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Academic Library Procedures for Providing Students with Required Reading Materials

The literature on reserve book systems in academic libraries is reviewed and problems with existing reserve book systems are discussed. The results are presented as a small-scale study of closed stack reserve book reading by one class of library school students. Waiting time and inconvenience occur even with a small class of fifteen students when only one or two copies of the required readings are placed on reserve and when students are only given the interval between two class periods to do the reading. The data from this study were used to develop a minimum cost decision model based on multiple channel infinite queueing theory. The study concludes that student waiting time is a significant and, until now, largely ignored factor in reserve book systems.

"THE UNSATISFACTORINESS of the reserved book arrangements in most colleges is agreed to by students, librarians, and instructors alike. The brief periods for which the books may be used, the necessity for many duplicates, the waste involved when reading lists are changed, the large number of volumes tied up which are not used, the crowded, noisy and restless condition of the reserved book reading room, the tendency of students never to go beyond the books given this special handling, are all causes of complaint."[1]

The paragraph above was written in 1940. It might well have been written in 1970. In this paper, the literature on reserve book systems is reviewed and a small-scale study on the subject is described. The typical reserve book system in today's college and university libraries is either a closed stack system, an open stack system, or a combination of both. The journal collection can be considered a part of the reserve book system since required readings are commonly assigned in journals. The journals are typically read in the library or are loaned for shorter periods than circulating books.

Review of the Literature

As early as 1878, an article on "Special Reserves" appeared in the *Library Journal*.[2] Library literature on this subject is mainly concerned with descriptions of systems in given libraries and comments from the librarians' point of view.

The authors are, respectively, Professor of Library Science, Professor of Finance, and Graduate Student in Florida State University.

Many of these librarians have thought, as did Pierce Butler, that "required reading is an overworked fad of the present generation of teachers."[3] A 1965 editorial in *Library Journal* suggested that the reserve book system tends to restrict students to reading only the assigned material and to discourage them from doing independent reading in the field being studied.[4]

Other librarians have attempted to find a system that would be more satisfactory. Branscomb felt that "a considerable waste of time and effort is associated with the present (reserve book) practice."[5] He suggested that materials which must be read by a large number of students could be supplied in many cases by more effective means. Alternatives to the reserve book system have been suggested and tried. Branscomb wrote ". . . it would probably be a kindness to most students and certainly an educational gain, if they were required to buy more of their indispensable books than they do in most colleges. The use of cheaper reprints and carefully planned rental sets are already being brought in to help solve the problem."[6] The provision of rental book collections has been attempted at several colleges and universities, but it was found in at least one instance that such collections proved to be too much of a financial hazard to the library.[7] A 1959 article which reviewed the advantages and disadvantages of rental collections considered the fact that the provision of rental books was out of the province of the library.[8]

Librarians have tried many "variations on a theme" in attempting to solve the problem of reserve book systems, *e.g.*, open-shelf reserves,[9] closed-shelf reserves,[10] time-limited reserves,[11] and duplicate collections.[12]

In 1945 Gordon Gray, noting the trend toward assigned reading in journals, suggested the use of mimeographed or photostatic copies in the reserve room.[13] Use of photocopies in public library reference rooms is currently being tried in California,[14] but no published reports on actual use of mimeographed copies or photocopies in college and university library reserve rooms have been found. It is, however, common knowledge among librarians that the use of copies of readings is being practiced by both libraries and teaching departments, in some cases disregarding existing copyright laws. This is in addition to the large amount of photocopying being done by students for their own use.

Very few of the reserve book studies have looked at the problem from the standpoint of the student, yet the report of a preliminary study at Florida State University (to be described below) indicates that the *principal* cost factor in the reserve book system is student time.[15] In a study designed to determine the reasons for the failure of students to read assigned material, A. D. Burnett noted that the "immediacy of availability appeared to be the most important factor" and that, for the student, delay of any kind in obtaining the reading amounted to failure.[16]

The educational literature is almost totally devoid of articles on reserve book and required reading. Two studies have been done showing that students who make considerable use of the library do better academically than those who do not, but neither of these studies has investigated required reading in the library as a separate part of the study.[17]

No reports have been found in the literature of any comprehensive, up-to-date studies of the reserve book system or its alternatives which study the system from the standpoint of all parties concerned: the student, the instructor, the librarian, and, where copyright laws are involved, the author and the publisher. Bibliographies of the literature show that reserve book systems have concerned academic librarians for many years. Although the current lit-

erature contains little material on the subject of reserve book systems, discussion with librarians, instructors, and students has indicated that such systems still cause dissatisfaction and that a systematic study is needed.

