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EDUCATION AND BUSINESS
IN PARTNERSHIP FOR FITNESS

A Dissertation Presented

by

MAUREEN MCCARTHY JOHNSON

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

DOCTOR OF EDUCATION

May 1989

School of Education

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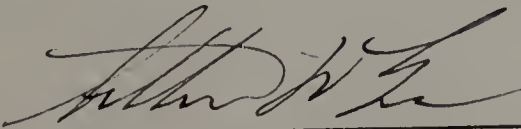
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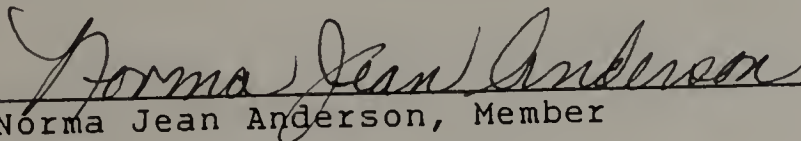
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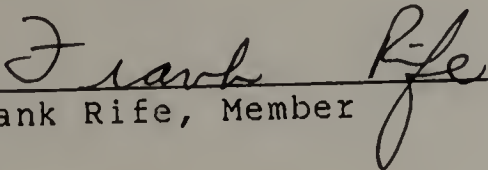
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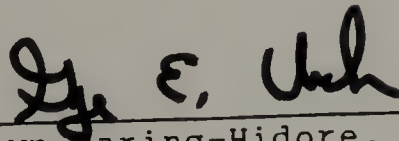
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ABSTRACT

EDUCATION AND BUSINESS
IN PARTNERSHIP FOR FITNESS

May 1989

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Abstract

This dissertation supports the thesis that public colleges and universities that broaden their public service mission through partnerships with industry also strengthen themselves institutionally.

It examines the establishment of a partnership between a state college and a large corporation for the purpose of developing and managing a physical fitness center for the employees of the corporation. The study considers the rationale for such partnerships and for employee-oriented fitness centers in particular. It presents criteria for successful partnerships and details procedures for setting them up and for on-going management.

It shows how one fitness-center partnership was assessed by a membership survey a year after the center was established. The design methodology of the survey instrument and the resultant design, itself, are fully discussed. The results of the assessment are given, and it is shown how these results were used in recommending center improvements.

A number of changes have taken place in the environment surrounding institutions of higher education: diminishing enrollments, changing student patterns, and financial cutbacks are current examples. While schools must gear up to meet these changes, the business community must also share the responsibility for meeting the challenges. It seems clear that no one sector can do the job alone.

The researcher encourages institutions of higher education to expand their missions to include outreach service, especially through partnerships with business. Specific follow-on research is recommended, and an approach for establishing an overall measurement of physical fitness is suggested.

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CHAPTER 1

THE PROBLEM AND RELATED ISSUES

Introduction

This dissertation concerns the establishment of a partnership between a state college and a major corporation for the purpose of developing and managing a physical fitness center for the employees of the corporation. The study considers the rationale for such partnerships and for employee-oriented fitness centers in particular.

In understanding the specifics of the study, it is helpful to review the current and projected environments of the nation's institutes of higher learning and to examine the health-related problems faced by corporations.

Changing University Environments

Diminishing student enrollments are forcing American institutions of public higher education to modify and expand their traditional roles of teaching, research, and service. Salem State College (SSC), of eastern Massachusetts, is typical of the institutions that face such enrollment declines. A rough projection of the decline expected over the

next decade may be made by considering the profile of births in the service region.

Births in Massachusetts during the decade of 1968-1978 will account for a great proportion of the Salem State College students expected in the decade of 1988-1998. The profile of births during that precursor decade shows a pronounced trend downward from 94,900 in 1968 to 67,800 in 1978, a drop of 29 percent.¹ It should be expected, therefore, that a material drop in higher-education enrollment will take place over the period 1988 to 1998.

Corroborating this expected decline in higher-education enrollment, the Massachusetts Department of Education has projected that the number of twelfth-grade students in Massachusetts will drop from 75 thousand in 1988 to 60 thousand in 1991, a decrease of 20 percent in three years.² Twelfth-grade students are, of course, potential matriculants in Salem State College and other institutions of higher education.

Other statistics, both corollary and contributing, support the hypothesis of material declines in Salem State

¹Massachusetts Department of Education, Bureau of Data Collection and Processing, "Massachusetts School-Attending Children, Historical Enrollments by Grade" (January 1987) [Table].

²Massachusetts Department of Education, Bureau of Data Collection and Processing, "Massachusetts School-Attending Children, Five-Year Projections by Grade," (January 1987) [Table].

College enrollment in the coming decade. Important among these supporting data is the proportion of college-age persons in the service region. For Salem State College, the primary service region is older and aging, according to the most recent U.S. census:

The percentage of persons over 65 increased by 16 percent during the previous decade;

The percentage of persons under 17 decreased by 30 percent during that period. 3

Additionally, the Massachusetts Office of State Planning has projected that the number of junior and senior high-school students will decline, statewide, from one million in 1980 to 864 thousand in 1990, a drop of over 14 percent. The Office projects that the Eastern Massachusetts Macro-Metro Region, the primary area from which Salem State College draws students, will follow the statewide trend and experience a 14-percent decrease in the 10-to-19-year-old population, from 664 thousand in 1980 to 568 thousand in 1990.

In short, there is a strong consensus among demographers that college enrollments will continue to decline over the next decade and, indeed, that the decline will accelerate. The research indicates that the service region of Salem State College will, at the very least, follow this

3U.S. Census of Population, 1980.

overall trend and that the effect in this region may well be greater than the overall average.

In meeting the challenge, American four-year public colleges and universities can adapt to these demographic changes in ways which enhance their traditional missions and which fulfill a critical need in the nation's future. Through the establishment of service outreach programs, institutions of higher education can develop partnerships with businesses, government agencies, other educational institutions, and community organizations. Such partnerships will offer opportunities for research, training, and technical assistance to faculty and students; will increase the institution's resource base; and will enhance the institution's ability to attract non-traditional students in a time of diminishing traditional enrollment.

The decision to establish a service outreach arm within an institution must be consistent with the mission of the institution. In addition, the commitment to take on this demanding role must have the full support of the President and the Board of Trustees. Both internal and external factors will influence an institution's ability to undertake such a challenge successfully:

"The most important factor of all appears to be dynamic, entrepreneurial leadership. Other key factors include institutional capacity, strong relations with the public and private sectors, a supportive campus culture, the availability of special resources, supportive administrative policies, and special

organizational arrangements. Conversely, the lack of funds and of faculty interest can be key barriers."⁴

Finally, institutions must be willing to draw upon public, private, and non-profit sector personnel to complement their efforts to meet the needs of the "other partner."

In a time of funding cuts and diminishing student enrollments, public colleges and universities that are active in broadening their public-service mission have an opportunity to strengthen themselves institutionally and to be in the forefront in partnership development.

Salem State College has long been known for its contributions to the educational and cultural environment of the region. In recent years, however, the College has broadened its base and reached out toward industry. Salem State College is now a major part of the service industry and a valuable, stable economic asset to the region.

Corporate Health-Related Problems

In the nineteenth century, the majority of industrial work was manual in nature. It has been estimated that in 1850 human muscle produced nearly one-third of the energy used by workshops, factories, and farms. The industrial revolution changed the character of the work place as

⁴SRI International, Public Policy Center, The Higher Education-Economic Development Connection (Washington: American Association of State Colleges and Universities, 1986), vii.

machinery replaced muscle. Today, muscle power as a means to industrial production is estimated to be less than 1 percent.⁵

While technology has improved the lifestyle of industrialized nations in many ways, it has also contributed to sedentary habits, which have had a significant effect on the overall health of the populace. This effect has been well studied in America.

According to the U.S. Department of Commerce, national health-care expenditures more than tripled from 1972 to 1982.⁶ The Health Care Finance Administration predicts that U.S. medical costs will double again by 1990, at which point the national expenditure will be \$690 billion. It is notable that of the \$350 billion a year now being spent on health care, more than 25 percent is paid by employers.⁷

Elevated and rising health-care costs have very material effects on the books of American corporations. At General Motors, for example, the single largest item in accounts payable is the premium paid to Blue Cross & Blue

⁵"Employee Fitness: Corporate Philosophy for the 1980's," Athletic Purchasing and Facilities 4 (July 1980): 12.

⁶"Executive Fitness: Exploring the New Corporate Lifestyle," Dun's Business Month 126 (December 1985): 64.

⁷J.P. Opatz, "Wellness is a Cost-Containment Strategy," National Safety and Health News 131 (June 1985): 66.

Shield on behalf of the GM employees - no other payee receives as much, not even a steel supplier.⁸

Further, the raw cost of employee health care is not the largest effect on American industry. Premature employee deaths cost American companies nearly twenty billion dollars a year, more than the combined profits of the five largest corporations.⁹ Backaches that take workers out of production cost businesses an estimated one billion dollars a year, not including \$250 million a year in workman's compensation. In total, American companies lose more than fifty billion dollars every year because of employee illness, disability, and premature death.¹⁰

According to figures released by the U.S. Center for Disease Control, 54 percent of all deaths of people under age 65 are directly attributable to unhealthful lifestyles.¹¹ Heart disease, cancer, and stroke are the top three killer diseases in America. The link between these three diseases and an unhealthful lifestyle is well proven.¹²

⁸Margaretha S. Maryk, "Corporate Fitness and Sports in a Changing Society," Fitness and Health 53 (May 1982): 64.

⁹C.L. Cooper, "High Cost of Stress," Organizational Dynamics, May 1982, 44.

¹⁰Barbara Lau, "Corporate Fitness Programs," NRECA Management Quarterly 26 (Spring 1985): 21.

¹¹"Executive Fitness," 65.

¹²Ibid.

A Model Partnership

The GTE Products Corporation, in Danvers, Massachusetts, has shown its commitment to the health and well being of its employees through the establishment of its Personal Fitness Center. The newly constructed fitness center, of 6000 square feet, is located at Corporate Headquarters and is available to all 2615 employees.

This fully equipped center is the first of its kind on Greater Boston's North Shore to be built by a major corporation. It also represents the first known time that an academic institution has joined with a major company to develop a comprehensive health-promotion program for employees.

Under contract with GTE, the Resource Center for Business at Salem State College was responsible for developing and delivering comprehensive health-care programs, managing the facility, promoting the programs, and evaluating the results.

In evaluating the results, an assessment was made of participant attitudes toward the use of the Personal Fitness Center after it had been operating for one year. This assessment was conducted through a survey of employee participants at the GTE fitness center. Copies of the survey instrument and letter of transmission are given in the appendix.

Analysis and Results

At the end of the first year of the SSC-GTE partnership, the employees who participated in the fitness program were surveyed regarding their attitudes and opinions of the fitness center. The survey was conducted via a questionnaire mailed to the employees and returned to a central collector.

The eighty-eight Likert-scale survey questions were grouped into five categories:

1. Equipment provided
2. Center management
3. Perceived personal changes from participating
4. Fitness programs offered
5. Personal data about the participant

The purpose of the survey was to gather information for improving the fitness program in meeting the needs, desires, and goals of the partnership.

With regard to equipment, the perceived effectiveness of the exercise instruments was positively correlated with friendliness. Treadmills and ergometric bicycles were clearly the most popular devices, and were thought by the participants to be the most effective in reaching their fitness goals.

Management of the center was favorably regarded and was seen as generally competent, but the survey answers showed

several management aspects that needed improvement. The fitness newsletter was considered to be worthwhile.

More than 80 percent of participants considered themselves to be healthier after the first year of the program. Self-motivation was, by a large factor, the most significant element in a participant's reaching a given fitness goal. Support by the employee's supervisor was at the bottom of the scale for reaching a goal.

As for fitness programs, the low-impact program was favored by 71 percent of women. Caloric-expenditure and timed cardiovascular programs were favored by 68% of participants, both men and women.

The information presented in this dissertation will be of special interest and importance to, among others, business leaders and educators who are committed to public-sector partnerships and to the health and fitness of the work force.

Organization of the Dissertation

Chapter 1

Chapter 1 provides a summary of the dissertation and gives an overview of the research. The background and environment within which the research was conducted is presented, and the analysis method and results are summarized and discussed.

Chapter 2

Chapter 2 is devoted to a discussion of the available literature surrounding the dissertation subject. For this discussion, the literature is considered to be classified in three categories:

1. Environmental Changes Affecting Education, wherein the major elements which drive change in universities are provided
2. Outreach and Partnership Development, in which one major reaction to university environmental change is discussed
3. Physical Fitness and Corporate Health Programs, where the particular type of partnership relevant to the dissertation is detailed

Chapter 3

In Chapter 3, a detailed presentation is given on the research design and methodology. A complete description is given of the physical facility and the related activities around which the research was conducted. The survey method used in the investigation is presented, and the survey instrument developed for the research is described. Literature pertinent to the design of the survey instrument is cited, and reasons for the design decisions actually made are set forth.

Chapter 4

Chapter 4 is devoted to the presentation of research results and to the analysis by which the results were derived. Each of the five sections of the survey instrument

was designed to examine a particular aspect of a fitness center operation: the exercise equipment; the facility management; personal changes brought about by use of the facility; interest levels in the exercise programs; and demographic characteristics of center participants. This chapter presents the results of each of the five sections.

Chapter 5

This final chapter presents conclusions reached through the research and makes recommendations for actions to be taken and further research that might be conducted. This material is given in three parts: those conclusions and recommendations for the educational community in partnership with business; conclusions relating particularly to the establishment of corporate fitness programs; and recommendations for further study and research.

CHAPTER 2
REVIEW OF THE LITERATURE

Introduction

An extensive literature review was conducted on the topics surrounding the need for institutions of higher education to develop partnerships with industry with emphasis on assisting industry in promoting physical fitness in the work place. For purposes of the present research, the literature is most conveniently categorized under the following subject headings:

1. Environmental Changes Affecting Education
2. Outreach and Partnership Development
3. Model Partnerships
4. Physical Fitness and Corporate Health Programs

These subjects, then, form the section headings for a discussion of the literature, below.

Environmental Changes Affecting Education

Declining Enrollment and Support

Of all the changes that have taken place in the environment of higher education since World War Two, none poses more difficult management problems for institutions

than the decline in enrollment and support. The effect of these declines has been made all the more serious because the declines followed close on the heels of a long-term expansion, and the turnaround was not adequately anticipated.¹

The downward trend is not over. It is projected that enrollments will continue to drop until nearly the end of the twentieth century because of a steady decrease in the college-age population. From 1985 to 1995, the number of potential college matriculants is expected to go down by 25 percent.² In the shorter term, over the next five years from 1989 through 1994, the number of potential matriculants will drop 15 percent, nationwide.³

The institutions most likely to be hit the hardest by the declines are the smaller private liberal arts colleges and the public state colleges, many of which are former

¹Jay D. Scribner, "Colleges of Education in Urban Universities," in Colleges of Education: Perspectives on Their Future, ed. Charles W. Case and William A. Matthes (Berkeley, Calif.: McCutchan Publishing Corporation, 1985), 71.

²Ibid., 79.

³David W. Breneman, The Coming Enrollment Crisis: What Every Trustee Must Know (Washington: The Association of Governing Boards of Universities and Colleges, 1982), 21; James R. Mingle and Associates, Challenges of Retrenchment (San Francisco: Jossey-Bass, 1981), 19; and Three Thousand Futures: The Next Twenty Years for Higher Education, Final Report of the Carnegie Council on Policy Studies in Higher Education (San Francisco: Jossey-Bass, 1981), 32-64.

colleges of education.⁴ In the colleges of education, sometimes known as "teachers colleges," the situation is especially serious. The decline in enrollments began earlier and has moved at a swifter pace. During the decade of the 1970's, when total college enrollments rose 29 percent, colleges of education were experiencing the opposite trend:

To anyone who teaches in a school of education, it is no secret that enrollments have been declining. In 1971, there were over 176,000 bachelor's degrees granted in education. In 1980, just ten years later, that number had dropped to slightly over 118,000, a decline of over 33 percent. During that same period, bachelor's degrees in education as a percentage of all bachelor's degrees declined from 21 to 12.7 percent.⁵

For all institutions of higher learning, the decline has been felt, and will continue to be felt, more severely in New England than elsewhere in the United States.⁶ Using 1988 as a base, enrollments in Massachusetts are expected to drop 23 percent by 1994; in Connecticut, 21 percent; in New Hampshire, 17 percent; in Rhode Island, 22 percent;

⁴Mingle 1981, 19-20.

