td>
<td>6.9%</td>
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</tbody>
</table>

TABLE 3

"WAS HELP REQUIRED AND IF SO, FROM WHOM?"

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<tr>
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<th>Yes: Lib. Staff</th>
<th>Yes: Friend</th>
<th>No</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
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<td>68.2%</td>
<td>10.8%</td>
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<tr>
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<td>66.7%</td>
<td>0.0%</td>
<td>33.3%</td>
<td>1.5%</td>
</tr>
<tr>
<td>3d sem</td>
<td>33.3%</td>
<td>16.7%</td>
<td>50.0%</td>
<td>11.8%</td>
</tr>
<tr>
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<td>22.2%</td>
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<td>4.4%</td>
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<tr>
<td>5th sem</td>
<td>12.9%</td>
<td>16.1%</td>
<td>71.0%</td>
<td>15.3%</td>
</tr>
<tr>
<td>6th sem</td>
<td>17.6%</td>
<td>5.9%</td>
<td>76.5%</td>
<td>8.4%</td>
</tr>
<tr>
<td>7th sem</td>
<td>21.4%</td>
<td>4.8%</td>
<td>73.8%</td>
<td>20.7%</td>
</tr>
<tr>
<td>8th sem</td>
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<td>0.0%</td>
<td>78.6%</td>
<td>6.9%</td>
</tr>
<tr>
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<td>64.7%</td>
<td>8.4%</td>
</tr>
<tr>
<td>Faculty</td>
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<td>3.4%</td>
</tr>
<tr>
<td>Staff</td>
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<td>0.0%</td>
<td>78.6%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Other</td>
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<td>100.0%</td>
<td>1.5%</td>
</tr>
<tr>
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</tr>
</tbody>
</table>

TABLE 4

"TERMINAL CONVENIENTLY LOCATED?"

<table>
<thead>
<tr>
<th>Status of User</th>
<th>Yes</th>
<th>No</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
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<td>4.8%</td>
<td>10.7%</td>
</tr>
<tr>
<td>2d sem</td>
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<td>1.5%</td>
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<td>3d sem</td>
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<td>12.2%</td>
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<tr>
<td>4th sem</td>
<td>100.0%</td>
<td>0.0%</td>
<td>4.6%</td>
</tr>
<tr>
<td>5th sem</td>
<td>87.1%</td>
<td>12.9%</td>
<td>15.7%</td>
</tr>
<tr>
<td>6th sem</td>
<td>93.3%</td>
<td>6.7%</td>
<td>7.6%</td>
</tr>
<tr>
<td>7th sem</td>
<td>90.2%</td>
<td>9.8%</td>
<td>20.8%</td>
</tr>
<tr>
<td>8th sem</td>
<td>92.9%</td>
<td>7.1%</td>
<td>7.1%</td>
</tr>
<tr>
<td>Graduate</td>
<td>100.0%</td>
<td>0.0%</td>
<td>7.6%</td>
</tr>
<tr>
<td>Faculty</td>
<td>100.0%</td>
<td>0.0%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Staff</td>
<td>85.7%</td>
<td>14.3%</td>
<td>7.1%</td>
</tr>
<tr>
<td>Other</td>
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<td>1.5%</td>
</tr>
<tr>
<td>Column Total</td>
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<td>100.0%</td>
</tr>
</tbody>
</table>

quested information from the borrower inquiry function, thus relieving circulation division staff, who previously had to handle these requests on a personal basis.

Table 8 shows that the largest number of users (72.2 percent) found the terminal easier to use than the card catalog.

THE USERS COMMENT

Each respondent was asked for comments that might shed further light on user attitudes to the online circulation system. Several findings emerged: the library needs more terminals and a subject approach; otherwise, the system is a good one.
### Table 5

**WAIT TIME TO USE TERMINAL**

<table>
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<tr>
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<th>3-5 Min.</th>
<th>6+ Min.</th>
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<td>10.8%</td>
</tr>
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<td>0.0%</td>
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<td>1.5%</td>
</tr>
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<td>11.8%</td>
</tr>
<tr>
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<tr>
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<td>19.4%</td>
<td>15.3%</td>
</tr>
<tr>
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<td>47.1%</td>
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<td>11.8%</td>
<td>8.4%</td>
</tr>
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<td>20.7%</td>
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<td>21.4%</td>
<td>6.9%</td>
</tr>
<tr>
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<td>8.4%</td>
</tr>
<tr>
<td>Faculty</td>
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<td>0.0%</td>
<td>14.3%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Staff</td>
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<td>42.9%</td>
<td>14.3%</td>
<td>21.4%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Other</td>
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<td>100.0%</td>
<td>0.0%</td>
<td>1.5%</td>
</tr>
<tr>
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</table>

### Table 6

**TYPE OF INFORMATION REQUESTED**

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<td>1.2%</td>
<td>0.0%</td>
<td>1.5%</td>
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<td>14.8%</td>
<td>0.0%</td>
<td>11.9%</td>
</tr>
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<td>4.6%</td>
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<td>7.4%</td>
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### Table 7