Pilot Study of a Closed Stack Reserve Book System

A small-scale study of reserve book reading in a closed-stack reserve book system was made with a class of fifteen library school students at Florida State University. The class met three times a week (Mondays, Wednesdays, and Fridays). During the two weeks of the study, twelve reading assignments were given. Two readings were given during each of the six class periods with instructions to complete the reading for the next class period. One to three copies of the readings were placed on reserve. The students were asked to record on a form the time in minutes each reading was charged out (the service time), whether they had to wait for the reading, and, if there was a wait, whether it caused any inconvenience. The mean reading time ranged from nineteen to fifty-four minutes with a mean of thirty-five minutes for the twelve readings. The results of this study are summarized in the following table.

It can be seen that, even with a small class of fifteen students and one in which not all of the students charged out the required readings, some inconvenience was reported. This occurred when only one or two copies of the readings were placed on reserve and when students were given only the interval between two class periods to do the reading.

Reserve book systems appear to present as yet unresolved problems to students, faculty, and librarians in colleges and universities. Systems analysis methodology is recommended to characterize the objectives of reserve book systems in measurable terms and to develop as well as test alternate means for achieving the stated objectives.

RECORD OF RESERVE BOOK USE BY A CLASS OF FIFTEEN LIBRARY SCHOOL STUDENTS

Reading Assignment	Mean Service Time per Student (Minutes)	Copies on Reading	Number of Students Who:		
			Charged Out Reading	Had to Wait	Were Inconvenienced by Wait
A	29	3	13	none	none
B	30	1	14	6	2
C	41	2	12	none	none
D	54	1	13	3	3
E	29	3	14	none	none
F	19	1	13	1	none
G	35	2	13	none	none
H	37	1	12	1	none
I	38	2	12	6	5
J	41	1	12	4	2
K	30	2	11	2	1
L	38	3	13	1	none

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2. "Special Reserves (at Harvard)," *Library Journal*, III (1878), 271.
3. Pierce Butler, "College Students' Reading," *Bulletin of the Association of American Colleges*, XIX (1933), 345.
4. J. N. Berry, "Unreserved Book," *Library Journal*, XC (1965), 2228.
5. Branscomb, *op. cit.*, p. 57.
6. *Ibid.*, p. 130.

7. E. A. Henry, "University of Chicago Rental Collections," *Library Journal,* LIII (1928), 253.
8. A. Kusler, "Rental Collection: Pro and Con," *Library Journal,* LXXXIV (1959), 1753.
9. A. Laing, "Reading Programs," *Dartmouth College Library Bulletin,* II (1958), 3.
10. Branscomb, *op. cit.,* p. 127.
11. A. J. Vennix, "Two-hour Reserve Desk at University of Nebraska," *Library Journal,* LXXVII (1952), 1040.
12. Branscomb, *op. cit.,* p. 128.
13. G. W. Gray, "Teachers, Reserve Lists, and Librarians," *Wilson Library Bulletin,* XIX (1945), 695.
14. Martin Erlich, "The Mass Assignment," *Library Journal,* LXXXXIII (1968), 3099.
15. Charles L. Hubbard, G. Jahoda, and T. Johnson, *Minimum Cost Decision Model for Additional Copies of Library Books Based on Multichannel Queueing Theory* (Tallahassee: Florida State University, 1968), p. 1. The data in the table were used in the development of a minimum cost decision model based on multiple channel infinite queuing theory. Copies of a particular reading are treated as service channels, and individual readers become units which require service. Service time is the length of time a reader spends with a reading, and waiting time in the queue is the delay between arrival at a charge-out desk and receipt of the reading. The limited empirical data supported a double Poisson model for distribution of arrival and departure rates (service rates). Long-run incremental costs are investigated and allocated to book life, library service, and waiting time of readers. The value optimization consists of finding the number of books (service channels) which minimize long-run incremental cost to society. The queue parameters of mean arrival rate and mean service rate are reinterpreted into four decision variables for analysis of individual readings. These four decision variables are: (1) number of readers; (2) time available to complete a reading; (3) length of reading in words; and (4) difficulty of reading in words per unit time. A series of sample decision charts is presented which permits the selection of an optimal number of copies for a particular reading in terms of the four decision variables and unit cost of a given library.
16. A. D. Burnett, "Reader Failure; a Pilot Study," *Research in Librarianship,* I (1967), 145.
17. K. L. Heaton and Vivian Weedon, *The Failing Student* (Chicago: University of Chicago Press, 1939), p. 76; A. E. Eurich, "The Significance of Library Reading among College Students," *School and Society,* XXXVI (1932), 92-96. ■■