

Spring 1986

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Publication Info

Special Libraries, Volume 77, Issue 2, Spring 1986, pages 61-70. <https://www.sla.org/content/shop/speclibs.cfm> ©1986 Special Libraries Association

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Marketing Measures for Information Services

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■ Despite their leadership in developing information services, special librarians often express frustration with the design and evaluation of the programs by which they market these services. This paper explores the problem by analyzing and synthesizing ideas from the literature of marketing and performance evaluation. Potentially useful approaches and quantifiable measures for market structure analysis, design decision-making, and marketing program evaluation are identified.

Introduction

THE MARKETING of information services has been a popular topic in the library profession in recent years. For special librarians, neither the concept nor the practice of marketing is new; both have been part of the special library idea for a long time (1). This "special library idea" maintains that the manager of information services must be *proactive* rather than *reactive* to user information needs and demands. The basic idea of marketing is that *responsiveness* to client needs and demands is the key to success in the marketplace (2). Actually, both ideas speak to an understanding of needs and preferences and to meeting them in advance of extensive demands.

The telling characteristic of a responsive organization (in marketing terms) has two sides. On one side, the organization encourages its clients to participate outspokenly in its activities. On the other

side, the organization wholeheartedly accepts these needs and demands, as stated, in the design and delivery of products or services. Open, personal communication is the key.

The opposite kind of organization is the bureaucracy, routinized in its operations, delivering services according to its own version of need, carrying out impersonal policies through a rigid hierarchy of command—a truly unresponsive organization. A bureaucracy makes it difficult for its clients to voice their opinions, and it takes no initiative in finding out the precise needs or preferences of these clients (2). Such unresponsive, bureaucratic organizations are the antithesis of "the special library idea." As would-be service organizations, they fail in both the profit and the nonprofit sectors. The organization that succeeds is "responsive" in marketing terms, "proactive" in the thinking of special librarians.

Despite their belief in the special li-

brary idea and despite the relationship between this concept and current marketing beliefs, many special librarians have expressed frustration in their efforts to apply the basics of marketing as it is practiced in the for-profit sector to their own not-for-profit information agencies. This frustration reaches acute levels when it comes to the evaluation of the marketing programs they design and mount. (Note that we describe special libraries and information centers as "not-for-profit" even when they are located in commercial organizations. We do so because this is the traditional management view on which corporate accounting rationale is so often based.)

We believe that an examination of key marketing concepts and of selected evaluation techniques currently in use by some special librarians will show a convergence that would be helpful to others who attempt to increase the responsiveness of their information agencies through marketing programs. We also believe that the suggestions we will make at the conclusion of this paper will, if acted on by special librarians, lead to a new rationale for accounting the value of special libraries, information centers, and information services. Although we are presenting this trend in terms of corporate libraries, it will be evident that it also has potential for information agencies in government, academe and other locales.

Key Marketing Concepts

Basic to all of the marketing is the idea of "responsive organization" just described. Given an organization that is open to personal suggestions from its clients and that is flexible and creative enough to adapt itself or its services to meet the changing needs and demands of these clients, certain questions face the organization. Five key marketing concepts relate to these questions. All five concepts are in use, in greater or lesser degree, by some special librarians.

Market Segmentation is the name of the concept which states that a marketplace

is comprised of individuals, some of whom will have a need for your organization's services, though in varying degrees; some, of course, will be uninterested in your offerings. No organization can be successful by treating the entire marketplace as if it will show equal interest in the organization's products or services. The process of determining the proportion of individuals already demanding your service, and the proportion that will never be interested, is called "market segmentation." It answers the following questions: Who, exactly, are your clients? To what extent are they similar, to what extent different in their needs and demands? Which groups, among your clients, are your most intensive users? Least intensive users? (2). Segmentation is a marketing measure that holds considerable significance for special librarian managers.

Public libraries have traditionally segmented their clients on the basis of demographic characteristics. Academic libraries have segmented their markets by academic factors. Special librarians must use factors such as internal structure of the company, the organizational position and mission of the information service and the division of work responsibilities within the parent company's total work force. Geographical relationships between the information service and the company units it is assigned to serve, as well as selected demographic characteristics of the work force, may also be important. A graphic design of the library's marketplace for a given special library results from a market analysis—a measure already somewhat in use by many special librarians, probably under another name.

