

Periodical Usage in an Education-Psychology Library

A study was conducted of periodical usage at the Education-Psychology Library, Ohio State University. The library's closed reserve system provided circulation data which were analyzed according to currency of usage and usage of specific titles. Such factors as loan period, binding, multiple copies, closed reserve, and indexing services were considered in relation to actual usage patterns for improved management of the journal collection. The analysis incorporated discussion of the techniques and limitations of journal usage studies.

THIS CASE STUDY of the periodical usage at the Education-Psychology Library, Ohio State University, was initiated to determine the little-use materials at a time when subscription rates became a major concern. The inquiry was expanded to examine the usage by the date of publication in addition to the usage of each specific title in order to provide data needed for other possible changes in management policy.

Over the years, a number of periodical usage studies have appeared which similarly gathered data for better administrative decisions. Each has found that the circulation patterns reported were not unlike the others—that is, the current years accounted for most of the usage, contributed by a limited number of highly used periodicals.¹⁻³ However, several writers have questioned the value of use studies which are based on the single measure of raw data, claiming that the conclusions can be misleading

if not dangerous. Raisig pointed out that such studies measure the physical volumes borrowed, not the intellectual units. For example, the record would indicate one physical volume used for possibly three citations pursued; and few or no records would indicate the citations a library could not deliver or the patron's behavior in pursuing them.⁴ Subramanyam added his caution against any ranking of journals based on one measure in addition to pointing out the specific limitations of such single measures as citation, source, and usage counts.⁵ Sandison's shelf density study even questioned the existence of obsolescence.⁶

These criticisms of use studies are valid and important contributions to library knowledge and methodology. Nonetheless, it is felt that this case study can be of value for several reasons.

First, the efforts to date have concentrated on the literatures of the natural, physical, and health sciences rather than on social science fields, such as education and psychology.

Second, the goals of this study stressed the identification of low-use items, and determination of rough blocks of titles for policy decisions was

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deemed adequate. Although some distortion might have occurred by measuring only the usage of material available and not the total demand, the general patterns were thought to be a sufficiently workable basis for coping with the shifting and often unpredictable needs of the academic population.

Third, a case study such as this can point out its own limitations and strengths, which may be helpful to others in planning a similar study. It also serves as a vehicle for discussing the relationship of such data to periodical management concerns regardless of the specific figures stated.

METHODOLOGY

The primary user populations of the Education-Psychology Library are the undergraduates, graduate students, and faculty of the College of Education and the Department of Psychology in the College of Social and Behavioral Sciences, Ohio State University.

The data employed for the study are based on user circulation records of the ten most recent years of 804 journal titles. The issues of each title for 1962 through 1972 were held in closed reserve for a two-hour loan period, requiring a slip to be filled out for each circulation. These were arranged and counted in two ways. First, the slips were sorted by the year of publication. Figures can vary slightly, due to some split-year volume numbers for bound issues. Second, the slips were grouped by call number (title) and the number per title was recorded. It should be noted that this is a study of "title" usage. Few users were allowed to browse in the closed reserve area, so the choice of requests was based largely on known items, on the title of the article, or on the subject indicators in the indexes. In open stacks, rejection of an article probably would have occurred before the circulation.

A preliminary study based on twenty-eight days in October 1972 and four randomly chosen days in November

1972 surveyed 7,623 circulations. These provided the only data used for analyzing usage in relation to currency. The examination of specific title usage also included slips from winter, spring, and summer quarters (January through August) 1973, which brought the total to 57,332 circulations. Because nonusage was of prime importance, the size of the data base was deemed justified for a thorough study.

RESULTS AND DISCUSSION

Currency of Usage

Table 1 displays the usage by date of publication. The pattern is typical of most use studies in that the most current issues were the most heavily used. The table indicates that eight years of holdings provided almost 91 percent of the circulation, and five years, 76 percent. The data support the customary practice of restricted circulation for these high-demand items. Apparently, ten years is a convenient but arbitrary cut-off point for placing items on closed reserve. A revised cut-off date would free lesser-used older volumes for a longer loan period, although increased space would be required elsewhere to house them.

