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An analysis of characteristics associated with corporate colleges

Jean Simpson Rose

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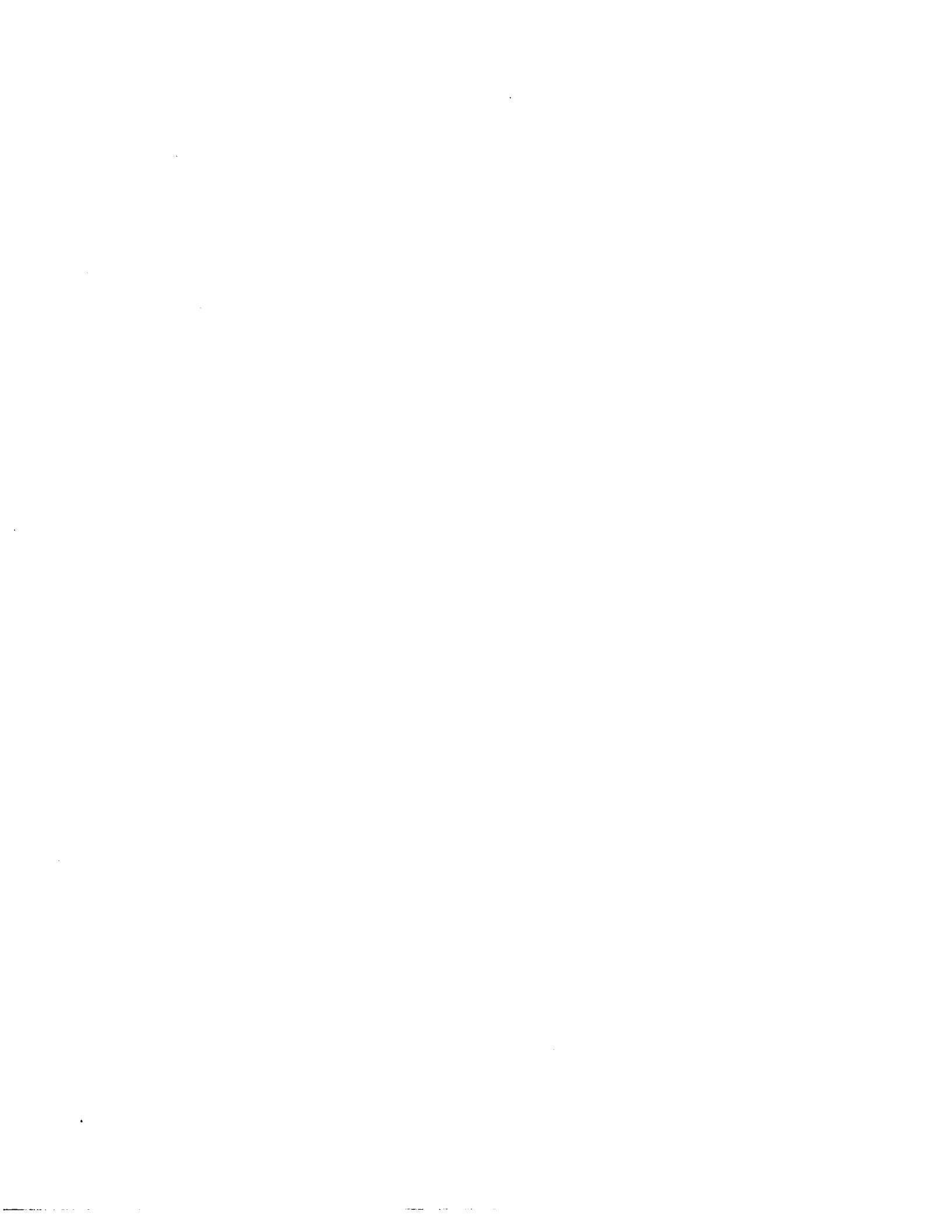
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Rose, Jean Simpson, Ed.D.

The College of William and Mary, 1991

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AN ANALYSIS OF CHARACTERISTICS
ASSOCIATED WITH CORPORATE COLLEGES

A Dissertation
Presented to
The Faculty of the School of Education
The College of William and Mary in Virginia

In Partial Fulfillment
Of the Requirements for the Degree
Doctor of Education

by
Jean S. Rose

AN ANALYSIS OF CHARACTERISTICS
ASSOCIATED WITH CORPORATE COLLEGES

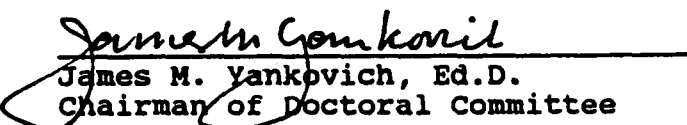
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ABSTRACT

The purpose of this study was to determine the degree of change in corporate colleges between 1985 and 1989 and to examine the evolution of these institutions to structures and programs which more closely resemble traditional institutions of higher education. A random sample of three institutions was selected for analysis from the list of corporate colleges identified in the Carnegie Study, **Corporate Classrooms: The Learning Business**, conducted in 1985.

Data collection instruments were sent to 17 of the institutions identified in the Carnegie Study. Of the institutions contacted, 11 responded which represented a return rate of 64.7 percent. All of the institutions, including non-respondents, were contacted by phone for the information or to clarify and refine data. A case study approach was applied as a methodology to analyze and compare the institutions. In order to determine if these institutions were becoming more like traditional institutions, a degree from one of the 18 institutions was compared with one offered in a traditional postsecondary institution.

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CHAPTER 1

INTRODUCTION

The participation of business and industry in the education of their employees has been rapidly increasing over two decades. This has been evidenced by journal and newspaper reports of increasingly large sums which corporations continue to invest in the education and training of their employees (Baker, 1983, Carnevale, 1988, 1989). This escalating educational activity by the business community raises the question of potential competition from the professional sector with traditional postsecondary institutions for quality students, particularly in degree areas related to management, computer science, and technical knowledge. Previous research has shown that much of the education provided by this sector is job-specific (Lusterman, 1977; Hawthorne, 1983; Eurich, 1985). Recent trends, however, indicate that significant portions of this education may no longer be as job-oriented as it was in

the past. Upon completion of coursework at a corporate college, students are now receiving degrees in broader areas of study which are becoming more like those offered in traditional institutions (Cottingham, 1979; Jacobson, 1981; Brazziel, 1981; Boyer, 1985). As a result of this transition, colleges and universities may eventually be competing for quality students in job-specific courses of study, non-job-specific courses, and degree programs which have become more attractive because of their accessibility. This study will address two areas of the business and industrial involvement; the characteristics of these programs and how they compare with those provided by traditional institutions of higher education.

The authority to grant degrees has traditionally been vested in colleges and universities. If significant numbers of corporations assume this authority, it could represent the most serious form of competition to face institutions of higher learning in the future. Concern on the part of the educational community over the

development of these educational systems was demonstrated as early as 1975 by references to what experts have called "a shadow system, or a second system" of education (Dunlop, 1975, Eurich; 1985; Lynton and Elman, 1987). In a study sponsored by the Carnegie Foundation for the Advancement of Teaching (1985), Eurich wrote: "the power and potential of corporate training are too often overlooked by people in government, in traditional education, and in industry itself." A measure of the extent to which business and industry are assuming the role of educator is the number, type and comparability of degree-granting programs.

The study of corporate colleges conducted in this research was motivated by an interest in the similarity between traditional and non-traditional institutions and the degrees which they grant. This similarity does exist. A review of the available literature indicates that in 1983, there were fourteen corporate institutions which offered college-level degrees; by 1985, the number

had increased to eighteen. These institutions are sponsored by such corporate giants as Bell and Howell, Rand, Northrop, and General Motors. At the heart of this research are three essential questions: what are the characteristics of these institutions, how do they compare with traditional institutions, and have these institutions continued to become more like colleges and universities. Finding answers to these questions constitutes an important new area of study in higher education.

Purpose of the Study

The purpose of this study was to determine the characteristics of corporate colleges sponsored by selected industrial corporations in the United States. The study included an analysis of the characteristics of these institutions in 1985, changes occurring in the characteristics of these institutions since 1985, how these programs compare with traditional institutions, and are they becoming more like those granted from

traditional post-secondary schools. There are many cooperative agreements between traditional institutions and corporations for providing courses which lead to a degree. In recent years, however, corporations have expanded their own educational roles and are offering degrees at the associate, bachelors, master and doctorate levels which are no longer so job-specific. This study is concerned with degree-granting programs offered by various American corporations.

In research conducted by the Carnegie Foundation, *The Corporate Classroom: The Learning Business*, the case study method was applied as a means to analyze these institutions on a case to case basis (Eurich, 1985). That same framework was applied in this study as a method to explore interrelated questions of these non-traditional models as a form of progressive education ideology. Within this methodology the following aspects were explored: the general characteristics of these institutions, changes in these institutions between 1985 and 1989, to include faculty

qualifications, availability and type of facilities, instructional methodology, and curriculum. Also of interest was the presence or level of job-specificity in the degree programs. Specific curricula offered by a corporate college from the respective categories of management, professional or technical institutions was also compared with that offered in a traditional college or university program.

Research Questions

1. What are the descriptive characteristics of corporate colleges?
2. What were the unique characteristics of these institutions in 1985?
3. Have the characteristics of these institutions changed since 1985?
4. How do these characteristics compare with those of traditional colleges and universities?
5. Does the research, literature, site visits and interviews indicate that corporate colleges are becoming more like traditional institutions?

Assumptions and Limitations

There were three assumptions for this study. The first one was that corporate colleges have certain distinctive characteristics which may have changed in the intervening period from 1985 to 1989. The second assumption was that some of these characteristics were similar to those of traditional colleges and universities. Finally, it was assumed that where change had occurred, corporate colleges had moved towards structures more closely aligned with traditional institutions which offered similar degree programs. The belief underlying these assumptions was that corporations were providing their own degree programs and that they were becoming more like those offered by traditional colleges and universities.

The institutions studied in this research are limited to the 18 corporate colleges identified in the original Carnegie Study (Eurich, 1985) since the identification of new institutions was not an intent of the research. Due to the scope and extent of the degrees provided by corporate colleges, few of them

can be distinctly identified as programs primarily for management, technical or professional education. This is because several of the institutions offer degrees in a management discipline which contain strong elements of professional or technical education and other institutions offer technical or professional degrees with heavy emphasis on management. This study will, therefore, restrict its focus to institutions with degree programs which can more readily be characterized as management, professional or technical.