Given such a graphic design which identifies markets and their size, with supplemental data about total information resources within and available to the company, a special librarian would then be able to move on to answering questions about prioritizing groups of clients and types of services. This is the process of *market positioning*. It results in policy statements about who are the primary

client groups, about the expenditure of library resources in relation to each group, who pays for service to each, even what proportion of cost must come from what sources, and possibly policies about what services shall be left to the competition (2). Having arrived at these policies, the librarian will be able to establish both short- and long-range goals, and state these goals in such a way that quantitative measures can be used to determine the extent to which each is achieved.

From analysis of market segments and choice of a market position, the special librarian who is implementing marketing concepts will move on to *consumer analysis*. This process answers questions about the extent of the need for homogenous sub-groups, even individual clients, the significance of each need in relation to company objectives, the preference for delivery of information products or services, the perceptions of members of client groups about library/information center service. Measures used in consumer analysis concentrate on obtaining detailed quantitative data. Information gained provides the foundation for planning a marketing program (2).

The concept of a *marketing program* underlies the coordinated effort which utilizes information gained and policies established in the interests of the parent company. The purpose of this step is to arrive at a customized plan for the optimum mix of product or service, price and cost, place or mode of delivery, and promotion of the products or services within your company (2). Without such an inclusive customized plan, with its own built-in goals and measures for defining success, libraries and other information agencies cannot be said to be truly engaged in marketing. Although they may be using some marketing concepts, without well-defined marketing *programs*, much of the potential impact of market segmentation, positioning and consumer analysis will be lost.

Finally, a *marketing audit* completes the cycle and sets the stage for the next cycle of planning, implementation and review. Such an audit, or evaluation, uses multiple measures to quantitatively study the results of the marketing program. It answers questions about the effectiveness of marketing programs and sets the stage for expansion or retraction, continuance of discontinuance of specific parts of the

Figure 1. Key Marketing Concepts, Their Nature and Significance

KEY CONCEPTS	Nature/Significance of Concepts
1. <i>Market Segmentation</i>	Identification of actual and potential markets and nonmarkets within company. <i>Information gathering. Quantification.</i>
2. <i>Market Positioning</i>	Prioritizing clients, groups and information services. <i>Policy Making.</i>
3. <i>Consumer Analysis</i>	Determination of needs and preferences. <i>Information gathering. Quantification.</i>
4. <i>Marketing Program</i>	Determination of optimum mix of product, price, delivery mode (place), promotion. <i>Planning. Customization. Coordination.</i>
5. <i>Marketing Audit</i>	Evaluation of plan and implementation. <i>Information gathering. Quantification. Making Judgements. Reporting.</i>

N.B. Marketing is a cyclical process, comprised of five major steps, represented by the five concepts above. Each of these five concepts includes secondary concepts, thus each step in the process includes secondary steps. "Secondary" does not mean less important, but rather hierarchical in relation to the five key concepts/steps shown here.

Figure 2. Hypothetical Company in Which Library is Assigned Responsibility to Company Management, R/D, & Sales

Work Units by Structure	No./Sub-Unit	No./Major Unit
Corporate Management		100
Officers	5	
Personnel	20	
Marketing	10	
Legal	5	
Finance	5	
Non-exempt personnel:		
Office management	10	
Computer operations	20	
Other support	25	
Research / Development		50
Unit Managers	5	
Unit 1	5	
Unit 2	10	
Unit 3	15	
Non-exempt personnel	15	
Sales		350
Regional Managers	20	
Account Executives	200	
Advertising	20	
Non-exempt personnel	110	

program. If there have been changes in the parent company or in the library's professional environment outside the company, additional studies relative to revised market segmentation and positioning may be needed as part of the audit. High turnover or new work assignments to significant portions of the client groups may call for new consumer analyses (2). The marketing audit sets the stage for the next phase of library/information agency service.

Measures Used in the Implementation of Key Marketing Concepts/Steps

Of the key concepts just identified, three require the use of measures for quantification in their information gathering. (Several utilize other kinds of information as well; we are concerned here only with measures for quantification.)

We'll look at these in the order of their usage in marketing.

