

The Characteristics of a Collection for Research in Business/ Management

The citations from dissertations of Ph.D. candidates in the field of business/management were analyzed. The characteristics studied were publication form, periodical title, subject, time span, language, and publisher. In addition, information was gathered that revealed the extent to which materials were owned by the State University of New York at Buffalo (SUNYAB) Libraries. The study was based on 2,805 citations drawn from thirty-one dissertations—thirteen completed at SUNYAB and eighteen from other institutions.

“EVERY LIBRARY exists chiefly to serve the needs of its own community of users. It follows, then, that any . . . evaluation of a library [collection] ought to be based chiefly on how well it does, in fact, serve those needs.”¹ One of the methods for gaining better insight to users’ needs and a general perspective of the library collection is through checking relevant bibliographies that match the objective, purpose, and interest of the library and its clientele.

In this study the approach employed was a citation analysis of bibliographies from dissertations. The two major aspects of this investigation were to: (1) define the characteristics of literature (interpreted as users’ needs) cited by Ph.D. candidates in the field of business/management and (2) gain a better perspective of the collection at the State University of New York at Buffalo (SUNYAB) Libraries in terms of ownership

of materials cited in the dissertations. The resulting data are intended to serve as guidelines in defining a subject statement for the business/management collection. This information will ultimately constitute a portion of the overall collection development policy for the SUNYAB Libraries.

BACKGROUND

The SUNYAB Libraries system consists of eight unit libraries, five subunit libraries, and four storage facilities that collectively house more than 1.6 million volumes of books and maintain subscriptions to 11,467 serial titles.² Although the majority of research materials for business/management are located at the Lockwood Memorial Library (social science and humanities), it was decided this study would be conducted on the basis of the SUNYAB Libraries system. The rationale for this choice was the notable trend toward interdisciplinary research in the field of business/management, which undoubtedly would require the use of subject materials from various library facilities. In addition, if the materials were owned by the SUNYAB Libraries, they should be accessible regardless of location on campus.

The specific questions concerning

Charles J. Popovich is business/economics librarian, State University of New York at Buffalo. The full report on which this article is based is available as an ERIC publication, "Business/Management Research Characteristics and Collection Evaluation: A Citation Analysis of Dissertations" (ED 136 835).

business/management research this study aims to answer are: (1) What is the form of publication most frequently used, i.e., periodical, monograph, serial, miscellaneous? (2) What are the most frequently cited periodical titles? (3) What is the subject dispersion for monographs and serials? (4) What is the time span for the materials being used? (5) How extensive is the treatment of foreign language materials? (6) What are the most frequently cited types of publishers? (7) To what extent do the SUNYAB Libraries own the materials cited in the dissertations? A total of thirty-one dissertations were analyzed in an effort to find answers to these questions.

PROCEDURE

Thirteen of the dissertations that had been selected were completed at the School of Management at SUNYAB between February 1972 and February 1974. The remaining eighteen dissertations were those of incoming faculty members who became affiliated with the School of Management at SUNYAB between September 1972 and September 1974 and finished their doctoral work at another institution. This latter group of dissertations, however, was completed during various years, i.e., 1953 (1), 1961 (1), 1967 (1), 1969 (2), 1971 (1), 1972 (2), 1973 (4), and 1974 (6).

A list of the schools where the faculty had completed their doctoral work and the number of dissertations that pertained were as follows: Berkeley (3), Carnegie-Mellon (1), Cornell (2), Harvard (1), Illinois (2), Kansas (1), MIT (1), Minnesota (1), NYU (1), Pennsylvania (1), Purdue (2), Rochester (1), and Southern California (1).

The reasons for including the faculty dissertations were threefold: (1) the effects of a local situation on the research findings would be avoided; (2) the subject expertise of new faculty, denoted by the dissertations, may suggest current trends and emphasis in SUNYAB's business/management program; (3) it was assumed information from these dissertations would reflect the research interests of the faculty.

