ROBERT J. GREENE

The Effectiveness of Browsing

Faculty at Georgia Institute of Technology specified how they learned about samples of books borrowed from the library. They also rated the usefulness of these books. The relationship between the way in which library books are discovered and their subsequent usefulness is examined. The effectiveness of browsing as a method of learning about books is discussed.

Several previous studies have attempted to determine the comparative importance of the different sources employed by scientists in locating information. Voigt reviewed some of these studies and found considerable agreement in the ranking of the various sources.[1] Browsing was found to be the method most often used to learn about printed information sources. The second most important method was the recommendations of colleagues. Other sources, listed in order of their importance, were: the scientist's own memory, citations found in books and periodicals, personal indexes, and library catalogs.

The use studies reviewed by Voigt compared the different methods of locating information from a quantitative point of view. That is, the various studies ranked the methods according to how often they were used or how much information they produced. Except for a few indexing studies, such as the Cranfield investigations, which have included library card catalogs, very little research is available about the quality of the information produced by each of the methods. Therefore, little is known about the value or usefulness of information discovered in different ways in libraries.

One study which briefly touched on the usefulness of books and serials found through browsing was made by Fussler and Simon.[2] They found that 56 percent of a sample of physics and history volumes removed from the shelves by users were located through browsing. The remaining 44 percent were discovered through the card catalog or were "known items." Forty-six percent of the persons who found material by browsing in the stacks reported that they had made some use of the books discovered in this way.

Another investigation which gleaned some information about the usefulness of library materials was Slater and Fisher's examination of the users of British technical libraries.[3] For each of the 6,300 people who returned questionnaires, the average number of documents consulted was 4.1, and the average number of these that were found useful was 2.1. Slater and Fisher also found that 57 percent of the library users considered their visit to the library a success, and another 24 percent considered their visit a partial success. Only 6 percent of the users considered their visit a failure.

Setting and Methodology for the Study

The present study examines the relationship between how a book is discovered and its subsequent value to its user. The study is limited to samples of faculty users of the Georgia Institute of Technology Library. Although most of the faculty at Georgia Tech are scientists or engineers, several faculty are in the social sciences or humanities. The

Robert J. Greene is librarian, Kennesaw Junior College, Marietta, Georgia.

samples include some of these non-scientists and non-engineers. This may limit the present study's comparability with previous studies. The present study is also limited to an examination of books loaned to faculty and does not look at non-book materials or in-library use of books.

This investigation examines data gathered in a study of a library remote access system at Georgia Institute of Technology in Atlanta, Georgia.[4, 5] The remote access system, called LENDS, consists of two main components: (1) microfiche copies of the card catalog placed in thirty-five academic and research departments; and (2) a book delivery system. In addition to borrowing books in the conventional manner, LENDS provides faculty with the option of searching the catalogs in their departments and having books delivered.

Part of the study of the LENDS system consisted of two questionnaires sent to Georgia Tech faculty to see if the LENDS remote access system had any effect on the circulation of library books. A pretest of the instrument used indicated that faculty could remember the circumstances of a specific loan for at least a period of one month. The first questionnaire (pre-LENDS) was sent to a random sample of faculty who had borrowed books during November 1971, which was before the implementation of LENDS. The second questionnaire was sent to a random sample of faculty who had borrowed books during May 1972, which was after the start of LENDS. Both questionnaires asked the faculty members to respond to a number of questions concerning specific books they had borrowed.

Of the 233 questionnaires sent out for the pre-LENDS sample, 209 (89.7 percent) were returned. This response rate was slightly exceeded for the second questionnaire. Two hundred and forty-four questionnaires were sent out for the post-LENDS sample and 222 (91.0 percent) of these were returned. Both the pre-LENDS and post-LENDS questionnaires asked the faculty to respond to two questions in relation to books they had borrowed. The data obtained from faculty replies to these two questions are presented in Tables 1 and 2.

Table 1 shows a high degree of consistency for the distribution of replies between the pre-LENDS and the post-LENDS samples. It also shows that, as in previous studies, browsing was the most used method of finding out about books. However, the data in Table 1 indicate that the library catalog and references in other publications rank higher as methods of learning about books than in previous studies. Similarly, recommendations of books by colleagues and the subject's own memory rank lower in this study than in previous studies. These differences may be due to

TABLE 1

How Faculty Learned About Books Borrowed from the Georgia Tech Library

How the Book Was "Discovered"	Pre-LENDS Sample Number	Pre-LENDS Sample Percent	Post-LENDS Sample Number	Post-LENDS Sample Percent	Total Number	Total Percent
1. References in a publication*	58	27.8	55	24.8	113	26.2
2. Browsing in the library	67	32.1	68	30.6	135	31.3
3. From a colleague	16	7.6	22	9.9	38	8.8
4. From the library catalogs†	50	23.9	53	23.9	103	23.9
5. From memory	9	4.3	13	5.9	22	5.1
6. From some other source	7	3.3	9	4.0	16	3.7
7. No response	2	1.0	2	.9	4	1.0
Totals	209	100.0	222	100.0	431	100.0

* Includes responses specifying advertisement or book reviews from category 6.
† Includes responses specifying either the library card catalog or the LENDS microfiche catalog.

TABLE 2

VALUE OR USEFULNESS OF LIBRARY BOOKS BORROWED BY GEORGIA TECH FACULTY

Value or Usefulness Ratings	Pre-LENDS Sample Number	Pre-LENDS Sample Percent	Post-LENDS Sample Number	Post-LENDS Sample Percent	Total Number	Total Percent
1. Book was "essential"	57	27.3	62	27.9	119	27.6
2. Book was "useful"	99	47.4	111	50.0	210	48.7
3. Book was "interesting or of incidental value"	35	16.7	26	11.7	61	14.1
4. Book was not read or could not be judged	9	4.3	12	5.4	21	4.9
5. Book was of no value	7	3.3	5	2.3	12	2.8
6. No response	2	1.0	6	2.7	8	1.9
Totals	209	100.0	222	100.0	431	100.0

the fact that previous studies have included other sources of information besides books.