**RETRIEVAL OF INFORMATION**

<table>
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<tr>
<th>Status of User</th>
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<th>No Title</th>
<th>No Subs</th>
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</tr>
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</tr>
<tr>
<td>3rd sem</td>
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</tr>
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<td>7.7%</td>
<td>7.1%</td>
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<td>0.0%</td>
<td>3.6%</td>
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<td>100.0%</td>
</tr>
</tbody>
</table>

### Concluding Remarks

It is apparent that the attitude of the user to the online circulation system at the University of Guelph, is, with few exceptions, positive. It is also obvious that orientation will be needed on the use of the online system as the online cataloging module is made available. Not one user mentioned eyestrain as a disadvantage of having to read CRT screens, a point raised frequently by those who are skeptical of online systems. R. Gay
TABLE 8
COMPARISON EASE OF USE—TERMINAL AND CARD CATALOG

<table>
<thead>
<tr>
<th>Status of User</th>
<th>Easier Terminal</th>
<th>Easier Catalog</th>
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<td>6.3</td>
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<td>7th sem</td>
<td>86.5</td>
<td>2.7</td>
<td>10.8</td>
<td>20.6</td>
</tr>
<tr>
<td>8th sem</td>
<td>66.7</td>
<td>16.7</td>
<td>16.7</td>
<td>6.7</td>
</tr>
<tr>
<td>Graduate</td>
<td>75.0</td>
<td>6.3</td>
<td>18.8</td>
<td>8.9</td>
</tr>
<tr>
<td>Faculty</td>
<td>50.0</td>
<td>33.3</td>
<td>16.7</td>
<td>3.3</td>
</tr>
<tr>
<td>Staff</td>
<td>72.7</td>
<td>0.0</td>
<td>27.3</td>
<td>6.1</td>
</tr>
<tr>
<td>Other</td>
<td>50.0</td>
<td>50.0</td>
<td>0.0</td>
<td>1.1</td>
</tr>
<tr>
<td>Column Total</td>
<td>72.2%</td>
<td>10.6%</td>
<td>17.2%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

in the American Scholar mentions the “strain of reading banks of information through the unsteady light of the console screen.” She does concede that at “Ohio State, however, readers preferred using the terminal to the card catalogue.” This is most certainly the case at the University of Guelph.

REFERENCES
5. Ibid.

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The Library Journal architectural issue of 1967 contained the first of Jerrold Orne’s annual statistical surveys of college and university library architecture. Designed to provide a continuing record of academic library construction, it also introduced standardization in the reporting of new buildings. Data offered in the surveys can serve as a starting point for charting the ways in which individual libraries have changed physically over the years.

It may be an overstatement to say that libraries listed in the first years of the survey are now approaching middle age. Some libraries, barely a decade and a half old, face problems now which were not encountered in twice that time by the buildings they replaced. The present study seeks to examine certain library buildings constructed in 1967 and 1968, specifically those that serve colleges. How have these structures adapted to the growth of their collections? How serious are storage and seating problems? What specific physical modifications have been made since they opened?

TARGET GROUP

The study is limited to institutions that enrolled 3,000 or fewer students when their libraries were new. Libraries that met the requirements in 1967 or 1968, but have greater enrollments today, are still included. These institutions would now be classified as comprehensive universities and colleges or liberal arts colleges, according to the Carnegie Commission on Higher Education. However, since the Carnegie topology did not exist in 1967 or 1968, the decision was made to choose the target group according to the student clientele served. Seventy-two libraries became part of the study (seventy-five were included in the target group; three had closed in the intervening years); thirty-six (or 50 percent) of the libraries returned the survey instrument (eighteen each from Orne’s 1967 and 1968 list). The median enrollment was 1,284 (1979–80 figures). Most of the target group has a collection size today of between 100,000 and 200,000 volumes; 28 percent had fewer than 100,000 volumes; and 11 percent more than 200,000.

RESULTS

Storage Space

Five libraries in the survey indicated that they had already reached capacity. A comparison of current collection size with the data in the Orne survey shows that these buildings are between 100–160 percent of planned capacity. An additional five libraries also exceeded theoretical storage limits, and each of these reported less than five years growth available. In all, fifteen of the thirty-six libraries indicated five or fewer years of space for printed material. Some of these will probably encounter serious difficulties in the near future. Only five had any concrete plans for increasing book storage.

Some of the thirty-six responding libraries have avoided or mitigated their storage problems by a variety of means. Three have built additions to their original structures, two have acquired remote storage facilities, and one opened a separate branch library. However, one library in three increased storage capacity through more conventional ways, most notably by placing additional shelving in areas originally designed for non-storage uses, or by eliminating open space. Two libraries noted a major gain in shelf space by moving book stacks closer together.

