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DOCUMENT RESERVATION PATTERN IN A SPECIAL LIBRARY: A Case Study

M. S. SRIDHAR, *Librarian, ISRO Satellite Centre, Industrial Estate, Peenya, Bangalore.*

Over 1600 reservations of documents made at ISRO Satellite Centre Library during 1982 are analysed in relation to total collection and membership. A representative sample of reservations made for high demand documents are further examined in relation to year of acquisition, year of publication (age) and subject of the document. Results of the analysis and observations are presented with suggestions for better record keeping and feedback for lending system and collection development policy.

Introduction

Collection and membership of ISRO Satellite Centre Library have almost doubled in the last four years resulting in manifold increase in lending activity and use of documents. With the objective of maximising the use of documents among those who are in need, provisions for reservation of documents and levying overdue charges for late returning of documents were introduced during 1979. The factors which have direct bearing on reservation activity are size and homogeneity of users as well as collection, simultaneous demand for documents by more than one user, duration of issue of documents, fine system, user attitude and perseverance in borrowing a document etc.

1 Objectives and Scope

In order to know the trend in reservation and also to have feedback for better lending system and collection development policy all

reservations for books and paper copy reports received at charging desk of the Library during 1982 were collection and analysed for this study. These documents are normally issued for 21 days with a provision to levy overdue charge of 10 ps. per day per document till three months from the date of issue and recover the replacement cost of the document together with overdue charges thereafter. If a particular document has more than three reservations at a time the issue period is often reduced to 7 or 14 days in order to make it available to all those in the reservation list within a reasonable period. About 1,500 reference and restricted documents which are not issued for 21 days and hence not covered under reservation provision are excluded from the study.

Due to limitation of manually operated lending system including lack of complete details of documents as well as users for every reservation transaction, a detailed analysis for a larger data could not be undertaken. Incorporating the total number of books published in the subjectwise analysis and comparison of results with statistics of similar special libraries are much desired. However, a detailed analysis of reservations against different user characteristics is being done as part of a separate study.

2 Frequency Distribution of the Data

The frequency distribution of number of documents against number of reservations is depicted in Table 1. When this data is plotted on a graph, a fairly smooth wide angled 'L' shaped curve with long tail along number of reservations can be seen.

As expected almost one half of reserved documents had only one reservation during the year. Many of these are as a result of initial curiosity about a new book on display. A little less than one-fifth of reserved books had two reservations. As number of reservations increase the number of titles fall sharply. No report had more than five reservations during the year whereas some books had as many as 14 to 20 reservations. This can be explained by the facts that (i) many reports are otherwise accessible to users as gift from authors or from organisations of issue (ii) reports normally deal with highly specialised area which is in the forefront of R&D and attract a definite small set of users and (iii) finally, books are more popular than reports

TABLE 1. Frequency Distribution of Documents against Reservations

No. of reservations	Books		Reports		Total	
	No. of Books	Total reservations	No. of reports	Total reservations	No. of documents	Total reservations
1	260	260	47	47	307	307
2	102	204	07	14	109	218
3	052	156	03	09	055	165
4	028	112	02	08	030	120
5	023	115	02	10	025	125
6	031	186	00	00	031	186
7	012	084	00	00	012	084
8-10	022	192	00	00	022	192
11-13	014	166	00	00	014	166
14 & above	004	068	00	00	004	068
Total	584	1543	61	88	609	1631

TABLE 2. Frequency Distribution of Users against Reservations

No. of reservations	No. of users	Total reservations
1	118	118
2	081	162
3	048	144
4	022	088
5	022	110
6	019	114
7	015	105
8	012	096
9	008	072
10	008	080
11	005	055
12	003	036
13	003	039
14	001	014
15-20	011	184
21-54	006	204
Total	382	1631

for meeting 'continuing education' requirement of large number of users.

Library has about 1000 registered members and from Table 2 it is clear that little over one-third of these members have availed reservation facility during 1982. Among those availed little less than one-third have reserved only one book. The number of members decreases sharply as number of reservations increase. This frequency distribution of users against reservations when plotted on graph results in a typical simple asymptote curve. It is very interesting to note that one member has made 54 reservations in the year amounting to an average of one per week. Also there are four members each with 23, 24, 27 and 29 reservations. There are 45 members (or 12% of the members) who availed reservation facility each with more than 8 reservations represented 684 reservations or 42% of total reservations during the year.

