A MARKETING FRAMEWORK FOR USER SERVICES MANAGEMENT

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Introduction

Dramatic, new developments in technology plus continually changing needs of users present great challenges for those of us involved with computing in higher education. While it is quite evident that a tremendous amount of change is occurring around us, it is often less noticeable that the rate of change is accelerating. One of the major factors contributing to this acceleration is the rapid growth and development of technology. Alvin Toffler, in <u>Future Shock</u>, called the "technological engine" the driving force of change and he predicted that as man's search for new knowledge expands, the rate of technological development will increase spectacularly.

Probably the most significant recent technological development is the growth in the use of computers. The way computers are used has also changed during this technological explosion. The computer, previously only a calculating machine, has become a major information processing instrument. The role of computing on colleges campus has changed accordingly. It is not uncommon for graduate students to spend as much time at a terminal preparing thesis text as they do executing data analysis programs.

Educational institutions have always played an important role in identifying change, in preparing people to respond to change, and in helping explain the impact and use of computers. In the last 15 years the percentage of colleges and universities which have their own computers, or at least have access to one, has increased from 10% to over 90% (1). The availability of low cost microcomputers has probably increased this figure even closer to 100%. In North Dakota all public and private colleges and universities have at least one computer. This high percentage masks the fact, however, that there are still a great number of students (and faculty) who are not using computing in their

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classes. By 1985, it is expected that 75% of all high school graduates will have used computing (1). The impact of these students entering college plus the growing emphasis on "computer literacy" for college graduates (3) will compound the changes occurring in curriculum and computer use. It is, therefore, important that those persons charged with supporting educational computing be aware of change, and be prepared to deal with the resulting demands placed upon them.

Computing Center Challenges

The rate of change, the increase in computer use, and advances in computing technology, when combined, present a great challenge for a computing center's management and staff. We must not only function within a technology-intensive discipline, but also understand and attempt to meet the needs of a rapidly changing user community. Computing centers have been generally successful in adapting to technology changes. Data processing journals and conference proceedings reveal many innovative and cognitive approaches to applying computing methodologies. Even though the computing profession is relatively young, there are many knowledgeable and capable practitioners. The technical experience and training of computing center staff have helped them deal successfully with the changes in technology.

It is more difficult to judge the degree of success achieved by computing centers in attempting to meet changing user needs. In fact, it is nearly impossible to define criteria for determining when an effort has been successful. In some cases, the lack of success can be used as a measurement of Computing and Higher Education: an Accidental Revolution progress. indicated development of educational computing has not been exemplary. (1) It states that the successful application of computing technologies has been most evident in business, industry, the professions, and government. The use of computing in education has not been as fruitful as in other fields, because its application has been largely unplanned. Educators usually recognize the need to use computers, but have had difficulty identifying specific roles for this new technology. Individual higher education computing centers may view this as undue criticism, but as a group must consider this an opportunity to demonstrate resourcefulness and efficacy in dealing with the challenges in higher education.

Problems of Management

While the title of this paper addresses user services management, the information should be useful for all user services staff, as well as other groups within the computing center. Computing center staff must deal with a variety of responsibilities, opportunities, and problems. They are expected to handle each situation efficiently and effectively. Those in user services, however, often wonder if there is a "method to our madness". Are we promoting a particular strategy or management plan when we help users or are we merely reacting to user problems? While it is quite easy to define daily problems, it is not easy to objectively determine an overall approach for solving them. This

paper does not present specific tools for day-to-day activities, rather it provides a context within which the user services function can be discharged.

Selecting a management approach is difficult, since there is no single, best solution. The search for an appropriate strategy quickly leads one to realize there is a rich assortment of management philosophies, theories, and practices. Evaluation of the alternatives is a formidable task. Computing professionals are accustomed to functioning in a very descriptive field where it is often possible to identify specific results of decisions in areas of hardware and software. However, management is a normative endeavor where guidelines and models indicate only what should result, not what will result.

It is a management truism that if there is a good foundation for making decisions, then it is likely good decisions will result. This paper suggests a foundation which may not be "the" answer to all management problems, but it is one approach which can help solve some of the problems of managing resources within a higher education computing center.