Sandison's application of his density of use per meter of shelf space to physics journals at MIT questions the above pattern of obsolescence. While

TABLE 1
CURRENCY OF USAGE

Date of Volume	Number of Circulations	Year's Percent of Total Circulation	Cumulative Percent of Total Circulation
1972	1,927	25.3	25.3
1971	1,496	19.6	44.9
1970	1,020	13.4	58.3
1969	763	10.0	68.3
1968	554	7.3	75.6
1967	440	5.8	81.3
1966	398	5.2	86.6
1965	309	4.0	90.6
1964	283	3.7	
1963	235	3.0	
1962	186	2.5	
1961	12	.2	100.0
		100.0	

a decline in usage exists in the short term (several years), his measurement indicates even increased usage of the older volumes of certain journals.⁷ However, any data will indicate certain groupings of the journals, each of which can require a different housing in accord with their demand.

One rather complex plan reported by Basile and Smith has (1) full runs of some journals in open stacks, (2) others with ten-year runs in open stacks, (3) five-year runs of all other titles, and (4) the remaining volumes kept in a storage area apart from the library.⁸ They also stress the use of ongoing research. One can begin with rough groupings and adjust later.

Although it is obvious that the most recent issues are the most used, a speculation could be made as to the effect of changes in binding policy on the usage patterns. Since most of the latest issues were unbound and those of the preceding year were bound, it is possible that there would have been more circulation for those earlier issues had they been left as individual pieces rather than gathered as a single volume. In other words, the process of binding affects the usage patterns by removing items from circulation at their point of highest demand. As Raisig noted, "Since it is the librarian's primary duty to make the serial's articles available and his secondary duty to preserve the serial's articles by collecting and binding them, it appears that a delay in serial binding of two or three years following publication might make more serial articles more easily available to more users."⁹

Although from a service viewpoint it might be desirable to delay binding, the probabilities of deterioration and theft of individual issues have discouraged a change in binding practices. One means of increasing usage has been the purchase of second copies, which permits alternate binding schedules and insures availability of at least one copy. For some journals that are available in

microfiche editions, second copies can be made available without the problems of binding and at considerable savings. It might be reasonable to treat the paper copy as expendable and have the microfiche version for periods of low demand.

Specific Journal Usage

The next step was to explore which journals were being used and to what degree. The results agree with the expectation that certain heavily used core journals contribute most of the circulation while the remaining journals contribute less in a decreasing pattern.

High Usage. Table 2 reveals that the top 100 journals (one-eighth of the total) provided 72.4 percent and 150 provided 83.8 percent of the circulation.¹⁰ Such a concentration suggests possible special treatment. For example, those specific titles which represent the true demand items could be given extra protection from theft, could be the only titles kept on two-hour reserve, or might be those for which extra copies are needed. In fact, the Education-Psychology Library did have at least two copies for one-third of the top 150 journals, more than three-fifths of the top fifty,

TABLE 2
HIGH USAGE

Cumulative Number of Journals	Cumulative Percent of Total Journals	Cumulative Circulation	Cumulative Percent of Total Circulation
10	1.2	9,900	17.3
20	2.5	16,328	28.5
30	3.7	21,296	37.1
40	5.0	25,566	44.5
48.4			50.0
50	6.2	29,230	50.9
60	7.5	32,316	56.3
70	8.7	35,034	61.1
80	10.0	37,519	65.4
90	11.2	39,651	69.1
100	12.4	41,561	72.4
150	18.7	48,040	83.8
200	24.9	51,961	90.6
300	37.3	55,643	97.1
400	49.8	—	—
500	62.2	—	—
612	76.1	57,332	100.0
804	100.0		

and all of the top thirteen. The high circulation figures for these items could be a reflection of demand as well as increased availability due to multiple copies.

The preceding discussion suggests that closed reserve could be limited to the most recent issues of the small number of core journals. This extra protection for high-demand items could inhibit theft and also could allow a delay in binding to increase availability. For the limited number of journals involved, temporary covers could be used to prevent deterioration.

