

Indexing

A Comparative Study of Three Systems of Information Retrieval. By Norman D. Stevens. New Brunswick, N.J.: Graduate School of Library Service, Rutgers—The State University, 1961. 149p. \$4.00.

This study gives close scrutiny to three existing systems of indexing a small specialized collection of printed material dealing with explosives. The library of Picatinny Arsenal, Dover, New Jersey, is first cataloged in the traditional manner. The results from this system of information retrieval are compared with two variations of a partly mechanized system.

A project for using a file of punched cards to analyze the literature of explosives, supported by the Department of Defense, resulted in a file of IBM cards which was used to prepare a handbook on the subject. The literature for the period from 1942 to approximately 1958 was analyzed; the system consisted of 80,000 cards, covering some 3,420 references, generated from examination of about 900 reports. An original print-out of the more significant data covering literature through 1953 was supplemented four times. As of 1961 the cumulated listing of data in tabular form had not been completed.

The author found that for simple matters of fact, the traditional reference approach is superior in terms of time required; the literature survey approach takes more time than the mechanized approach, but yields more complete information. The mechanized data-extracting system is more effective both in time required and in the fullness of the answer when certain specific values are required; e.g., finding all compounds and mixtures within a given range of impact sensitivity and vacuum stability.

In matters of cost, the author found that traditional methods are much cheaper. The cataloging cost at the Picatinny Arsenal library varied from 33 cents per item, to \$4.33. The lowest estimate input cost per item for

the data-extracting system, on the other hand, was \$37.25, or almost nine times as much as the highest traditional cataloging cost. The most reliable average cost of input per report to the data-extracting system was \$250, fifty-eight times the highest cataloging cost.

In estimating costs of output, the time of persons involved was computed at the same level for all methods (GS11). Cost of machine rental was not included. For simple factual questions, the cost of consulting two published reports which summarized previous literature was 10 cents per fact; when consulting the handbook prepared from punched cards, the cost rose to 22 cents; when the reference approach, involving locating the original source document, was used the cost was 41 cents. The handbook and traditional reference approach were equally effective, locating forty-six (though not necessarily the same ones) of the seventy-eight items requested. Two summary reports yielded thirty-nine answers.

In more complicated questions, the labor cost of using the punched card file tended to exceed that of the reference approach, but in some cases gave more complete results. The actual time elapsed between posing the question and receiving the results was usually greater for the punched card approach, because of delays in the availability of machine time.

In some ways, the results of the study may be unfavorable to mechanized systems, more because of weakness in the conception of the system utilized than because of limitations in mechanized systems *per se*. But had the material been analyzed for the manual system in depth comparable to that used in the machine system (at a cost of \$250 per report), the effectiveness of the traditional system might well have exceeded the data-extraction system at only a fraction of the cost per inquiry.

This, then, is perhaps the first serious inquiry into the competitive possibilities of mechanized information retrieval. The results indicate that the newer techniques are

not yet developed to a point where they can replace the older methods.—*Ralph H. Parker, University of Missouri.*

Cost of Library Services

The Cost of Providing Library Services to Groups in the Purdue University Community—1961. By Gerald L. Quatman. Lafayette, Ind.: Purdue University Library, 1962. 58l. Appl.

The purpose of the Purdue study was to determine the average cost of providing library services and facilities to members of the university engaged in research supported by organizations outside the university. This clientele works primarily in the science field, uses more current materials, and needs the material more quickly than others.

The author was a graduate research assistant at Purdue who worked with Purdue librarians and with a representative from the university's business office. The duration of the study was from February 1961—January 1962, a period of one year. Twenty survey days were selected. Entire days were used for a sample of usage. The days were selected to represent as equitably as possible other days with similar characteristics.

The information in this study will provide a basis for including library cost estimates in government and industrial research contract budgets, the purpose for which the study was made. But, in addition, it will provide librarians with a greatly needed study of true library costs. To know that the library cost to serve undergraduates is \$44.22 per year, that the graduate cost is 2.8 times as great as that to undergraduates, and that faculty cost is 2.267 times as great, would be invaluable information to the library administrator. These ratios reflect the fact that faculty members and graduate students use more costly library services than undergraduate students.

The process used by Quatman in arriving at his cost figures is well worth studying. It can be used as a guideline for future cost studies in libraries. These studies are greatly needed. The study was conducted in five steps:

1. The actual use of twenty library services was measured.
2. The costs of the services were computed.
3. The costs of the services were allocated to the using groups on the basis of percentage of use.
4. The total costs chargeable were divided by the number of persons.
5. The ratios of graduate student to undergraduate student library costs and faculty member to undergraduate student library costs were computed.

The tables are numerous, and the presentation is lucid. Table VIII shows the average percentage of time spent on various library services and table IX, the percentage of reference time spent on each type of question; table XII, which shows the distribution of the cost of library services, is exceedingly helpful to busy administrators. Quatman's study of space expenditures is perhaps the most original section of the study.

It is hoped that this study will stimulate other cost analyses in the library profession; all administrators need them constantly.—*Lorena Garloch, University of Pittsburgh.*

Cataloging

Sample Catalog Cards, Illustrating Solutions to Problems in Descriptive Cataloging. By Robert B. Slocum. New York: The Scarecrow Press, 1962. 190p. \$4.50.

Cataloging Made Easy. By A. Stan Rescoe. New York: The Scarecrow Press, 1962. 210p. \$5.

The cataloger is always seeking help with the idiosyncrasies encountered in original cataloging. Here are two books which promise help. As Mr. Slocum points out in his preface, there are printed codes available for describing works with peculiar and unusual characteristics, but they often leave that element of vagueness that produced uncertainty in the first instance. *Sample Catalog Cards* provides, under appropriate headings, examples of what has been done on Library of Congress printed cards. *Cataloging Made Easy* summarizes rules and provides examples. Both will be useful to catalogers.