⁵Sam J. Yarger, Sally Mertens, and Kenneth R. Howey, "Schools of Education and Programs for Continuing Professional Development," in Colleges of Education: Perspectives on Their Future, ed. Charles W. Case and William A. Matthes (Berkeley, Calif.: McCutchan Publishing Corporation, 1985), 98.

⁶Scribner 1985, 79; Mingle 1981, 19; and Three Thousand Futures, 66-71.

and in Vermont, 16 percent⁷. The average enrollment decline in the Northeast, 1988 through 1994, will be 22 percent, seven percentage points more than the national average.

The estimates by Breneman for Massachusetts are substantiated by figures from the Massachusetts Department of Education. Using known birth rates in the late 1960's, this state agency projects a decrease of 20 percent in the number of twelfth-grade students in Massachusetts during the period 1988 to 1991.⁸

And across the country, the financial resources of nearly all colleges will be under strain. The decreased enrollments cut income from tuition and also from state government support. Additionally, there has been a steady decrease in private support for the average college, even while personal income has been rising.⁹ A secondary effect is felt in the increased cost of maintaining an older faculty, since salaries of senior faculty members are generally much higher than those of junior members.¹⁰

Managing the problems brought on by declining enrollment and public support has not been easy. As the

⁷Breneman 1982, 23, 15, 27, 31, 34.

⁸Massachusetts Department of Education, Bureau of Data Collection and Processing, Massachusetts School-Attending Children, Historical Enrollments by Grade (January 1987). [Table]

⁹Three Thousand Futures, 107.

¹⁰Ibid., 104-7.

problems became manifest, heads of colleges began to call for new, creative, and workable marketing strategies. College financial executives began to insist on redefinitions of missions and on reallocations of resources. Faculty members are beginning to seek ties with industry and getting involved with the business world, as the faculty, too, begins to look for new marketing plans.¹¹

The straightforward approach to cost cutting, increasing the student-to-faculty ratio, has severe drawbacks: it is limited by tenure rules; it reduces the variety of courses that can be offered; and, of course, it decreases the attention that can be given to the individual students. All these elements negatively affect the attractiveness of the school and act to further decrease enrollment, particularly the enrollment of the better students.¹²

Educational executives are managing around the fiscal and environmental changes taking place and are seeking what advantages are to be found. As Scribner puts it,

[The] patterns of interaction suggest a network of strategies aimed at adapting to, as well as resisting, the decline. ... Managing decline involves strategies for resistance that seek new markets, new delivery systems, new products, and new sources of revenue.¹³

¹¹James R. Mingle, The Challenges of Retrenchment (San Francisco: Jossey-Bass, 1981).

¹²Three Thousand Futures, 105.

¹³Scribner 1985, 80-81.

In short, the elements necessary to promote outreach strategies are being assembled in institutions of higher learning. The loss of revenue due to enrollment decline can be countered by new kinds of services or by redefining markets and services already offered. Colleges and universities are establishing new relationships with private industry and with governments, and they are seeking to be the research agent employed to solve energy, health, and urban problems.¹⁴

Changing Student Patterns

In addition to decreases in the absolute numbers of matriculating students, the patterns of attendance and the characteristics of the students, themselves, are changing.

For one thing, young students are now increasingly delaying their entry into higher education. For many years, nearly all students who attended college did so immediately after high school and continued their college work straight through to completion. If their plans called for graduate study, that was also generally completed before starting their career.

This front-loaded pattern is changing. One in three freshman students delay the beginning of their college work,

¹⁴Mingle 1981, 231.

and many take a hiatus during their studies.¹⁵ Forty per-
cent of undergraduates are attending college part-time, and
more than half take longer than the traditional four years
to complete their baccalaureate studies.¹⁶

Further, until recently the few adults who came to
higher education came mainly for self-improvement. Now,
adult education is changing. More and more, older people
are going to formal colleges in order to improve their
position in the job market.¹⁷ But straight vocational
training is not all that these people seek. As Frank
Rhodes, president of Cornell University, points out, profes-
sional education is much more than vocational training:

Professional education is broad and expansive and,
in the spirit of liberal learning, sees skills as
means to larger ends. It embraces meaningful
attention to liberal education, not as an add-on,
but as a vital component of professional study. ¹⁸

It can be concluded that many professionals grasp and agree
with Rhodes's observation, inasmuch as they are choosing a
formal college to which to return rather than a strictly

¹⁵Ernest A. Lynton and Sandra E. Elman, New Priorities
for the University (San Francisco: Jossey-Bass Publishers,
1987), 86-87.

¹⁶Ernest A. Lynton, "The Pause That Refreshes: Hand-
ling the Interrupted Education," Educational Record 67,
1986, 29.

¹⁷Ibid.

¹⁸Frank H. T. Rhodes, "Reforming Higher Education Will
Take More than Just Tinkering with Curricula," The Chronicle
of Higher Education, 22 May 1985, 80.

technical or vocational school. The issue of adults who return to college for job-related reasons has been studied extensively by Lynton.¹⁹

Similarly, those who received their higher education in schools of the liberal arts are finding that a lack of knowledge in science and engineering is retarding their professional advancement. They are returning to formal colleges to close that educational gap. Saxon sees that there are two types of higher-education institutions and that the truly educated take advantage of both.²⁰

So many professionals are returning repeatedly to college that the phenomenon has been referred to as "lifelong learning," and the Massachusetts Institute of Technology (MIT) prepared a special report on the topic.²¹ Among other recommendations of this report, it was proposed that MIT offer a new terminal degree: Master of Engineering. This degree would be intended to meet the needs of those "engineers who have started their career in industry upon completion of their undergraduate education."²² The

¹⁹Ernest A. Lynton, "Occupational Maintenance: Recurrent Education to Maintain Occupational Effectiveness," CAEL News, 1983, 7(1), 6-8.

²⁰David S. Saxon, "Liberal Education in a Technological Age," Science 218 (26 November 1982): 845.

²¹Lifelong Cooperative Education: Report of the Centennial Study Committee, by Robert M. Fano, Chairman (Cambridge, Mass.: The MIT Press, 1982), 2.

²²Ibid, 50.

proposal of this new graduate degree explicitly recognizes the interrupted, or paused, education.

The paused education, especially for the technological professional, makes it even more important for the institution, in its instructional program, to close the gap between theory and practice: The returning student has much experience in the application of knowledge and will insist that the practical exercise of theory be recognized. At the same time, because of their experience, the mature students will assist in bridging the theory-application gap.²³

It has been argued that the colleges of education should take the lead in meeting the need for continuing professional development. Of course, updating professional teachers has long been a role of the college of education, but the modern issue is much broader. It extends to the military, business, industry, health professions, and a variety of social services.²⁴

An important concept regarding continuing professional development is outlined in the MIT report on the subject:

This demand [for updated engineers] cannot be met by replacing obsolescent engineers with new graduates (and the human costs of such a replacement

²³Lynton 1986, 29-33.

²⁴Dean C. Corrigan, "Preparing Educators for Nonschool Settings," in Policy for the Education of Educators: Issues and Implications, ed. Georgianna Appiagnani (Washington: American Association of Colleges for Teacher Education, 1981), 37-49.

policy would be unacceptable even if it were feasible).²⁵

The report then recommends a number of specific actions to be taken by schools of engineering:

1. Faculties and administrators of engineering colleges should work closely with their counterparts in industry to design special courses for working engineers.
2. Engineering colleges should be opened up to working engineers for study on a part-time basis.
3. Arrangements should be made to use television for offering class work at the work place.
4. Corporations should support, financially and in spirit, formal study for their engineers in all stages of their career.²⁶

The authors of the report, the very select Centennial Study Committee, go even further in this direction by recommending that the charter of MIT be modified to add the education of working engineers: "We believe that the ... tradition of service to the engineering profession demands that the charter be so extended."²⁷ It would be difficult to find a more credible recognition of the importance of continuing professional development.

The lifelong learning issue is summed up neatly by Matthews and Norgaard:

The time is dead and gone, buried and past, when we could graduate from a four-year institution

²⁵Lifelong Cooperative Education 1982, 6.

²⁶Ibid., 6-11.

²⁷Ibid., 8.

with a degree that would prepare us with all the education we would need for a 30- or 40-year career. The hallmark of the successful employee of the future will be a willingness and motivation to pursue his or her continuing professional development.²⁸

And, "The very idea of 'post-secondary' or 'higher' education is gradually being replaced by the notion of lifelong learning."²⁹

Corporate Education

Of all the changes that have taken place in the environment of the universities, none have been more massive in this century than the rise of education at the corporate site. By the mid-1980s, even the more conservative estimates of annual corporate expenditures for employee education approached the total annual expenses of all the nation's universities and colleges. And the number of employee-students in training reached the level of total enrollment in the traditional institutions of higher learning.³⁰

²⁸Jana B. Matthews and Rolf Norgaard, Managing the Partnership Between Higher Education and Industry (Boulder, Colo.: National Center for Higher Education Management Systems, 1984), 45.

²⁹Ibid., 63.

³⁰Nell P. Eurich, Corporate Classrooms: The Learning Business, with a foreword by Ernest L. Boyer (Princeton: The Carnegie Foundation for the Advancement of Teaching, 1985), 7-8.

Estimates of the total corporate budgets for formal education of their employees, not including on-the-job training, range from thirty billion³¹ to one hundred billion dollars.³² Before its operating-company divestiture, the Bell System, alone, spent nearly two billion dollars annually, with twelve thousand courses offered and an average of twenty thousand employees in class on any given day.³³

If on-the-job training is included in the national figures for the private sector, the estimated expenditure is over two hundred billion dollars, which is approximately the total amount spent on all public education from first grade through institutions granting terminal degrees.³⁴

Curricula offered by the corporate institutions comprise courses from the remedial to the doctoral level.³⁵

³¹Harold L. Hodgkinson, preface to Business and Higher Education: Toward New Alliances, ed. Gerard G. Gold (San Francisco: Jossey-Bass, 1981), 1; and Anthony Patrick Carnevale, "The Learning Enterprise," Training and Development Journal, January 1986, 18.

³²Thomas F. Gilbert, "Training: The \$100 Billion Opportunity," Training and Development Journal, November 1976, 3-8.

³³Gerard G. Gold, "Toward Business-Higher Education Alliances," chap. in Business and Higher Education: Toward New Alliances (San Francisco: Jossey-Bass, 1981), 30.

³⁴Carnevale 1986, 18-23.

³⁵Ernest L. Boyer, foreword to Corporate Classrooms: The Learning Business, by Nell P. Eurich (Princeton: The Carnegie Foundation for the Advancement of Teaching, 1985), x.

Four dimensions of corporate education have been identified by Eurich:

1. In-House Educational Programs
2. Educational and Training Facilities
3. Degree-Granting Institutions
4. Satellite Universities

The in-house educational programs span a wide range of training programs, seminars, and institutes offered at the work site. Courses cover the spectrum from computers to management techniques, from machinery operation to mathematical theory. Moreover, the training is increasingly systematic and covers things that traditional colleges would call general education. As Eurich puts it,

The curriculum of corporate classrooms has broadened markedly in recent years. Courses of study now seek to educate the whole person and to put the work of industry in a larger social, economic, and political context. Indeed, the corporate curriculum increasingly parallels the work of the nation's colleges and schools, ranging from the teaching of English and computation to post-doctoral study and research.³⁶

Educational and training facilities are being widely constructed by corporations as institutional housing to supplement instruction in the work place. These facilities look very much like college campuses. Prime examples are the Xerox center in Virginia, the RCA campus in New Jersey, and the Holiday Inn University in Mississippi. They all

³⁶Eurich 1985, 59.

have dormitories, classrooms, and recreational facilities.

The ambience on the corporate campus is generally different from that at the traditional college. The behavior of both students and faculty tends to be more purposeful in the corporate setting, and the activity level is more intense. Informality is usual, first names are generally used, and the lines of hierarchy are blurred.³⁷

Degree-granting institutions are being established by industrial corporations at a great rate. These institutions have passed the same academic hurdles as the traditional schools and are accredited by the same organizations. In 1988, it was estimated that there were nineteen corporate college-level degree programs.³⁸ An analyst with the New York Times, referring to a study by the U.S. News and World Report, projects that there will be hundreds of such programs established in the next fifty years, mainly in high technology, science, and engineering.³⁹

It is arguable that corporate education is a publicly supported enterprise: About 50 percent of the corporate expense for education is taken as a tax write off and the remainder is supported by increased prices that the consuming public pays. Additionally, the employees being educated

³⁷Eurich 1985, 47-51.

³⁸Eurich 1985, 85.

³⁹The New York Times, 9 May 1983, A5.

are citizens, and education at the work place must be viewed in a larger educational and social context. To the extent that this argument is cogent, more openness and public accountability is required.⁴⁰ To this end, Eurich suggests the formation of a national Strategic Council for Educational Development (SCED). The SCED would provide leadership, not bureaucratic mandates, by proposing policies and programs for government agencies and for the private educational sector.

In addition to the instruction given, the corporate educational system also conducts a certain amount of pedagogic research, inquiring into the learning process and discovering how to teach better. The results of their research is generally shared through publication, and often benefits the traditional educator, especially since conventional universities have done little along these lines.⁴¹

Further, corporations routinely assess the effectiveness of their teaching, carefully measuring the cost-benefit of the educational investment. Their assessment and measurement methods are a challenge to schools and colleges to improve their own.⁴²

⁴⁰Eurich 1985, 2-4.

⁴¹Eurich 1985, 55.

⁴²Eurich 1985, 55-58.

Employers have taken up the role of educators for a number of reasons:

1. To make up for inadequacies, real and only perceived, in the traditional education system
2. To train employees for promotion, both technologically and for management positions
3. To cope with technological changes that make employee skills obsolescent
4. To provide company-oriented training in specific company products and processes
5. To enhance recruitment and employee benefit packages
6. For economic and convenience reasons⁴³

Inadequacies in the traditional education system are of real concern. David Saxon, president of the University of California, writing in Science, says

There is compelling evidence that growing numbers of high-school students are unprepared either for jobs or for further education. In the five-year period between 1975 and 1980, total student enrollments at higher-education institutions increased by only 7 percent, but enrollments in remedial math courses at four-year institutions increased by 72 percent. We in the universities and those in industry are, as a consequence, being forced to devote more time and money to teach young people basic skills -- reading, writing, and simple arithmetic -- things they should have learned in high school.⁴⁴

⁴³Robert L. Craig and Christine J. Evers, "Employers as Educators: The 'Shadow Education System,'" in Business and Higher Education: Toward New Alliances, ed. Gerard G. Gold (San Francisco: Jossey-Bass, 1981), 29-46; and Eurich 1985, 12-14.

⁴⁴Saxon 1982, 845.

And from Ernest Boyer, President, The Carnegie Foundation for the Advancement of Teaching:

It is unacceptable that corporate America is compelled to engage in remedial education and teach the basic skills. ... One important lesson from corporate education is that the quality of public education in the nation must be strengthened.⁴⁵

It seems clear that no single sector of education can do the whole job alone. Corporate education quite rightly has more interest in the organization than in the individual and has more specific and narrower goals than traditional education. But collegiate education should have a higher mission than simple training: It is charged with educating for life, not employment alone; it must help the student to discover how knowledge fits into the larger context and how facts are given meaning.