The subjects of the thirty-one dissertations were related to nine general areas of study, which included: accounting (6), economics (2), finance (5), health care manage-

ment (1), industrial relations (4), marketing (4), organization and behavioral sciences (6), quantitative methods (2), and statistics (1).

In recording information from the dissertations, the following procedures were used: (1) If a source was cited two or more times in the same dissertation, it was counted only once. (2) If a citation was not a standard bibliographic reference, it was excluded from the study. Examples are a list of newspapers consulted—*Oakland Tribune*, *Detroit Free Press*, *Baltimore Sun*, etc., as well as references to cities where interviews were conducted—Dayton, Omaha, Seattle, etc. (3) Each reference was checked against the card catalog or the serials record to determine whether it was held by the SUNYAB Libraries. If there was any doubt about ownership of a particular source, it was physically checked for location. (4) If a source was not owned by the SUNYAB Libraries but additional information was necessary, standard bibliographies and printed library catalogs were searched for the missing details. (5) The language of a cited publication was defined by the language of its title. (6) Classifying a citation by form was dependent upon the manner in which the author of the dissertation cited the material, and the investigator's judgment.

As the citations from the dissertation bibliographies were verified, the information was recorded on a twenty-column code sheet. This information was ultimately keypunched into Hollerith cards. The Statistical Package for the Social Sciences (SPSS)³ program was used in tabulating and cross-tabulating the data on a Control Data Corporation (CDC) 6400 computer.

The thirty-one dissertations produced 2,805 citations with an arithmetic mean of 90.5 and a range of 15 to 221 citations per dissertation.

PREVIOUS STUDIES

In analyzing the thirty-one dissertations (thirteen SUNYAB, eighteen outside SUNYAB), the method used was pioneered by Gross and Gross⁴ in 1927. Their technique of "reference-counting" was an attempt to determine the most useful periodicals in the field of chemistry. Refinements of this study were performed by Fuss-

ler when he investigated the use of serial and nonserial literature by researchers in the fields of chemistry and physics.⁵ Another investigation, this time in the social sciences, was conducted by McAnally in his study of history literature. He used both books and journals published in 1903, 1939, and 1948 in an effort to determine whether there were distinct changes in the characteristics of materials used by researchers in the field of history.⁶

In addition to these studies, there have been a number of investigations utilizing many similar procedures and techniques. The studies useful as a background for this particular evaluation were Stevens (library materials in doctoral research), Seagly (economics), Emerson (doctoral research in a university library), Sarle (business administration), Beckman (research collections), Intrama (public administration), Brace (library and information science).⁷⁻¹³

ASSUMPTIONS

Although many of the previous studies argue the pros and cons of a citation analysis evaluation, it was not the intention of this paper to present a lengthy discussion on that aspect of the topic. The following assumptions, however, constitute the point of view taken in this particular evaluation.

When analyzing the characteristics of literature (users' needs) in a citation analysis study, it must be assumed a direct relationship exists between quantity (number of times cited) and the importance of materials. Although this assumption is difficult to prove, investigators using this method have concluded that any defects that occur happen so infrequently they are likely to have little effect on the accuracy of results.¹⁴

In evaluating the SUNYAB Libraries'

business/management collection, consideration of adequacy was based on the ownership of sources (perspective of the collection) cited in the dissertations. This was interpreted as being supportive of business/management research, and it was assumed that other doctoral candidates are likely to use the library resources in much the same manner. Naturally, an assessment of where the collection is and where it should be going demands that the librarian be constantly alert to new courses, new programs, and new faculty interests.

FORM

An important consideration in allocating library funds is deciding what proportion of the budget to spend on periodicals, monographs, serials, etc. Table 1 demonstrates for this study how publications were divided by form—periodicals, monographs, serials, and miscellaneous forms. An overall distribution by form is shown first, followed by comparative data for citations in dissertations prepared at SUNYAB and outside SUNYAB.

"A periodical is defined . . . as a publication [other than a newspaper] issued at regular intervals, at least twice a year."¹⁵ As table 1 indicates, periodicals constitute 49.1 percent of all the cited materials. A possible inference is that the field of business/management is dependent on current research materials. Since periodicals provided that information, they were of primary importance.