Definition of Terms

For the purpose of this study, the following definitions were employed:

1. Degree program was considered to be any specific course of study certified by the corporation with the conferring of a degree upon completion of the program to include associate, bachelor, master, doctorate (Hawthorne, 1983; Eurich, 1985; Boyer, 1985; Baker, 1983).

2. Corporate college represents an institution, sponsored by a business or industry, or a segment of business or industry, both profit and nonprofit, which provides postsecondary degrees upon completion of a designated program of study (Dunlop, 1975, Hawthorne, 1983; Eurich, 1985; Boyer, 1985).

3. Corporate education refers to formal education acquired in a corporate-sponsored classroom and which provides credit towards a degree program (Hawthorne, 1983; Eurich, 1985; Boyer, 1985).

4. Training was considered to be job-related learning with college credits for a position in which the student was currently employed.

5. Education was defined in terms of human resource development and learning experiences focusing on "preparing the employee to perform on a specific job or group of jobs interchangeably as a result of additional education or training (Nadler, 1980; Cross, 1981; Lynton and Elman, 1987).

6. Postsecondary education denoted all types of education beyond high school (Baker, 1983).

7. Non-traditional institutions denotes educational experiences which do not occur under the supervision and sponsorship of a traditional institution of higher education but may be sponsored by other groups. It may also refer to formal learning that occurs under the auspices of a traditional institution but differs significantly in its nature or content.

8. Shadow education system refers to educational activities which occur outside the parameters of the college and university but may closely replicate or model those offered within these institutions.

CHAPTER 2
REVIEW OF THE LITERATURE

In a 1980 keynote address to the Higher Education Conference at the University of Arizona, Ernest Boyer, current President of the Carnegie Foundation for the Advancement of Teaching, predicted five major directions for the decade of the 1980s. Included among these was a projection for changes in the academic preferences of students. In relation to this, Boyer pointed out that the number of career and vocational-related majors had increased and that business and industry were creating and expanding their own educational systems (Baker, 1983).

According to the literature, some of the growth Boyer (1985) predicted for these educational systems during this decade has occurred. This has been evidenced by the sums of money that business and industry have continued to expend for employee education and training. In 1977, Seymour Lusterman of the

Conference Board, estimated that employers in the United States spent \$2 billion on employee education and training. A survey conducted by the Conference Board identified these expenditures as "salaries of employees devoting all or major portions of their time to education and training activities; travel and living expenses; payments to outside institutions or individual contractors; and costs of equipment and materials purchased or rented" (Lusterman, 1977; Baker, 1983). Three years later, in 1980, interviews conducted with members of the American Society of Training and Development (ASTD) indicated that this sum had increased to \$30 billion. By 1986, ASTD published reports that workplace training and development had become "roughly equivalent in size to the entire elementary, secondary, higher education systems" (Carnevale, 1986).

By 1989, statistics again published by ASTD, presented evidence of corporate America's increasing participation in the learning enterprise as "formal learning of all kinds occupies about 77 million people

annually and costs as much as \$304 billion with almost one in every three Americans a student or trainee." This equated to employers delivering learning "to more people than the entire higher-education system" (Carnevale and Galagan, 1989).

The identification of expenditures, although not an area of research for this study, helps clarify the extent of growth occurring in this sector. The fact that private industry is investing more in the future of its employees than the combined totals spent for elementary, secondary and post-secondary education is another indication that employee-sponsored education is becoming big business or a "learning enterprise" in its own right (Carnevale, 1986; Carnevale and Gainer, 1989).

Although the focus of this research is directed toward the characteristics of the corporate college, it is believed that an illustration of the breadth of the corporate educational involvement is essential to an understanding of the importance of the findings of this study. A review of the literature, therefore, includes

the following: a historical background of corporate involvement in education and the scope of corporate participation.

Historical Perspective

Since the earliest days of commerce, the most commonly applied method for obtaining skilled workers was employer-based training. In some trades or skill areas, where the requirements were high, the training may have been lengthy. In others, only a short period of time was required to achieve competency. These periods of training were known as apprenticeships. For over a century and a half in this country, beginning with the Industrial Revolution - a period from the mid-19th century to the mid-20th century, American employers have taken workers and molded their skills to fit corporate requirements through training and education. This occurred concurrently with the substantial growth in knowledge and technology as human productivity increased by a hundred-fold within this century and a half. The magnitude of this growth was evidenced by the extent and

number of patents issued during a relatively brief historic period (Hawthorne, Libby and Nash, 1983; Baker, 1983).

In 1914, Dr. Charles Steinmetz, first president of the National Association of Corporation schools, described these institutions in a written interview as:

"an elementary school conducted by a corporation to Americanize alien railway labor, for instance; or a commercial school with university classrooms, and sometimes university lectures and credit; or a technical school with a course extending, as in one corporation, through four years of company worktime, demanding two hours each day, and a total of 10,960 hours in all for bonus and a diploma (Wilhelm, 1914)."

Even without this description, it is apparent from the literature that these schools were diverse and represented all educational levels. It should not be overlooked, however, that these schools came into existence during a period when the workforce was primarily illiterate and contained a high percentage of immigrants. It was not the intent of corporate founders to replace or correlate the educational activities of

these schools with traditional institutions but simply a transition which they felt was based on expediency (Corporation Schools, 1914).

During the boom era of the 1920s, no references are found to corporation schools. Although some of them continued to offer courses for employees, it is not clear how many of them were still in operation (Coler, 1932; Blackerby, 1961). Perhaps some of the schools were no longer needed because of a large market of skilled labor. It has also been suggested that newly emerging land grant colleges and junior colleges, which also conducted work-related education, had filled the manpower gap (Levine, 1978). The depression years, however, changed this because seasonal fluctuations and high employee turnover become more commonplace. As employees moved from industry to industry, retraining became more significant as a method of worker retention and economic survival in the highly competitive marketplace (Hawthorne, Libby, and Nash, 1983).

With the growth and complexity of business and industry following World War I, industrialists quickly realized that techniques used to educate and train workers were not effective in solving the "scarcity of managerial talent" (Clark and Sloan, 1958; Baker, 1983). A large number of colleges and universities responded to these demands by establishing departments and schools of business to meet the requirements for trained managers (Serbein, 1961). Jacobs and Phillips (1979) observed that "work and school had become enmeshed and symbiotic" but that inevitably, as America rode out the social and economic effects of World War I and the depression, cracks in the relationship began to appear" (Baker, 1983).

Following World War II, work and education continued to grow but at different paces and often in different directions. This post-war period has been referred to as a "second industrial revolution." Wartime research in technology and science had served as a catalyst for growth still occurring in space,

computers, the behavioral sciences, and management concepts (Clark and Sloan, 1958; McGregor, 1960; Likert, 1961; Vroom, 1964).

By the 1950s, demands for business school graduates threatened to exceed the supply. Again, in the twin decades of the 1960s and 1970s, accelerating advances in technology created numerous new career fields in business and financial operations. There was a general perception on the part of business and industry that colleges and universities had been unable to keep up with the pace of their requirements for qualified employees. According to Jacobson and Phillips (1979), "the apparent inability of schools to meet new training needs has led many employers to take on a larger share of the training function." Despite continued high enrollments in collegiate business programs, the literature indicates that the education and training activity in many high-technology corporations increased during this timeframe (Miller, 1973-74; Luxenberg, 1978-79; Maeroff, 1981; and Porter

1982). This shift signalled the assumption of corporate responsibility for some types of extensive employee education and training. The scope of corporate involvement in education will be examined in the following section.

The Scope of Corporate Education

To both the educational community and the general public, changes in corporate education had been relatively unnoticed until the 1970s. In a special issue of *Daedalus*, Branscomb and Gilmore (1975), two senior executives of IBM, described what was happening reported on growth in corporate education by citing figures from their own company and the Bell System. They attributed much of this growth to rising concern in American industry over "the intellectual vitality and flexibility of industrial personnel" and pointed out that:

"An accelerating pace of social and technological change calls for some form of continuing education for which our colleges and universities are not yet organized."

Similar concerns were expressed by John Dunlop, then Secretary of Labor (Dunlop, 1975), who coined the term "shadow educational system" in an attempt to draw more attention to the emergence of major and complex employer-sponsored instruction. This developing system was interpreted as a new, possibly parallel, system existing in virtual isolation with little attention from the established educational community (Lynton, 1984).

According to the literature, by the 1970s, the dominant theme of corporate education had become the growing formalization of coursework (Craig and Evers, 1981). A few corporations had integrated courses into traditionally styled institutions called "corporate colleges" (Hawthorne, Libby, and Nash, 1983). The few corporate colleges established during this decade were sophisticated educational enterprises, offering a wide range of coursework with titles which sounded more and more like courses offered in traditional business and engineering schools. Lynton (1984 and 1987), upon reviewing the 1980 Guides

by the Board of Regents in New York State and the National Guide from the American Council for Education, noted:

A random sampling of these volumes, shows collegelike courses such as "An Introduction to Finance" and "Calculus I and II offered by General Electric to its employees; "Materials Engineering" and Modern Structural Analysis" offered by General Motors; and "Multivariate Analysis" and "Statistical Foundations" provided by the New York Telephone Company. There is, therefore, little doubt that a substantial portion of the corporate "shadow educational system" is similar to undergraduate or graduate level instruction.

The scope of employer-sponsored education was once again brought to the attention of the general public in the first quantitative study conducted by Lusterman (1977) for the Conference Board. When published in 1977, it left little doubt about the scope of a major educational enterprise in which colleges and universities had little involvement. The results of the study clearly pointed out that corporations increasingly viewed "education and training as a subsystem of the larger system for

ensuring the presence of skilled and productive human resources" (Lusterman, 1977).

As the decade progressed, the overlap between corporate coursework and programs offered by traditional colleges appeared to be increasing. As demonstrated in TABLES 1 and 2, the distinction between the providers of education and the providers of training, once relatively clear, no longer existed as both public and private institutions served similar, missions, competed for the same students, had comparable objectives, and provided many of the same programs (McQuigg, 1980; Boyer, 1987; Lynton and Elman, 1987; Hawthorne, 1987; American Vocational Association, 1988).