As Boyer admonishes,

In the end, universities and corporations should build connections; but they must also protect their independence. The unique missions of the nation's universities and colleges -- to act as a moral force, to discover and transmit knowledge and larger meanings, to engage with integrity in the nation's service -- must be preserved and strengthened as we seek to clarify and reaffirm traditional higher learning's compelling and essential role.⁴⁶

Higher education should never abandon its mission and imitate the corporate approach. Society will lose a force

⁴⁵Boyer 1985), xii.

⁴⁶Boyer 1985, xv.

that it desperately needs, and the university will enter a contest that it cannot win. Rather, the university should supplement and augment its educational programs by aggressively reaching out beyond the campus to the surrounding community and to the business world.

Outreach and Partnership Development

Introduction

The term outreach, as used in the context of this dissertation, refers to the concept and process of reaching out by an educational institution to the community or to the business world. Outreach comprises contracts, partnerships, liaisons, and general communications originated by the institution with organizations outside the campus.

Outreach toward all off-campus organizations is important, of course, but many authorities feel that cooperation with the business world is particularly essential. Robert M. Bersi, Chancellor Emeritus of the University of Nevada System and Vice President for Development at the California State University at Long Beach, said,

Those colleges and universities determined to stay at the cutting edge of American higher education will be those that master the art of recruiting to their cause the wealth, reputation, and influence of powerful private sector organizations.⁴⁷

⁴⁷Robert M. Bersi, "Some Personal Thoughts on Business/Academic Partnerships: An Entrepreneurial Strategy," in Exploring Common Ground: A Report on Business/Academic Partnerships, ed. Joe N. Prince (Washington: American Association of State Colleges and

Hence, the emphasis of the material considered in this section is primarily concerned with the academic-business aspects of outreach.

Direct Benefits of Outreach

The American Association of State Colleges and Universities (AASCU) established a Committee on Corporate/College Relations many years ago. The present committee chairman is Stephen Feldman, President of Western Connecticut State University, who is an active proponent of outreach toward business. He caused a report to be prepared which details collaborative programs between colleges and business in thirty-six higher-education institutions.⁴⁸

One of the many successes reported by the AASCU committee was the Quality of Work Life (QWL) Program established by the Auburn University of Montgomery with the Monsanto Agricultural Company. The benefits to the university included the financial return, of course, but the university reported benefits substantially beyond that.

They cited valuable on-site research permitted by the program that would not have been possible in any other way. Refereed publications resulted from this research, and the

Universities, 1987).

⁴⁸Exploring Common Ground: A Report on Business/Academic Partnerships, ed. Joe N. Prince (Washington: American Association of State Colleges and Universities, 1987), v.

expertise gained by the university staff was intrinsically valuable. Additionally, the material and experience gathered during the program resulted in several case studies that were used in university courses. In short, Auburn was strengthened financially and professionally, and the school's reputation was materially enhanced.⁴⁹

Similar benefits are described throughout the AASCU report. Essentially all thirty-six institutions reported benefits well beyond the revenue received for their services.

Which is not to say that the revenues are not important. At Auburn, in their report on the QWL Program, the university made a specific point that the financial strengthening of their Center for Business and Economic Development was important, for it provided the resources whereby additional programs, with their attendant professional benefits, could be pursued with Monsanto and other companies.⁵⁰

More generally, the financial difficulties associated with falling enrollment and declining public support plague many colleges. Among other effects, this is contributing to a shortage of faculty members in engineering, scientific, and mathematical disciplines. The salary differential

⁴⁹Ibid., 56-62.

⁵⁰Ibid., 61.

between industry and academe is often 100 percent, and in some cases reaches 200 percent. The attraction is too strong to resist for many young graduates, and this means fewer doctoral candidates, which leads to fewer professors. In some disciplines, the faculty shortage is near 50 percent.⁵¹

In the climate so created, an effective counter is the establishment of fresh, new challenges that give to faculty members work opportunities that are missing in industrial settings.⁵²

Proper outreach to industry can lead not only to interesting and challenging work for the faculty, but to increased income. The former effect makes academe more attractive to desirable faculty members; the latter permits them to accept the opportunity.

⁵¹Matthews and Norgaard 1984, 77-84.

⁵²Mingle 1981, 6-7.

Indirect Benefits of Outreach

Bersi has commented on the indirect benefits to the college of close relationships with industry.⁵³ His observation that it is necessary to have that business alliance in order to be among the foremost institutions of higher learning is shared by many others, notably Lynton and Elman.⁵⁴

But, in addition to the advantages to the university in such alliances, these two authors see also an obligation for the school to develop the business relationship. They believe that the university should become as involved in the dissemination, in the interpretation, and the application of knowledge as it is in the search for new knowledge.⁵⁵

The faculty's role must broaden to include the dissemination of the practical side of knowledge. The faculty must be involved with the actual application of the knowledge that they have acquired. Much more is required of teachers, in today's environment, than the ex cathedra transmission of knowledge to the attentive student. There is a strong need for teaching that ties together theory and practice.

[The teachers] also need knowledge of, and preferably some experience in, the world outside the university to gain an understanding of the applications of new ideas and methodologies, the relationship of theory to practice, the limita-

⁵³Bersi 1987, 200.

⁵⁴Lynton and Elman 1987, 132.

⁵⁵Ibid., xi.

tions of the former, and what can be learned from experience.⁵⁶

A good way to prepare the teacher to carry out this expanded role is through interactions with professionals who are practicing the theory of the teacher's field.

There are a number of avenues to constructive interactions. Some of these bring the faculty member into very close contact with the practicing professionals, and others keep the teacher more aloof. Directed, or contracted, research is generally done largely on the campus and is not greatly dissimilar from familiar scholarly pursuits; the professional contact may be close or it may be infrequent and distant. Paid lectures for corporate or, in some cases, general audiences are quite like classroom teaching; there may be introductions to fellow professionals, but little close work together. Specialized briefings and esoteric instructional activities take the teacher closer to the body of practicing professionals. Finally, consultation, technical assistance, policy analysis, technology assessment, and program development and evaluation generally leads to very close working relationships with the professional community.

These types of outreach are highly desirable, but in most academic settings they are individually sought out by the occasional faculty member. Oftentimes there is no overall institutionalized approach to broadening the staff

⁵⁶Lynton and Elman, 132-45, 137.

through outreach. Indeed, the pressures may work to the contrary. Even attempts by faculty to reach beyond their department are often treated as disloyal acts.⁵⁷

The most effective way to broaden the faculty in the sense discussed above is to change the system of rewards under which they serve. Although "service" is nearly always included among the principal factors when assessing a teacher's performance, it has never really been a major factor in tenure decisions and has not had the level of esteem and reward given to scholarship: research, publications, and teaching have always been considered far more important than "service." Junior faculty, especially, run a great risk if they devote any appreciable time to outreach activities. "Service" is traditionally thought of as being charitable in nature: serving on the library board, giving volunteer help to high-school students, and similar civic endeavors.⁵⁸

The label service, which has the connotation of civic duty, should not be applied to the professional service that we advocate for outreach. Outreach service, the kind that complements teaching, is the kind that draws upon the teacher's professional expertise and benefits the recipient through the teacher's specialized knowledge, while estab-

⁵⁷Rhodes 1985, 80.

⁵⁸Lynton and Elman 1987, 146-60.

lishing for the teacher the pragmatic application of the theory.

Professional activity in outreach is an extension of scholarship, not a substitute nor a conflict with it. The faculty member that engages in suitable professional activity outside the school, whether receiving consulting fees or acting pro bono, deserves scholarly recognition.⁵⁹

The involvement of an educational institution in outreach to any great extent will require review, and possible revision, of policies regarding faculty workloads, compensation, promotion, and tenure. Else, faculty members may be reluctant to participate.

Model Partnerships

The most important factors in establishing a successful outreach program are these, according to the Stanford Research Institute:

1. Dynamic, entrepreneurial leadership
2. Institutional capacity
3. Strong relationships with the public and private sectors
4. Supportive campus culture
5. Availability of special resources
6. Special organizational arrangements

⁵⁹Ibid., 148.

The key barriers to outreach success are a lack of funds and a lack of faculty interest.⁶⁰

In addition to these detailed factors, Zacchei and Mirman point out an overall characteristic shared by most successful outreach programs:

The most successful partnerships are those that provide opportunities for employees from both sectors to interact on a professional basis.

This observation ties in well with the complementary goals of outreach from the teaching viewpoint, discussed above.

For success, both business and the school must bring valuable things to the partnership: Schools bring professional educators and specialized knowledge; Businesses bring money, executives, and pragmatic professionals.

The Committee on Corporate/College Relations of the American Association of State Colleges and Universities has reported on thirty-six partnership endeavors that are the result of successful outreach programs. Among the outreach programs singled out in the report is that developed and operated by the Resource Center for Business at Salem State College.⁶¹ The mission of Salem State College (SSC) is

⁶⁰SRI International, Public Policy Center, The Higher Education-Economic Development Connection (Washington: American Association of State Colleges and Universities, 1986), vii.

⁶¹Maureen M. Johnson, "Salem State College, Resource Center for Business," in Exploring Common Ground: A report on Business/Academic Partnerships, ed. Joe N. Prince (Washington: American Association of State Colleges and Universities, 1987), 109-13.

threefold: to prepare students to be competent professionals, to discover and transmit knowledge, and to provide public services to the citizens of the Commonwealth of Massachusetts.

As the major public institution of higher education on the North Shore of Massachusetts, SSC accepts its responsibilities to serve and contribute positively not only to its student body, but also to the general public within its region. The college, therefore, is committed to providing a broad spectrum of public service and public relations programs, including educational, cultural, social, and athletic events.

The college's interest in serving area businesses has generated several services. The division of graduate and continuing education offers a broad spectrum of programs and courses specially designed for business. The Small Business Development Center and Service Corps of Retired Executives (SCORE) provide free services to local businesses in management, financial counseling, continuing education, information, and referrals. The college's cooperative relations and programs -- professional conferences, consulting, research and internships for area business and service organizations -- number over 450.

The Resource Center for Business is a prime example of the college's efforts to serve area business. The center's goal is to assist in developing partnerships and designing

service for business, industry, educational institutions, government agencies, and the community.

In order to respond in a timely manner to client needs, the center developed a resource bank. As a result of a survey conducted of the college's faculty, administrators, and selected consultants from the private sector, resource information was computerized and stored. Based on client need, a specialist is identified through the resource bank and asked to work with the center staff in fulfilling the client's request. The fee structure for services is based on the nature and scope of each project.

The Resource Center for Business was one of seven institutions of higher education receiving special commendation in The 1986 G. Theodore Mitau Award for Innovation and Change in Higher Education. This award is presented annually to a state college or university that has demonstrated a strong commitment to academic improvement, innovation, and educational excellence. That commitment is expressed in high-quality programs that break new ground in order to meet changing educational needs.

SSC and its local business community have formed a happy union. The college's Resource Center for Business uses public and private resources to arrange partnerships between industry and education. A public non-profit organization drawing upon the talents of the college's faculty members, administrators, and students and of private consul-

tants, the center designs and delivers services such as research, technical assistance, training, and publications.

With clients ranging from multinational corporations to local educational and financial institutions to government agencies to entrepreneurs, the center assists in such areas as corporate finance, site analysis, competition analysis, school-business alliances, special events, promotions, health and fitness, and research.

Services delivered to date by the center have provided faculty and staff with an opportunity to conduct research and deliver training and technical assistance to a very wide range of clients. In addition, many of the center's programs offer opportunities to students in their respective field of study. For example, client contracts serve as opportunities where students, under the guidance of faculty and trained professionals, obtain direct experience which further complements their programs of study. These opportunities may also lead to long term employment upon graduation. Finally as a result of the center's corporate fitness programs, the Sports, Fitness and Leisure Studies Department at SSC now has an innovative tool to assist the department in recruiting students into their undergraduate program.

Comparing outreach partnerships with the traditional support of schools by business, "The contribution of human resources is what distinguishes partnerships from other

forms of business support." Traditional support has been through donations of money or equipment.⁶²

Looking forward, the Carnegie Council on Policy Studies in Higher Education observes that

The future holds many unknowns and it also holds a range of already known choices that can be made by those making decisions about higher education. ... This places great responsibility on teachers, administrators, faculty leadership, and trustees, and on private support. ... Institutional action with private support is the single best key to unlock future possibilities.⁶³

Physical Fitness and Corporate Health Programs

Between the sixties and the seventies, the number of companies offering some form of health or fitness program quadrupled.⁶⁴ Between four hundred⁶⁵ and seven hundred⁶⁶ companies offer extensive or comprehensive health and fitness programs, and about fifty thousand offer a more modest

⁶²David A. Zacchei and Jill A. Mirman, Business-Education Partnerships: Strategies for School Improvement (Andover, Mass.: The Regional Laboratory for Educational Improvement of the Northeast & Islands, 1986), 7.

⁶³Three Thousand Futures, 116-118.

⁶⁴"Measuring the Shape of Corporate Fitness Plans," Employee Benefit Plan Review, April 1984, 10.

⁶⁵William M. Timmins, "Public Employee Physical Fitness Programs," Public Personnel Management Journal 10 (Summer 1981): 217.

⁶⁶"Executive Fitness," 64.

program.⁶⁷ A "comprehensive" program is generally taken to include health assessment, exercise facilities, educational seminars, and organized sports.

In addition to management's concern over the effect of employee health on costs and profits, the surge of interest in these programs is also fueled by our culture's increased awareness of the effects of lifestyles on the quality and longevity of life. Well-publicized increases in the number of cardiovascular disease cases has alerted people to the consequences of poor health habits and a physically sluggish life. It is estimated that ten million people suffer from alcoholism, twenty-two million from back problems, and twenty-three million from hypertension.⁶⁸ In an effort to counter these patterns, many Americans have taken a serious interest in improved health habits and in regular exercise. Corporate management has taken this interest into account in designing programs to attract desirable employees.

However, the effect on costs and profits remains the most forcibly convincing argument for management to support health and fitness programs. In addition to the direct costs associated with employee's health care, management is

⁶⁷Richard L. Pyle, "Performance Measures for a Corporate Fitness Program," Training and Development Journal, July 1979, 32.

⁶⁸Barbara Lau, "Corporate Fitness Programs," NRECA Management Quarterly, Spring 1985, 21.

also acutely aware of the effect of poor health on productivity. The facts are overwhelming:

1. Industry loses over 130 million workdays a year to cardiovascular disease.⁶⁹
2. Over eight million workdays a year are lost to smoking-related illnesses.⁷⁰
3. Nearly 132 million workdays are annually lost to premature employee death.⁷¹

In 1950, only about 4.5 percent of the Gross National Product was spent on health care; but by 1982 the percentage had risen to 10.5 percent.⁷² In 1987, the U.S. Health Care Finance Administration reported the figure at nearly 13 percent.⁷³ Of the total U.S. health-care costs, industry pays between 25 percent and 30 percent.⁷⁴ As cited above, General Motors pays more in employee health-insurance premiums than it does for steel⁷⁵, and GM is not singular in

69W.T. DeCarlo, "Filling a Need for Meaningful, Acceptable Information," Corporate Fitness and Recreation, October/November 1982, 9.

70W. Goldbeck, "Industry and Its Growing Responsibility for the Health of Our Nation," paper presented at the Eighth Annual Convention of the American Association of Fitness Directors in Business and Industry, 1982.

71"Employee Fitness," 12.

72Werner W.K. Hoeger, Lifetime Physical Fitness and Wellness (Englewood, CO: Morton Publishing Company, 1986), 5-6.

73Lau, 21.

74Ibid.

75Maryk, 64.

that regard: The average Fortune-500 company spends about 24 percent of its profits on health-insurance premiums.