Of the 1,377 citations to periodicals, 78 percent of the references (1,070 citations) were for materials in sixty-two different periodical titles. A complete list of these journals is included in the full report of this study.¹⁶

TABLE 1
DISTRIBUTION OF CITATIONS BY FORM

Form	Overall Distribution		Comparative Data			
	Number	Percent	SUNYAB		Outside SUNYAB	
			Number	Percent	Number	Percent
Periodicals	1,377	49.1	604	50.8	773	47.8
Monographs	895	31.9	360	30.3	535	33.1
Serials	266	9.5	100	8.4	166	10.3
Miscellaneous Forms	267	9.5	124	10.5	143	8.8
Totals	2,805	100.0	1,188	100.0	1,617	100.0

Monographs were the second most frequently cited form of publication, accounting for 31.1 percent of the sources. A monograph was defined as "a single volume dealing systematically and in detail with a single subject."¹⁷ This high ranking is not too surprising since monographs contain many basic studies and classic works.

Those sources issued less frequently and regularly than periodicals were defined as serials. "The term includes . . . annuals, numbered monograph series and the proceedings, transactions and memoirs of societies."¹⁸ With an overall distribution of 9.5 percent and a third place ranking, there is clear indication that this form of publication is of lesser importance.

The miscellaneous forms of publications, including doctoral dissertations, newspapers, reports, working papers, manuscripts, conference papers, master's theses, mimeographed documents, private communications, memoranda, as well as unidentified forms, represented a total of 9.5 percent. It is evident such forms are used only to a minimal degree and so were combined under the heading, "miscellaneous forms."

The comparative data for dissertations from SUNYAB and outside SUNYAB show only minor differences between the two. Because of the relative consistency in the users' needs, as indicated by the form of publications, the budget allocation for these items at the SUNYAB Libraries was reviewed. It was learned the business/management acquisitions fund is weighted approximately 50 percent periodicals, 30 percent monographs, 18 percent serials, and 2 percent miscellaneous.¹⁹ Although the SUNYAB Libraries' present spending pattern somewhat parallels the business/management users' demands, perhaps a slight reapportionment may be necessary between serials and miscellaneous forms.

SUBJECT DISPERSION

The analysis of materials by subject could serve as a guideline in determining the extent doctoral candidates in business/management rely on various types of literature in their field as well as outside their field. An awareness of these key areas allows for the selection of relevant materials and thereby an opportunity for providing better

service to the library users. In this study the Library of Congress classification provided the basis for defining subjects. The forms of publications analyzed were monographs and serials.

Generally, business/management materials are included in the Library of Congress classifications HB through HJ. For the 1,161 citations pertaining to monographs and serials, table 2 shows a comparative dispersion of the ten leading Library of Congress subjects. They represent more than 75 percent of the subject sources in each category being compared, i.e., SUNYAB, outside SUNYAB, and overall distribution.

With the exception of HC (Economic History and Conditions: National Production), the majority of business/management materials (classifications HB-HJ) were from SUNYAB dissertations. Conversely, the majority of supporting literature (BF Psychology, HM-HX Sociology, etc.) was dominated by dissertations from outside SUNYAB. Information such as this is useful in helping to define the academic orientation of SUNYAB's business/management program and in delineating the research interests of the School of Management faculty.

TIME SPAN

"Time span may be defined as the extent to which the research worker in a given field reaches back into the literature of the past to find useful information."²⁰ An awareness of the degree to which retrospective research prevails in the field of business/management can aid in selecting library materials and in weeding the collection. In this study the date of each dissertation was compared to the date of each citation appearing in the dissertation.

Table 3 indicates the distribution of time span by the form of publications.

More than 70 percent of all the cited materials were ten years old or less, and nearly 85 percent of all the sources were cited within fifteen years. The rate of usefulness seemed to decline even more rapidly for the miscellaneous forms of publications during the first ten years.