Market Segmentation. Market segmentation is based on descriptive data such as the total number of individuals in each category under study. For interpretation, these data are often converted to proportions. When studying an individual library market, it is critical to identify categories that are meaningful in relation to company structure, nature of the work performed by each company unit, and company priorities.

Company structure comes straight from the organization chart and, since most companies are structured functionally, the chart tells you a good bit (but not all) about the work performed in each unit. Your company personnel office can supply you with the numbers.

For example, an initial market segmentation chart might look like Figure 2, in a Hypothetical Company in which the

information service is assigned the responsibility for meeting the needs of company management, research and development, and sales.

This kind of information tells you how many individuals you have in your total market, and it gives you the broad dimensions of your subject coverage and your services. You also need to know the intensity of interest in these market segments at the beginning of your planning. This information is available to you from library records or from your users. The picture might look like Figure 3.

Now you know, by company units, where the intense segments of interest are. In corporate management, for instance, your officers, marketing and financial executives and your computer managers are heavy users. Similarly, you would have the picture for research and development and sales. Your mission is to serve all of these units, so you have question marks in your mind beside the non-intensive user units, to call them to your attention later in the marketing process. Some of these work units are potential markets. Some may be non-markets, depending on company priorities, alternative information sources available to the workers, limitations of library resources, or for other reasons. All of this information helps you in the key step called market positioning, in which library priorities are determined and ser-

vice policies are formulated in relation to your own users and to other suppliers.

Consumer Analysis. Consumer analysis is the detailed study of the characteristics and information-seeking behavior of your users. Data collection techniques include direct and indirect (unobtrusive) observation as well as the collection of user-supplied data. The latter, familiarly known as "surveys," are by far the most often used, and the name covers a broad range of more or less formal, more or less rigorous activities. The results are, therefore, more or less valid and reliable. This is not the place to go into the nature or mechanics of a good study, as numerous textbooks are available (3).

Examples of survey instruments abound in the literature. One bibliography, covering the literature from 1965-1982, identified 57 studies in which instruments used in special libraries and information centers are reproduced (4). This bibliography has been updated as part of our work. Selected examples are listed in an appendix to this paper. (Copies of the complete bibliography are available from Dr. Williams.)

Results of a consumer analysis survey might look like Figures 4 and 5 (plus, of course, considerable additional data).

Consumer analysis surveys will provide information for choosing between optional designs of the same service, especially when the options represent dif-

Figure 3. Intensity of Current Library Usage by Work Units

Company Work Units	% of Unit Workers Using Library			
	1/week	1/month	1/3 mos	1/6 mos
Corporate Mngt (N = 100)				
Officers (n = 5)	90	10		
Personnel (n = 20)	10	10	30	10
Marketing (n = 10)	80	10	10	
Legal (n = 5)	10	10	20	30
Finance (n = 5)	90	10		
Office Mngt (n = 10)	30	10		
Computer Mngt (n = 20)	80	10	10	
Support Staff (n = 25)		10	20	10
Research/Development				
Sales				

Figure 4. Levels of Information Used Regularly in R/D Unit

R/D Units	Percent of Sample Giving Highest Priority to and Using at Least Once per Week				
	News/ Update	Research Reports	Manuals	Govt Regs	Secondary Reference
Unit Managers (n = 5)	60	20		20	
Unit 1 (n = 5)	20	80			
Unit 2 (n = 1)				100	
Unit 3 (n = 2)		50		50	
Non-exempt (n = 2)			50		50

ferent cost levels. Consumer analysis surveys can also provide information about how to customize the delivery and promotion of your services. In short, consumer analysis is a *sine qua non* of marketing. It provides you with specifics on which to base your decisions about each of the four P's of marketing: products, place or methods of dissemination of your products, price or cost of products, and methods of promotion of your products. Without consumer analysis, you simply are not into marketing.

Marketing Audit. Now we move to measures used during the marketing audit. The audit is the evaluation step, used after the marketing plan (based on information gained in the previous steps) has been implemented. A critical part of that plan consists in the setting of measurable goals.