Moreover, twenty-five billion dollars a year is spent by industry on cardiovascular treatments, and more than seven hundred million dollars is spent replacing those who are disabled and killed by this disease. Back-related illness costs industry \$250 million each year in Workman's Compensation alone.⁷⁶

It is apparent, then, that corporations have a legitimate concern in the health and fitness of their employees. The cost to industry is heavy in rising health-care bills and in lost productivity, and it threatens to become even more burdensome. Dr. Jerome Zuckerman, of the Cardio-Fitness Center in New York City, puts it this way:

Companies use to take the view that an individual's medical situation was that person's own business. Now companies realize they have invested in an employee's education and training and suffer if they fail to take an interest.⁷⁷

A survey by the Health Research Institute reported that of the fifteen hundred largest corporations in 1983, those without fitness programs paid \$1456 per employee a year in

⁷⁶D. Howell, "Inside Corporate Fitness," Athletic Business 9 (July 1985): 22.

⁷⁷Peter Gambaccini, "The Bottom; Line on Fitness," Runner's World, July 1987, 69.

health-care costs, while those with a program paid \$1061 per employee a year.⁷⁸

In the United States, the prevailing attitude toward illness has been oriented to curative measures rather than preventive ones. This is changing. It is with the preventive approach to health that corporations wish to influence employee lifestyles and health habits. In a later chapter, we will look at how the GTE Products Corporation, in Danvers, Massachusetts, has implemented a preventive approach through the establishment of the Personal Fitness Center.

The range of approaches taken in implementing such health and fitness programs is broad, and it reflects varying levels of corporate commitment and finances to such programs. Some corporations provide extensive educational mailings to their employees (e.g., Xerox); some provide medical screenings (e.g., New York Telephone and Campbell Soup Company); some sponsor athletic competitions and leagues (e.g., Bonne Bell and Motorola); some provide their employees with financial incentives to exercise on their own time, some provide memberships to fitness clubs (generally reserved for executives and middle managers); and many provide on-site facilities for exercise (e.g., GTE, Tenneco,

⁷⁸"Executive Fitness," 65.

Coca Cola, Kimberly-Clark, PepsiCo, Texas Instruments, and Tracor).⁷⁹

The literature provides information on a variety of health and fitness programs. New York Telephone started a program in the early seventies that consisted of nine screening and educational programs.⁸⁰ They drew upon national networks to provide these services. The cost was \$2.84 million in 1980, but the company saved \$2.7 million in reduced absenteeism and health-care treatment costs.⁸¹ The biggest savings came from the smoking-cessation clinic in which more than two million dollars was saved in treatment costs and work absences.⁸² Also, a clinic in hypertension saved \$663 thousand, a clinic in back-related problems saved \$302 thousand, a program on cholesterol saved \$204 thousand, a breast-cancer screening clinic saved treatments costs of \$269 thousand (and possibly the lives of forty-two women), a colon-cancer screening clinic saved \$85 thousand, a stress-control program saved \$268 thousand, and a program in alcoholism saved \$1.6 million in treatment costs and absenteeism.⁸³

⁷⁹Ibid, 65-66.

⁸⁰Hoeger, 6.

⁸¹Margaret LeRoux, "Cashing in on Wellness," Business Insurance, 21 September 1981, 35.

⁸²Ibid.

⁸³Ibid.

Mesa Petroleum Company, of Texas, created an on-site facility in 1979. A 1982 study showed that the health-care cost for a non-participant averaged \$434 per year, while the rate for a participant was less than half that at \$173. In addition, sick-leave time for non-participants was forty-four hours a year, but participants had only twenty-seven hours of sickness a year.⁸⁴

Tenneco has an extensive health and fitness program, including an eleven-million dollar facility. A study showed that non-participant males cost \$442 more than participant males in health-care costs a year. Among women, non-participants cost the company \$896 more per year in health-care expense than participants. In addition, non-participant females averaged twenty-three hours more a year in absenteeism than participant females.⁸⁵

The New York State Education Department initiated a five-year heart-disease education program and experienced a 55-percent drop in absenteeism in the first year.⁸⁶

A Canada Life Survey conducted by the University of Toronto concluded that a health and fitness program had saved that company \$37 thousand dollars in health-care

⁸⁴"Executive Fitness," 65.

⁸⁵Ibid.

⁸⁶Ibid.

costs, saved \$231 thousand in costs of employee turnover, and achieved a decrease of 22 percent in absenteeism.⁸⁷

Coors, of Colorado, has a Wellness Program, holistic in approach, which was begun in 1981. This program saved the company \$319 thousand in treatment costs, alone, through its back-injury program.⁸⁸

The Dallas Independent School District claims that participants in their health and fitness program are absent three days less a year than non-participants.⁸⁹

General Motors focused its health-education program on employees with job performance problems and claimed a "three-to-one return on a dollar."⁹⁰ Lost time dropped 40 percent, grievances dropped 50 percent, and on-the-job injuries went down by 50 percent in the first year of the program.⁹¹ The Pontiac Division had an alcohol-related program that they estimate saved eleven thousand lost-work hours.⁹²

Purdue University reports that exercisers are better decision makers; a Swedish study showed that physically fit

⁸⁷LeRoux, 36.

⁸⁸Hoeger, 6.

⁸⁹"American Business Gets Fit," Business Week, 7 October 1985, 115.

⁹⁰leRoux, 37.

⁹¹Ibid.

⁹²Ibid.

people commit 60 percent fewer errors in tasks involving concentration and short-term memory; and a NASA study found that non-active individuals have a 50-percent drop in accuracy levels during the last two hours of the workday, whereas active workers have no such reduction in accuracy.⁹³

Companies that invest in fitness programs primarily to improve the productivity of workers must deal with some amount of ambiguity in assessing the effect of the programs. A strong correlation between improved physical fitness and increased productivity is difficult to establish unambiguously, since good health cannot be readily quantified. It seems quite logical that an employee who feels well will perform better, and there is testimony to this effect⁹⁴, but how is "feels well" to be measured? The subjectivity inherent in the matter is hard to reduce to analytical form. Study of the measurable variables, such as error rates and absenteeism, provide only a partial handle on the question.

However, the correlation between fitness programs and health-care costs is more amenable to analysis. As cited above, early diagnosis and preventive action can materially cut labor cost by reducing actual medical expense and lost work time. These are variables which can be measured before and after establishment of fitness programs. Standard sta-

⁹³Gambaccini, 68.

⁹⁴Ibid. A Tenneco study reported a high positive correlation between exercise and merit salary increases.

tistical analyses support the hypothesis that these programs pay worthwhile returns on the investment.

It is also important to note that fitness programs are relatively new on the business scene. There have not yet been studies to gather and interpret data on the effect of such programs across the broad spectrum of American business. Nor has sufficient time passed to permit analyses of the long-term effects on health-care costs and productivity. (Doubtless some of the effects seen so far are the result of Hawthorne phenomena.)

A company wishing to justify the costs of a health and fitness program should create clear functional goals that can be measured. A decrease in absenteeism and an improvement in specific error rates are measurable goals that evidence shows to be affectable by fitness programs. Further, goals structured around variables such as these often facilitate obtaining top-management support and funding, since absenteeism and error rates are directly convertible into dollars.

Further on the matter of obtaining top-management support, Pyle suggests that employees be viewed as resource elements that require maintenance and conditioning, just as other resource elements require that attention.⁹⁵ Health and fitness programs then become a kind of preventive main-

⁹⁵Pyle, "Performance Measures," 32.

tenance system. Short-term results (three to four months) will accrue primarily to the employee in the form of, for example, decreased blood pressure and weight loss. Within a year, middle management will feel the effects through, say, increased productivity and decreased absenteeism. Upper management will benefit in three to five years by increased profits and decreased health-care costs.

In many corporate environments, fitness programs are sold largely through the personal bias of a top manager or group of managers. Once this biased individual, or group, chooses to take action, the receptivity of the employees to the idea should be gauged through a questionnaire, a needs assessment, or other suitable medium. When the extent of the employee's enthusiasm for a fitness center is known, then management must consider which portions of the program to offer at an in-house facility and determine which portions will be contracted out.

Small-scale programs may be accommodated entirely within an in-house facility, of course, but most companies employ a combination of inside professionals and outside contractors. This is particularly true of companies that offer screening for alcoholism and drug abuse. Generally in these cases, an "in-take" program is set up to watch for signs and symptoms such as sudden degradation in job performance and a sudden increase in absenteeism. Once a possible

problem is noted, the subject is referred to an outside expert.

Often, a company wishing to provide medical screenings or mailings will rely upon national health-care networks such as the Heart & Lung Association and the American Cancer Society. These non-profit institutions offer screenings and mailings at nominal rates. This option is especially attractive to decentralized corporations seeking a consistent program across their various operations.

One advantage of an in-house program is that the corporate fitness specialists are likely to be more sensitive to nuances in corporate policy and goals. Additionally, the in-house person will often feel a personal commitment to the success of the program that may be less intense in the contractor.

The principal advantage of the contracted-service approach lies in the specialized knowledge and expertise of the professional in the field. A reputable, reliable contractor will have up-to-date information and experience that would not be available to the most dedicated in-house people who are setting up a fitness program for the first time. It may also be true that the contractor will maintain a greater concern for the needs of individual employees: the in-house program manager may occasionally lose sight of the employee in zeal over corporate goals.

There are also the issues of confidentiality and liability. As to the former, the in-house program manager may preserve the most strict of security measures, but the employees know and work with that manager. That, in a sense, is an inherent breach of confidentiality - or, at least it may be so perceived by employees. This may be of great concern, especially in screening programs. If so, an outside contractor may be the logical option.

The issue of liability is more mundane, dealing as it does with the question of who bears the blame if an employee is injured. The injury can be physical, the result of an accident in the physical fitness center, or it can be defamatory, the result of a security lapse. Most especially with a defamatory injury, the effect on the company will go well beyond the financial penalty involved and can adversely affect, perhaps irreparably, the corporate morale. In a severe case, the program manager and staff may have to be fired.

The company can assure a fairly strong measure of protection from the risks of the confidentiality and liability issues by using an outside contractor. The contractor, of course, will protect itself through liability insurance, the cost of which will be included in their price. However, many companies opt for the contracted approach as a protective measure, believing that the protection is well worth the price.

The Association for Fitness in Business sought to develop a profile of companies that chose the option of in-house fitness centers.⁹⁶ In their study, they found the following:

The industry segment with the largest number of in-house centers was the service industry (38 percent of the total); followed by manufacturing (23 percent); financial, real estate, and insurance (16 percent); wholesale and retail (8 percent); transportation, communications, and utilities (6 percent); federal government (5 percent); and state government (3 percent).

The companies tended to be rather large, one thousand to five thousand on-site employees.

About 34 percent provided an on-site facility (a room or a building).

About 41 percent provided an on-site outdoor facility (e.g., pool, track).

Most required employees to use the facility on their own time.

Of the users, management were 32 percent; professional and technical were 31 percent; clerical were 21 percent; and blue collar were 16 percent.

Facility directors were generally well trained: 13 percent had doctorates, 60 percent had masters degrees, and 28 percent had bachelors degrees.

Of directors, 97 percent actively instructed participants, 88 percent provided feedback, 85 percent monitored participants, and 26 percent offered some form of alcohol and drug-abuse programs of treatment.

The average facility cost was \$177 thousand, with between \$20 thousand and \$50 thousand going for equipment.

⁹⁶"Measuring the Shape of Corporate Fitness Plans," 10.

Over 38 percent of the companies stated that productivity had been favorably affected by the programs.

Initial use by the employees was rated at about 55 percent, but dropped to about 20 percent within a year. Boredom and the need for discipline were cited by the dropouts.

Another study by the Association for Fitness in Business investigated such programs by state and federal governments.⁹⁷ It was found that governments are moving much slower than private industry into fitness programs. Those programs that have been set up by government agencies tend to be larger in membership, but of more modest scope, than those in industry.⁹⁸ Further, the government programs require little employee time and offer no incentives for participation.⁹⁹ It should be stressed, however, that many state groups make participation mandatory for police and fire personnel. The study concluded that the effects of the programs on productivity and health-care costs in government agencies were unclear. More time is needed, the researchers felt, before the effects will be measurable.¹⁰⁰

The provable benefits of fitness programs include direct savings in the cost of employee health care, reduced absenteeism, and (debatably) increased productivity. Beyond

⁹⁷Timmins, 218.

⁹⁸Ibid.

⁹⁹Ibid., 219.

¹⁰⁰Ibid., 221.

these, Gambaccini believes that fitness programs have great benefit as morale boosters.¹⁰¹ The tangible payoffs of this effect are the retention of employees and an improvement in recruiting. Further, Gambaccini says, the fitness centers are more likely to be used by the better educated, more valuable employees, which enhances the payoff.¹⁰²

¹⁰¹Gambaccini, 71.

¹⁰²Ibid.

CHAPTER 3

DESIGN AND METHODOLOGY

In January 1986, the GTE Products Corporation contracted with the Resource Center for Business at Salem State College to assist in the development and management of GTE's newly constructed 6000-square-foot fitness center located at the corporation's world headquarters in Danvers, Massachusetts. The fitness center is a fully equipped, in-house fitness facility consisting of the following principal elements:

A physical-fitness-assessment area where comprehensive evaluations are conducted for cardiovascular endurance, body composition, flexibility, muscular strength, and muscular endurance.

An exercise area which includes four Quinton Q65 treadmills, four Schwinn Air-Dyne ergometers, three Concept-II rowing machines, a Nordic-Track skiing machine, and ten stations of Keiser strength-training machines. In addition, an area is designated for warm-ups, stretching, and mild exercising.

An aerobics studio which includes full length mirrors, a specialized aerobics floor to prevent injuries, and a VCR set-up for viewing fitness videos on an individual basis when aerobic classes are not in session.

A state-of-the art computer system which records daily facility usage and exercise participation. Data entered into the computer is incorporated into monthly reports submitted to center management and to fitness-center members.

Fully equipped locker-room facilities for men and women.

A reception area, staff office, and laundry area.

A variety of specialized fitness and health related programs are offered, including high-energy and low-impact aerobics, calisthenics, stretching, abdominal classes, and programs designed for the over-forty membership.

Under the contract, the Salem State College Resource Center for Business provides complete facility management services for the center, with the following personnel assigned:

A Director, who is responsible for the overall administration of this facility and of all other health-related programs offered through the Resource Center for Business.

A Manager, who manages this particular site. The Manager conducts the physical fitness assessment, orients members to the facility and equipment, and leads fitness classes.

An Assistant Manager, who supervises the facility during the later portion of the twelve-hour day. During the busiest hours, the middle of the day, the Assistant Manager and the Manager are both on site.

An Exercise Technician, a specialist who is responsible for assisting the Manager and Assistant Manager in all areas mentioned above and is responsible for leading some of the exercise and strength programs.

Two Interns, who maintain the exercise equipment, and who keep the facility clean. They are provided an opportunity to gain practical experience and to expand their skills in fitness testing, fitness instruction, program and newsletter development, and facility management.

Medically, the fitness center is under the direct supervision of the GTE Products Corporation Medical Director.

Membership at the fitness center is available to all 2615 employees located in Danvers, Salem, and Ipswich, Massachusetts. At the time of the survey, there were 426 fitness-center members: 230 males (54 percent of total membership population) and 196 females (46 percent of total membership). Seventy-eight percent of the membership were employees of the GTE World Headquarters (where the fitness facility is located), and the remaining twenty-two percent were employees from the outlying manufacturing sites. The membership was constant for the five months prior to the survey.

After operation for a year, according to plan, the attitudes of the employee participants were assessed with the purpose of gathering information for improving the program with respect to meeting the goals of the partnership. Data about member attitudes toward the GTE Personal Fitness Center were collected via a survey questionnaire. (More properly, a census questionnaire, since it was sent to all members of the population.) The instrument used a series of eighty-eight questions, with a Likert scale to quantify the responses, which was distributed to all fitness center participants with an explanatory cover letter. The questions covered facility design, the equipment, the management, perceived personal changes, and interest in specific health and fitness programs. In addition, demographic information was requested, and respondents were

given an opportunity to make comments and observations in an open-ended question.