Seating Space

When the libraries were constructed, the seating percentage (the median ratio of seating space to full-time enrollment) was .38.
TABLE 1
REASONS FOR BUILDING MODIFICATION

<table>
<thead>
<tr>
<th>Reason for Building Modification</th>
<th>Major Modifications Completed</th>
<th>Minor Modifications Completed</th>
<th>Major Modifications Needed</th>
<th>Minor Modifications Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce future energy costs</td>
<td>2</td>
<td>13</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>Increase access for handicapped</td>
<td>2</td>
<td>12</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Reduce noise</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Prevent loss of library resources</td>
<td>6</td>
<td>14</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>Increase comfort of users</td>
<td>0</td>
<td>7</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Enhance attractiveness of building (interior or exterior)</td>
<td>0</td>
<td>11</td>
<td>2</td>
<td>11</td>
</tr>
</tbody>
</table>

By 1981, that figure had dropped to .26. Four libraries actually increased seating/enrollment ratios since they opened, and six others declined by less than 10 percent. In several individual cases, the drop in seating percentage was due to enrollment increases. In others, seating areas were converted to book storage. However, the degree of erosion in the seating percentage is nearly the same for the thirteen most crowded libraries as compared to the total group. The sample here is quite small, so judgments must be qualified, but there is no evidence of large conversions of study space to book storage even in libraries that are rapidly approaching capacity.

The 1981 seating percentage is well within the range suggested for typical residential college libraries by the 1975 “Standards for College Libraries.” Formula C of the “Standards” recommends that seating “shall be one for each four FTE students.” The adequacy of seating space in the libraries surveyed is reflected by the fact that only one library in five rated patron study spaces inadequate during peak-usage times, and only one library from the responding thirty-five felt that the number of spaces was inadequate during a typical term period.

Building Modifications 1967–1981

Table 1 lists six current needs of many libraries. Libraries in the survey were asked to indicate which of these needs resulted in building modifications between 1967/68 and 1981, and which would need to be accomplished in the next five years.

Security-motivated changes (especially book-detection systems) were accomplished by a majority of the libraries surveyed. Clearly, fewer changes were done for aesthetic reasons or for user comfort.

A large number of the libraries surveyed believed that substantial investments would be necessary in order to reduce energy consumption and to ensure accessibility to handicapped patrons.

Other Interior Adjustments

To gauge the extent of interior changes, the survey presented the libraries with a list of twenty functional areas, and the respondents were asked to indicate which had changed building locations since opening day. The tabulation is presented in table 2.

Interior adjustments were made by 63 percent of the libraries, and over one-third had made three or more such changes over the years. Some relocations in these libraries were due to altered program objectives, the varied formats of library materials, and the need to provide services or house collections not foreseen by the building planners of the 1960s.

Four of the eight libraries that changed the location of their government document operations became federal documents depositories after 1968. While the survey did not specifically measure this, it is likely that the

TABLE 2
CHANGES IN BUILDING LOCATIONS

<table>
<thead>
<tr>
<th>Functional Area</th>
<th>Number of Libraries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media or A-V center</td>
<td>14</td>
</tr>
<tr>
<td>Microforms</td>
<td>11</td>
</tr>
<tr>
<td>Government documents</td>
<td>8</td>
</tr>
<tr>
<td>Maps</td>
<td>6</td>
</tr>
<tr>
<td>Reference department</td>
<td>5</td>
</tr>
<tr>
<td>Special collections</td>
<td>5</td>
</tr>
<tr>
<td>Current periodicals</td>
<td>5</td>
</tr>
<tr>
<td>Bound periodicals</td>
<td>5</td>
</tr>
<tr>
<td>Acquisitions</td>
<td>5</td>
</tr>
<tr>
<td>Staff lounge</td>
<td>5</td>
</tr>
<tr>
<td>Public card catalog</td>
<td>4</td>
</tr>
<tr>
<td>Interlibrary loan</td>
<td>4</td>
</tr>
<tr>
<td>Serials processing</td>
<td>4</td>
</tr>
<tr>
<td>All other areas</td>
<td>3 or less</td>
</tr>
</tbody>
</table>
large number of changes in audiovisual or media centers was due to service expansion and/or moves to consolidate such services within the library. When asked to indicate other modifications in public service or processing areas that have taken place, few libraries listed anything more other than furniture relocation, new carpeting, or similar minor changes.

CONCLUSION

The survey reveals that a major concern for college-sized libraries in the 1980s will be space for library materials. Whether or not the problem reaches crisis proportions will depend on the ingenuity of librarians and the availability of resources. Unfortunately, the next ten years look particularly grim for higher education, and certain solutions to storage problems (new buildings, additions, remote storage, compact storage) are fairly expensive. Libraries can take other actions to address the problem (e.g., greater use of microforms, more intensive weeding), but their constituencies may find these solutions unacceptable. In some cases, areas within the library used in pursuit of nonlibrary functions can be regained. Three-fourths of the libraries surveyed have portions of their buildings devoted to other uses. Most are classrooms, but academic and administrative offices, computer centers, reading and study-skill centers, art galleries, and radio stations are also found in libraries.

In the short term, some libraries may convert seating areas (still at levels recommended in the ALA “Standards for College Libraries”) into storage space. While seating percentages have dropped over the years, it is impossible to state that this is due to crowded book shelves. If conversion does occur in open-stack libraries, patrons and books will compete for the same limited space. Ironically, the decline in full-time enrollment, predicted for many colleges until the 1990s, may ameliorate this problem. However, if during the 1980s, overcrowded libraries seek to gain book-storage space by eliminating study areas, they will surely face the next decade with adequate room for neither users nor materials.