According to Lynton and Elman (1987):

Contemporary society is characterized by a highly disaggregated and heterogeneous system of education and training. A wide variety of sources provide different types of instruction. In the past, however, these offerings could be easily distinguished from typical college and university courses. Alternative sources now make available substantial amounts of advanced instruction..... Colleges are heavily involved in training and the programs of many corporations contain as much emphasis on theory as any business school.

TABLE 1
 MAJOR ADULT PROVIDERS/PROGRAMS
 (PUBLIC SECTOR - 1969)

PROVIDER	MAJOR SOURCES OF FINANCIAL SUPPORT				ADMINISTRATIVE UNIT		MISSIONS		PURPOSE PHILOSOPHY
	Govern-mental	Student Fees	Other	Job Related	Avocat-ional	Job Related	Avocat-ional		
Adult/Basic Education	X				Community/Junior Colleges	X			Provide basic/core education or for a four year institution
Continuing Education	X	X	X		Postsecondary Universities, Colleges, Junior Colleges	X	X		Providing academic resources via conferences, workshops and courses
Cooperative Extension	X				Land-Grant Universities	X			Extend expertise of state-wide uni-versities
Colleges and Universities			X		State Governing Boards/Agencies	X			Provide degree and certification programs
Vocational/Technical					Community/Tech-nical Schools	X			Provide entry and technical skills

SOURCES: ADULTS AND THE CHANGING WORKPLACE, AMERICAN VOCATIONAL ASSOCIATION
 AMERICAN COUNCIL ON EDUCATION, PETERSON'S GUIDES

TABLE 2
MAJOR ADULT PROVIDERS/PROGRAMS
(PRIVATE SECTOR TO INCLUDE CORPORATE COLLEGES - 1989)

PROVIDER	MAJOR SOURCES OF FINANCIAL SUPPORT			ADMINISTRATIVE UNIT	MISSIONS Job Related	PURPOSE PHILOSOPHY
	Corporate Support	Student Fees	Other Source			
Apprentice Programs	X		X	Labor Unions Corporations	X	Provide entry/technical level skills
Human Resources	X	X	X	Business and Industry	X	Management, leadership development/degrees
Professional Organizations	X	X	X	Non-profit Corporations	X	In-service recertification/degrees
Technical/Trade Schools	X	X	X	Proprietary Organizations	X	Provide entry/technical level skills
Colleges and Universities (Corporate/Private)	X	X	X	Governing Boards	X	Provide degree/certification programs

**SOURCE: ADULTS AND THE CHANGING WORKPLACE, AMERICAN VOCATIONAL ASSOCIATION
 AMERICAN COUNCIL ON EDUCATION, PETERSON'S GUIDES**

The literature indicates that as these two decades merged into the 1980's, both the business and education communities had experienced significant new developments which challenged our definitions and interpretations of what comprises education; definitions which have been tested with the development, recognition, and growth of degree-granting corporate institutions. The events of the 1980s, however, must be noted for the difference between this decade and those preceding; this difference is the widespread perception of a need to provide employees of all levels, including college-educated employees, with new and additional skills and information required in a dynamically changing economy. (Eurich, 1985).

Advocates for Corporate Colleges

According to corporate leaders, the need is being forced on them because employee skills in problem solving and decision making are not being provided in the college classroom (Samuelson, 1990; Kearns, 1987; Ruggiero, 1989; Hawthorne, 1987; Frey, 1984;). Donald

Frey, as CEO of Bell and Howell, and a strong vocal advocate of corporate participation in the education and training process, has stated:

In an era with widening budget deficits, we cannot rely on just the public sector alone to supply the human needs of industry. The private sector must assume a leading role in the education and training of American workers ... Something much bolder, more far reaching in impact, must be on corporate America's agenda. What is needed is for industry to assume, on broad scale the role of instructor. Perhaps it would be better to say reassume. There is little doubt that education or training in the workplace can produce a better prepared employee than simply relying on outside institutions to supply someone with requisite qualifications."

It was under the leadership and guidance of Frey that Bell and Howell acquired DeVry Institute. DeVry is not a single school or institution but is comprised of a network of schools situated at various locations across the country (Business Week, 1973, Frey, 1984).

Daniel Nickel, personnel Manager for Monsanto Company's operations in Latin America, feels that corporate colleges can more quickly and directly deliver new instruction than the average college or university.

This is because the programs are more intense and are conducted in concentrated timeframes. Little time is spent on extraneous information or socializing as the students spend about 40 hours a week in the classroom with additional time required in the evenings and on week-ends for outside assignments (Wilcox, 1987).

As CEO of Apple Computers and Chairman of the National Center for Education in the economy, John Sculley articulates his case for corporate involvement in education more conversatively but no less emphatically: "As we move into the 1990s, we need to examine the needs of our education system so that it can meet the needs of our country." (Sculley, 1989).

With this level of corporate support, education and training have continued to be growth industries into the 1980s and 1990s. Millions of adults, employees at all levels, pass through the portals of corporate classrooms every year seeking skill and information which they believe enhance workplace performance. During previous

decades, corporations had primarily sent managers and supervisors back to the classroom but expansion into new populations has provided impetus to the movement (Bok, 1986).

As the worker joined this group and the population requiring additional skills increased, the student also became older, more work experienced and better educated. As the numbers, range and variety of students increased, so did the group of participating institutions. This was confirmed with the founding of five new institutions during the 1980s: McDonald's Management Institute (and Hamburger University, 1981), Wang Institute of Graduate Studies (1981), the Industrial Management Institute (1982), and the National Technological University (1984). It was becoming abundantly clear that some of America's corporations had emerged as their own educational providers (Eurich, 1985).

In conclusion, it has become evident that educational agendas have continued to extend beyond the confines of traditional institutions of higher education

and into the corporate environment. They have become sophisticated, alternative, educational systems rooted, not only within the borders of the United States, but in the international business community as well with branches spread to other countries around the globe. The corporate college has become a reality based on the corporate concept of who is to be the educated and productive citizen in the late twentieth century and beyond (Fisher, 1967; Lynton, 1984, 1987).

CHAPTER 3

CHARACTERISTICS OF CORPORATE COLLEGES

Authors have often been reluctant to define the term "corporate college" primarily because of the diverse characteristics of these institutions and the nature of the programs they offer. Hawthorne, Libby and Nash (1983), however, in identifying the original list of 14 corporate colleges (TABLE 3) provided the following interpretation:

A corporate college is an institution offering post-secondary degrees which was initially established by an entity, profit or nonprofit, whose primary mission was something other than granting collegiate degrees. This includes business, service, and manufacturing corporations, as well as professional associations and clubs formed to provide educational support for members of particular professions.

This was a valid description of the schools in 1983, but by 1985 some of the institutional attributes had already begun to change. It had become apparent that these institutions had experienced various levels of growth since the publication of the original research

TABLE 3
CORPORATE COLLEGES (1983)

NAME OF INSTITUTION	ORIGINAL SPONSOR	LOCATION	YEAR DEGREE GRANTING	NONGOVERNMENTAL ACCREDITATION	DEGREES AWARDED
American Institute of Banking	Boston Chapter, Inc. of AIB	Massachusetts	1979	Candidate with New England	Associate
Arthur D. Little Management Educ. Inst.	Arthur D. Little	Massachusetts	1973	New England	Masters
Boston Architectural Center	Boston Architectural Club	Massachusetts	1979	National Architectural Accrediting Board	Bachelors
College of Insurance	Insurance Society	New York	1962	Middle Atlantic States	Associate Bachelors
DeVry Institute	Bell and Howell	8 Locations	1966	North Central	Associate
General Motors Institute	General Motors Corporation	Michigan	1945	North Central NATTS and ABET	Bachelors Masters
Institute of Health Professionals	Massachusetts General Hospital Corporation	Massachusetts	1977	Applicant to New England	Masters

* SOURCE: Hawthorne, Libby and Nash, 1983.

TABLE 3
CORPORATE COLLEGE (1983) cont'd

NAME OF INSTITUTION	ORIGINAL SPONSOR	LOCATION	YEAR DEGREE GRANTING	NONGOVERNMENTAL ACCREDITATION	DEGREES AWARDED
Institute for Management Competency	American Management Association	New York and California	Applied 1982	Applicant to Middle States	Applying for Masters
Institute of Textile Technology	Various U.S. textile mills	Virginia	1944	None	Ph.D. Masters
McDonald's Hamburger University	McDonald's Corp.	Illinois	Applied 1981	None	Applying for Associate
Northrop University	John Northrop Industries	California	1958	Western States and State Bar of California	Bachelors Masters, Law
Rand Institute	Rand Corporation	California	1970	Western States	Ph.D.
Wang Institute of Graduate Studies	Dr. An Wang Wang Laboratories	Massachusetts	1981	Applicant to New England	Masters
Waterson College	MetriData Corp.	Kentucky	1971	Southern Assoc., AICS, New England	Associate

* SOURCE: Hawthorne, Libby and Nash, 1983.

in 1983. With the addition of four new corporate colleges by 1985 (TABLE 4), the number had climbed to 18, an increase of over 22 percent. With this growth, the range, diversity and demographics had broadened and the schools represented a new spectrum of curriculum areas. Major emphasis in most of the original programs, as well as the new, was closely aligned with organizational philosophy and products, however a gradual evolutionary process had already begun in some of the institutions. Some new, more general, degree programs were under consideration in several of the schools and restrictions to outside students were gradually being removed. As a method of bringing order to this research and establishing some means to identify the direction and nature of this evolutionary process, a list of characteristics common to corporate colleges in 1985 was formulated.

1. Corporate colleges were nonprofit entities. These institutions were either independent or integral to the sponsoring organization or privately held

**TABLE 4
ADDITIONS TO THE 1983 LIST OF CORPORATE COLLEGES (1985)**

NAME OF INSTITUTION	ORIGINAL SPONSOR	LOCATION	YEAR DEGREE GRANTING	NONGOVERNMENTAL ACCREDITATION	DEGREES AWARDED
American College	National Assoc. Life Underwriters	Pennsylvania	1976	Middle States Association of Colleges/Schools	M.S.F.S. M.S.M.
American Graduate School International Management	Banks, Individuals and US Government	Arizona	1946	North Central Association of Colleges/Schools	Masters
Industrial Management Institute	Midwest Industrial Management Association	Illinois	1982	Applicant with North Central and New England	Applied for Masters
National Technological Institute	Business Corp. US Government AMCEE	Colorado	1984	Applicant to North Central	Masters

* SOURCE: Zurich. 1985

schools. In each case, they received partial to full support from a corporate sponsor, trade union, special interest or professional group and enrollment was restricted to employees of these organizations. All qualified applicants, of which there were significant numbers, were accepted. Although college graduates were preferred, diplomas were not always required for admission to the programs. Applicants were demographically older and represented a new, less traditional population. Significant numbers of these students had acquired some type of work experience and were encouraged by their employers to upgrade their credentials (Eurich, 1985; Wilcox, 1987).