There was a high degree of correspondence between the pre-LENDS sample and the post-LENDS sample in the replies to the second question, as shown in Table 2. Table 2 also shows that about three-fourths (75.6 percent) of the books borrowed were considered essential or useful for the purpose for which they were checked out of the library. Only twelve of the books were judged to be of no value.

ANALYSIS OF DATA

The data presented in the previous section were analyzed to determine if a relationship exists between the way in which a book is discovered and the subsequent value of the book. Since data gathered consisted of frequencies, the chi-square test was chosen as a method of analysis. The procedure and tests described by Woolf were used to pool the data from the pre-LENDS and the post-LENDS samples for chi-square analysis.[6]

The pooled data were inserted in a contingency table (Table 3). In order to minimize problems resulting from low frequencies in some of the cells of this contingency table, books were classified as either "essential" or "not essential" from the faculty ratings. The "not essential" classification consisted of the books rated as "useful," "interesting or of incidental value," and "not useful." Responses indicating that faculty had not read or had not judged the book and "no responses" were not included in the analysis.

The chi-square value of 18.075 obtained in the analysis of Table 3 is significant at the .005 level, which is considered statistically significant. Therefore, it is concluded that the two variables of how a book is discovered and the subsequent usefulness of that book are related.

Further analysis of these data was made by assigning arbitrary numerical values to the faculty usefulness rating. Book ratings were assigned the following values:

Essential	3
Useful	2
Interesting or incidental value	1
Not useful	0

Books not read or not judged and books not discovered in any of the ways listed in Table 3 were not given a numerical value. Mean values for books discovered in different ways were computed from the assigned values. Table 4 ranks the different methods of learning about books by the mean value of the books discovered by each method.

DISCUSSION

The results presented in this report should be regarded as preliminary. Further investigation is needed to determine if other variables (e.g., the purpose for which a book is borrowed) play a part in the relationship between how a book is discovered and its subsequent value. Also, the previously noted

TABLE 3

HOW GEORGIA TECH FACULTY DISCOVERED BORROWED LIBRARY BOOKS AND THE USEFULNESS OF THESE BOOKS

How the Book Was "Discovered"	Usefulness Rating of the Book: Essential Number	Essential Percent	Not Essential Number	Not Essential Percent	Total Number	Total Percent
Reference in a publication	44	40.7	64	59.3	108	100.0
Browsing in the library	23	18.3	103	81.7	126	100.0
From a colleague	15	39.5	23	60.5	38	100.0
From the library catalogs	26	26.5	72	73.5	98	100.0
Memory	9	42.9	12	57.1	21	100.0
Totals	117	29.9	274	70.1	391	100.0

$X^2 = 18.075$ with 4 degrees of freedom.
X^2 is significant at greater than .005 level.

limitation of the study to *books* borrowed by *faculty* at *one institution* should be kept in mind in making any generalizations. Despite these limitations, however, the findings do suggest important implications in the areas of browsing and the open-stack storage of books.

Table 1 shows that, from a quantitative point of view, browsing is the most important method used by faculty to learn about library books they borrow. However, Table 4 shows that browsing ranks last among all of the methods of learning about books when the usefulness of the books discovered by the various methods is considered. For example, browsing was responsible for 31 percent of the books borrowed in this study, but browsing produced only 18 percent of the books rated as essential by faculty. By comparison, references in publications were responsible for 27 percent of the borrowed books, but produced 41 percent of the books rated as essential.

With these findings in mind, perhaps it is time to review Gordon's suggestion of taking a second look at the almost universal acceptance by library administrators of the open-stack concept. Gordon questions if it is really in the "best interest of the reader to turn him loose in the collection to seek his own salvation."[7] The main argument for the open-stack arrangement of books is that it permits browsing. However, if browsing is the least effective way of discovering books, as the present study suggests, then library administrators may wish to reevaluate the usefulness of costly open book stacks.

TABLE 4

VALUE OF BOOKS DISCOVERED BY DIFFERENT METHODS

How Books Were Discovered	Numbers of Books	Mean Value of Books
From colleagues	38	2.26
References in publications	108	2.25
From memory	21	2.23
From library catalogs	98	2.12
Browsing in the library	126	1.87
All methods	391	2.09

REFERENCES

1. Melvin J. Voigt, *Scientists' Approaches to Information* (ACRL Monograph 24 [Chicago: American Library Assn., 1961]), p.5–6.
2. Herman H. Fussler and Julian L. Simon, *Patterns in the Use of Books in Large Research Libraries* (Chicago: University of Chicago Libraries, 1961).
3. Margaret Slater and Pamela Fisher, *Use Made of Libraries* (ASLIB Occasional Publication 2 [London, ASLIB, 1969]).
4. Robert John Greene, "Faculty Acceptance and Use of a System Providing Remote Bibliographic and Physical Access to an Academic Library" (Ph.D. dissertation, Florida State Univ., 1973).
5. Robert J. Greene, "LENDS: An Approach to the Centralization/Decentralization Dilemma," *College & Research Libraries* 36: 201–7 (May 1975).
6. Charles M. Woolf, *Principles of Biometry* (Princeton: Van Nostrand, 1968), p.239–42.
7. Harold D. Gordon, "Open Stacks: A Second Look," *Library Journal* 94:1844–45 (May 1, 1969).