Assuredly, future planning will need to be farsighted. Many libraries will require substantial investments if their physical plants are to serve their public adequately. Herein lies a major challenge: While requesting funds, librarians will have to convince faculty and alumni that despite the optimism of opening day, their college has an aging library.

REFERENCES


Statement of Ownership and Management

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Letters

To the Editor:

David Starn’s review of Volume IV of my History of Book Publishing in the United States (C&RL, November 1981) is so grossly unfair, and just plain wrong, that I can’t let it go unanswered.

In a scant half-dozen paragraphs, Mr. Starn gives us a splendid example of what’s wrong with so much scholarly reviewing these days, beginning with that hoariest of non sequiturs, that is, nit-picking a few errors (one of them typographical), and declaring that this casts doubt on everything else in the book. Mr. Starn works in a library and he certainly ought to know that every book has errors in it, and the greater the number of facts contained in a volume, or set of volumes, the greater the number of errors. There is no way of avoiding them, even with the most meticulous checking, which Chandler Grannis and I carried out. A fair-minded reviewer would have understood that. The critical cliché that Mr. Starn indulges in here is always witness, always offensive, and wrong.

Mr. Starn seems to complain that the bulk of the book is made up of histories of individual companies, but what in the world does he imagine the history of publishing consists of? That is the history of publishing, and I have organized these histories in a way that relates the growth and development of the various kinds of publishing. The charge that there has been “little discrimination in [the] choice of facts presented” is without any basis whatever.

Mr. Starn is in no position to make any such judgment in the first place, and I assure him that I exercised the greatest discrimination in what was included and what was left out. Mr. Starn says the coverage is uneven; I say he doesn’t know what he’s talking about.

Worst of all, perhaps, is Mr. Starn’s assumption that this is merely “a collection of raw materials toward a history of book publishing in mid-twentieth-century America.” It is nothing of the kind, and no other reviewer in the scholarly journals has made any such absurd charge. Mr. Starn obviously didn’t bother to read the preface, where I discussed my sources thoroughly. The personal knowledge of the industry that Mr. Grannis and I brought to this task, spanning the entire time period covered by this volume, is not even mentioned, although it was a prime resource. Mr. Starn cites as a “glaring omission” the lack of a statistical summary of production and financial data, but in the preface I state clearly that this kind of material, which does appear in the previous three volumes, was omitted in the present work because these are so easily available elsewhere that to produce them in this work would have been redundant.

“The net has not been cast widely enough, many leads have not been pursued, and much should have been culled,” says Mr. Starn. Again, absolutely wrong. Every possible lead was pursued, and everything even remotely relevant that could be culled was utilized. Mr. Starn doesn’t understand that the prime sources of publishing history in this period are the pages of Publishers Weekly and the Bowker Vertical Files, whose resources he is apparently unaware of, and I have used them judiciously and with care throughout.

I supplemented these with other secondary sources, with the tremendous amount of firsthand knowledge of the industry that Mr. Grannis and I share, plus interviews with living participants in many of the events. For an evaluation of these sources, I refer Mr. Starn, and other interested readers, to the speech I made in January at Columbia University, when I accepted the annual award of the American Printing History Association. I won’t rehearse it again, but it’s just possible Mr. Starn might learn something about the availability of source material in this field. He and one or two other reviewers have implied that there is some great vast mine of
material out there somewhere that I either overlooked, or ignored. There isn’t. Regretfully, such treasure troves of material simply don’t exist, and that situation is also covered in the preface to Vol. IV.

This is by no means the end of Mr. Stam’s sins of commission and omission. It astonished me that so many of them could be packed into a mere six paragraphs.

Fortunately, it isn’t the old story of the writer thinking he’s right and the reviewer wrong. More knowledgeable reviewers in other media have given this labor of love that has occupied fifteen years of my life much more judicious and approving notices, many of them all a writer could ask for. I ask readers of College & Research Libraries to use their own good judgment and decide for themselves who’s right and who’s wrong in this case.—John Tebbel, Southbury, Connecticut.

To the Editor:

I regret that I have outraged Mr. Tebbel with my review of his monumental study of The Great Change. There is a great deal of material of value in the work, and my review attempted to emphasize some of its virtues. I still contend, however, that the work does not provide the needed synthesis that this reader sought. It is not a question of right or wrong, but of critical judgment. Of course, users of Mr. Tebbel’s work will decide for themselves.

As to sins of omission, I could have packed many more into fewer paragraphs.—David H. Stam, The New York Public Library, New York City.

To the Editor:

Brian Nielsen’s proposal of a nebulous third role for reference librarians (C&RL, May 1982), one in which they neither emulate academic faculty and divide librarianship, nor monopolize knowledge, shows his disregard for the different needs of different library users.

In my job as an academic reference librarian I am both an intermediary and a teacher. My teaching a student who is working on a term paper how to find information, rather than finding it for him, is part of the student’s education. It is part of the job I am paid to do. If the chancellor calls me for information to convince the legislature of campus needs, I will not entice him to the library with a promise that I will show him how to go about finding what he wants. I will locate what he has requested and get it to him as quickly as possible. If my search turns up other information which I think could be useful to him, I will send that too. This service seems to be what Mr. Nielsen calls monopolizing knowledge. Such requests from staff and faculty make them dependent on me only in the sense that they depend on me to do my job.