Reasonable care was taken to protect the privacy of those surveyed, although the questionnaires were coded to identify the respondents so as to allow follow-ups to be sent to those who had not replied within a reasonable time. Confidentiality was assured by having the returns mailed to a central control clerk, who held the sole key to the identifying code.

The concern over privacy and confidentiality made impossible a few survey objectives that might have revealed interesting and important information. For example, an exploration could have been made into the correlation between absenteeism and fitness-center utilization, but that would have necessitated inquiries into the personnel files of the subjects. This was definitely ruled out.

For a different reason, a financial reason, survey questions about the adequacy of the amount of exercise equipment were ruled out. The GTE partner felt that such questions might prompt employee requests for more equipment and they would then be disappointed when the additions were not provided.

The survey questionnaire was reviewed by several faculty members from the University of Massachusetts and Salem State College, the GTE corporate fitness specialists, the GTE Human Resources Vice President, and the GTE Medical

Director. Their review included format, content, distribution techniques, and compilation and analysis of results. The instrument was redesigned based on the reviews.

As recommended by Borg and Gall, a pilot test was also conducted on the questionnaire, using a subset of GTE employees, and the instrument reworked once again based on findings from that test.¹

The final version of the survey instrument, along with an explanatory cover letter and a stamped, addressed envelope, were mailed to the 426 members of the Personal Fitness Center.

Experienced researchers who are familiar with survey questionnaires comment that the cover letter is a most important factor in the number of responses received.² The letter should be brief, but must contain certain information that is essential. First, give the recipient a good reason for completing the questionnaire and returning it. Second, assure the recipient of confidentiality if there are sensitive questions to be answered. Some mention of how privacy will be assured is generally helpful.

¹Walter R. Borg and Meredith D. Gall, Educational Research: An Introduction, (New York: Longman, 1983), 425-6.

²J.G. Odom, "Validation of Techniques Utilized to Maximize Survey Response Rates" (Paper presented at the annual meeting of the American Educational Research Association, San Francisco, 8-12 April 1979).

Third, the purpose of the study should be explained in such a way as to make the recipient feel that the work is significant. A bit of subtle flattery is not out of order, since it has been shown that both altruistic and egoistic appeals are effective in getting a good response rate.³ In devising the instrument to appeal to the recipient's vanity, it has been suggested that the common denominator of the sample group be determined: What elements are common to all the recipients of the mailing? Then flatter the group rather than the individual. In the case of the fitness-center survey, the appeal to the group's interest in health and fitness was an obvious ploy, as was the commonality of employment.

It is important in the cover letter to set a date by which the response should be mailed back. In choosing the date, it is better to choose a period that gives the respondent time enough to fill out the survey thoughtfully, but not so long that it will likely be set aside for another time, then forgotten. Borg and Gall suggest one week plus the mail-delivery time.⁴ A stamped and addressed envelope is vital to receiving a response. Additionally, all directions which are provided in the letter with regard to the completion and return of the survey must also be restated in

³Ibid.

⁴Ball and Gall 1983, 429.

the survey itself. This is particularly important in case the cover letter gets separated from the survey.

The cover letter used in the present study is given in the appendix. For the most part, it was composed using the guidelines discussed above, although the assurances of confidentiality were omitted.

Follow-ups to the initial mailing have a great effect on the response rate. One review of ninety-eight survey studies showed the following, where the average response was the average over the ninety-eight surveys:⁵

| <u>Mailing</u> | <u>Average Response</u> |
|------------------|-------------------------|
| Initial | 48 percent |
| First Follow-Up | 68 percent |
| Second Follow-Up | 80 percent |
| Third Follow-Up | 90 percent |

For the survey done in the present study of fitness-center attitudes, a response rate of 42 percent was achieved with one follow-up. This response was less than the average in the study cited above, although the volume was considered adequate for purposes of the study. It is believed that the relatively low response rate was due primarily to the lack of strong assurances of confidentiality in the transmittal letter. The questionnaire booklet contained a promise of response anonymity, but more responses would likely have

⁵Borg and Gall 1983, 432.

been received if the cover letter had been explicit about the measures taken for privacy. This is believed to be true, even though the questions posed were not particularly sensitive, nor did they ask for information generally thought of as private.

The main purpose of the survey was to determine changes that could be made to increase usage of the fitness center by the current membership and to attract new members. The questions were designed to measure the attitudes of members with respect to the program and to the management. Knowing the attitudes, center management could act to improve the areas of attitudinal weakness and thereby increase the probability of continued high usage and of new members. To these ends, the questions addressed the following aspects of center operation:

Hours of operation

Marketing to new prospects

Equipment provided

Fitness testing and evaluation methods

Assistance and barriers in meeting fitness goals

Class content and schedule

All but one of the questions were presented in closed form so that quantification and analysis were more easily done. The single exception was a question asking for suggestions on increasing the fitness center membership. The responses to this query were not to be quantified.

The attitude questions, which made up most of the instrument, were framed to call for Likert-scale responses. Fifty-seven of the questions were classical Likert in format, having five possible responses from "strongly agree" to "strongly disagree." These queries were aimed strictly at determining the respondents attitude toward various aspects of the fitness center.

For attitude determination, alternatives to the Likert-scale design include the Thurston scale, the Semantic Differential design, Guttman scaling, and open-ended questions.⁶ Likert was chosen in preference to the others because it could be more easily adapted to the particular needs of this survey.

Specifically, survey instruments of all the types mentioned are customarily used to get an overall "total attitude score" for each respondent. In the present case, an overall score was less important than the attitudes on individual items. Expressed in statistical terms, we are interested here in ensemble statistics rather than in sample statistics. The Likert format requires relatively few questions to gather ensemble data on a large number of specific topics because the responses fall into a five-part quantifiable range.

⁶Borg and Gall 1983, 342.

With a Thurston scale, for example, the responder expresses only agreement or disagreement with a given statement, and a series of statements are supplied by the investigator. Similarly, the Semantic Differential asks for an opinion using pairs of binary adjectives like fair-unfair, valuable-worthless, good-bad.⁷

As a secondary justification for choosing Likert, it has been reported that the Likert scale is superior to the standard alternatives, mentioned above, for most predictions of behavior based on measured attitudes.⁸

Nine of the survey questions are not formulated strictly according to the Likert design. This set of queries addresses the interest that fitness-center members and, by extrapolation, prospective members have in various fitness programs. The questions ask for the degree of interest the respondent has in very specific fitness programs:

Aerobics

Aerobic/Exercise I

Aerobic/Exercise II

Aerobics Plus

AM Abdominal

Stretch and Strengthen

⁷Ibid.

⁸Charles R. Tittle and Richard J. Hill, "Attitude Measurement and Prediction of Behavior: An Evaluation of Conditions and Measurement Techniques," Sociometry 30 (1967): 199-213.

Fit for Life

Lo-Impact for Ladies Only

Walking Club

A three-level scale of interest was provided. Clearly, these questions are to be used in deciding on exercise programs to be offered.

The remaining questions are demographic and personal-data oriented. A few questions in this section have to do with the fitness level of the individual before joining the center as compared with the current level. This modest amount of data is used primarily by the corporate partner, GTE Products Corporation, to assess the effect of their investment on the employees. The questionnaire, titled A Survey of Member Attitudes Toward the GTE Electrical Products Personal Fitness Center is given in the appendix.

All quantified data from the replies were entered into a Salem State College computer for summarization and tabulation. The statistical software package SAS was applied to the data to calculate central tendencies, dispersions, and complete frequency distributions.

With the data at hand, it has proven more useful to employ the full distributions in the analysis rather than use the abbreviated descriptions of mean, mode, median, variance, and other parameters. Chapter 4 presents the results of the analysis and the salient features of the collected data.

CHAPTER 4
DATA ANALYSIS AND RESULTS

Introduction

In the fall of 1987, one year after the opening of the GTE Personal Fitness Center (PFC), a questionnaire was developed to determine member attitudes about various aspects of the PFC. The specific purpose of the investigation was to guide the partnership in increasing the utilization of the PFC, both by current members and by attracting new members.¹

The questionnaire was sent to all 426 PFC members and 180 responses were received.² Although the nominal intent of the research was a census of the entire membership, the replies to the questionnaire can be considered statistical in two senses: First, somewhat more than half the membership did not reply, and therefore the 180 replies can be thought of as a 42-percent sample of the PFC membership; second, the 180 replies can be considered as a 7-percent

¹A more detailed examination of the research purpose and the questionnaire, itself, is contained in Chapter 3, "Design and Methodology."

²The design of the questionnaire is detailed in Chapter 3. A copy of the questionnaire booklet is given in the Appendix.

sample of the population of 2615 employees to whom the PFC is open. Admittedly, the sample in both cases may be somewhat biased in an unknown way, but this does not invalidate the conclusions reached.

Summary of Results

The survey examined member attitudes toward the fitness center established under the SSC-GTE partnership. Specifically, the survey focused on the equipment located in the fitness center, the management of the facility, perceived personal changes resulting from participation at the fitness center and in related programs, and interest in participation in a variety of health and fitness programs. Members were asked to respond to one open-ended question, were requested to respond to questions of a demographic nature, and were given space for comments. Following is an overview of the evaluations of each section of the survey.

In their responses to the survey, members indicated that the exercise equipment provided was appropriate and effective in assisting them in meeting their individual fitness goals and objectives. Responses indicated that members believe improved access to the exercise machines is needed: additional equipment should be provided or employees should be given opportunities to use the facility during non-peak times.

The center management received high marks in fitness testing and in orienting members to the facility and equipment. The management staff also received favorable comments on their ability to motivate members and for being competent, knowledgeable, and effective in the general management of the facility. Respondents suggested that consideration be given to providing more information concerning the physical fitness assessment of members. There were also requests for additional fitness classes to allow more members to participate.

The majority of respondents to this survey indicated that they believed that they were healthier, felt better, and had enhanced productivity as the result of participation at the fitness center.

Members reported that participation at the fitness center had a positive effect on a number of their lifestyle habits, including smoking, diet, and reducing body weight. In addition, members said that they had increased their awareness and understanding of the importance of issues related to health and fitness.

The survey responses indicate that the marketing plan for recruiting new fitness-center members has been successful: Word-of-mouth has been the best means of marketing membership at the fitness center. This reflects favorably on the quality of the overall facility and on the management and services provided, since it implies that members feel

comfortable in recommending the facility to friends. The collected data also showed that other factors affecting the recruitment of members include the use of brochures and the information booths located at various work sites.

Detailed Results

The survey instrument is divided into four sections: Equipment, Management, Perceived Personal Changes, and Respondent Data. Each section is designed to gather data about its particular subject from members of the Personal Fitness Center. Following is an analysis of the data received on each of the sections.

Section A: Equipment

This section is intended to gather data on each of the six major groups of equipment installed at the PFC, plus data on the computer program for tracking fitness progress. The data on each type of equipment concerns the responder's opinion on effectiveness of the equipment and on its "friendliness" (i.e., its ease of use by the member).

The survey instrument used the tactic of making a favorable statement about a type of equipment, then asking the responders the extent to which they agreed with that statement. Hence, a "strongly disagree" response would indicate very negative feelings about that equipment type.

In general, there were very few negative opinions expressed by the responders. Even on equipment much less

avored by the members, there were only a trivial number of "disagree" and "strongly disagree" responses. This would tend to show that the members have good, positive feelings about the equipment.

In all cases, the responses concerning "effectiveness" of equipment correlated highly with the responses about "friendliness." This is to be expected, especially for a program in its early stages: Equipment easy to use is likely to be seen as effective. Later, when the members learn more about using an unpopular machine, the attitude toward that machine may change.

At the time of the survey, treadmills were clearly the most popular of the equipment types. Stationary bicycles with ergometers were a fairly close second. Cross-country ski machines were the least favorite, and markedly so. Rowing machines and upper-body/lower-body exercisers were clustered together as rather neutral in effectiveness and friendliness.

The computer program used for tracking fitness progress was seen as fairly effective, but nearly a quarter of the members thought it was a neutral factor.

Following are summaries of opinions on each of the equipment types.

| <u>Equipment</u> | <u>Effective</u> | <u>Friendly</u> |
|-------------------------------------|-----------------------------------|-----------------------------------|
| Treadmills | 92% agree; 67% strongly agree. | 86% agree; 53% strongly agree. |
| Bicycles (ergometers) | 80% agree; 38% strongly agree. | 79% agree; 31% strongly agree. |
| Upper-body exercisers | 64% agree; 26% strongly agree. | 65% agree; 29% strongly agree. |
| Lower-body exercisers | 63% agree; 33% strongly agree. | 62% agree; 37% strongly agree. |
| Rowing & ski machines | 61% agree; 32% strongly agree. | 65% agree; 31% strongly agree. |
| Program for tracking progress | 70% agree; 23% strongly agree. | Not applicable |

Section B: Management

Perceptions of Center management were generally favorable, but some aspects show a need for improvement:

Need better feedback to members on their fitness progress.

Classes are not seen as particularly effective or useful.

Examine class scheduling to make them fit better into member's work schedule.

Members need more help in setting up their exercise programs.

Staff leadership when conducting classes is not seen as strong, although attitude is good. More experience is needed in this position.

The newsletter got high marks. Is there a way to make even better use of it?

Some particular observations are given below; survey question numbers are shown in brackets:

Testing Procedures [14, 20]: Perceptions generally favorable. About 6 percent want better monitoring of their progress.

Orientation and Training [15, 17, 18, 21, 35]: Nearly 29 percent are neutral on effectiveness of classes. Over 11 percent want better feedback on fitness results.

Fitness Evaluations [16, 22]: About 12 percent want better fitness evaluations. Over 40 percent are neutral or dissatisfied with fitness reviews and feedback.

Staff Knowledge and Training [23]: Nearly 95 percent feel good about the competence and knowledge of the Center staff.

Maintenance of Equipment and Center [25, 26, 27]: Very high ratings on maintenance and cleanliness of the Center and the equipment.

Staff Attitude and Interpersonal Skills [24, 29, 30, 31, 36]: Professionalism and attitude of staff got very high marks. Over 30 percent were neutral on staff's leadership, and 14 percent were neutral or dissatisfied with the motivation given by the staff.

Setting Up Programs [19, 33]: Almost 15 percent were neutral or dissatisfied with the help they received in setting up their exercise programs.

Overall Effectiveness of Center Management [32]: Of the responders, 97 percent were very satisfied with Center management's overall effectiveness. This in spite of the implied criticisms on certain particular points.

Newsletter Effectiveness [39]: The newsletter is thought to be very good by 85 percent of the members. Only 12 percent are neutral about it. This is higher than is generally seen with respect to newsletters.

Ease of Facility Use [28, 34]: Of the members, 92 percent are pleased with the check-in procedures. Only 67 percent find the class schedules convenient to their personal and work schedules.

Providing Incentives [37, 38]: About 33 percent are neutral or dissatisfied with incentives for individual and group participation in the fitness programs.

Section C: Perceived Personal Changes

This section deals with three issues:

1. The changes the members have seen in themselves as a result of their participation in the fitness program, including how the members feel about themselves, how their families feel, and how their work has changed.
2. The major factors helping members to reach their fitness goals.
3. The major factors that have hindered the members in striving to reach their fitness goals.

Personal Changes [Questions 40 through 45]:

Most members, 80 percent to 85 percent, say that they feel better and consider that they are healthier. However, only 64 percent have met the goals that they set out for themselves. Moreover, only 53 percent think that their work productivity has improved; but 40 percent are undecided on that question, which suggests that they really have no way of estimating their productivity. Similarly, only 53 percent believe that their (perceived) improved health has had a positive effect on their family; but, again, 41 percent are undecided on that.

Major Factors Helping to Reach Fitness Goals
[Questions 46 through 50]:

Far and away, the members think that the most important factor is self-motivation: 92 percent reported this. Second most important was reported to be support from the fitness staff: 80 percent reported this. Clearly at the bottom of major factors was support from the individual's supervisor: only 28 percent gave that as a major factor. It is important to note that only 44 percent reported that company incentive programs were a major factor in reaching fitness goals.