2. Corporate colleges were relatively comprehensive. The programs were intensive with the student often spending eight hours per day in the classroom, laboratory, or workplace depending on where instructional areas were located. These programs terminated in a degree readily recognized by the

corporation, related business interests and peer professionals. The degrees ranged from associate through doctoral and included study in specialized, technical, professional, and management education. Several of the institutions had attained national, regional or professional accreditation while others had applications for accreditation pending or had indicated an intent to achieve recognition through one of the appropriate groups (Eurich, 1985).

3. A number of the institutions had set up organizational structures closely resembling traditional post-secondary institutions. In other cases, however, responsibility for directing the education process was left to personnel directors, heads of training departments, advisory groups, or staff personnel whose primary job was not necessarily education or training. The academic structure was flexible, often changing in response to educational, economic, and demographic needs (Eurich, 1985; Wilcox, 1987).

4. Strong emphasis was placed on teaching skill. In most cases, professional and field experience were emphasized more than educational credentials. Corporate leadership maintained that the credibility factor was greater when an instructor could apply personal field experiences to the lesson (Eurich, 1985; Wilcox, 1987).

5. Most of the colleges relied on the lecture, discussion, and seminar methods for instructional delivery. A few high-tech corporations utilized more sophisticated techniques which included the use of electronic instructional delivery (Eurich, 1985; Wilcox, 1987; National Technological Institute, 1985).

6. Some of the corporate colleges had facilities located in campus-like settings while others offered instruction in available sites to include the industrial or business workplace, community colleges, or office space rented specifically for that purpose. A few of the institutions had computer labs, libraries, student facilities, academic counseling, job referral, and

placement services, however, these institutions remained in the minority (Eurich, 1985).

7. The curriculum was primarily job-specific and included ample opportunity to practice newly acquired skills in the workplace. This was prevalent because of a corporate perception that the major asset of the institution was the ability to provide skills and information which the students could immediately apply in the workplace. Corporate colleges readily admitted that their first obligation was to the practical aspects of the job. The educational services and courses provided in these institutions gained their structure and characteristics from the respective company or industry it served, competitive forces within that industry, and the company's product (Eurich, 1985; Wilcox, 1987).

8. In 1985, corporate colleges were primarily "closed institutions," meaning one which offered degree programs only to employees of the parent(s) organization or affiliated companies. This

characteristic is particularly significant because of the future implications for change through diversity of programs and student participation. McDonald's Management Institute represents one of the best examples of a "closed" institution serving only employees of the corporation (Eurich, 1985; McDonald's Institute, 1985, 1989).

9. Corporate colleges have also been categorized as "non-traditional institutions" and "shadow educational systems (Dunlop, 1975)." Basically this characterization was applied to experiences which did not take place under the supervision and auspices of a traditional institution of higher education but may be sponsored by other institutions; or it may refer to learning that occurs under these auspices and supervision but differs significantly from other formal educational efforts taking place there" (Hartnett, 1972).

This non-traditional approach to study has also been explained in simplest terms as "the changing

educational patterns caused by the changing needs and opportunities." As time progresses, it has grown to include a wide range of sponsors and embraces diverse educational philosophies (Gould, 1972; Cross, 1972). Although these providers attracted some attention in the late 1970s (Lusterman, 1977), they became a focus of national attention in the early and mid 1980s. These institutions were further spotlighted in 1981 when the Fall supplement to the New York Times for continuing education listed a number of companies as examples of those providing degree granting programs ranging from Associate to Ph.D. (Hawthorne, Libby, and Nash, 1983). What is helpful in understanding these institutions, their growth and philosophy, however, is a topography of their attributes (TABLE 5) which can be compared with those of traditional institutions of higher education (TABLE 6).

Recognition for Corporate Colleges

When Eurich identified 18 of these schools in the Carnegie Study (Eurich, 1985), she retained the feeling

TABLE 5
CHARACTERISTICS OF CORPORATE COLLEGES

TYPES OF DEGREES: Associate, Bachelor, Masters, Ph.D. and Professional	TYPES OF FUNDING: Full corporate, Partial corporate, Fully student paid, Partial student paid
INSTRUCTIONAL LOCATION: Corporate classroom, Workplace, Colleges/Community colleges	GOVERNANCE: Corporate sponsor. By college, by Combination
KIND OF PROGRAMS: Highly specialized, Specialized, Highly technical, technical, Management, Professional	SPONSOR: Corporate (nonprofit), Corporate (profit), Trade Unions, Professional groups/organizations, Clubs, Joint Groups
STUDENT PARTICIPATION: Voluntary professional, Involuntary professional, Voluntary personal, Involuntary personal	FACULTY: Full-time untenured internal, Part-time untenured, Career professionals, Contract, Consultant, College professors
POPULATION SERVED: Corporate employees, Open admissions, Preferential groups	RATIONALE: New technology, Cost of external programs, Quality of students, Quantity of skilled employees, Time savings, Corporate culture, Job knowledge/obsolescence, Foreign products/competition, Work related, Academic calendar
ADMISSION CRITERIA: High school diploma, GED, Bachelors Degree (or higher), Employer recommendations, Prerequisite courses, Professional experience, Standardized Tests	ACCREDITATION: Regional and professional accreditation/certification agencies
INSTRUCTIONAL METHODOLOGY: Lecture, Seminar, Discussion, Laboratory	SERVICES: Some educational/career, Job placement
FACILITIES: Training centers, Laboratories, Libraries, Media Centers	

SOURCES: EURICH, 1985, PETERSON'S ANNUAL GUIDE TO GRADUATE STUDY: BOOK 1, 1987; PETERSON'S HIGHER EDUCATION DIRECTORY, 1989; AMERICAN COUNCIL OF EDUCATION; REGIONAL ACCREDITATION AGENCIES

TABLE 6
CHARACTERISTICS OF TRADITIONAL INSTITUTIONS

<p>TYPES OF DEGREES: Associate, Bachelor, Masters, Ph.D. and Professional</p> <p>INSTRUCTIONAL LOCATION: College classroom, Colleges/Community colleges, Local schools</p> <p>KIND OF PROGRAMS: Specialized, Technical Management, Professional, Conceptual</p> <p>STUDENT PARTICIPATION: Voluntary developmental, Personal development, Professional development,</p> <p>POPULATION SERVED: Public at large</p> <p>INSTRUCTIONAL METHODOLOGY: Lecture, Seminar, Discussion, Laboratory</p> <p>ADMISSION CRITERIA: High school diploma, Bachelors degree (or higher), Appropriate grades and standardized test scores</p> <p>FACILITIES: Classrooms, Laboratories, Media, Centers, Libraries, Resource Centers, Clinics Study Centers, Science Centers</p>	<p>TYPES OF FUNDING: State/Federal funds, Tuition, Grants, Loans, Scholarships, Fellowship</p> <p>GOVERNANCE: Boards of Governors, Trustees, Visitors, Advisory Groups</p> <p>SPONSOR: Public groups (States, etc.), Private organizations/groups, Religious organizations and groups</p> <p>FACULTY: Full-time tenured, Part-time/Adjunct, Consultant</p> <p>ACCREDITATION: Regional and professional accreditation/certification agencies</p> <p>RATIONALE: Public service, Quality of life Appropriate credentials/certification, Personal and professional development</p> <p>SERVICES: Counseling (educational, career, personal), Job placement referral, Housing referral, Bookstores, Recreational facilities</p>
<p>SOURCES: EURICH, 1985, PETERSON'S ANNUAL GUIDE TO GRADUATE STUDY: BOOK 1, 1987; PETERSON'S HIGHER EDUCATION DIRECTORY, 1989; AMERICAN COUNCIL OF EDUCATION; REGIONAL ACCREDITATION AGENCIES</p>	

that a firm definition could not be made because of the diverse missions, degrees and population. Instead, she selected to describe them as a "motley group started by incorporated organizations whose primary function was not education (Eurich, 1985)." Wilcox (1987) challenged the characterizations which she made as an imprecise approach which tended to exclude institutions with sound programs and hundreds of other educational providers. In fact, Wilcox contended that this approach created more questions than answers about the corporate movement. Although she limited her descriptions to general terms, Eurich (1985) did provide a topography which grouped them according to the type of sponsoring organization they represented:

INDIVIDUAL BUSINESS CORPORATIONS. Six were founded or supported by the following companies: Bell and Howell, General Motors, McDonalds, MetriData Corporation, Northrop Aircraft, and Wang.

PROFESSIONAL, RESEARCH AND CONSULTING ORGANIZATIONS. Another six institutions can be commonly grouped by type of corporate sponsor. This list includes: The Rand Graduate Institute,

The Arthur D. Little Management Education Institute, the American Management Association's Institute for Management Competency, the Industrial Management Institute of the Midwest Industrial Management Association, the Massachusetts General Hospital Corporation's Institute of Health Professions and the Boston Architectural Center.

INDUSTRYWIDE INTEREST AND CONCERN. The final six institutions were created under the auspices of interest groups. Insurance interests established the American College and the College of Insurance. The textile mills in North America collectively incorporated to establish the Institute of Textile Technology. Boston bankers encouraged the American Institute of Banking to become accredited in programs related to their specific interests. Several high-tech corporate sponsors jointly founded the National Technological University and several banks assisted in the establishment of the American Graduate School of International Management - The Thunderbird Institute (Eurich, 1985).

Despite her reluctance to affix a definition to these institutions, Eurich (1985) acknowledged the significant impact these institutions have created across the educational community:

These institutions have developed levels of instruction directed to supervisors, managers, technical personnel, and other professionals. Component courses range from remedial to Ph.D., from short-term intensive training to sophisticated

high-tech graduate study. Entire industries, such as banking and life insurance, have their own educational system as corporate entities like the American Banking Institute, The American College and the College of Insurance (Boyer, 1985; Hawthorne, Libby and Nash, 1983; Lynton, 1984).