I fail to see how an on-line reference system changes this picture. Even if the student does not actually run the search, part of his education should include an explanation of efficient search strategy and his help in developing the strategy to be used. On the other hand, I would never offer such explanations to the business manager if he called me for financial statistics unless he requested such explanations. I would assume that the information he wanted is the statistics rather than my search procedure.

The needs of the user determine whether I’m an intermediary or a teacher, and I think these considerations are applied by other librarians in public, academic, and research libraries. Switching roles is not only necessary, it is an integral part of my job. If I were unable to determine when to switch roles, it would be unfortunate for the users, who would get less than they should. It would also be unfortunate for me because I would very probably be fired. Perhaps, if this should happen, I could be consoled by a special librarian who was fired because he ignored the intermediary function of his job, or shared information by passing it on to his company’s competition.—Valerie Burnie, Public Services Librarian, University of South Carolina, Spartanburg, South Carolina.

To the Editor:

As to the nebulousness of the third role I propose in my article, I plead guilty; I can only reiterate here that the shaping of that role will require thoughtful action, dialogue among colleagues and users, and the conduct of my research by many librarians in the field. I appreciate the opportunity for dialogue on a critical point which Ms. Burnie’s letter provides.

What, really, is “need” in the situations
described by Ms. Burnie? One could substitute the word “status” for “need,” and the issue would become clearer. Though it is certainly true that, given the present level of staffing in academic library reference departments, a student is better served who serves himself, the attribution of “need” of that student for instruction is something a librarian invented. One could just as logically, and incorrectly, state that every student “needs” a personal reference librarian to find, check out, and carry home his books. Ms. Burnie provides adequate rationale for this position, as the most successful student who achieves status on the campus later in life obviously has all such services provided. If the chancellor ever had a library instruction course, it was obviously a waste of time.

It is important for us to develop our service goals more carefully. There are situations in which it is far more desirable to give the undergraduate student a fact than to tell him how to find it himself; there are also situations in which the administrator or faculty member would be better served by being given training in the use of a tool. As on-line searching protocols become simpler, for instance, the business manager would be better served by being given a terminal on which to do his own searching, and some training, than to have him try to explain to a librarian the nature of his problem.

Whatever kind of service is provided, it should be based on a judgment that takes into account the context of the user’s problem, not the user’s status. Making any user dependent on a librarian is a disservice, as the nature of relevance and meaning of information is so subtle, that we must always encourage the user to look directly, and not through our eyes.

Switching roles between teacher and intermediary “works” when we serve reactively to the demands imposed upon us by others. Switching does not help us develop a proactive work style in which our own talents, knowledge, and values contribute to thoughtful practice. Respect for ourselves and for the mission of our occupation should, I think, direct us to avoid this schizophrenia and to evaluate more carefully where our energies might best be placed. — Brian Nielsen, Head, Reference Department, Northwestern University Library, Evanston, Illinois.

(POSTSCRIPT: Page 187, line 22 of paragraph two in column one should begin with the word “instruction” rather than “information.”)
New Titles

This compilation provides the first extensive, selective, and critically annotated guide to the official documents and publications of Albania, Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Yugoslavia, Poland, Romania, and the U.S.S.R.

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This selective bibliography includes 6,500 entries of books, pamphlets, and articles on all aspects of the Nazi Party and the Third Reich.

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This comprehensive bibliography on education in the Arab world includes 6,000 English-language books, journal articles, dissertations, and microform publications.

Labour and Social History Theses
This classified list of 2,626 American, British, and Irish university theses and dissertations covers political and trade union movements plus the areas of housing, public health and poverty which affect working-class life.

A London Bibliography of the Social Sciences, Sixteenth Supplement, 1981, Volume 39
This annual publication catalogs the holdings of the British Library of Political and Economic Science and the Edward Fry Library of International Law and covers the whole range of the social sciences.

Isis Cumulative Bibliography 1913–1965, Volumes 4 and 5, Civilizations and Periods
Edited by Magda Whitrow. 2 vols. 1,100p. total. 1982. (0-7201-0549-8). $160.00
The fourth and fifth volumes of this widely-acclaimed project contain 24,000 entries originally published in the Isis Critical Bibliographies Nos. 1–90 and comprise references to the history of science, medicine, agriculture and technology.

950 University Avenue
Bronx, New York 10452
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Abstracts ........................................ 492
Other Publications of Interest to Academic Librarians ........................................ 500

BOOK REVIEWS

Collection Development and Management at Cornell is the final report on a Cornell project created to deal with the “rapid and unplanned growth of library collections” at a large research library. Assisted by a Mellon Foundation grant, Hendrik Edelman, then assistant director of libraries for collection development at Cornell, headed the project from July 1977 to January 1979 until he moved to Rutgers as university librarian. His interim report, Collection Development and Management at Cornell: An Interim Report (1978), covering the project from July 1977 through June 1979, was the first of two reports. This review covers the second part, which describes project activities for the last year of the project and includes recommendations for the future of collection development at Cornell University Libraries. Although the author focuses on Cornell issues, the report recommendations have general applicability at other university libraries and offer planning approaches that can be used by collection managers at any institution.