Major Factors Hindering Achievement of Fitness Goals [Questions 51 through 57]:

Only 2 percent reported that lack of fitness-staff support was a major factor in not attaining goals. Lack of personal time was the chief reason for failure to reach goals, with 65 percent of the members reporting that as a major factor. Lack of supervisor support was mentioned as a major factor by only 19 percent. Business travel was given as a major negative factor by 27 percent, and 43 percent said that a "traveling" program that could be executed while away from home would be helpful (but 49 percent were entirely neutral on such a program).

Section D: Interest in Various Fitness Programs

In this section, nine fitness programs were proposed and the members were asked to indicate their interest in them. Three of the programs received expressions of interest from at least half of the members:

"Fit-for-Life" Program. [Teams working toward goals: caloric expenditure, timed cardiovascular workouts, etc.]
68 percent expressed interest.

"Stretch-and-Strengthen" Program. [Noontime stretching and calisthenics.]
62 percent expressed interest.

"AM-Abdominals" Program. [Early-morning abdominal exercises.]

56 percent expressed interest.

Five other offerings had reduced levels of interest reported:

"Aerobics-at-Noon" Program. [Three times weekly, at the noon hour. High-energy workout for the intermediate exerciser.]

45 percent expressed interest.

"Aerobics-11" Program. [Twice weekly, in the late afternoon. Advanced-level exercisers.]

45 percent expressed interest.

"Walking-Club" Program. [A lunch-hour walking program to be held in warm weather.]

42 percent expressed interest.

"Aerobics-Plus" Program. [Super-energy, 75-minute fitness class.]

41 percent expressed interest.

"Aerobic-1" Program. [Low-intensity, 40-minute program for the beginning exerciser.]

35 percent expressed interest.

"Low-Impact-for-Ladies-Only" Program. [High-energy, 50-minute workout with movements designed to minimize impact-related stresses.]

34 percent expressed interest. (However, this statistic is very misleading. From elsewhere in the questionnaire, we know that only about 40 percent of the respondents are women. Assuming that males did not respond with an expression of interest for this program, we conclude that 71 percent of the women members have an interest in this Low-Impact Program.)

Section E: Respondent Data

This section gathered data on the characteristics of the respondents including sex, age, and work location.

Following are statistics on the more important characteristics of the membership.

Sex. 40 percent female; 60 percent male.

Age. Average 35. Nearly evenly spread over the range of 20 through 50+.

Employment Status. 99 percent of the members are full-time employees.

Work Location. 82 percent of the responders are located at the Lighting Center in Danvers, 6 percent are at Sylvan Street (Danvers), 6 percent at Ipswich (EDO), and 6 percent at Salem and Beverly.

Date Joined Fitness Center. Nearly even distribution by month throughout 1986 and 1987.

Physical Shape Prior to Joining. 46 percent felt that they were in good physical condition before joining.

Effectiveness of Cardiovascular-Risk Education. 88 percent felt that the education given at the Center was effective.

Effectiveness of Fitness Education Overall. 89 percent felt that the Center has improved their knowledge of health and fitness.

Pre-Joining Examination. In only 44 percent of the cases did the examining physician discuss cardiovascular risks with the employee during the pre-joining examination.

Smoking Habits. 16 percent were smokers before joining the Center. Of these, 44 percent have stopped, 48 percent smoke less, and 8 percent now smoke more.

Weight Loss. 66 percent were overweight when joining the Center. Of these 12 percent lost the desired weight; 53 percent lost some weight; 26 percent neither gained nor lost; and 9 percent gained.

Eating Habits. 47 percent said that they had poor eating habits when joining the Center. Of all responders (not just those whose habits were poor), 46 percent reported improvement in their

eating habits as a result of exercise, and 33 percent reported improvement as a result of the dietary education received.

Learning About the Center. 35 percent reported that they first learned of the Center through another employee who was a Center member. The next most frequent source (19 percent) was the marketing brochure. Third-ranked of the information sources (10 percent) was the information booth set up at the employment location.

Reason for Joining. The primary reason for joining the Center, given by 44 percent of the members, was to improve cardiovascular endurance. The second most frequent reason (16 percent) was for weight loss. And 10 percent joined to become more alert and energetic.

Usage of Center. 60 percent of the members use the Center at least three times a week, and 11 percent use it at least five times a week. But 18 percent use it only once a week or less. As would be expected, maximum usage occurs between 4:00 p.m., and 7:00 p.m., the time that 44 percent of the members reported as their regular exercise period. The second most popular time is from 11:00 a.m. until 1:00 p.m. (28 percent of the members). 14 percent of the members regularly exercise before 8:00 a.m.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Introduction

This study evolved from a need for an understanding of those partnerships between education and business in which employee physical fitness is the main concern. The information presented in this study will be of special interest and importance to the following:

Business leaders, stockholders, government representatives, and educators who want to develop partnerships between industry and education

Business leaders, health and fitness administrators, and educators who want to contribute to programs that are directed toward creating a healthier work force

Employees in the public and private sectors who are concerned about health and fitness in the work place

Boards of Trustees, presidents, faculty, administrators and students at institutions of public higher education

Education in Partnership with Business

Benefits to Education

The literature supports and encourages institutions of higher education to reach out and expand their traditional missions to include outreach service, specifically as it relates to partnerships with business and industry. This alliance between business and education is critical if an institution wants to continue to provide a quality education at a time when the university environment is changing rapidly. The environmental change, which is not expected to abate in the near future, is a result of many factors, including the following:

- Declining enrollment

- Diminishing resources

- Change in student patterns

- Corporate education

According to the literature, and the researcher's knowledge and experience, there are many benefits to be derived from outreach service. It provides the institution with an opportunity to do many desirable things:

- Enhance the institute's financial base

- Provide faculty with research, training, technical assistance and opportunities for personal interaction with the non-academic world

- Expand its curriculum vertically by the knowledge gained in off-campus experiences

- Provide faculty with a chance to earn additional income

Provide students with the vehicle to gain experience in their field of study and in related fields

Provide students with access to prospective employers

Improve faculty and student morale

Attract more capable students by enhancing the reputation of the faculty within their academic field

Increase the institute's political and community support at the local, state, and federal levels

Establishing an Outreach Unit

If an institution wants to establish and operate a successful service outreach unit, the institution must be willing to provide the necessary human resources and financial support. The institution should begin by developing a strategic plan. This plan will help to ensure that the goal of the outreach unit is closely aligned with that of the institution. Further, the strategic plan should outline the goals and objectives; address the role of the faculty, staff, students, and private sector in the administration and delivery of services; and provide for a marketing and financial plan. The strategic plan should reflect how the outreach unit will draw upon private-sector consultants in the delivery of services to its clients. This is particularly important in institutions of public higher education because it eliminates the misperception that the taxpayers's

dollars are being used to compete against the private sector.

Based upon the researcher's knowledge, which includes fifteen years of outreach experience within the Massachusetts system of public higher education at both the university and state-college level, the researcher suggests that, when establishing a service outreach unit, the institution appoint a Board of Directors to oversee the operations of the outreach unit. The Board should be composed of individuals who are representative of the client group which the outreach unit intends to serve. For example, if the goal is to serve business, industry, governmental agencies, and other educational institutions, then chief executive officers and top ranking officials from a select group of those businesses and organizations should be asked to serve on the board. The appointment of such a board has many benefits:

The board brings immediate credibility to the newly established outreach unit

The individual board members can be helpful in sharing their knowledge regarding the needs within their respective field of business

The board members can be helpful in providing introductions to prospective clients

The board can assist the outreach unit by bringing a broader perspective on the needs and opportunities available, thereby avoiding the more limited view from the institution, itself

Organizationaly, the researcher suggests that the outreach unit report to, and be evaluated by, the president of the institution. Reporting to the president is critical to the unit's long-term success for the following reasons:

It makes a statement internally and externally as to the institution's commitment to service and outreach, and reinforces the institution's goal to make a strong contribution through involvement with the community.

It ensures that the unit's Board of Directors, composed of chief executive officers from the business community and from the non-elected government, have a direct line of communication to the president and encourages immediate and appropriate flexibility in the formation of policy decisions.

It expedites the approval process and provides the crucial autonomy necessary to act quickly and decisively in responding to the needs of the clients.

It provides the most direct and equitable access to all departments and resources within the institution and helps to eliminate potential biases when negotiating contracts and delivering service.

Once an institution makes a commitment to establish a service outreach unit, it must be prepared to provide the necessary funding to support the operation. Initial funding can come directly from the institution's budget or, in those cases where there are insufficient funds, the institution can initiate a capital campaign. In the case of Salem State College, the need for an outreach unit had been recognized, but the question of funding was difficult to answer. Years of budget cuts and no expected increase in the level of

funding from the state legislature did not provide the College with the necessary funds to support new initiatives.

The College recognized that the outreach unit could not be funded through the College's state appropriation or general purpose trust fund. Private funding as an answer emerged after consultation between the College's administration and its then Board of Development. The College had no experience in raising private funds and had never undertaken a major capital campaign. Moreover, at that time, private fund raising by public colleges was virtually unheard of. Nevertheless, with the encouragement of local business leaders and the enthusiasm of the College administrators, the capital campaign was established as a project of the College's Board of Development. It was the first such campaign in the 125-year history of Salem State College.

The campaign resulted in the establishment of the Resource Center for Business, which serves as a model for partnership between the public and private sectors. Over \$416 thousand was raised from 267 donors in support of the establishment of the Center. Donors included businesses, national foundations, local citizens, alumni, College employees, and the state government.

Among other things, this campaign served as a vehicle for the College to acquire, from the outset, community-wide support for the Center's establishment. During this time, the College began to nurture and build relations with the

private, public, and nonprofit sectors. Having successfully completed its campaign, the College approached the Massachusetts legislature for state funding in order to insure that the Center would become an integral department within the College. Impressed by the initiative and commitment of the College and the results of the campaign, the legislature appropriated additional funds to the College in support of the Center. These funds, together with the annual interest earned on money generated through the campaign, serve as the base operating budget for the Resource Center for Business. Additional funding comes from contracts and grants.

The expectations of the private sector are high. Therefore, when establishing an outreach unit, the institution must be prepared from the outset to provide sufficient support for the unit to deliver quality products on time. Else, the outreach unit will fail and the reputation of the entire institution will suffer accordingly.

The creation of an outreach unit can serve as a catalyst for change. Outreach can have a favorable effect on the faculty, staff, and students. However, the educational institution must be prepared to make some modifications to its tenure and compensation policies. Traditionally, teaching, research, and publications are the areas which have principal influence when it comes to faculty evaluations and tenure decisions. Service has always been a stepchild. This must change, particularly if the institution wants to

encourage its junior faculty to get involved with the new challenges of outreach.

In addition, some institutions have strict guidelines which govern additional compensation for faculty. These guidelines need to be reviewed and modified as necessary to allow for flexibility in earning limits for faculty members who are engaged in outreach activities.

Benefits to Business

The most successful outreach partnerships are those that provide opportunities for participants from both sectors to interact professionally. The exchange of experiences, ideas, values, and work styles can enrich even experts. The process, when well designed, allows all the participants to contribute to the partnership in personal ways as well as professionally. For the faculty members, this will improve the educational quality that they bring to the classroom.

Generally speaking, industry gives more than lip service to its recognized responsibilities to society. Business is usually a willing partner in helping to create a better society of educated, thinking, and producing people. It is widely accepted by the business world, at least in principle, that neglect of education results in the decreasing quality of general society (and of the consuming public). Support of quality education, then, becomes a

social responsibility that benefits all. This concern is a responsibility that business is beginning to willingly undertake.

Beyond the general satisfaction of fostering a better society, industry gains very specific benefits from healthy relations with colleges. Not the least of these benefits is access to the trained and talented faculty and students, who form a valuable pool of potential employees, consultants, and research people that complement the company's in-house staff.

At the same time, businesses can effectively use the basic teaching mission of the university. Industry collectively spends billions of dollars annually in educating its employees. There are continuing needs for effectively educating new and existing employees. The experience and ability of faculty members are in demand in industry for designing and implementing corporate education programs that work. Properly presented, businesses may consider employing these reservoirs of talent rather than using valuable in-house resources that could be profitably employed in direct production. This makes good fiscal and sound educational sense, resulting in a more satisfied, more productive work force.

Other parts of a typical university's mission are equally attractive to industry. Research, especially basic research, is such a mission that falls within the scope of

many universities and colleges. The pure research of the university laboratory and the applied research typical of the corporate laboratory are not incompatible. They are most often complementary. Sharing the minds and the physical resources of business and academe, both pure and applied research advance to everyone's greater benefit. A third typical mission of universities is outreach service. Consulting services for small businesses, development of corporate health and training programs, and library and reference services are among the most valuable university resources available to the business world.

Establishing a Corporate Fitness Program

The sense of the literature is that society needs to focus on modern health problems rather than on those of the past. Infectious disease, once the principal threat to life, is no longer the major killer. Dealing with the modern threats requires changes in attitude and lifestyle.

The control of infectious disease is considered a major public health revolution. The changes needed in society to overcome the new health barriers will require a second revolution. These modern threats are largely chronic disease, sudden trauma associated with chronic disease, and accidents.

Before age sixty-five, only one infectious disease is included in the list of the ten leading causes of death. In

this age group, unhealthful lifestyles are estimated to account for 53 percent of the lost years of life. Consequently, the new public health revolution focuses on modifying the lifestyles that lead to premature death and disablement. The participation of all influential groups is necessary in achieving these modifications: schools, churches, business, labor, and government.

Virtually all health-care investigators agree that the inclusion of exercise and general physical fitness into lifestyles is one of the top priorities. Programs of physical fitness in schools, work sites, and communities are all needed to promote the concept and to increase the proportion of the population that includes this beneficial change in their routine. No single agency nor any sole organization nor any one method can accomplish the revolution alone.

In some ways, the current health challenge is more formidable than the eradication of polio and smallpox. Whereas the fight against these traditional diseases took an objective form and was fought by specialists, the fight against unhealthful living habits has to be fought subjectively by each potential victim. The arena is consciousness: society must become convinced, person by person, that old habits and routines must be replaced by new beneficial ones.

For most people, this is an almost impossible task to do alone. Support from all groups of influence is needed.

One of the most important of the support groups is the one at the work site. Properly planned and implemented programs at work can have really major effects on routines and lifestyles.

As the new movement toward health builds momentum, Americans become more interested than ever before in taking responsibility for their own health. The data found in the literature is not entirely clear as to the causes, but it is known that millions have improved their health and their outlook on life by giving up tobacco, changing their diet, and starting regular exercise. Many employers have played a large part in bringing about this change in consciousness about fitness.

Adoption of regular exercise habits has been one of the most important changes in American habits to take place in a decade or more. No reliable data were found in the literature to estimate, numerically, the extent of the change, but qualitatively it is unarguable that the change has taken place. A good bit of the movement was brought about through profit-oriented marketing by equipment makers and health clubs. The Surgeon General has played a big role in the swing to healthier lifestyles. Slower to evolve, but as powerful as any other, is the employee-health orientation of large employers. The motives of the employers are not entirely selfless, since they intend to save expenses and increase profits by having healthier employees. Neverthe-

less, the beneficial effects are there for the individuals, as well.

In one sense, the efforts of employers to improve the health of their employees establishes a new front, because these efforts are often in the direction of exercise rather than diet-only, smoking-only programs. And this is of particular importance, since 80 percent of Americans are dangerously sedentary, while only 40 percent are smokers. From a statistical viewpoint, then, more can be gained, on average over the population, by promoting exercise than by concentrating on anti-smoking campaigns.

The literature contains ample evidence that links effective exercise to health and to lifelong functional capabilities. Further, regular exercise seems to operate synergistically with other factors to promote better health and a higher overall life quality for the practitioners.