In the past, these institutions had been satisfied to provide educational services without seeking legitimate recognition. As their numbers increased and they expanded their agendas, the programs often seemed to be repetitions of those available in traditional schools of business, management, engineering, banking, computer science and health services. Initially, only a few corporations chose to formalize their programs, however, as the involvement grew they crossed over into territory historically considered the domain of traditional post-secondary institutions to become degree-granting.

The desire for recognition during the 1980 appears to have been motivated by several reasons: a society which tends to be credential conscious, an institutional need to attain degree-granting authority as a logical

accretion of an educational and training capacity which had experienced dynamic change and become progressively more sophisticated, corporate pride and desire to gain recognition for educational accomplishments, and student reluctance to matriculate in long programs which did not conclude with some form of certification or diploma. Much of this development and need for accreditation has occurred under the umbrella of employee development, or more specifically as human resource development (HRD). Because of these initiatives, corporate education now represents a significant sector of the educational community (Business Week, 1979; Business Week, 1980, Hawthorne, 1985; Eurich, 1985; Lusterman 1985).

The objectives, resource utilization, and organization of U.S. corporate education have continued to alter with the 1980s as all strata of employees have been challenged to acquire new competencies via degrees in these institutions. Several distinct factors have become motivating forces for the acquisition of additional education and training: technological

change, adoption by many companies of new economic strategies and goals in response to deregulation, global competition, environmental changes, and a shifting of the United States from a product-orientation to the role as the major informational society (Lynton, 1984; Eurich, 1985; Lynton and Elman, 1987).

Corporate sector education has been called a "shadow system" or a "second system" but such labels are both misleading and questionable. It is not a shadow and it is second to none in the integrity of its programs and purposes. The corporate system is educating many millions of adults in this nation.

Much of what had occurred was not really new or unique. According to Hawthorne (1987), "although some employer-sponsored education has existed for many decades, corporate education has expanded greatly in recent years." Boyer (1985) and Wilcox (1987), long-term observers of this phenomenon, concur that growth is anticipated in this sector during the next decade. It must also be noted that five (TABLE 7)

TABLE 7
CORPORATE COLLEGES FOUNDED SINCE 1980

NAME OF INSTITUTION	ORIGINAL SPONSOR	LOCATION	YEAR DEGREE GRANTING	NONGOVERNMENTAL ACCREDITATION	DEGREES AWARDED
Industrial Management Associate Institute	Midwest Industrial Management Institute	Illinois	1982	Applicant with North Central	Applied for Masters
Institute for Management Competency	American Management Association	New York and California	Applied 1982	Applying to Middle States	Applying for Masters
McDonald's Hamburger University	McDonald's Corp.	Illinois	Applied 1981	None	Applying for Associate
National Technological University	Business Corps. US Government, and AMCEE	Colorado	1984	Applicant to North Central States	Masters
Wang Institute of Graduate Studies	Dr. An Wang Wang Laboratories	Massachusetts	1981	Applicant to New England	Masters

* SOURCE: Burich Additions to the 1985 list.

of the corporate colleges were founded in the 1980s. (Eurich, 1985; Boyer, 1985; Wilcox, 1987).

Initially, war, economics, or technology provided the impetus for this phenomenon, however, as institutions and programs expanded, the motivation became more complex and included a number of factors related to the economic climate (Kelly 1919). The economic philosophy of industry could be said to be manifested in the growth of these institutions during the last two decades. Although a number of them had existed since the 1940s, the lists published between 1983 and 1985 (Hawthorne, Libby and Nash, 1983; Eurich, 1985) reflected a growth in excess of 22%. Boyer (1985 and 1987) evaluated the potential future growth to be even greater:

At present, 18 such institutions have been identified. No special nationwide registry exists; some are listed in the official Higher Education Directory, but others are not. Although these corporate colleges are an odd assortment of types and hybrids, all of them give academic degrees, all are accredited or have formally applied for such status, and most significantly, their numbers are increasing.

In the near future, we are told, five corporations plan to start at least five more degree granting programs in management, semiconductor design, systems engineering and business administration. And by 1988, eight corporations propose to offer about 20 more college-level degree programs.

These institutions had been quietly increasing in number and were broadening their curriculum to encompass more and more of the programs traditional to the college and university environment. They had also become geographically representative. A significant number of them were located in the Boston area, a region internationally recognized for outstanding colleges and universities. Several were located in the midwest with Rand and Northrop located on the west coast. Three of the institutions had multiple locations: the American Institute of Banking has several hundred offices, the Rand Graduate School also maintains offices in Washington, D. C. and DeVry provides multiple school locations across the country. Only one of the corporate colleges identified in the study is located or maintains facilities in Virginia. The Institute of Textile

Technology, established in 1944 and one of the oldest institutions, is located in Charlottesville (Eurich, 1985).

These institutions have taken innovative approaches to their programs. They have not restricted their degree granting status to just one particular field of study (TABLE 8). Degrees offered by these schools do not always uniquely yield traditional engineering, law, or computer science degrees but also integrate principles of skill application and management techniques. In several cases, technological or economic changes have created markets for their educational services. They principally appear to fulfill needs which business and industry feel have not necessarily been met by higher education. These companies have made a substantial investment of funds, time and personnel and have become reluctant to turn them over to colleges and universities (New York Times, 1981).

**TABLE 8
TYPES OF CORPORATE DEGREES (1989)**

INSTITUTION	MANAGEMENT	TECHNICAL	PROFESSIONAL
American College	Master of Science in Management		Master of Science Financial Services
American Graduate School of International Management	Master of International Management		
American Institute of Banking	Associate in Business Administration		
Arthur D. Little Management Institute	Master of Science in Management Master of Science in Administration		
Boston Architectural Institute		Bachelor of Architecture	
DeVry Institutes of Technology	Master of Science in Project Management	Bachelor and Associates in Electronics, Technology, Engineering, Computer Information Systems	

KURICH, 1985. VARIOUS COLLEGE CATALOGS/BULLETINS, 1989-90.

**TABLE 8 cont'd
TYPES OF CORPORATE DEGREES (1989)**

INSTITUTION	MANAGEMENT	TECHNICAL	PROFESSIONAL
GMI Engineering and Management Institute		Bachelor of: Mechanical Engineering Industrial Engineering Electrical Engineering Industrial Management Master of: Manufacturing Management	
Industrial Management		Associate in Industrial Management and Supervision	
Institute of Textile		Master in: Textile Technology Ph.D. in Textile Technology	
MGH Institute of Health Professions		Master of Science in: Dietetics, Nursing, Speech Pathology, Physical Therapy	
McDonald's Management Institute	Associate in Business		

EURICH, 1985, VARIOUS COLLEGE CATALOGS/BULLETINS, 1989-90.

TABLE 8 cont'd
 TYPES OF CORPORATE DEGREES (1989)

INSTITUTION	MANAGEMENT	TECHNICAL	PROFESSIONAL
National Technological Institute		Master of Science Computer Engineering Engineering Management Electrical Engineering Industrial Engineering Mechanical Engineering	
Northrop University	Masters in: Taxation, Procurement Acquisition Management Bachelor and Masters Business Administration	Bachelor and Masters Aerospace Engineering Electronics, Etc. Masters in: Systems and Logistics Management and Technology	
Rand Graduate Institute	Ph.D. in: Policy Analysis		
The College of Insurance			Masters and Bachelor in Insurance, Acturial Science Associate in Occupational Sciences
Watterson College	Associate in: Business Administration	Associate in: Computer Programming	Associate in: Medical Assistant Secretarial Sci Laboratory Tech. Fashion Merch.

EURICH, 1985, VARIOUS COLLEGE CATALOGS/BULLETINS, 1989-90.

Education or Training

Students of the corporate education movement feel that "educators" and "trainers" have traversed common areas of subject matter so frequently that the differences between the two, once so clear, can no longer be made. According to Cross (1981), "...purists like to make the distinction that industry "trains" and a traditional system "educates," however, these distinctions are difficult and superficial to maintain." There are those within the accreditation community who feel that the two are still different processes while others see the use of education versus training as a "distinction without a difference" (Fenwick, 1989; Manning, 1989; Phillips, 1989). Hawthorne (1987), in evaluating employee programs, offered the following perspective:

Education and training are different processes. Essentially education is a process of learning to think and to examine and solve problems. Training is specific and skill oriented. Traditionally, academia educated and business trained. The advent of vocational education in postsecondary institutions with .. passage of the

Morrill Act in 1862, which established land-grant colleges for training in agriculture, and mechanical arts, altered the historic distinction which was blurred again with the advent of community colleges. When corporations began providing liberal arts coursework for employees, the distinction was further diminished.

Branscomb and Gilmore (1975), among the first to advance the issue of corporate education, discussed the commonality in terms of historic precedents: " It is not always possible to make a clear distinction between corporate "training" and, say, Whitehead's sense of "education," although one can imagine a scale of parameters in which the distinction might be drawn."

The rapid growth and impact of corporate colleges have introduced new and unique terminology to provide clarification of their role and mission. Phrases like "corporate college," "parallel system," "second system," "shadow system," and the "third sector," were not popular educational terms two decades ago. They have now become associated with institutions which offer nontraditional degrees. Despite the facile acceptance of these credentials by broad segments of industrial,

military, and government agencies, the definition of these institutions continues to be nebulous, institution-specific characterizations (Dunlop, 1975; Lynton and Elman, 1987; Eurich, 1985).

Size and Organization

Within many of the corporations in the United States, education and training have become a major "learning enterprise," a term used by Carnevale (1989; 1989) to describe the size and scope of what is happening. Millions of Americans participate in this enterprise each year as they pass through corporate classrooms. Delivery of educational services for employees span the educational and training gamut, encompassing all classifications and levels of organizations (Carnevale 1986, 1989). Using IBM as an example of the efforts of just one major corporation, on any given day 18,000 of the company's 390,000 employees are involved in some type of formal education - in a classroom, through self-study, or in a computer based training program. The yearly IBM budget for this

level of employer investment is approximately \$900 million (Galagan, 1989).