The report has an executive summary outlining and indexing principal segments of the report in detail. The study offers a variety of strategies for coping with collection development in a large institution, including improved collection of management data, a restructuring of the organization, and limitations on collecting goals and objectives. In addition to a short summary of the interim report and generous quotations from it, the final report includes appendixes with a bibliography of articles on allocation; a sample collection profile of the music library; a list of data collected by the project at Cornell; a list of documents and working papers prepared for the project; and definitions of terms used in the project report.

The profile of the music library, by Michael Keller, is of special value because it demonstrates in practice one of the chief planning tools recommended by the project: a collection statement about a type or field of literature. These profiles are more detailed and comprehensive than the standard ALA collection-policy statements and are proposed as an essential element of a “plan to control costs by limiting the library’s goals and objectives rather than by ad-hoc program reductions or by trying to apply any kind of budgetary formula.”

Other major elements of the recommended program include a detailed mission statement for the library; a survey of research use; definitions of collecting responsibilities; factors for decision making on book fund allocation; proposed categories of data
and information required for collection planning; an access service department; and working groups charged with implementing this program. The segment of the report on factors for decision making on book fund allocations (p. 71-73) is a particularly valuable compilation of factors to be considered when dividing up the book budget.

Miller makes a number of significant observations about the planning process. He notes that university libraries have not applied networking concepts within their own institutions, e.g., the library as a clearinghouse or reference center for the internal “University Information Resource Network.” In relation to this concept he suggests: “The Library should be encouraged with adequate funding to set up within the library system a clearinghouse to provide repositories such as art galleries, slide collections, collections of objects or images, collection of audio-visual materials and libraries or document collections outside the library system.” He argues that, if the library takes on responsibility for special materials, e.g., data tapes, slides, phonodiscs, report literature, and videotapes, then they should do so with the assurance of special funds. He proposes that there be a two-level allocation system, one internal library allocation for core collections, and the other external allocation for highly specialized information services. He notes: “Taking a leaf therefore from some of the schemes by which universities are funding their computer centers, some decentralization of funding of library resources will both protect the core of the library budget and put the responsibility for some of the highly specialized resources in the departments or colleges with special and particular information requirements, where it belongs.”

Miller also recommends an important role for circulation in the management of collections. This role includes management responsibility for bindery; security; conservation and preservation; microform collections; user surveys; replacements and withdrawals; duplication policies; and storage of materials. Finally, he reiterates Hendrik Edelman’s concern that bibliographic access “has typically been confused with in-depth cataloging,” and suggests that “the entire concept of access . . . bears reexamination.” As he and Edelman point out, cataloging is critically important to the broad concept of collection management since libraries are not now readily able to respond in a timely fashion to the growing requirements to process specialized materials such as company reports, data tapes, microform sets, census publications, collective-bargaining agreements, and other such materials, because there is still a tendency to treat everything with the same level of intensity.

This study is well written and well documented. The report’s few defects stem from its origin as an internal report. It is too bad, for example, that the first and second reports were not published together since there is extensive quotation from the first report, and it would be useful to see these comments in context. There are also some typos; for example, Leroy Ortopan is referred to twice as Ortop Zan. For the most part, however, the text is very clear and the layout is attractive. One unfortunate binding error is that the two major charts showing the “University Information Resources Network” and the “Proposed
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Structure for Collection Development” are out of place in the text, but this mistake is covered by an “errata slip.”

Although this report is an internal report, it should get wide distribution in the academic library field. It contains some unique insights into the problems of planning for academic library collections and is a very useful supplement to the handbooks of the Association of Research Libraries’ Collection Analysis Project. Messrs. Miller and Edelman are to be commended for their incisive statements about complex collection-planning problems at Cornell because their recommendations will have enduring value outside of Ithaca.—Frederick C. Lynden, Brown University.


Now, when the dust has settled after the debate between the supporters and opponents of corporate “authorship,” triggered by the preparation of AACR2, we have a good book on the topic. The timing seems unfortunate, because a publication date a few years earlier would have helped to clarify some of the issues then under debate.

The book is divided into three parts: (1) “The Problem of Corporate Authorship,” (2) “The Nature of Authorship,” and (3) “Conclusion.” The first part is a description of the rise, development, and ultimate demise of the concept of corporate “authorship,” limited mostly as it was to the English-speaking world and lasting approximately a century and a quarter. The second part analyzes the concept of authorship in more general terms, presenting the main arguments pro or con for the extension of the concept to include corporate bodies in addition to the traditional personal authors.

The book is well written and offers a fairly thorough exposé of relevant developments, especially in the United States. If the work has a flaw, it would be its tendency to present the pro-corporate-authorship arguments more fully than their counterpoints. However, even so, the reader gets a clear presentation of the qualitative differences between personal and corporate authorship and of the theoretical difficulties faced by anyone trying to formulate a justification of why personal authors and corporate “authors” should be treated in the same manner in a cataloging code. The procrustean qualities of such a position were not lost on the framers of AACR2 and led, ultimately, to its abandonment altogether.