The principles upon which health promotion is based are drawn from many disciplines: medicine, psychology, physiology, nutrition, organizational theory, and others. But, as a discipline itself, health promotion is very young and still developing. As in any new field, the methods of practice are still forming and changing.

A particular weakness lies in the tools used to evaluate health in individuals whose condition lies between the extremes of invalid and athlete. There is also only a very limited understanding of how health behavior can be changed

and how people can be motivated to change their living patterns for the better. Effective recruitment of individuals into health programs is weak, possibly partially the result of a lack of understanding of how to demonstrate the benefits and how to integrate the program into the overall organization.

Even so, health promotion can be of greater benefit than medicine in many cases, and the results are obtained at significantly less cost. It is entirely realistic to expect that many participants in a good fitness program would lose excess weight; stop smoking; improve their cardiovascular condition, their muscle tone, and their flexibility; and reduce their stress levels.

On the other hand, one should not expect deteriorated health conditions to improve quickly. Nor should one be disappointed to have a certain proportion of relapses back to poor health behavior. Most assuredly, one should not expect to see quick materialization of the long-term payoffs that might have been the main motivation in setting up the program:

There will not be quick turnarounds in absenteeism rates, although that can be expected in time.

There will not be an immediate drop in health care expenses. This may take several years, even after major investments in the program.

There will not be fast, measurable increases in job productivity. Even after a year or two, not all participants will show productivity increases.

As the program matures in a given organization, the relapse rate will decrease and there will be greater success in reversing deteriorated health conditions. The participation rate may also increase.

The goal of the program, of course, is to further the objectives of the parent organization. Hence, the fitness program should be tailored for the company; the company should never be expected to tailor itself to the fitness program. Towards this end, an early research phase is recommended. This research should precede the design phase.

The research phase generally includes a feasibility study as a first step. This step is to answer the question, "Should the company undertake the development and implementation of a fitness program?" Five points are addressed in this feasibility study:

1. The parent company's objectives in setting up the employee-fitness program
2. The cost-benefit issues associated with the investment required to set up the program
3. The extent of support evidenced by top management, from middle management and from the employees
4. The resources (financial, physical, and human) needed from within the company and from the surrounding community
5. The major factors to be taken into account during the design of the program

The feasibility study has purposes other than establishing the fact that the company should undertake the

program. For one thing, it provides much of the material needed for the design stage, if the activity goes that far. For another, it generates much of the baseline data for measuring the effectiveness of the program after it has been implemented and operated for a time.

The company should be aware that the activity associated with the feasibility study may raise the hopes and expectations of middle managers and employees. Morale may be adversely affected if the study shows an unfavorable climate for the program and it is cancelled or delayed.

For success of the program, the support in the organization must be both broad and deep: a large percentage of the employees must want to see the program in place, and the supporters must extend from middle management well into the organizational structure. Assessment of support is a critical issue in the research phase. If the feasibility study indicates that the program development should go forward, but the support is weak in some areas, then the design plan should include heavy promotion where it is needed. (This situation often arises where top management strongly favors the program, but there is apathy in some quarters.)

If strong top-management support is lacking, that issue should be settled before initial implementation is begun. Some design work may be done even in the absence of top support, but only if that design work is considered to be crucial in convincing management of the desirability of the

program. (If this sort of design is done, note should be taken of the morale consequences if the program is cancelled.)

The support of top management should not be limited to an agreement with the general concept of the program.

Before proceeding with the program work, the following matters should be addressed, at a minimum:

1. Will top managers, themselves, participate in the program?
2. Will management enthusiastically support the program, formally and informally?
3. Will there be financial backing for the program from the top, or will the funding all come from lower echelon budgets?
4. Will management have an open mind about changes to company policy that might be needed to make the program a success?
5. Does top management understand that much of the payback from the program will be several years away and that, even then, evidence of the payback may be indirect?

It should be remembered, early on, that the ability of the company to finance the program is not tied directly to the cost-benefit value of the program. Even if the Chief Financial Officer is completely convinced that the program will pay for itself in the long run, the program must be financed in the short run. There are, of course, many ways to finance every corporate effort, but most of the cost of a fitness program cannot be capitalized. It must be treated as an expense, year by year and quarter by quarter. The

leader of the fitness-program movement in the company should be satisfied that the funding plan for the effort is realistic.

It should not be assumed a priori that all funding for the program has to come from the company's operating funds.

There are other sources of financial support:

Direct money from employee participants (membership fees or fee-for-service arrangements)

Cafeteria-style benefits (trading vacation days or sick days for participation in the program)

Contributions from concessions and employee fund raising

Insurance-company rebates by reason of fitness program

Government or business grants

But fiscal resources are not the only ones needed for a successful program. Not everything needed can be bought easily. Space, for example, may be an unavailable resource in an urban site. Technical knowledge for designing and implementing the program may not be available in the time frame needed. All these resource matters need careful attention from the program manager if a catastrophe is to be avoided.

As for the technical knowledge and other human-resource issues, vendors and consultants are available to serve virtually every need related to a fitness program. Competent, experienced outside contractors are there to design the program, hire staff, build the actual facility, manage

the ongoing program, and measure and report the program results. And all this can be had piece-by-piece or turn-key. In many cases, perhaps most cases, a well-recommended contractor is the wisest and safest course for the employer to take.

After the company goals are clarified; after the cost-benefit analysis is complete and accepted; after the interest and support is assessed; after the resources of all kinds have been determined; the feasibility of the undertaking can be provisionally determined. Provisionally determined because the program design, itself, may reveal flaws that cause delays or even cancellation.

As immediate prelude to the design, the following questions must be addressed:

What are the main obstacles and problems foreseen as likely to arise during program development?

What are the organizational components and the individuals that should be involved in developing the program?

What are the (non-financial) company and community resources that can be brought to bear on the program development?

Of the several options for developing the program, which ones have the greatest probability of meeting the company's objectives?

Attention should be given to the placement of the program management within the corporate structure. The placement will partly depend upon the objectives of the program, the related company objectives, and the hierarchial

rank of the program manager. Also, the program should be placed with the component most nearly accountable for the company goal that the program supports. If the program targets health screening and employee-risk reduction, it might fit best in the medical department. If the company goal is educational, the training department is the logical spot. A simple fitness facility with very little programming might well be handled by the facilities department. For a program with the long-term goal of reducing health-care expenses, perhaps the employee-benefits department (or the insurance department, if there is one) is the better placement.

In short, the responsibility for the program should go where accountability for the results is placed.

If possible, and if compatible with other considerations, the program should be managed high enough in the company to give the manager access to top management when it is necessary. The program should ideally be at the rank of line managers who supervise the employees enrolled in the program.

A new fitness program is a fragile thing. It nearly always represents a new concept, not very well understood. The expectations vary widely (although management should have a firm grasp on that issue before the program is begun), running the gamut from recreation to solving the problem of rising health-care cost. Wherever the program

resides, that department should have a positive, respected image to give the fledgling unit the best chance possible.

Optimally designing a fitness program will be the result of skillfully considering the specific needs of the company and its employees. The factors and issues that lead to a successful mix of ingredients have been discussed above and in the literature review of Chapter 2. Every success in the field will have the common denominator of supportive corporate management and knowledgeable program management and careful up-front planning.

Recommendations

Partnership Development

Implicit in the charter of every institution of higher learning is the responsibility to meet the needs of qualified citizenry for appropriate education. This dissertation argues that the institution needs to go well beyond that initial duty, at least as that duty is generally interpreted and defined. This argument is based not simply on the altruistic nature of colleges, but also on evidence that going beyond the basic responsibility serves the college well. As shown throughout Chapter 2, above, some leading educators believe that a college cannot be effective in its most basic responsibility without a strong outreach partnership with industry.

Institutions of learning should take the initiative in pursuing such partnerships. As a first step, the institution should develop an overall plan that ties the prospective outreach program in with concurrent operational activities of the school. In short, the institution needs a strategic plan that includes the outreach program.

Components of the strategic plan should include the following:

1. The mission of the institution
2. A statement of purpose for the outreach program
3. Analysis of existing outreach activities
4. Marketing strategies, taking into account internal and external needs, benefits to the institution, benefits to the industrial partner, and benefits to others
5. The organizational structure, including a staffing plan and placement of the outreach component within the institution
6. A financial plan

A companion document, a plan for partnership development, should be prepared to complete the plan for acceptance by top management of the institution. This plan should include the following considerations:

1. Local school systems and the part that they may play in the prospective partnership
2. Other institutions of higher learning and their possible role
3. Local, state, and federal governmental agencies and how they may fit into the plan

4. Industry and business, as potential partners and as allies
5. Non-profit organizations that can help (or compete) with the planned program
6. The community at large

The importance of the strategic plan and the effort required to develop it should not be underestimated. Of particular importance is the statement of purpose, which will form the basis for later evaluation of the success of the program.

From the outset, preparing the plans should have active support from the community and from business. Representatives from outside should have as active a part as they are willing to take in the planning. This is vital from a marketing standpoint if for no other reason. It also ensures that the plan will incorporate the needs of the constituents.

Time frames for plans vary somewhat from one institution to another, but three to five years is typical. The plan should include annual objectives, and the institution should be prepared to measure progress against the objectives and to update the plan every year. In this way, the document becomes a rolling plan, always extending out three to five years into the future, and will reflect both immediate needs and long-term goals.

Corporate Fitness

Successful in-house programs for corporate fitness require highly supportive top management, knowledgeable program managers, and careful up-front planning. Strategic planning here is just as important as that in the outreach program of the university.

One purpose of the plan for a corporate-fitness program is to ensure that the operation has sufficient backing from management to conduct a program that is committed to changing the lifestyle of employees. A quality environment is necessary to have the social interaction and personal development that can change a lifestyle, and to get that environment requires complete financial and philosophical support from the top.

At a minimum, the corporate fitness-center plan should have the following components:

1. Corporate fitness goals in objective terms (e.g., reduce job-related accidents, decrease medical expense, reduce health-related absences)
2. Corporate fitness goals stated in general terms (e.g., increase employee awareness of health issues, expand employee health knowledge, alter lifestyles for the better)
3. A statement of corporate position on employee health, a position to which top management subscribes (e.g., "Healthful lifestyles are good for the company as well as for the individual, and the company will make the necessary investment to assist in bringing about changes for the better.")
4. A plan for financing and staffing the center, both initially and on-going

5. A plan for recruiting fitness-center participants and a plan for retaining members

In addition, the initial corporate plan may include some or all of the following elements, which are items that must be addressed eventually:

1. A plan for physical screening and fitness evaluation of employees, including individual fitness profiles (e.g., cardiovascular endurance, muscular endurance, body composition, body flexibility, muscular strength, posture analysis)
2. A plan for individual exercise prescriptions based on the individual fitness profiles
3. A training plan for teaching participants to use the exercise equipment
4. A personal health care consultation program to educate employees and their families in self-care methods and in the proper use of the community health-care system, including educational material such as newsletters, videos, and topic-specific literature
5. Administrative procedures for enrolling members, keeping membership records, making fitness-progress reports, maintaining confidentiality, and such issues
6. Special educational programs devoted to particular health issues (e.g., freedom from smoking, weight management, blood-pressure control, stress management)

As this thesis argues, a well-designed corporate fitness program can have tangible benefits to the company through a healthier, happier, and more productive work force. The tangible benefits include reduced operating costs, reduced medical costs, reduced absences, improved

productivity, improved morale, improved employee retention, and improved employee recruiting.

Further Study

A Fitness Measure

There does not exist a practical, standiardized measure of overall fitness. One approach to measuring fitness is through a composite of the known medical parameters of health: blood pressure, body fat, cholesterol, aerobic capacity, and similar measurements. Each of the cited parameters can be measured objectively, and from these it may be possible to derive an overall figure of merit for fitness. Alternatively, a polar graph displaying normalized dimensions of the parameters might be more useful and practical. Properly normalized, the medical parameters would form a circle in the polar graph; deviations from the ideal circle would measure and quantify a lack of fitness.

A program of study into this, or other fitness-measurement approaches, is recommended.

Correlating Fitness and Corporate Benefits

Although the case for corporate fitness programs has been fairly well proven in the general sense, a quantification of the derived benefits has not been done. A quantified relationship between elements of physical fitness and corporate benefits would give great impetus to the health-care movement in the industrial world. If the research

recommended in the paragraph above produces an overall fitness measure, a correlation between this measure and payoffs to a fitness sponsor would be of very great value. Absent an overall measure, correlations between given aspects of fitness and benefits should be explored.

Alternatively, a correlation might be established between given kinds of exercise and certain benefits, such as reduced absences or improved productivity.

Regarding correlations between fitness (or specific exercises) and productivity, even restricted laboratory experiments in this area would be valuable.

A program of study into these correlations between fitness (or exercise) and sponsor payoff is recommended.

Additional Research

The researcher suggests that another study be conducted at the GTE Personal Fitness Center. Additional questions should be added to the initial survey and the survey techniques changed in order to increase the response rate.

It is also suggested that a study be conducted to look at the applicability of in-house fitness programs to other settings, particularly in elementary schools and the public sector. The research shows that programs do and must differ between public and private sectors. It would be valuable to gain more information on these differences. Also, if a standardized measure is developed, it would be useful to compare data among different sites.

APPENDIX

Survey-Instrument Cover Letter

Survey Instrument

October 14, 1987

Dear GTE Personal Fitness Center Member:

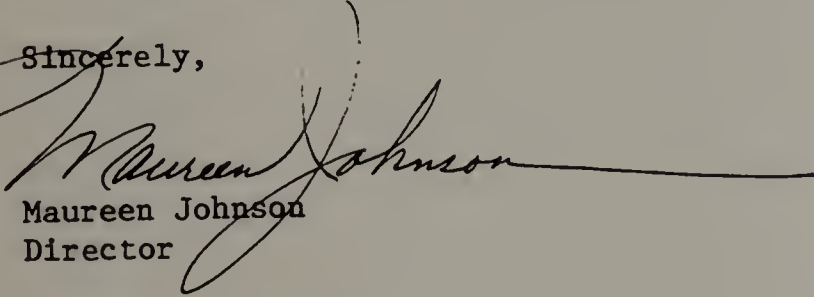
On behalf of GTE Electrical Products, Dr. Carl A. Soderland, Medical Director, and the Resource Center for Business at Salem State College, I want to thank you for becoming a member of the GTE Personal Fitness Center. As you know, GTE has contracted with the Resource Center for Business to manage your Personal Fitness Center. This 6,000 sq.ft. fitness facility is the first of its kind on the North Shore to be built by a major corporation and is also the first known example in which an academic institution has joined with a major industry to develop a comprehensive health promotion program for employees within a corporation.

To assist us in tailoring our services to meet your needs and interests for the upcoming year, we are asking you to complete and return the enclosed annual GTE Personal Fitness Center Questionnaire. In addition to assisting us in developing meaningful programs for the upcoming year, the information derived from this questionnaire will be compiled and submitted as part of our annual report to the GTE Products Corporation.

Please return your completed questionnaire in the enclosed envelope to Maureen Johnson, Director, Resource Center for Business, Salem State College, 352 Lafayette Street, Salem, MA 01970, by October 30, 1987. You may also return your survey to the "Survey Return Box" located in the Personal Fitness Center.

Thank you again for your cooperation.

Sincerely,



Maureen Johnson
Director

MJ:pv
Enclosure

A SURVEY OF MEMBER ATTITUDES
TOWARD THE
GTE ELECTRICAL PRODUCTS
PERSONAL FITNESS CENTER

Conducted By:

Maureen Johnson, Director
Resource Center for Business
at Salem State College
Salem, Massachusetts

October 14, 1987

A SURVEY OF MEMBER ATTITUDES TOWARD THE GTE ELECTRICAL
PRODUCTS PERSONAL FITNESS CENTER

This questionnaire is to gather information about the GTE Electrical Products Personal Fitness Center for the purpose of tailoring our services so we can better understand your interests and meet the goals and needs of the GTE Corporation. In addition, the information derived from this questionnaire will be compiled and submitted as part of our annual report to the GTE Products Corporation. Your input is extremely important and will be useful in implementing changes and improvements. The survey is being carried out by the Resource Center for Business.