The Framework Approach

While it is easy to define the desired outcome of a successful management effort, it is often very difficult to describe the exact actions which will produce that outcome. One method of approaching a degree of specificity is by using a framework, guideline, or model. A framework can provide a structure for thinking, but it is not a substitution for thought and action. The framework described in this paper is based on principles of marketing, a field not usually associated with computing centers.

Marketing Principles

Many people do not clearly understand the meaning of marketing. As a result marketing is often viewed as high-pressure selling, extravagent advertising, and customer manipulation. It is difficult to imagine building a positive management framework on such a negative base.

Actually marketing encompasses a variety of activities and is a function found in almost all organizations. Marketing is defined as a process through which a business enterprise, institution, or organization:

- 1. Selects target customers or constituents,
- 2. Assesses the needs of these target customers, and
- 3. Manages its resources to satisfy those customer needs.

Marketing has not always held these activities as objectives. Evolution of the marketing concept can be characterized by four distinct stages.

<u>Stage 1</u> -- Product Orientation: A superior product is the most important

element of satisfying consumer needs. If a good product is produced, consumers will want to buy it. This stage is typified by the expression "build a better mousetrap, and the world will beat a path to your door."

<u>Stage 2</u> -- Selling Orientation: Selling the product is the major concern. Increased market competition requires that products be "sold" to potential consumers. It is assumed that the seller can influence the consumer; the product is sold by the firm, not bought by the consumer. Much emphasis is placed on salesmanship and the art of creating consumer demand.

<u>Stage</u> 3 -- Marketing Concept Orientation: The organization first identifies a need, then produces a product to meet that need. Marketing, not production, staff determine what will be produced. There is a concentrated effort to analyze the market, identify specific consumer demands, and provide products to satisfy those needs.

<u>Stage 4</u> -- Societal Marketing Orientation: An organization has a societal responsibility beyond just providing products to meet consumer needs. Individual consumers may demand a particular product, but the producer has an obligation to provide a product which does not pollute, create a hazard, or harm society in general.

All organizations do not evolve through each stage, some enter at higher stages while others do not change at all. Individual organizations have been successful at all stages, although most modern organizations have found the Marketing Concept orientation best addresses today's changing consumer needs. Business firms do not survive if they do not adjust to change; the same is true for computing centers.

The most important contribution of marketing is the philosophy which emphasizes identifying specific needs before providing a product or service.

A Marketing Strategy for Management/Planning

The marketing concept as a management framework for computing centers is actually a strategic planning process consisting of the following steps:

- 1. Identify the corporate/university/college mission.
- 2. Determine a general opportunity within this mission.
- 3. Select a specific marketing objective.
- 4. Perform a market analysis.
- 5. Develop a marketing mix: the 4 P's.
- 6. Prepare an operational plan.

- 7. Implement the plan.
- 8. Utilize control and feedback.

Only the Market Analysis and Market Mix steps will be addressed here since steps 1-3 and 6-8 are common to most management strategies. For example, the educational, research, and service missions of a higher education institution provide an opportunity for the computing center to provide services but the computing center's marketing objective may be to concentrate only on academic or administrative computing.

<u>Market Analysis</u> is the systematic study of the market to determine the characteristics and needs of potential customers. The purpose is to identify specific target markets so available resources can be focused on meeting the needs of these targets. Another name for this process is <u>market segmentation</u>. It is generally best to select a middle ground approach to market segmentation. This is located between market aggregation, where all consumers are treated the same, and total market disaggregation, where each consumer is considered unique.

Most computing centers know their targets in general terms, but spend little time categorizing them as to specific needs. Segmentation should result in the identification of groups of computing users with similar resource, information, or service needs. Segments can be categorized by geographic characteristics, such as users at local or remote campuses; by type of service used, such as word processing, statistical analysis, or graphics; by quantity of resources used, such as the "number crunchers", students in introductory programming labs, or instructors who use the computer only to score a few exams. Some segments may have subcategories, for example, text-processing users may consist of subgroups such as professional secretaries and graduate students. Each group requires different capabilities, training, and documentation.