It also focuses our attention on what happens when one tries to create a cataloging code, not by starting with the user and what his needs are, but with the code maker’s perception of what such a code should be. After all, what difference does it make to the user when a main entry under personal name is called “authorship” and one under a corporate body “emanation,” when in most cases he is totally unaware of such refinements anyway?

The book is, by its nature and topic, of special interest, and is recommended for collections or persons interested in the history and development of the concept of “authorship.” It is definitely not something a practitioner needs to have handy when trying to interpret or unravel the why's of AACR2.—Åke I. Koel, Yale University Library.
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ABSTRACTS

The following abstracts are based on those prepared by the ERIC Clearinghouse of Information Resources, School of Education, Syracuse University.

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Further information on ordering documents and on current postage charges may be obtained from a recent issue of Resources in Education.


Library-use instruction is seen by most librarians in Britain and the United States as an essential component of an academic library's overall operation, with the expressed or implied aim of enabling students to achieve maximum utilization of library resources and services. Having passed through a long history of cyclical popularity dating back to before the turn of the century, library instruction enjoyed a period of renewed popularity in the early seventies. Presently many writers believe that academic libraries are failing in their function of facilitating access to stored knowledge. The challenge of educating library users, however, has generated a multiplicity of instructional approaches in both nations. These approaches include handbooks, leaflets on specific resources, specialized bibliographies, audiovisual presentations, orientation tours, and informal courses; the slide/tape presentation is one of the more popular types of media used. Sixty references are cited.

Qualified Citation Indexing: Its Relevance to Education Technology. By E. B. Duncan and others. Aberdeen University Teaching Centre; Robert Gordon's Inst. of Technology, Aberdeen, Scotland. Sponsored by the Scottish Inst. of Adult Education, Edinburgh. 1981. 11p. ED 207 567. MF—$0.83; PC—$1.82.

Citation indexing, which matches linked articles through links with authors rather than through subject-keyword matching, is particularly relevant to educational technology, a widely spread subject with a special user group of varying interests, difficult to cover in one retrieval service, and whose terminology is often ambiguous. By including links from lists of references, very large databases are created, some of whose links may be misleading. Qualified citation indexing seeks to refine the output by including terms to describe the context of the reference that are mutually exclusive and unambiguous. The Scottish Education Department Qualified Citation Indexing Project is setting up a citation database with linked references from citing to cited work, the links qualified by using a list of relational or descriptive terms compiled from previous studies and from the suggestions of users. Retrieval will be tested and modifications will be built in from feedback thus acquired, and a prototype index will be presented. A major part of the work will be the identification of key authors and key papers, and estimates will be made of both computing and indexing costs.


Intended as a guide for federal-agency libraries in the application of the second edition of the Anglo-American Cataloging Rules and not to supersede them, the emphasis in this manual is on material and problems likely to be encountered by catalogers in the area of descriptive cataloging; it also includes the most recent Library of Congress rule interpretations at the time of publication. Following an introductory section, the main body of the manual is arranged according to AACR2 rule number with discussions and example applications to specific cases. Each example refers to the appendix, which contains photocopies of title pages and other sections of books, serials, etc. Complete cataloging, with and without MARC coding, is given for each title and is cited whenever that title is used to illustrate a rule. A number of typographic conventions are included to assist the user.


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program for library paraprofessionals, a ten-month project funded by the Library Services and Construction Act (LSCA) Title III and matching state appropriations through the Virginia State Library. Designed by an area-library networking committee to provide library paraprofessionals with competence in basic library skills and to reinforce positive public-service attitudes, the project included seven program modules, five training workshops, a ten-week course on basic library skills, and a lecture on censorship and intellectual freedom in libraries. Summaries and essential materials for each of the components are provided, as well as extensive evaluation information.


The second of four volumes in a series describing the basic documentation practices involved in the initial setting up and subsequent operation of an information-library organization to provide defense-aerospace, scientific, and technical information services, this manual consists of three sections. "Data Recording and Storage," by J. Howard Petrie, provides an introduction to the hardware and software of computer systems, discusses the problems of inputting data, describes the different types of input and storage equipment, and outlines management and systems-analysis problems in the project environment. "Mechanization Systems and Operations," by Victor Rogers, provides a working basis for setting up a computer system for indexing, processing, and disseminating information, mainly in the form of bibliographic references. The main emphasis is on the in-house computer and methods are described for setting up, storing, and exploiting databases, and creating an announcement journal. "Announcement Services and Publications," by Elizabeth Ridler, reviews methods for announcing holdings and new acquisitions to users, provides examples of manually- and computer-produced bulletins, and discusses the production of indexes to computer-produced publications. Also described are manual and computer-based SDI services and repackaging of literature resources as bibliographies, state-of-the-art reports, and packaged information for technical innovation.


The third of four volumes in a series describing the basic documentation practices involved in the initial setting up and subsequent operation of an information-library organization to provide defense-aerospace scientific and technical information services, this manual consists of three sections. "Information Retrieval," by Tom Norton, provides a brief overview of the development of information retrieval (IR) and a model of an IR system.