Within the corporate community, educational agendas have gone beyond the confines of conventional classrooms. These alternative educational systems have become highly sophisticated with roots firmly entrenched in the business community, trade schools, apprentice schools and human resource development. They are expanding their purview to meet the needs of what has become an interdependent global society with international implications. Their philosophies are diverse and dynamic, changing to meet new business requirements. Instruction is readily accessible well beyond institutional walls reaching across national boundaries and utilizing advanced tele-communication networks. Corporations can now offer programs almost simultaneously in Rio de Janeiro, Tokyo, Rome and Hong Kong as well as New York. Quoting Eurich and the Carnegie Study (1985): "the corporate system is educating many millions of adults It is not

factory bound as a single corporation may be educating in several major capitals simultaneously."

Eurich (1985) also evaluated all dimensions of the institutional impact made by these schools including their role as contributors to adult educational opportunities:

These classrooms should be seen as vital contributors to the array of adult educational opportunities. They are an essential national resource, crucial to maintaining and sharpening America's competitive position. Our society cannot evaluate its problems, nor certainly consider solutions, without taking into account a major provider of education for productivity.

In 1981, Harold Hodgkinson, former Director of the National Institute of Education and the Professional Institute of the American Management Associations, in noting combined totals for both formal and informal corporate providers of educational services, suggested that "the size and value were coming close to the networth of the 3,500 colleges and universities whose total investment is now about \$55 billion." Noting the

escalating participation by 1983, he revised earlier estimates:

Today, about 12 million people attend colleges and universities in the United States. However, about 46 million adults are being educated by other service providers. These providers range from educational colleges to the Management Academy of United Way. About 400 corporations offer their own instructional programs to employees. The military, and the Graduate School of the Department of Agriculture, alone educates some 12 million adults, about as many as are educated in all our colleges and universities combined.

According to the College Board, about 50 percent of all American adults are involved in some form of organized instruction, but only a small percentage of the total learning is in a college or university setting. It now appears that we have a educational system in the U.S. whose total annual investment equals what is invested in colleges and universities put together - about \$50 billion.

By 1986, expenditures had increased significantly. A review of these statistics, published by the American Society for Training and Development, revealed that corporate investment had grown to \$215 billion a year, representing almost the amount invested in elementary, secondary and postsecondary education (see TABLE 9).

TABLE 9
CORPORATE EXPENDITURES FOR EDUCATION AND TRAINING

PROVIDER	EXPENDITURE
Elementary and Secondary	\$144,000,000,000
Postsecondary Education	\$95,000,000,000
Informal Employee Training	\$180,000,000,000
Formal Employee Training	\$30,000,000,000
Training Provided by Government and Military	\$18,000,000,000

SOURCE: TRAINING AND DEVELOPMENT JOURNAL, American Society for Training and Development, 1989.

Updated statistics published in a 1989 report for the Department of Labor, showed another sharp increase in the providers and their commitment to education and training for the workforce. According to this study, expenditures for formal learning had reached the staggering sum of \$453 billion and encompassed over 77 million people (Carnevale, 1989; Spille, 1989). In the last decade these numbers have burgeoned as business and industry became their own educational providers. In evaluating their potential, Eurich (1985) writes: "...Its scope and implications as a major American educational resource are far broader and demand attention and understanding. Corporate education and training are, in fact, one of the largest providers of adult education in America."

The American Banking Institute, which has a number of campuses across the country, in 1983 provided educational services to more than 23,000 bank employees and other groups of more than 200,000 adults in a range of in-service and "for credit" courses. Statistics are not available on how many degrees have been granted to

students who were not employed by this organization, however, the enrollment in these various programs is significant (Eurich, 1985).

In 1985, the American Council of Education, which evaluates courses for accreditation but leaves the evaluation of institutions to regional, professional or national agencies, had placed its stamp of approval on approximately 1000 courses offered by industry with the recommendation that they be accepted for college credit (Smith, 1985). By 1988, this number has exceeded 3000 courses (Solozano, 1989). Only one third of the money spent by corporations for education and training goes to traditional colleges and universities. These funds are primarily expended on internal activities, on courses designed by corporate individuals and are taught by corporate educators and trainers (Solozano, 1988).

Business organizations provide almost two times as much job-related education as any other single provider. In 1983, roughly one in every eight working Americans participated in a formal training course each year. By

1986, these numbers had increased to one of every three Americans. As the list of sponsors increased so did the range and diversity of programs. The characteristics of the programs reflect the philosophy and product of the sponsoring organization except in those instances where programs were developed to attract additional students or to meet unique demands of the industry.

According to the Department of Labor, the \$30 billion a year investment attributed to formal corporate degree programs represents 1.5 percent of the nations private sector payroll and reaches 10 percent of the workforce. As demonstrated in TABLE 10, the overwhelming majority of expenditures are for updating and sharpening of skills for the 12 million personnel in supervisory and executive positions, not for the 110 million employees who work at lower level functions.

Oddly enough, research studies suggest that we are probably fully competent internationally in the top 10 percent of our workforce. We lag significantly, however, in the remaining 90 percent. It has been suggested in

TABLE 10

TYPES OF CORPORATE PROGRAMS

CATEGORY	% PROVIDING	IN-HOUSE	OUTSIDE	BOTH (%)
Management Skills	78.5	11.8	20.5	46.2
Supervisory Skills	69.3	39.5	8.5	24.9
Technical Skills	65.0	18.5	13.3	34.5
Executive Development	57.5	7.2	21.0	29.6
New Methods	56.5	32.3	3.1	21.1
Employee/Labor Relations	39.9	14.3	9.6	16.0

SOURCE: TRAINING Magazine. October, 1987.

a report contracted by the Department of Labor, that if corporations were to double their investment to \$60 billion, we could upgrade the standards of the workforce by 30 percent (Smith, 1989).

Rationale For Development of Corporate Colleges

Numerous reasons are provided for the initiation of these institutions. They are primarily established by sophisticated, highly resourced, organizations. The companies are quality control-oriented and are usually vigilant about maintaining high instructional standards. Their leadership strongly feels that historical precedents exist to support this instructional role. In the era before mechanized manufacturing and assembly line production made the skills of many craftsmen obsolete, the employee learned a trade in the workplace, not in school. This process was called the "apprentice system." Many also feel that events of the past two decades aren't greatly different from a tradition which goes back to medieval times (Gould and Cross, 1972; Business Cross, 1981 and Frey, 1984).

Although employees have historically learned on the job, the process of acquiring job knowledge and skill has made substantial changes moving consistently from informal to more formalized instruction. As technological and economic change have escalated during the last half-century, industry has tried to ensure efficient and effective agenda. They have maintained the link between job and learning application of a methodology planned to translate the reality of learning requirements into structured learning programs. This methodology, "instructional systems design," is an applied approach to learning which maintains as its focus the employee and job reality. This process begins with a job and task analysis to identify any deficiencies between employee skill and knowledge and requirements of the job. It concludes with the evaluation of the employees's performance.

Work sector changes and the discovery of new clientele have affected the demand for educating employees. As the number and complexity of skills

increased, many corporations began to feel plagued by an inadequately prepared labor force. To a disconcerting extent, corporate executives have often expressed their concerns about the lack of general background knowledge and application skills they feel that college graduates currently have. Widespread dissatisfaction with the preparation of students in colleges and universities has existed for some time. As early as 1977, the mounting criticism of performance and competence was directed at levels of the traditional system (see TABLE 11). The dissatisfaction with education has been as pervasive in the 1980s as it has been during any previous time in our history (Frey, 1984; Kearns, 1987; Samuelson, 1990).

Union movement and collective bargaining agreements produced additional incentives to expand corporate investment in education. During certain phases of this development, the numbers of college students increased at a more rapid pace than suitable jobs producing employees who were considered "underemployed" or "misemployed." Displacement of employees by recession,

TABLE 11
EXECUTIVE RATING OF EDUCATIONAL INSTITUTIONS ON WORK PREPARATION

BELIEVE INSTITUTIONS PERFORM WORK PREPARATION ROLE:

Type of Institution	Particularly Well	Particularly Poorly	Total Mentions	'Poorly' on Total Mentions
Four-year colleges (engineering/science)	44%	4%	48%	8%
Two-year colleges (vocational)	51	7	58	12
Private (vocational)	29	10	38	26
Graduate schools	28	12	40	31
Four-year college (business)	28	20	48	41
Two-year colleges (academic-primary)	17	23	40	57
Four-year colleges (liberal arts)	10	34	44	78

* SOURCE: Lusterman 1977, p. 62

technology and foreign competition fostered a need for re-education not previously required. Business began to recognize the need to (Lusterman, 1977, 1981; Mayhew, 1977, and Lynton, 1984) match employment requirements to the existing workforce which often generated a requirement for retraining (Hawthorne, 1983).

As the corporate college movement has continued to expand, it has become more complex resulting in numerous combinations of educational delivery systems, course locations, student choices levels of instruction, kind and types of instruction, funding sources, faculty, control of the programs, and the functions and purposes it would serve for the organization. Many employers feel that applied learning, acquired in the workplace has inherent advantages. By nature, it is perceived to be more flexible than when accomplished under a fixed academic calender. Employees learn at their own pace while on the job. This provides the advantage of immediate application of newly acquired knowledge rather than risking learning decay from knowledge not utilized.

They also feel that employees are more motivated to learn when newly acquired proficiency is reflected in immediate rewards or recognition and that learning tailored for the workplace leads to more direct employee loyalty, its strategic planning, and organizational culture. Learning acquired in the context of the work environment and with a working team encourages group efficiency. It also takes place in context with an organizational strategy, products, marketing philosophy which increases innovation, quality and efficiency (McQuigg, 1980; Carnevale, 1989).

It is contended by some levels of management that national interest in these educational programs comprises a "strategic advantage," "secret weapon," or first line of defense" against foreign and domestic competition, technology, and economic changes. The ability of employers to respond expeditiously to a dynamic environment and formulate adaptive or corrective strategies, in turn, determines how competitive the nations economy will be (Peters, 1987 and Carnevale, 1989).

Among major corporations, technological change has become the primary driving force for company education and training because technologies replace themselves at a rapid pace. According to McQuigg (1980), "the further toward the leading edge of technology the company operates, the more it must educate its own people." Consequently, an ever larger share of the budgets designated for employee development. Because so many new goals and strategies have proliferated in response to deregulation, global competition and corporate culture, education and training programs have been developed to accelerate the pace by which employees can fill existing voids. Attitudinal adjustments as well as new knowledge and skills have been developed as whole industries have have been undertaken to change leadership patterns to more innovative and participative styles while maintaining clearly defined goals and objectives. Renewed emphasis has been placed on competencies in marketing, decision-making, problem solving, interpersonal skills and even entrepreneurship (Lusterman, 1985).