The results show there is a high obsolescence factor in business/management mate-

TABLE 2
COMPARATIVE SUBJECT DISPERSION (IN PERCENTAGES)

Rank	LC Classification	SUNYAB percent of 460 Citations	Outside SUNYAB percent of 701 Citations	Overall Distribution percent of 1,161 Citations
1	HF 5001-6351	17.4	13.0	14.7
2	HD 4801-8942	19.4	6.4	11.5
3	HD 1-100	17.6	6.3	10.8
4	BF Psychology	5.2	10.1	8.2
5	HM-HX Sociology	2.0	10.8	7.3
6	HC Finance	8.7	4.9	6.4
7	HB Economic Theory	7.2	5.3	6.0
8	Q Science	4.6	5.1	4.9
9	HC Economic History and Conditions: National Production	0.9	6.8	4.5
10	J Political Science	1.1	6.6	4.4
	Totals for leading LC Subjects	84.1	75.3	78.7
	Miscellaneous Literature	13.5	18.0	16.3
	Unknown	2.4	6.7	5.0
	Totals	100.0	100.0	100.0

TABLE 3
TIME SPAN OF CITATIONS BY FORM (CUMULATIVE PERCENTAGES)

Form	Years					
	0-5	6-10	11-15	16-20	21+	Unknown
Periodicals	42.7	72.8	87.0	93.0	100.0	
Monographs	36.0	66.2	80.7	89.5	99.9	100.0
Serials	36.8	64.6	82.3	89.1	98.9	100.0
Miscellaneous Forms	53.6	76.1	88.5	90.4	90.5	100.0
Totals	41.1	70.3	84.7	91.3	99.0	100.0

rials, and recency of materials is a key consideration when building a collection or weeding it.

FOREIGN LANGUAGE

The extent to which foreign language materials were used in business/management research revealed that it is practically nonexistent. Of the 2,805 citations that were analyzed, four, or 0.1 percent were to non-English titles. The distribution included two citations in French and one each in Spanish and German.

Ostensibly, the foreign language materials could be ignored, and it would be a temptation to do so. However, the rise of multinational corporations; the progress of Japanese, German, and Russian technology; advances of international practices in

business/management activities; as well as other factors may produce an added interest in international subjects. With these circumstances, an increased proportion of writings based on foreign literature may be forthcoming. At present, however, it appears that doctoral candidates in business/management make little use of research materials written in languages other than English.

TYPES OF PUBLISHERS

The decision to acquire certain library resources is sometimes based on the type of organization publishing the materials. To learn more about the publishers cited in business/management literature, the dissertations were analyzed by categorizing the types of publishers into groups, i.e., com-

TABLE 4
TYPES OF PUBLISHERS BY FORM

Form	Comm.		Assn.		Govt.		Univ.		Unpubl.		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Periodicals	176	12.8	717	52.1	45	3.2	435	31.6	—	—	4	0.3	1,377	100.0
Monographs	663	74.1	48	5.4	20	2.2	163	18.2	—	—	1	0.1	895	100.0
Serials	50	18.8	57	21.4	87	32.7	71	26.7	—	—	1	0.4	266	100.0
Misc. Forms	60	22.5	8	3.0	10	3.7	19	7.1	157	58.8	13	4.9	267	100.0
Totals	949	33.8	830	29.6	162	5.8	688	24.5	157	5.6	19	0.7	2,805	100.0

mercial, association, government, and university. The commercial publishers were defined as profit-making organizations, such as Prentice-Hall, McGraw-Hill, Praeger, etc. The names of association publishers were established by consulting the *Encyclopedia of Associations*.²¹ The definition of government publishers includes any municipal, state, federal, or international agency of any government.²² The university publishers were references cited as "university press." In addition, references were grouped as "unpublished" and "unknown." Table 4 indicates the results.

The totals indicate commercial publishers (33.8 percent) were the most frequently cited. They were closely followed by associations (29.6 percent) and then university (24.5 percent). References to government publishers were minimal (5.8 percent).