It is our belief, based on the literature, that a new understanding of goals needs to be developed among special librarians. Cost-effectiveness goals have been em-

phasized in the past. Performance goals are currently popular. However, these kinds of goals result in measurement categories that speak more to cost containment of the work done in the library, than to successful marketing or the impact of the library on the parent agency. Failure to differentiate between administrative goals for the operation of the library and marketing goals for getting services and products out of the library may well be the cause of the frustration special librarians voice about the evaluation of their marketing efforts.

This is not to say that cost containment is unimportant. For routine internal administrative purposes, budget justification, and in periods of company retrenchment, it is critical to have such information and be able to present it convincingly. Marketing measures, however, have a different purpose and require a different rationale.

Remember that marketing is a process for determining what information ser-

Figure 5. Delivery Preference for Selected Services by R/D Units

R/D Units	News/Update*				Research Reports*			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Unit Managers (n = 5)		80	20				90	10
Unit 1 (n = 5)		20		20	60	20	20	
Unit 2 (n = 1)							100	
Unit 3 (n = 2)							100	
Non-exempt (n = 2)								

* Numbers 1-4 represent alternative kinds of delivery, such as: routing, notifying with request capability, notifying without request capability, SDI, on-demand searches.

vices are needed by company personnel and customizing those services in such a way as to get the company's work done effectively in the marketplace. The marketing audit is the evaluation of how well one has accomplished that purpose during a specific promotion or over a given period of time. The measures used during your audit must relate specifically to the goals of your customized program. They can never exclude the users of the offered information services. Top management is interested in the worth—to the users and therefore to the company—of specific services or products. Thus *cost-benefit* measures speak with greatest power in marketing audits.

Cost-benefit analysis answers the question: Is the benefit, in dollar value, more or less than the cost, in dollar value? A particular activity in the company is considered worthwhile when its benefits exceed its costs. Benefits are all of the contributions the particular activity makes to the company's objectives, just as costs are all of the resources the activity will divert from alternative objectives (2).

This rationale (which is standard business usage) places critical importance on the parent organization's objectives—not only on its long-range objectives but also, perhaps more importantly, on its immediate objectives. It places emphasis on company values which are the philosophic foundation for management of the company. Among the values expressed by top management, and used for operational decision-making, are:

- To be first in the marketplace with new products on a regular basis;
- To be competitive by economic marketing of existing products;
- To turn the company away from declining markets for once standard products toward expanding markets for what will become enduring new products; and
- To maintain a specific company image in the local community.

From these and other kinds of values, top management derives company goals related to sales volume, profit level, return on investment, level of market share,

company image, company resource accumulation, and social goals (5).

Special librarians need to study their own company's values and objectives in order to determine the market positioning of their information services and to develop customized programs for marketing these services. We need to develop measurable goals for our marketing programs *in company terms*. It will be especially helpful if those who do carry through on this will publish their experiences so that other special librarians can begin to identify commonalities and to draw generalizations. Commonalities and working generalizations can in turn become the basis for the assumptions and hypotheses of needed research.

Measures used in the past to describe special libraries to top management, as reported in the literature (6, 7), have been about ninety-nine percent oriented to internal management, i.e. staff activities (e.g. circulation and reference transactions, each more or less subdivided in different libraries). There has been little effort that we can find to convert these data to terms of impact on company goals, of impact on profit centers and revenue earning programs, and on the perception of this impact by profit center managers. It is in these terms that we must describe our benefit to the company if we are to impress top management (8).

The problem is that we do not need reports of staff activities, per se, nor reports of self-justification of library budgets. What we need are reports that show the *impact* of the library on company goals. One group of special libraries has been very concerned on this point: hospital libraries. There a concerted effort is being made to demonstrate a strong positive relationship between high quality library service and high quality patient care (9). It is essential that hospital libraries be able to do so because of their need to demonstrate this relationship to third party payers for hospital care. Unfortunately, no convincing measure has yet emerged.

One additional difficulty in developing and using marketing measures in special

libraries stems from the emphasis in our literature, and in the minds of many librarians, on a need for performance standards against which the activity in an individual library may be described and evaluated. These standards are conceived as being industry-wide, or at least applicable to broad segments of the world of special libraries. Such standards, were they available, might be very useful to library managers; however, few have been developed and virtually none have been validated.