3 Comparison of Reservation Statistics with Collection and Membership

Table 3 summarises reservation, collection and membership statistics of the Library for comparison. About 5.5% of total books and 1.7% of total reports are reserved during the year. Average reservation per document is 2.8 for book and 1.4 for reports. Average reservation per member is little over four.

Further analysis of reservations against year of acquisition, year of publication (age) and subject of the document is made only for 40 books having more than 7 reservations and 7 reports having more than 2 reservations. As could be seen from Table 1 these 47 documents constituting 7.72% of reserved documents account for 453 reservations or 27.77% of total reservations.

4. Reservation vs Year of Acquisition of Document

It is clear from Table 4 that except few fundamental classic books in the field acquired during initial years (i.e., 1973, 1974 and 1977) all other tightly reserved documents were acquired during last four years. Again as expected maximum reservations are made for books acquired during 1982 and the number of reservations steadily decreases as we go backwards. The data indicates that except classic

TABLE 3. Reservation, Collection and Membership Statistics

Sl. No.	Description	Books	Reports	Total
1.	Total reservations	1543	88	1631
2.	Collection	10000	3500	13500
3.	No. of documents reserved	548	61	609
4.	Percentage of collection reserved (3/2 X 100)	5.48	1.74	4.51
5.	Average reservation per document (1/3)	2.78	1.44	2.68
6.	No. of members who availed reservation facility			382
7.	Average reservation per member (1/6)			4.25
8.	Total members			1000

TABLE 4. Reservation Vs. Year of Acquisition of Document

Year of Acquisition	Books		Reports	
	No. with more than 7 reservations	Total No. of reservations	No. with more than 2 reservations	Total no. of reservations
1982	18	186	7	27
1981	04	057	0	0
1980	06	062	0	0
1978	00	000	0	0
1977	01	009	0	0
1976	00	000	0	0
1975	00	000	0	0
1974	01	013	0	0
1973	04	036	0	0
Total	40	426	7	27

books which are needed repeatedly by many new as well as old members, other books are less likely to have reservations after 3-4 years. However in case of reports, all highly reserved reports were acquired during 1982. Thus the data establish that recency/currency of the acquired document has a direct bearing on reservation.

5 Reservation vs Age of Document

The same data presented against year of publication of the document reveal that reservations are concentrated among documents published during latest four years. However, it is obvious from Table 5 that books published as early as 1966 and 1967 are also in great demand. Thus reservations are spread over almost last 15 years of the publications. To some extent, this may be an indication of the technological gap. The data appears to be inadequate for above generalisation as far as reports are concerned.

TABLE 5. Reservation Vs. Year of Publication (Age) of Document

Year of Publication	Books		Reports	
	No. with more than 7 reservations	Total no. reservations	No. with more than 2 reservations	Total no. of reservations
1982	1	8	1	3
1981	9	98	0	0
1980	9	95	2	9
1979	6	70	0	0
1978	4	49	0	0
1977	1	09	0	0
1976	1	11	0	0
1975	1	13	0	0
1974	0	00	3	10
1973	1	08	0	0
1971	2	21	0	0
1967	2	18	0	0
1966	0	00	1	5
Total	40	426	7	27

TABLE 6a Reservation Vs. Subject (Based on main divisions of UDC)

Main divisions of UDC	Approx. % of members	Approx. % of stock	Reservations for books		
			No. with more than 7 reservations	Total no. of reservations	% of reservations
0	—	4	0	0	0
1, 2, 3 & 4	—			8	1.8
5	12	32		46	10.7
6	85	58	34	372	87.4
7, 8 & 9	—	2	0	0	0
Total	97	100	40	426	100.0

TABLE 6b Reservation Vs. Subject of Documents (For classes in main division 6 of UDC)

Class no. of UDC	Approx. % of stock	Reservations for books		
		No. with more than 7 reservations	Total no. of reservations	% of reservations
6 (General)	0.3	0	0	0
61	1.1	0	0	0
62	38.5	20	204	47.9
64, 64 & 60	0.8	0	0	0
65	3.7	0	0	0
66	1.6	0	0	0
67/68	12.0	14	168	39.5
Total	58.0	34	372	87.4

6 Reservation vs Subject of Document

A subject-wise distribution of reservations for books, library members and the total book stock based on UDC divisions are presented in Table 6a and 6b. It is not a surprise that out of 7 highly reserved reports, 6 are NASA reports and one is Aerospace Corporation report as NASA reports form over 50% of the present hardcopy collection.

