

Open Access Use of Serials Collections

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OPEN ACCESS USE OF SERIALS COLLECTIONS

A case study at Helsinki University of Technology Library

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A considerable amount of attention has been devoted to the analysis of the use of library collection, and a variety of methods has been applied for assessing the value of books, journals and other library materials from the point of view of users. The ever growing number of serials and their rising subscription fees have forced most libraries to cancel subscriptions, and to develop new acquisition and cancellation practices. The selection of serial titles can no longer be based on quality criteria, because resources are too limited to maintain a representative collection of serials.

Several ranking methods have been proposed as aids to serials selection by libraries. According to Singleton¹⁰, these include three main methods of ranking: citation analysis, size or productivity, and use or user judgements.

As a method citation ranking is an attractive one. However, its use is limited by lack of valid lists. Data obtained from the Science Citation Index cannot be used in science and technology libraries because the bias is on biomedical literature^{5,11}. Citation analysis would have its best use in narrow and well defined subject fields but not in science and technology in general.

Some ranking methods are based on the productivity or the size of literature in the subject area concerned. Within the UNISIST programme a core list was compiled of journals in engineering based on articles abstracted in the Engineering Index¹⁴. This sort of list, however, often has an generalised bias and omits regional and national characteristics.

Ranking serials by use has been a very popular method. A great number of studies is based on the statistics collected from circulation and inter-library records. Survey techniques, such as questionnaires and interviews have been applied for assessing an overall usage of library materials. To get more specific information about open access use other methods should be

applied to measure the "real" use.

Open access use does not produce any data that could be used to compile ranking lists and use statistics. Therefore many methods have been developed to measure the open access use in libraries. Basile & Smith closed the open access collection for the period of the study¹.

Many studies are based on examining the serials left on desks in reading rooms and elsewhere in the library^{3,4,5,8,12,14}. Harris also put a paper slip inside publications and recorded every fall when the publication was taken out of the shelf⁶. Eardley & Eatwell⁴ and Morse⁸ attached a paper slip to the cover of journals, and the slip included a request that users should write the date of each consultation.

Methodology Used

None of the techniques mentioned above seemed suitable for the measurement of in-library use of serials collection at the National Central Library of Technology where more than 10 000 current serial titles are shelved partly in a reading room and partly in open access stacks on two floors below in an area of 5000 sq meters. Nearly one thousand readers visit the reading room and the stacks daily.

Creating the closed access collection for the period of study requires much space and labour, and anyway, it is inconvenient for measuring the use of the whole collection. Users seldom obey the request not to resshelf publications in the stacks. Therefore examining the material left on desks is unreliable. We found it difficult to insert slips inside publications because of the great number of unbound issues. We also considered it wishful thinking that our users would write down the date of use. So we ended up with a new technique developed by Elina Savo in 1978⁹.

In this "bundling" technique volumes of mostly unbound serials are "bundled" by means of paper tapes in a way that prevents the use of the serial issue without breaking the tape. The tapes are examined daily and the breaks observed and tapes sealed again.

Open Access Use Study in 1979

In 1979 it became evident, that the literature grant did not allow continuing all periodical subscriptions. Apart of the literature grant had to be saved by cancelling journals. To select the least used titles for cancellation a

"bundling technique" was used. The use study was carried out during August 7 - October 7, 1979, one holiday month and one normal study month. The sample consisted of 1487 subscribed titles. Abstracting and indexing journals, and bibliographies, were not included in the sample. The sample was further limited to the three latest years, namely 1977-1979.

During the two months 6399 "bundle" breaks were recorded. 1320 breaks were caused by loans, interlibrary loans and photocopy requests. This finding clearly shows that statistics based on circulation or interlibrary loan records are too limited in an open access library.

The Core Serials

About 200 titles of which the three latest volumes had been used at least nine times form the core group of serials. They covered 50% of the total use. 740 titles (50% of the sample) cover 90% of the total usage and 534 titles (49% of the sample) cover 80% of the usage.