A set of statements have been prepared and organized into five categories: (A) Equipment; (B) Management; (C) Personal Changes Resulting From Participation; (D) Interest in Health and Fitness Programs; and (E) General Information and Comments. For each statement, please indicate your response by circling the response which applies to you. Of course there are no correct responses to the statements - the best responses are those that truly reflect your opinions or feelings. Do not place your name on the survey. We would like responses to be anonymous. The completion of this survey should take about 12 minutes of your time.

I appreciate your cooperation and assistance in collecting this information. When you have completed this survey, please use the enclosed envelope and return your completed survey by October 30, 1987 to Maureen Johnson, Director, Resource Center for Business, Salem State College, 352 Lafayette Street, Salem, MA 01970. You may also return your survey to the "Survey Return Box" located in the GTE Electrical Products Personal Fitness Center.

In the meantime if you have any questions, please do not hesitate to call me at 617-741-1490. Thank you.

Sincerely,



Maureen Johnson, Director
Resource Center for Business
at Salem State College

In Sections A, B, and C there are five possible responses: Strongly Agree (SA), Agree (A), Neutral or Undecided (N), Disagree (D), and Strongly Disagree (SD). Please circle the response that truly reflects your opinions or feelings.

Two samples have been provided as follows for your convenience:

SAMPLE

| <u>Statements</u> | | <u>Responses</u> | | | | |
|--|----|------------------|-----|-----|----|--|
| The wearing of seat belts should be mandatory. | SA | A | (N) | D | SD | |
| The speed limit should be increased to 65 mph. | SA | A | N | (D) | SD | |

SECTION A - In regard to EQUIPMENT the GTE Electrical Products Personal Fitness Center has:

| <u>Statements</u> | | <u>Responses</u> | | | | |
|---|----|------------------|---|---|----|--|
| 1. Bicycle ergometers which are effective in meeting your personal fitness goals. | SA | A | N | D | SD | |
| 2. User friendly bicycle ergometers. | SA | A | N | D | SD | |
| 3. Treadmills which are effective in meeting your personal fitness goals. | SA | A | N | D | SD | |
| 4. User friendly treadmills. | SA | A | N | D | SD | |
| 5. A cross country ski machine which is effective in meeting your personal fitness goals. | SA | A | N | D | SD | |
| 6. A user friendly cross country ski machine. | SA | A | N | D | SD | |
| 7. Rowing machines which are effective in meeting your personal fitness goals. | SA | A | N | D | SD | |

| <u>Statements</u> | <u>Responses</u> | | | | |
|--|------------------|---|---|---|----|
| 8. User friendly rowing machines. | SA | A | N | D | SD |
| 9. Lower body strength training equipment which are effective in meeting your personal fitness goals. | SA | A | N | D | SD |
| 10. User friendly lower body strength training equipment. | SA | A | N | D | SD |
| 11. Upper body strength training equipment which are effective in meeting your personal fitness goals. | SA | A | N | D | SD |
| 12. User friendly upper body strength training equipment. | SA | A | N | D | SD |
| 13. A computer program which is helpful in tracking your progress. | SA | A | N | D | SD |

SECTION B - In regard to MANAGEMENT, the fitness center staff has:

| <u>Statements</u> | <u>Responses</u> | | | | |
|---|------------------|---|---|---|----|
| 14. Implemented effective <u>testing procedures</u> which have given you a better understanding of your current fitness level. | SA | A | N | D | SD |
| 15. Implemented an <u>effective orientation</u> program which has given you a better understanding of the importance of exercise. | SA | A | N | D | SD |
| 16. Been effective in conducting physical fitness evaluations. | SA | A | N | D | SD |

| <u>Statements</u> | <u>Responses</u> | | | | |
|--|------------------|---|---|---|----|
| 17. Been effective in reviewing physical fitness assessment results during the orientation sessions. | SA | A | N | D | SD |
| 18. Been effective in demonstrating the proper use of the equipment. | SA | A | N | D | SD |
| 19. Been effective in <u>developing</u> your exercise program. | SA | A | N | D | SD |
| 20. Been effective in <u>monitoring</u> your exercise program. | SA | A | N | D | SD |
| 21. Been effective in assisting you in understanding how to meet your personal goals when first joining the GTE Electrical Products Personal Fitness Center. | SA | A | N | D | SD |
| 22. Been effective in assisting you in meeting your personal goals through retesting and program review. | SA | A | N | D | SD |
| 23. Demonstrated knowledge in principles of exercise and conditioning. | SA | A | N | D | SD |
| 24. Been effective in motivating you to meet your personal health and fitness goals through continued encouragement. | SA | A | N | D | SD |
| 25. Maintained the equipment. | SA | A | N | D | SD |
| 26. Insured that the <u>exercise area</u> of the facility is kept clean. | SA | A | N | D | SD |
| 27. Insured that the <u>locker rooms</u> are kept clean. | SA | A | N | D | SD |

| <u>Statements</u> | <u>Responses</u> | | | | |
|---|------------------|---|---|---|----|
| 28. Implemented an efficient system for checking into the facility. | SA | A | N | D | SD |
| 29. Exhibited professionalism. | SA | A | N | D | SD |
| 30. Exhibited a positive attitude. | SA | A | N | D | SD |
| 31. Good interpersonal skills. | SA | A | N | D | SD |
| 32. Been effective in managing the facility overall. | SA | A | N | D | SD |
| 33. Been effective in providing variety in the fitness programs offered. | SA | A | N | D | SD |
| 34. Been effective in conducting classes to accommodate your schedule. | SA | A | N | D | SD |
| 35. Been effective in providing sound content in the classes. | SA | A | N | D | SD |
| 36. Demonstrated effective leadership skills when instructing classes. | SA | A | N | D | SD |
| 37. Been effective in providing special incentive programs to enhance <u>individual</u> participation. | SA | A | N | D | SD |
| 38. Been effective in providing special incentive programs to enhance <u>group</u> participation. | SA | A | N | D | SD |
| 39. Been helpful in encouraging you to adopt a healthier lifestyle through the publication of the GTE Electrical Products Personal Fitness Center Newsletter. | SA | A | N | D | SD |

SECTION C - In regard to PERCEIVED PERSONAL CHANGES resulting from participation at the GTE Electrical Products Personal Fitness Center:

| <u>Statements</u> | <u>Responses</u> | | | | |
|---|------------------|---|---|---|----|
| 40. You feel healthier. | SA | A | N | D | SD |
| 41. You have been successful in achieving your personal health and fitness goals. | SA | A | N | D | SD |
| 42. Your physical fitness condition has improved <u>since</u> your enrollment at the facility. | SA | A | N | D | SD |
| 43. Your rate of productivity at work has increased <u>since</u> your enrollment at the facility. | SA | A | N | D | SD |
| 44. You feel better about yourself. | SA | A | N | D | SD |
| 45. Your improved health has had a positive effect on other members of your family. | SA | A | N | D | SD |
| 46. A major factor which <u>assists</u> you in achieving your personal health and fitness goals is support from GTE Electrical Products. | SA | A | N | D | SD |
| 47. A major factor which <u>assists</u> you in achieving your personal health and fitness goals is support from the fitness center staff. | SA | A | N | D | SD |
| 48. A major factor which <u>assists</u> you in achieving your personal health and fitness goals is support from your supervisor. | SA | A | N | D | SD |

| <u>Statements</u> | <u>Responses</u> | | | | |
|---|------------------|---|---|---|----|
| 49. A major factor which <u>assists</u> you in achieving your personal health and fitness goals is self-motivation. | SA | A | N | D | SD |
| 50. A major factor which <u>assists</u> you in achieving your personal health and fitness goals is incentive programs such as the Holiday Fitness Festival and the Shape Into Spring Celebration. | SA | A | N | D | SD |
| 51. A major factor which <u>prevents</u> you from regularly using the GTE Electrical Products Personal Fitness Center is lack of personal time. | SA | A | N | D | SD |
| 52. A major factor which <u>prevents</u> you from regularly using the GTE Electrical Products Personal Fitness Center is lack of self-motivation. | SA | A | N | D | SD |
| 53. A major factor which <u>prevents</u> you from regularly using the GTE Electrical Products Personal Fitness Center is lack of support from fitness center staff. | SA | A | N | D | SD |
| 54. A major factor which <u>prevents</u> you from regularly using the GTE Electrical Products Personal Fitness Center is lack of supervisor support. | SA | A | N | D | SD |

| <u>Statements</u> | <u>Responses</u> | | | | |
|---|------------------|---|---|---|----|
| 55. A major factor which <u>prevents</u> you from regularly using the GTE Electrical Products Personal Fitness Center is lack of supervisor support to use the facility at non-peak hours during the workday. | SA | A | N | D | SD |
| 56. A major factor which <u>prevents</u> you from regularly using the GTE Electrical Products Personal Fitness Center is business travel commitments. | SA | A | N | D | SD |
| 57. A major factor which would <u>assist</u> you when travelling on business would be the establishment of a fitness and health program which you could follow and undertake when travelling (e.g., in-room exercises, walking, and running program). | SA | A | N | D | SD |

SECTION D - Interest in Health and Fitness Programs.

In this section there are three possible responses: Definitely Interested (DI); Somewhat Interested (SI); and Not Interested (NI). Please circle the response that truly reflects your opinion or feelings.

| <u>Programs</u> | <u>Responses</u> | | |
|---|------------------|----|----|
| 58. <u>Aerobics</u> - M-W-F - 12:05-12:35 p.m. 30 minute high energy workout at noon that involves a basic format including warm-up, stretches, 20-25 minutes of aerobic activity and a cool-down. Targeted towards the intermediate level student. | DI | SI | NI |

| <u>Programs</u> | <u>Responses</u> | | |
|---|------------------|----|----|
| 59. <u>Aerobic/Exercise I -</u> M-W - 4:00-4:40 p.m. 40 minute combination of low intensity aerobic movements, stretching, and level I floor work designed to firm and tone the body. This is a beginner level class. | DI | SI | NI |
| 60. <u>Aerobic/Exercise II -</u> M-W - 5:10-6:10 p.m. Targeted towards advance level students only, this class includes 30-35 minutes of high intensity aerobics, stretching techniques, and level II floor work. | DI | SI | NI |
| 61. <u>Aerobics Plus - F - 5:10-6:25 p.m.</u> Super energy 75 minute fitness class combining 35-45 minutes of challenging aerobics with warming and cooling down segments. Level II floor work. | DI | SI | NI |
| 62. <u>AM Abdominals -</u> T-Th - 7:15-7:30 a.m. Keep your abdominal muscles in shape to prevent back pain and trim the waistline. Level II exercises. | DI | SI | NI |
| 63. <u>Stretch and Strengthen -</u> T-Th - 12:05-12:35 p.m. Stretching techniques and calisthenics geared for tightening all areas of the body will be included. Emphasis given to upper torso, abdominals, hips, thighs, and buttocks. | DI | SI | NI |

| <u>Programs</u> | <u>Responses</u> | | |
|---|------------------|----|----|
| 64. <u>Fit for Life</u> - Programs such as the Holiday Fitness Festival which involve team members working towards predetermined goals (i.e. caloric expenditure, timed cardiovascular workouts, etc.) | DI | SI | NI |
| 65. <u>Lo-Impact For Ladies Only</u> - T-Th - 5:10-6:00 p.m. 50 minute high energy workout that includes movements designed to minimize impact related stresses. | DI | SI | NI |
| 66. <u>Walking Club</u> - A lunch time walking program to be held during the warm weather. Novice, recreational and power walkers will be invited to participate. Various courses for all levels will be developed. | DI | SI | NI |

SECTION E - While we do not want you to include your name on this questionnaire we would like to know a little about you so that we can compare different types of people with the attitudes being examined. Please circle the response numbers or fill in the blanks according to your answers.

67. Your sex?
 1. Female
 2. Male
68. Your age?
 1. Under 20
 2. 20-29
 3. 30-39
 4. 40-49
 5. 50 +
69. Your employment status?
 1. Full Time
 2. Part Time

70. Your work location?

1. Beverly Airport, Beverly
2. Boston Street, Salem
3. Ipswich, EDO
4. Ipswich Quartz
5. Lighting Center, Danvers
6. Loring Avenue, Salem
7. Rt. 114 Warehouse, Danvers
8. Sylvan Street, Danvers
9. Transportation Center, Danvers
10. Other (specify) _____

71. When did you join the Personal Fitness Center?

Month _____ Year _____

72. Do you think you were in good physical shape before joining the Personal Fitness Center?

1. Yes
2. No

73. Has the process we implemented been successful in educating you about the major cardiovascular risk factors? (e.g., smoking, overweight, etc.)

1. Yes
2. No

If no, why?

74. Do you feel that since joining the GTE Electrical Products Personal Fitness Center that you know more about health and fitness overall?

1. Yes
2. No

If no, why?

75. Did your personal physician discuss cardiovascular risk factors with you as part of the mandatory physical examination which you were required to have before joining the Personal Fitness Center?
1. Yes
 2. No
76. Did you smoke prior to joining the Personal Fitness Center?
1. Yes
 2. No (If no, skip to #78)
77. If yes, circle one:
1. I smoke less.
 2. I have quit smoking.
 3. I smoke more.
78. Did you need to lose weight before joining the Personal Fitness Center
1. Yes
 2. No (if no, skip to #80)
79. If yes, circle one:
1. I have lost the desired amount of weight.
 2. I have lost some weight.
 3. I have not lost or gained any weight.
 4. I have gained weight.
80. Before joining the Personal Fitness Center my eating habits were poor.
1. Yes
 2. No
81. Since joining the Personal Fitness Center my eating habits have improved as a result of exercising.
1. Yes
 2. No
82. Since joining the Personal Fitness Center my eating habits have improved as a result of the nutrition education provided.
1. Yes
 2. No

83. What primary source made you aware of the GTE Electrical Products Personal Fitness Center? (Circle one)

1. The marketing brochure
 2. The marketing poster
 3. The information booth set up at your employment location
 4. The video production
 5. Encouragement from another employee who is a member of the facility
 6. Encouragement from an employee who is not a member of the facility
 7. Encouragement from your supervisor
 8. Encouragement from Health Services
 9. Encouragement from the fitness center staff
 10. Encouragement from family members
 11. Encouragement from family physician or other health professional
 12. Other (please specify) _____
-

84. What was your primary reason for joining the GTE Electrical Products Personal Fitness Center? (Circle one)

1. To improve cardiovascular endurance
 2. To lose weight
 3. To improve self-esteem
 4. To become more alert and energetic
 5. To become more productive
 6. To improve social relations
 7. To reduce stress
 8. Other (please specify) _____
-
-

85. Generally how often do you use the GTE Electrical Products Personal Fitness Center? (Circle one)

1. Less than once a week
2. One time per week
3. Two times per week
4. Three times per week
5. Four times per week
6. Five times per week
7. More than five times per week

86. When do you regularly use the GTE Electrical Products Personal Fitness Center? (Circle one)

1. 6:30 a.m. - 8:00 a.m.
2. 8:00 a.m. - 11:00 a.m.
3. 11:00 a.m. - 1:00 p.m.
4. 1:00 p.m. - 4:00 p.m.
5. 4:00 p.m. - 7:00 p.m.

87. What can we do to encourage more employees to join the GTE Electrical Products Personal Fitness Center?

88. May we use your comments as quotes in our Annual Report and in other printed materials? (Circle one)

1. Yes
2. No

Comments: Please feel free to provide general comments on the GTE Personal Fitness Center or comment on any of the statements presented in this survey.

Please return this survey using the enclosed envelope by October 30, 1987 to Maureen Johnson, Director, Resource Center for Business, Salem State College, 352 Lafayette Street, Salem, MA 01970. You may also return your survey to the "Survey Return Box" located in the GTE Electrical Products Personal Fitness Center.

Thank you for taking time to complete this questionnaire.

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