In analyzing the types of publishers by form, periodicals issued by association publishers were the most frequently cited (52.1 percent). A relatively strong representation was also indicated by university publishers (31.6 percent).

The monograph form of publication was dominated by commercial publishers (74.1 percent), with university publishers a distant second (18.2 percent).

The serials form of publication was well distributed. The category most frequently cited, however, was government publishers (32.7 percent).

Many of the miscellaneous forms of publication (58.8 percent) were in the "unpublished" category, but this represented only a small portion of the overall totals (5.6 percent).

The distribution totals indicate three types of publishers (commercial, association, and university) were clustered within 10 percent of one another, and a fourth category (government) was cited infrequently. However, when considering the publisher in the acquisition of library materials, it is important to define the form of the publication. For business/management research the results indicate that the types of publishers ranking first were different for periodicals (association), monographs (commercial), and serials (government). In addition, the university publishers ranked second for all three forms of publications.

OWNERSHIP STATUS

The second major aspect of this study was to determine the extent to which the SUNYAB Libraries owned the materials cited in the dissertations. The results could be used to gauge a perspective of the collection apropos to business/management research.

Of the 1,377 citations to periodicals indicated in table 5, SUNYAB owned 95.8 percent of the materials. Of the monographs cited 89.3 percent were available as well as 81.2 percent of the serials. However, only 26.2 percent of the miscellaneous forms of publication were held.

Although no library collection can be expected to include all needed research materials, the overall ownership figure of 85.7 percent is a fairly strong representation. Another positive factor to be noted is the ownership status by distribution represented in table 6. This indicates that ownership of materials cited in dissertations prepared at SUNYAB closely paralleled ownership of materials cited in dissertations from outside SUNYAB. One possible inference is a balanced business/management collection based on relatively consistent findings.

If it can be assumed that other doctoral candidates are likely to use materials in about the same way as did the writers of these dissertations, a large number of the resources should be obtainable at the

SUNYAB Libraries. Perhaps the lone areas of collection weakness stem from the lack of items in the miscellaneous category. At present, the results of this evaluation indicate a library collection conducive to doctoral work in business/management. With an ample budget allowing for growth at a similar or greater rate, an adequate collection can be maintained in the future.

CONCLUSION

Although this study may not provide direct answers for all questions regarding the business/management collection at the SUNYAB Libraries, it does include sufficient information to serve as a guideline in substantiating a subject statement for the collection development policy. Perhaps an area where the guidelines may be implicit are in regard to the library's role in supporting master's level work. Presumably, the results of this investigation may be interpreted as having similar implications for the MBA program. That is, the latter course of study has a somewhat parallel relationship to the doctoral program, but the curriculum level does not require the intensity of demand placed on the library collections. Therefore, if the criteria for Ph.D. research are adequately defined, it is reasonable to assume the MBA requirements are likely to entail a similar but less comprehensive pattern of research.

TABLE 5
OWNERSHIP STATUS BY FORM

Form	Number of Citations	SUNYAB Owns	
		Number	Percent
Periodicals	1,377	1,319	95.8
Monographs	895	799	89.3
Serials	266	216	81.2
Miscellaneous Forms	267	70	26.2
Totals	2,805	2,404	85.7

TABLE 6
OWNERSHIP STATUS BY DISTRIBUTION

Where Dissertation Prepared	Number of Citations	SUNYAB Owns	
		Number	Percent
SUNYAB	1,188	1,048	88.2
Outside SUNYAB	1,617	1,356	83.9
Overall Distribution	2,805	2,404	85.7

Perhaps these implications have a carry-over into the undergraduate program in business/management as well, but the Undergraduate Library at SUNYAB would establish the standards for handling research demands at that level.

Since the results of this study indicate the status of the collection at a particular point in time, it is suggested that a follow-up re-

view be conducted at some future date so the circumstances may be reassessed. The development of the collection, however, may be best thought of as a process of ongoing communication among the librarians, faculty, and students in their pursuit of a mutual objective—building a collection capable of meeting the demands placed on it.

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