Instead of continuing the search for the unicorns of performance standards, special librarians should adopt the attitude of Brown: the idiosyncratic nature of performance measurement and the relation of such measures to the specific objectives of individual special libraries preclude standard performance measures (7). Rather, we should be trying to identify to which of those company goals of sales volume, profit level, return on investment, level of market share, company image, company resource accumulation and social goals the library *does* make a high quality, essential contribution. Then we should find measures that will express, in company terms, what that contribution is.

The measure with the greatest potential that we have seen reported is that of "return on investment." In a 1982 study of the Department of Energy Technical Information Center and its Energy Data Base, King Research used sophisticated

economic modeling methodologies to determine costs and values of specific services and products and of the data base (10). Return on investment for the Energy Data Base, for example, was determined by comparing its overall production costs to its value to users. Value was determined by surveying users regarding their time and effort saved by using the data base. Application of the economic model to survey responses showed that reading a periodical article was worth \$590, and reading a technical report was worth \$1,280. The overall return on investment for the Energy Data Base was about 220% or 2.2 to 1. Similar savings and return were calculated for online searches, printed indexes, specific areas of Department of Energy funding. Consequences that would occur if the services were not available were also projected.

Manning has used a different way to convert the measure of time saved for researchers by library activities to a return on investment figure which is very impressive to top management (11). She assumes that the amount of dollars saved the company when the library does an hour's work for an engineer is the amount of an engineer's salary for that hour, using an average supplied by the personnel department. That is, of course, the gross saving, or benefit. The net benefit is the amount of the engineer's salary less the library's cost in substituting for the engineer during a specific period of time. Subtleties (such as the value of the work

Figure 6. Manning's Formula for Return on Investment

Step 1. $(\text{average hours per month saved})(\text{number of responses}) = \text{total hours per month saved}$

Step 2. $(\text{total hours per month saved})(\text{average \$ per engineer hour})(12 \text{ months}) = \text{gross benefit in dollars}$

Step 3. $(\text{gross benefit}) - (\text{cost of library services}) = \text{net benefit in dollars}$

Step 4. $\frac{\text{net benefit}}{\text{total cost of library services}} = \text{return on investment (\%)}$

N. B. Manning used this formula to obtain a return on investment in total library services. To use it in a marketing audit one would substitute cost of the specific marketing plan, or even cost of one or more specific products or services.

actually done by the engineer while the library is engaged in doing work formerly done by the engineer, or allowing for same library work being used by more than one engineer) are not included in the formula at present. The net benefit divided by the company investment in library services equals the percentage or proportion called "return on investment."

In Manning's usage, the total amount of time saved is calculated from the average of the responses to the question "How much time do you estimate that library services save you per month?" The formula shown in Figure 6 was used to convert data obtained in surveys to a return on investment figure which ranged, in different years of an annual survey and on different groups of employees, from 400% to 1200%. The use of measures such as those of King Research and Manning, some complex but some fairly simple, will enable special librarians not only to calculate a variety of general and specific returns on investment but also to evaluate specific marketing strategies.

Conclusions

As in business ventures, market segmentation, consumer analysis, and the marketing audit call for the use of quantitative measures. Market segmentation and consumer analysis utilize measures well-known to special librarians, though marketing effort will be best served if librarians now move away from mere opinion surveys to new levels of sophistication in their data gathering and, as a consequence, in their interpretations of market needs, demands and usage of information products.

Evaluation of marketing plans (the marketing audit) is the most difficult step for special librarians for several reasons:

1. The lack of quantitative measures that are being widely used, and thereby tested and reported.
2. A dearth of critical examination of the assumptions underlying those evaluation measures that are being tried. Many

of these assumptions are researchable questions themselves, but one cannot expect busy practitioners to undertake this research.

3. Failure of special librarians to relate the measurable objectives of their marketing programs to company objectives and to carry out and report their audits in terms meaningful to top management. Return on investment is one such measure which has been reported in the literature.

Marketing is planning that focuses on products, place or mode of delivery, adjustment of cost/price to the market, and promotion to specifically targeted segments of the special librarian's market. As such, marketing is in its infancy in application by special librarians. Marketing is, however, a logical extension of our historically valued and highly successful proactive style of information service, worthy of continuing application and critical discussion.

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Appendix

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