The ultimate goal of market segmentation is to efficiently allocate limited resources to best satisfying the needs of identified targets. Defining user needs in terms of desired outcomes makes it easier for the computing center to provide specific products to meet those needs. Too often, user services staff think of their clients only as good or bad users.

The NDSU Computer Center uses the following market analysis vehicles:

- The campus Computational Resources Committee and its planning subcommittee. This group of faculty, staff, and student representatives advises the Center as to emerging or changing computing needs. They have prepared a 6-year plan which is updated every two years.
- 2. The North Dakota Higher Education Computing Network Users' Council.

Representatives from each network campus meet bimonthly and makes recommendations to the Center. They recently completed a long-range plan for computing in higher education in North Dakota.

- 3. The ACM Peer Review Team. They evaluated services provided by the Computer Center and suggested methods to better meet user needs.
- 4. The campus ACM Student Chapter. They have been quite helpful in providing advice about student needs.
- 5. Campus surveys. Surveys are taken regarding timesharing, telecommunications, microcomputers, and support services.
- 6. Computer Usage Statistics. Detailed information is available on departmental and library program use.
- 7. Equipment Approval. All requests for computing equipment are coordinated through the Center. This means users contact the Center early in the planning process.
- 8. Staff Feedback. Since all User Services staff consult, they have become one of the best sources of gathering market information. Identified needs are then discussed within the group.

The <u>Marketing Mix</u> component of marketing strategy was developed at the Harvard Business School in the 1940's and has been amplified considerably over the years. Marketing mix suggests that a consumer does not buy a physical product, but instead buys a bundle of satisfactions of which the physical product is only a part. The entire package consists of the product and its features, information, convenience and attendent services, and price. These elements of a consumer's purchase are called the four P's: Product, Promotion, Place, and Price. The 4 P's can help the computing center focus on the complete product sought by consumers.

<u>Product</u>: People seek products which will provide satisfaction or utility to them. These products can be ideas, services, or physical items consisting of both tangible and intangible qualities. The consumer is usually not concerned with the details of the product, but rather the benefits the product can provide.

<u>Promotion</u>: Communications is very important since the consumer must understand what utility the product will provide and how to use the product. Promotion may consist of persuasive efforts, but it is primarily a means of providing information about the product. This is especially true for technologically complex products. Communications media include seminars, short courses, newsletters, documentation, annual reports, and consulting.

<u>Place</u>: The consumer needs to have a method of acquiring a product. There must be some place to find out about a product, to purchase it, and to return

to for support help. One of the most important tasks a computing center can perform is to serve as a broker between the consumer and the actual hardware or software supplier. The NDSU Computer Center bids general use terminals so network users know what is available where at what price.

<u>Price</u>: All computing services are paid for pay either directly through chargeback systems, or indirectly by sharing the organization's overhead budget. Although some colleges do not have formal charging policies, all user services' products have a price: staff time.

Conclusion

The quickening pace of change, increasing demands on personnel, and tightening financial constraints mean that computing centers can no longer merely react to current circumstances, but must anticipate changing user needs. Therefore, it is important that a management framework be available to provide direction and guidance for all planning and decision making.

Marketing provides a good framework because it contains an overall philosophy which stesses both a consumer orientation and the identification of specific consumer needs. The emphasis on customer satisfaction implies that all computing center activities should be focused upon this fundamental objective. While this sounds straightforward, some computing centers may not have a single objective, instead have subunits each striving for what it thinks is important. A consumer orientation also keeps the computing center alert to changing needs in the campus marketplace. It is important that we develop a "user-friendly" atmosphere or service, but it is more important to be "userconscious" so we provide what is needed (2).

Marketing also provides specific steps for carrying out a strategy. Market segmentation helps the computing center define specific computing needs and whether there is sufficient demand to warrant providing services to that segment. The 4 P's force consideration of the total product desired by the computing consumer.

Although computing centers are often tempted to try being everything to everyone, we realize that resource limitations mean we may end up meeting no one's needs very well. Conversely, if resources are concentrated on only a few consumer targets, then the center is not discharging its responsibility to develop computing as a campus-wide tool for dealing with change. It is a difficult challenge, but one which must be attempted. Computing centers can improve the probability of successfully meeting this challange by using an organized management strategy built upon the concepts and principles of marketing.

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