Low Usage. At the other end of the spectrum are those titles which show little or no use. Table 3 shows that of the 804 journals, 23.9 percent were not used at all, while a total of 48 percent were borrowed no more than five times for the year. Therefore, there is much latitude for replacing unused titles with those more suitable to patron needs, a more efficient use of available funds. A list of little-used journals at the Education-Psychology Library was compiled. However, any cancellations based on this list must also include a qualitative judgment, perhaps in consultation with the teaching faculty.

If a simple use count is not considered a sufficient basis for cancellations, one could apply a formula devised by Holland in a similar study of little-used journals. Using the formula, one can determine the increased percentage of unsatisfied demand in relation to budget

reductions when titles used x times are cut.¹¹

Although the data in this study lack the adjustments to raw data suggested by Raisig and others, the data are based on a ten-year period that should give a rough parity to the titles. All physical usage was recorded except interlibrary loan and some minimal browsing. Such records do not consider Raisig's "intellectual units," which would ideally equate physical units if each article were bound separately. However, the two-hour loan period of this study allowed for a high degree of availability of a volume and its many intellectual units. The nature of closed reserve, therefore, should provide a crude compliance with some of the needed adjustments, and the data should stand as reasonably usable. A more detailed study, as Raisig points out, can be made manageable by concentrating on the core journals, which concern the more critical decisions.¹² That core might be selected from a citation study or perhaps this study.

FACTORS AFFECTING USAGE

The intent of this case study was to gather usage data to support maintenance or revision of policies concerning the journal collection. The study centered on administrative decisions affecting journal availability, such as length of loan period, use of closed reserve, purchase of multiple copies, binding frequency, and protection from theft. These factors affecting usage have been discussed above. Other variables relating to library policy and procedure are the availability of photocopying and interlibrary loan facilities. Factors which are external to the library include the users' academic level, course work, research activity, and work habits. Class assignments, bibliographies, browsing, and the "invisible college" also influence borrowing patterns. Raisig discusses these and other "inconstant variables" which "derive from practices, coincidences, ac-

TABLE 3
LOW USAGE

Number of Circulations	Number of Journals	Percent of Total Journals
0	192	23.9
1	69	8.7
2	44	5.5
3	26	3.1
4	28	3.5
5	26	3.3
	386	48.0
6 or more	418	52.0
	804	100.0

cidents, procedures, occurrences, and characteristics common to libraries and their patrons, employees, and serials."¹³

Undoubtedly, among the major influences on journal usage are indexing and abstracting services, both manual and computer-based. An initial investigation of the relationship between four commonly used indexes and journal usage was made at the Education-Psychology Library. Each of the 804 journal titles was checked for coverage by the *Readers' Guide to Periodical Literature*, *Education Index*, *Current Index to Journals in Education*, and *Psychological Abstracts*. Of the 360 titles which circulated eleven or more times, 337, or 93.6 percent, were indexed by at least one of the services, and all of the top 50 were indexed. Only 34, or 17.7 percent, of the 192 journals which did not circulate at all were indexed.

The extent of cause and effect cannot be assumed due to other factors affecting usage. However, it is apparent that the most-used journals are indexed and only a few of the unindexed titles were borrowed. Coverage by indexing services should be considered when choosing titles suitable to the user population.

Also, usage of journals already in the collection can be affected by the choice of indexing and abstracting services and by the librarian's efforts in explaining and encouraging their use.

SUMMARY

The data collected in this case study provided a basis for practical decisions about the administration of a journal collection. Although research libraries tend toward building ideal collections for many reasons, such as satisfying unpredictable user needs and prestige for faculty recruitment, today's financial realities require optimum utilization of available resources.

This journal usage study has revealed a large amount of unused material, funds for which could be better applied. Also, closer analysis of high-demand items provides information for their improved management and maximum satisfaction of patron needs. The study also tried to indicate its own limitations in light of use study criticism. It is hoped that others planning their own studies will be able to benefit from the contributions to improve this type of research.

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