Increased support has come from the top as executives have become aware of these new needs. In some cases, greater interest followed significant growth in company size and resources; in others, enhanced respect for the potential benefits of education and training based on personal experience. As the educational level of leadership has increased, so has the base level of the employee as each group has served to push increased standards on the other (Lusterman, 1985).

Increased level of respect for human resources management programs and growing professionalism in training activities of many companies have facilitated change in executive attitudes. It had become all too apparent that employee growth and development through formal instruction could be reflected in competence and company success. The "baby boom" generation, now comprising a significant percentage of the managers and supervisors in these companies, expected and demanded more development opportunities as time and experience convinced them that education drives the business.

University graduates have often been dissatisfied and feel that the degrees they have attained have not prepared them for real world requirements (McQuigg, 1980). Consequently, no group of personnel or type of industry is immune from the learning of new technology. These elements and philosophies have combined to enhance the role of corporate education and its providers (Lusterman, 1985).

The "academic rythm" with a September to May calender has been cited as another reason for development of degree programs. Business finds it difficult to adjust needs to a drawn out class schedule and prefers to do its own educating thus reducing the reaction time in resolving a skill or knowledge deficit. Another is that universities emphasize theoretical approaches to knowledge while business feels that it needs more specific application. According to John Humphrey, Chairman of one of the largest employee development firms says, "clients turn to universities when they want to introduce executives to new ideas,

broaden their perspective and have them meet new people. But when they want learning that gives them a competitive edge, they tend to use our program which is company-specific" (Solozano, 1988).

Corporate educators perceive that colleges and universities of higher learning still plan programs for invalid demographic age groups. In the early and mid 1980s, colleges were concerned about an impending decline in the number of college students. At that time they were focusing on birth rates and the declining number of perspective students in the 18-24 age group. In reality, this decline never occurred as older students began to return to the classroom (Bok, 1987; Carnevale, 1989) (TABLE 12). Corporate executives and educators feel they are more experienced in dealing with the older, work experienced students and can respond more quickly to workplace trends and forecasts. According to corporate leaders, they do not plan any significant shift back to courses provided by traditional institutions. To the contrary, they give

TABLE 12

FORMAL TRAINING BY AGE GROUPS

AGE GROUPS	PERCENTILE
19-17	0.15
18-19	0.54
20-24	8.84
25-34	38.75
35-44	28.83
45-54	14.82
55-59	4.46
60-64	2.62
65 +	0.98

SOURCE: U.S. Census Bureau (1987). Survey of Participation in Adult Education. Washington, D.C., U.S. Printing Office. Printed in the TRAINING and DEVELOPMENT JOURNAL. February, 1989.

every indication that they will continue to expand the range of courses and degrees available to employees as they see the need (Frey, 1984 and Solozano, 1988).

Based on an analysis of the relevant literature, research and interviews with industrial and corporate educational leaders (Enmon, 1989; Marks, 1989; Phillips, 1989; Fenwick, 1989), the 12 the reasons most frequently cited for corporate involvement in formal educational opportunities for employees are listed below:.

1. TECHNOLOGICAL CHANGE. In a high technology world, especially in engineering and computers, and with the pace of scientific advances, knowledge and skills may face a half-life of about five years. Certain computer and engineering-related jobs are excellent examples of the rapid change found in emerging and advancing technology. The more rapidly these skills requirements change, the more frequently organizations must provide training (McQuigg, 1980; Frey, 1984).

2. JOB OBSOLESCENCE. Categories of jobs once lasted the life-span of an individual. In the past two decades, new types of employment are appearing as others are rapidly becoming obsolete. As the nation has evolved into an informational society, jobs in the manufacturing sector have declined. This trend is expected to escalate in the 1990s and into the 21st Century with increased use of robotics and broader applications of artificial intelligence. Employees will more and more be required to be occupationally adaptable and prepared to cope with stresses of an unpredictable work environment (Frey, 1989; Enmon, 1989).

3. KNOWLEDGE OBSOLESCENCE. Knowledge requirements for many of today's jobs are also changing at a pace almost equal to job obsolescence. The competencies to be a bank manager or a nurse are substantially different from those required just a few years ago. Maintaining competence on the job requires much more than maintaining necessary

technical skills. Reports on engineering education have consistently pointed out that new technological and scientific developments are often more than extensions of previous ones. They can represent categorical advances that require new mathematical or scientific knowledge. New generations of engineering students are learning basic principles which are often significantly different from those previously taught (Smith, Silbert, Smullin, and Fano, 1981).

4. SKILL DEVELOPMENT. Many corporations are critical of college and university programs which are limited and do not provide training in human relations, decision-making, problem-solving, communication skills, and group dynamics. One of the most common concerns expressed by corporate executives is the inability of many college students to work well in groups and communicate effectively. A significant percentage of the new courses offered by the corporate sector

have grown out of these of deficiencies (Frey, 1984; Eurich, 1986; Gordon and Zemke, 1986; Kearns, 1987).

5. ORGANIZATIONAL COMPLEXITY. Technological advances have increased organizational complexity frequently changed their mission. This requires new skills in the ability to develop management philosophy and new ideas. Additionally, rapid technological change requires increasingly more and more education which must, in turn, be incorporated into and diffused throughout the organization to keep it on the cutting edge. Some corporations find that they cannot locate the range of educational opportunities they feel employees require (Hawthorne, Libby and Nash, 1983; Frey, 1984; and Kearns, 1987).

6. COMPETITION IN THE LABOR MARKET. Educational options prove to be excellent recruitment and retention strategies. Several major corporations have reported that they must provide these opportunities in order to continually attract and

retain the highest quality personnel. The "baby boom" generation, many of whom are now in managerial positions, demand additional educational options which provide advantages for promotion or job enhancement. Many business and industrial firms have initiated requirements for numerous courses which they provide for updating personnel on new competitive techniques, managerial strategies and market trends (Kearns, 1987; Hawthorne, Libby and Nash, 1983).

7. HUMAN RESOURCE DEVELOPMENT. Companies consider support for both the professional and personal growth and development of their employees as an necessary investment to ensure economic success. In theory, a higher employee investment should produce a greater return to the corporation through increased motivation, more time on the job, increased productivity, and a reduction in attrition. New human resource development and education programs

for employees are being institutionalized in many organizations (Quinn, Robert and Graham Staines, 1977).

8. COST SAVINGS. In terms of employee release time, travel, and tuition costs, in-house instruction is considered less costly for a company to add to existing programs than to buy or contract educational programs from the outside. This includes joint efforts with colleges and universities which they feel take too long to respond to change, implement courses which will update skills, or are unwilling to provide services they need. Some business and industrial executives feel that time is also a factor and that it is less time consuming and more efficient for personnel already on staff to develop and implement programs as they are needed (McQuigg, 1980; Lusteran, 1977).

9. EXTERNAL REGULATION. There are often legal and social responsibilities from such groups as

the Environmental Protection Agency and the Department of Labor which mandate the expansion of educational opportunities to women and minorities. In addition to being sources for much needed information, these courses are usually designed to update skills, enhance professional credentials and provide potential upward mobility (Peterfreund, 1976 and Reilly, 1982).

10. INADEQUATE PREPARATION. Significant numbers of employers claim that graduates of colleges and universities are not well prepared to be effective organizational members. They view academic curricula as too narrowly focused on theoretical and abstract content. They also feel that students receive minimum preparation relative to affective or behavioral factors, insufficient practice in dealing with complex situations through practical experience and too little participation in problem-solving, decision-making teams, interpersonal skills, and (Lynton and Elman, 1981 and Mitroff and Kilman, 1984).

11. COLLEGIATE INDIFFERENCE. Representatives of these industrial institutions, as well as some educators, feel that some traditional institutions do not utilize appropriate instructional methodology for students who have acquired experience before returning to classes. to the classroom. Also many colleges are not willing to accomodate the nontraditional student. Numerous factors, including class schedules, location, instructional styles appropriate for experienced students, course content, and even day care have become sources of contention between students, colleges and industry (Lynton and Elman; Mitroff and Kilmann, 1984).

12. TAILORED EDUCATIONAL EXPERIENCES. When the same organizations provide both work and education, they contend that an opportunity to tailor all educational or training experiences to specific corporate needs. There is also the

convenience of scheduling and minimizing time lost for participating in programs outside the workplace. Immediate feed-back is provided on students on academic performance as well as job performance. The employer also has the assurance that skills taught are those most valuable to the corporation (Eurich, 1985).

In conclusion, corporate colleges were established for a number of reasons. The characteristics inherent to these institutions are generally a reflection of the organizational mission, product, or philosophy. As the programs have expanded, they have become more general and management-oriented. The reasons presented in this chapter are representative of corporate attitudes and rationale for the development, support and projected growth in these institutions and the latitude of options they provide. If these reasons are valid, it then becomes clear why these institutions have flourished and will plan to expand course offerings, particularly in specific job-related areas, technology, human resources and development; areas where they feel their specific educational needs have not been met.

CHAPTER 4

METHODOLOGY

This research began with a conviction that by studying external degree granting institutions, it would be possible to provide a service to higher education through an increased knowledge and understanding of corporate educational efforts. The list of characteristics delineated for corporate colleges in Chapter Three came from three major sources: the study published in 1985 by the Carnegie Foundation for the Advancement of Teaching (Eurich, 1985), related literature sources (Hawthorne, Libby and Nash, 1983; Wilcox, 1987) and catalogs and bulletins from the 18 institutions listed in the Carnegie Study. This set of characteristics formed the baseline group for the comparative analysis conducted in this research.

It was also a purpose of this research to identify the characteristics of those institutions as they exist today. This was accomplished through a number of

methods which included a review of the literature, information from national, regional and professional accreditation agencies, current college catalogs and bulletins, survey forms, telephone interviews, and on-site visits to institutions located in the Virginia and Washington, D.C. area. In order to confirm the institutional characteristics and gain a more indepth understanding of the corporate degree programs, it was necessary to make direct contact with senior managers or administrative personnel in the education or training departments, resource centers, accreditation agencies, and admissions personnel. These contacts were made through the distribution of survey forms, site visits, personal interviews, review of course catalogs and numerous telephone conversations (Enmon, 1989; Fenwick, 1989; Manning, 1989; Phillips, 1989).