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**Workshop for Japanese Collection Librarians in American Research Libraries**


A description of the structure and approach of a workshop held to identify and explore important issues relating to the future of Japanese collections in academic and research libraries is provided, as well as eight papers presented at the workshop together with written reactions to the papers by other workshop participants. Topics covered include: (1) the current status and directions of Japanese studies; (2) the current status of collections supporting Japanese studies; (3) the management and organization of Japanese collections; (4) the book market in Japan and the acquisition program of the Library of Congress; (5) Japanese libraries for Japanese studies, focusing on libraries in general and special collections on literature, history, and the social sciences; (6) the case of Japanese collections as an emerging issue in national resource sharing, including problems of access and coordinated collection development, the National Periodicals Center, and the Center for Research Libraries; (7) a view of resource sharing from a smaller collection; and (8) the regional level of resource sharing. Many papers contain references and tables. Three appendixes provide workshop results and recommendations, a list of participants, and part one of a doctoral dissertation on Japan, which gives a statistical and analytical overview of current trends.

**Classification of Education and Research in Librarianship and Information Science**


In order to provide access to individual educators and researchers in library science on the basis of their specializations and types of research, a project was undertaken to develop a Classification of Education and Research in Librarianship and Information Science (CERLIS). A review was conducted of the treatment of library science materials in a number of existing classification schemes and thesauri, among them Library of Congress classification, Classification Research Group classifica-
Converting your library’s catalog to machine-readable records was an immense task. Now converting those records to AACR2 cataloging rules creates a new challenge. Split catalogs, “file-as-if” techniques and extensive cross reference structures are costly to maintain and difficult to use. Certainly automated authority control is the answer.

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tion, and the Thesaurus of Information Science and Technology. CERLIS, the scheme tested during this project, is a twice-revised version of the Classification Research Group’s Classification of Library and Information Science. Established to classify people rather than documents, CERLIS is designed for self-classification by the individual to be classified. The test version of CERLIS was sent to a random sample of 100 full-time personnel in library education programs, and 28 persons responded with completed classification forms. Specialization profiles and tabulations of the responses were then drawn up. Though there were some problems with CERLIS, testing indicated that it can be used by educators and researchers to describe their specializations, courses, and research. A guide to CERLIS is appended, and six tables, four figures, and a twenty-three-item reference list accompany the text.


This review essay examines the fifth editions of the Directory of Special Libraries and Information Centers and its companion, the Subject Directory of Special Libraries and Information Centers, and compares these volumes with earlier editions with respect to comprehensiveness of coverage, standards for inclusion, entry forms, consistency, and other related criteria. The background of the directories is outlined, the current context of the North American special libraries universe is described, and changes in the North American special libraries universe as reflected in the successive editions of the directory between the 1960s and 1979 are reviewed. A reference list, eleven tables presenting and comparing data on special libraries, and four figures accompany the text.

Publication Activity of Academic Library Directors. By Ronald Rayman and Frank Goudy. 1980. 13p. ED 214 505. MF—$0.83; PC—$1.82.

Comparative statistical analyses of publication records for the library directors of the fifty largest academic libraries in the United States revealed that: (1) total years of library experience bore no relation to publication activity; (2) the directors’ publication records were generally average when compared to the field as a whole; and (3) the acquisition of advanced academic degrees, especially the library science doctorate, resulted in an increased rate of publication. Statistics for this report, which were compiled from citations in Library Literature and Library Science Abstracts/Library and Information Science Abstracts, included information gathered from several sources regarding total years of library experience and academic degrees held. Footnotes include twelve references.


This report describes current book deterioration in libraries, the status and economies of acid-free paper production, and categories of books that should be printed on acid-free paper. Recommendations are discussed for publishers and librarians regarding the use of acid-free paper. Technical guidelines on paper acidity, a table on manufacturers of acid-free identifying types, shades, and surfaces of paper as well as definitions and a list of members of the Committee on Production Guidelines for Book Longevity of the Council of Library Resources are provided.


This set of minutes from a semiannual meeting of the Association of Research Libraries includes two presentations: “Some Reflections on User Needs and the Information Transfer Process,” a talk on government publications and the public’s right to know by Joseph Morehead, and “A Commentary on the NCLIS Public Sector/Private Sector Task Force and Its Report,” by Robert M. Hayes. Reactor panel comments on the two addresses reflecting views from government, libraries, and the information industry are followed by a general discussion of the topics addressed and a set of reports from ARL executives and committees. Among the nine appendices to the minutes are the annual reports of the Committee on Interlibrary Loan, the Committee on ARL Statistics, the Membership Committee on Nonacademic Libraries, the ARL Task Force on Bibliographic Control, and the ARL Task Force on Collection Development. Also appended is a membership roster for the association as of 1981.
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appt.—appointment
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prog.—program

SPECIAL USAGES

More than one reference per page is indicated in parentheses. Under the heading "Acquisitions (by author, subject, or title)" parentheses may enclose donors’ names (for subjects) or subjects (for named collections).

Prepared by Eldon W. Tamblyn
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