It is obvious from Table 6a that almost all users and 90% of books collection fall under main divisions 5 (Mathematics and Natural Sciences) and 6 (Applied Sciences and Technology). Both put together account for 98% of reservations. A comparison between main divisions 5 and 6 shows that books in 6 are in much more demand than those in 5. Books under main division 5 constituting 32% of collection represent only about 11% of reservations whereas books under main division 6 constituting 50% of collection represent 87% of reservations. The subject-wise analysis shows that the percentage of reservations in a subject correlates better with percentage of members than percentage of stock.

A further analysis of reservations for books in main division 6 presented in Table 6b reveals that all reservations fall under class number 62 (Engineering and Technology) and 67/68 (Manufacturers). A great majority of members have specialisation as in class number 62 and the only other class which has very meagre representation of members is 67/68. Thus we can safely conclude that high demand for books naturally comes only in the areas of specialisation of users. It may be interesting to note that except one title all other titles in class number 62 were on Electronics and Electrical Engineering (621.3) and all the titles in class number 67/68 were on Data Processing, Computer Science, etc. (681.3). Incidentally these two are high technology, fast growing and all pervasive areas, specialised by more than 50% of users.

7 Results and Observations

It is assumed in the study that, by and large, document reservation activity in the library reflect awareness and perseverance of users, overall demand for and use of library documents.

To summarise the results, while frequency distribution of documents against reservations gave a fairly smooth wide angled 'L' shaped curve with long tail, frequency distribution of users against reservations resulted in a typical asymptotic curve. Only about one-third of existing members used reservation facility. One-half of reserved documents had only one reservation during the year. Maximum reservations for books and reports were twenty and five respectively.

About 12% of members contributed to 42% of reservation transactions. One member has reserved almost one book per week and four others have reserved one book per fortnight. Average reservation per member is 4.25 and average reservation per document is 2.68. The percentage of collection subjected to reservation during the year was 5.48 in case of books and 1.74 in case of reports.

Maximum reservations were made for books acquired during the current year and most of the reservations were for books acquired during last 3-4 years with the exception of few fundamental classic books in the field. Though slight concentration of reservations on documents published during last 4-5 years is seen, age of document does not clearly correlate with reservation pattern. Reservation is spread over books published during last 15 years.

Most of the reserved reports are NASA reports which form more than 50% of the present collection. While pure science books representing 32% of collection cover only 11% of reservations, Applied Science and technology books representing 58% of the collection cover 87% of reservations. Reservations for books falling under other main divisions of UDC are almost negligible. Percentage of reservations in a subject correlates better with percentage of members in that subject than with percentage of stock.

All reservations for books under Applied Science and Technology are for books in the areas of Electronics, Electrical Engineering, Data Processing and Computer Science. In other words, most of the reservations were made in high technology and fast growing areas which represent major part of the existing collection and also the specialisation of majority of users.

As a feed back to lending system, it is obvious that more details, especially call number of document and staff number of user, of each and every reservation should be made available preferably as part of automated lending system. The study clearly points that latest documents in UDC class no. 6 need to be acquired quickly and in multiple copies. Lastly, in order to explore the possibility of adding additional copies of high demand books, a comprehensive list of 55 books with 10 or more reservations was made after scanning reservations made during 1980 and 1981. This list included most of the 40 high demand books analysed in this study. A qualitative scrutiny of the list by concerned specialists resulted in recommendation for additional copies of many of these books barring few text-books identified as having temporary demand.

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About the Author

Dr. M. S. Sridhar is a post graduate in mathematics and business management and a doctorate in library and information science. He is in the profession for last 35 years. Since 1978 he is heading the Library and Documentation Division of ISRO Satellite Centre, Bangalore. Earlier he has worked in the libraries of National Aeronautical Laboratory (Bangalore), Indian Institute of Management (Bangalore) and University of Mysore. Dr. Sridhar has published four books ('User research: a review of information-behaviour studies in science and technology', 'Problems of collection development in special libraries', 'Information behaviour of scientists and engineers' and 'Use and user research with twenty case studies') and 74 research papers, written 19 course material for BLIS and MLIS, presented over 22 papers in conferences and seminars, and contributed 5 chapters to books. **E-mail:** sridharmirle@yahoo.com, mirlesridhar@gmail.com, sridhar@isac.gov.in ; **Phone:** 91-80-25084451; **Fax:** 91-80-25084475.