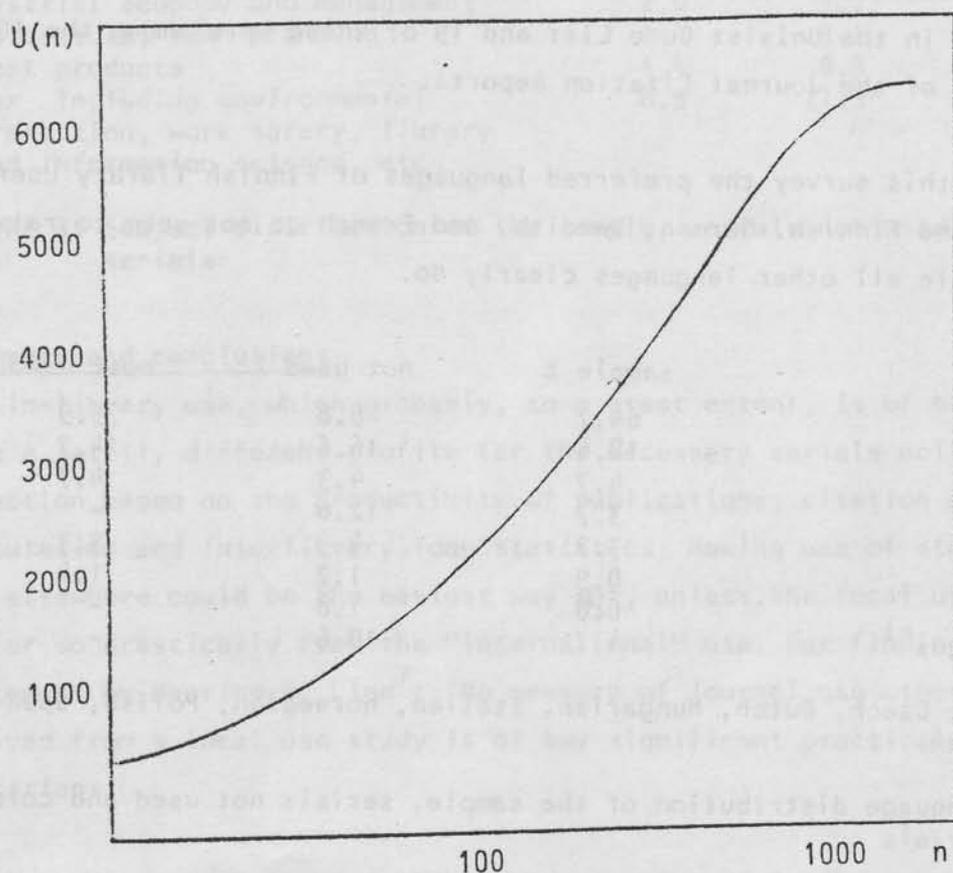


FIGURE 1. Cumulative Use $U(n)$ against the Logarithm of Title Rank n .

The UNESCO/PGI publication Unisist Core List of Journals in Engineering consists of 732 titles most frequently abstracted in the Engineering Index¹⁴. When this core list was compared with the core list obtained in the study, only 68 titles were in common.

A similar result was reached when the Library's core list of serials was compared with the list of Science Citation Index Journal Citation Reports, which is based on references in journal articles¹¹.

The above findings indicate that the in-library use of serials has a pattern of its own and differs from both citing habits and abstracting policies. Accordingly core lists of serials compiled elsewhere on the basis of different judgements cannot be used alone as criteria for selection of periodicals for cancellation.

Titles not used

During the two months under survey the three latest annual volumes of 305 serials, or almost one fifth of the sample, was not used at all. 30 of these were included in the Unisist Core List and 19 of these were among the 1000 core journals of the Journal Citation Reports.

According to this survey the preferred languages of Finnish library users are English and Finnish. German, Swedish, and French do not seem to raise barriers, while all other languages clearly do.

	sample %	not used %	most used %
English	64.2	48.6	75.9
German	18.4	16.6	14.7
Swedish	4.7	4.3	4.7
Russian	3.7	12.6	-
French	3.2	4.3	3.3
Finnish	0.9	1.2	1.4
Danish	0.8	1.8	-
Other languages ^{x)}	4.2	10.6	-

x) Bulgarian, Czech, Dutch, Hungarian, Italian, Norwegian, Polish, Spanish Yugoslavian

FIGURE 2. Language distribution of the sample, serials not used and core serials

The most used subject area was chemistry including chemical technology and polymers followed by mechanical and electrical engineering. That general science and technology proved to be very frequently used is probably due to the fact that popular magazines such as Nature and Scientific American

formed almost one tenth of the core titles, were included in this group.

A proposal for cancellation of the 356 least used titles was submitted to the 80 professors of the University. They were asked to check the list from the point of view of their field of interest. Through this "hearing" 350 journals were cancelled from 1980 onwards, and the necessary saving was achieved.

	sample %	not used %	most used %
General science and technology	5.5	8.1	8.1
Mechanical engineering including materials science, ship building, aeronautics, etc	18.2	11.5	20.9
Electrical engineering, electronics	11.6	12.2	12.3
Chemistry, chemical technology, polymers	17.9	9.5	30.8
Mining, metallurgy, geology	7.8	7.8	1.9
Physics, nuclear technology	8.9	8.5	5.3
Civil engineering	5.6	5.1	0.5
Mathematics, information processing	6.8	7.8	5.7
Psychology	1.8	4.7	-
Surveying, real estate	2.5	5.8	-
Industrial economy and management	2.0	3.7	-
Architecture, town planning	1.4	3.1	-
Forest products	1.4	0.3	0.9
Other including environmental protection, work safety, library and information science, etc	8.5	11.9	9.7

FIGURE 3. Subject distribution of the sample, serials not used and core serials

Comments and conclusions

The in-library use, which probably, to a great extent, is of browsing nature, gave a totally different profile for the necessary serials collection than a selection based on the productivity of publications, citation analysis, or circulation and interlibrary loan statistics. Making use of studies carried out elsewhere could be the easiest way out, unless the local use would differ so drastically from the "international" use. Our findings confirm the statement by Maurice B. Line⁷: 'No measure of journal use other than one derived from a local use study is of any significant practical value to librarians.'

Continuous measurement of in-library usage of serials is necessary because research activities open up new fields of science and technology, new projects are initiated and earlier ones ended, while the purchasing power of the literature grant shrinks.

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