When sufficient data had been collected, I collated the information gleaned through the multiple systems of contact and compared it with information on the 18 corporate colleges identified in the Carnegie Study

(Eurich, 1985). A general analysis of the 18 schools was conducted. This analysis included a review of various types of degree programs offered by each, admissions criteria, courses required, graduation requirements, fees and tuition, transfer credits, length of time allowed to achieve graduation, facilities and faculty qualifications; all of which would be attributes of significance in a traditional university. The scope of study was then narrowed from the list of 18 institutions to a smaller, more manageable number of three institutions. The information used for the analysis contained in the three case studies included in Chapter 5 was acquired through the various techniques previously identified.

The primary purpose of the research was to identify the attributes of three corporate colleges as they exist today and compare them with the characteristics associated with the schools in 1985. This comparative analysis was to facilitate the identification of changes in institutional characteristics which may have occurred

between 1985 to 1989. The intent for defining and reducing the field of study was to establish order to the extensive information available on each of the institutions. In order to gain a more comprehensive perspective, it was essential to select an institution from each of the three categories of sponsoring organizations listed in Chapter 3 (Individual Business Corporations; Professional, Research and Consulting Organizations) and an institution from each of the three areas of educational emphasis (technical, management, and professional). Selection of the three institutions for case studies based on this criteria provided the scope and diversity of study required for comparative analysis (Eurich, 1985).

Within these groups, a number appeared to be more successful in providing a substantive and balanced program, carefully designed to most effectively meet the needs of their clientele (Eurich, 1985). Although a number of the institutions met the criteria established by the proposed research, several more clearly provided

the types of degrees which could be examined through comparative analysis than others. With this determination, several excellent institutions were eliminated from the research and would be unnoted. Paradoxically, due to the scope of the degree programs offered by these schools, few of them could be distinctly identified as a school for just management, technical or professional degrees. This was because several of the institutions offered degrees in a management discipline which contained elements of the professional or technical just as some of the technical degrees contained some measure of management or professional training. Examples of this include the DeVry Institute, which offers both technical and management degrees, each of which contain some degree of training in the other area. The American Institute of Banking offers education in financial and management services but primarily directs its courses to a professional group. Because of this dichotomy, institutions in this group were eliminated from further

study (DeVry, 1989; American Institute of Banking, 1989).

In order to develop a more comprehensive perspective of these institutions, the case study approach was confirmed as the appropriate methodology. This research technique provided a better approach for organizing and analyzing the significant amount of data collected during the research (Leslie, 1970; Johnson, 1979; Pressley, 1980; Baker, 1983).

The three institutions selected for study were the Rand Graduate Institute for Policy Studies, the Wang Institute, and The American College. In addition to representing the best elements of the criteria established for this research, these institutions also offer a wide range of degrees: the Rand Institute grants a Ph.D. in Policy Analysis, The American College offers a Masters of Science in Management, and the Wang Institute which offered a Masters of Computer Software. These schools were also among those studied in the original Carnegie research, therefore the degree of

change within these institutions could be more readily measured (Eurich, 1985).

Within the designated timeframe, 1985-1989, each of the three institutions experienced significant change. The first institution selected for study is the Rand Graduate School for Policy Studies. The program at Rand is highly specialized, therefore, graduates of this institution tend to work either for government agencies or a small, select group of consulting agencies. The program of study at Rand has tended to emphasize both international and regional political and economic studies. Because of its highly specialized nature, the program at Rand is subject to change with shifting economic and political conditions such as the events which occurred in Europe in late 1989 (Rand Graduate School, 1985; Rand Graduate School, 1989-90).

The school was founded by several organizations interested in professional study, research and consultation services. The Rand program in policy analysis tends to be selective with admission granted to

only a few students yearly. In the last five years, the curriculum has experienced several dynamic changes as it evolved to meet the needs of its specialized clientele. (Rand Graduate School, 1985; Rand Graduate School, 1989-90).

The American College was selected as an institution for comparison because it represented a degree program in management and was founded as a result of industrywide interest and concern. This institution was also representative of a number of general trends occurring within the corporate college community: it had initiated a general management degree in response to demands from clientele and sponsors; it had demonstrated an initiative to upgrade its admission criteria and faculty, it had demonstrated both physical and philosophical growth, and had effectively broadened its population. The Master of Science Degree in Management at American will be compared with a degree in management offered by East Carolina University, in Greenville, North Carolina (The American College, 1985; The

American College, 1989-90; East Carolina University; Kaye, Henne and Bohlander, 1989).

This institution was selected as representative of technical schools which had been established by an individual business corporation. The Wang Institute ceased to exist as a separate entity in 1986-87 when its program merged with Boston University, however in the context of this study, the characteristics of corporate colleges and how they had evolved between 1985 and 1989, this assimilation was important to the research. Although there were several significant differences between the Wang program and one offered by Seattle University (Baker, 1983), an institution offering a comparable degree, it did include enough substantial components to allow its successful integration into the program at Boston University (Boston University, 1989).

The Masters Degree in Business and Management at East Carolina University is a comprehensive program and contains many of the elements typical of medium size graduate programs in business and management schools

across the country. The program at ECU serves a relatively wide population and is approved by both regional and professional groups. The diversity of courses is appropriate to many aspects of the business world and does not restrict the graduate to narrow, specific occupations. The services provided by the institution are typical of those provided in both post-secondary institutions of higher education and the more sophisticated corporate colleges (Goldstein and Sacchetti, 1987; East Carolina University, 1989-90).

In summary, data for this research came from a multiple of sources: a review of the related literature, survey forms, site visits, interviews, college catalogs and bulletins, and certification and accreditation agencies. The information was reviewed and the scope of the material for study was reduced from the 18 institutions identified in *The Corporate Classroom: The Learning Business*, a study for the Carnegie Foundation for the Advancement of Teaching, written by Eurich in 1985, to a representative group of

three institutions. These institutions were selected from each of two principal groups: the type of sponsoring entity (individual business corporations, professional, research and consulting organizations, or industrywide interest and concern), and the type of graduate degree offered (management, professional or technical). The case method of study was used as it provided the most effective and comprehensive approach to analyze and formulate comparative changes over the period from 1985 to 1989 and to compare the program at a corporate college with one from a traditional post-secondary institution of higher education.

CHAPTER 5

INSTITUTIONAL CASE STUDIES

Case Study 1

For over three decades, the Rand corporation has conducted research in many of the international and domestic problems faced by the United States. As a result of these efforts, corporate personnel have made significant contributions in the formulation of courses of action in areas of national defense, health care, policy, education, internal security, civil justice, and international economic policy. Although the primary goal of Rand research has been to help policy makers improve their decision-making process, education and training became natural by-products of these efforts and were institutionalized in 1970 with the founding of the Rand Institute, now the Rand Graduate School (RGS).

The school provides graduate education at the doctorate level in policy analysis, which is defined as the "application of scientific methods to problems of

public policy in domestic national security and international affairs." Again quoting from the Rand Catalog, "the institution has "since 1948 provided decisionmakers with a better understanding of critical policy issues across a wide range of national concerns" (The Rand Graduate School of Policy Studies, 1988-89).

The main offices at the Rand Graduate School are set on a 13 acre site near the civic center complex in Santa Monica, California. The facilities, including the library, classroom facilities, and computer complex, are distributed throughout three interconnecting buildings. The library, used primarily for research projects, is noted for its extensive collection of over 74,000 volumes, 213,000 reports and numerous periodicals, maps and special files which have been gathered and donated for use by the students during the comprehensive research-oriented program (The Rand Graduate School, 1989; Kaye, Henne and Bohlander, 1989).

Much of the success experienced by the Rand program has been attributed to its unique character, strong

financial backing, corporate support, management, and organization. Many corporate colleges operate almost autonomously, however, the Rand Graduate School (RGS) is both an integral part of its corporate sponsor and an autonomous entity within it. Organizationally, intellectually, and financially, the school is a part of the Rand Corporation. The intellectual ties are designated the higher priority since the research staff also serves as the principal faculty for the school. Of the fifty-two faculty members listed in the 1988-89, only four of the instructors in the Rand programs do not have doctorate degrees. Since faculty duties are above and beyond their job, faculty members are paid additional salary to teach in the school and their work loads are adjusted to accommodate teaching responsibilities. In addition to Rand personnel, the staff may be augmented by members from research universities in the Southern California area. Since Rand receives support from its corporate sponsor and both the federal and state government, the school has access to additional personnel and facilities beyond

those at the graduate school (American Council on Education, 1983; Brazziel, 1988; The Rand Graduate School of Policy Studies, 1988-89).

Organizational and financial ties are also significant because the school draws upon the corporation for a number of supporting functions such as financial backing, accounting services, personnel functions, computer support and library facilities. Educational and financial policies, however, are formulated by two boards working cooperatively: the Rand Advisory Board and the Academic Advisory Board. Rand is governed by a Board of Trustees which sets basic policy and must be informed of new developments in technical programs and research findings (The American Council on Education, 1983; The Rand Graduate School of Policy Studies, 1988-89).

When asked why Rand had elected to establish its own institution for advanced study, Dean Charles Wolf, Jr. is quoted as responding, "that it was first a decision of whether or not Rand should do something more

in education and, if so why and what" (Eurich, 1985). The corporation first contemplated a joint venture with the California Institute of Technology or the University of California at Los Angeles. From the onset, the project became overly complicated in terms of course locations, responsibility for funding, and finally, authority to award the degrees. Rand, therefore, proceeded independently developing one of the most successful, creative, and flexible programs in corporate education (Eurich, 1985; Brazziel, 1988).

Upon its establishment in 1970, RGS initiated a free-standing, interdisciplinary program in policy analysis which innovatively combines academic courses, seminar workshops, and on-the-job training. Objectives of this program are to seek and to "furthur promote scientific, educational, and charitable purposes, all for the public welfare and security of the United States of America." The educational program is described as "connected in series with the world of practical affairs." This means that courses such as

mathematics, economics or engineering are studied in blocks. When the textbook work is completed, the focus is turned to analysis and application of solutions to problems in those areas. Although there are some exceptions, such as internships in medicine, the usual practice is to study first, then apply what has been learned. In order to achieve this end, courses are distributed across four primary areas of concentration: economics, quantitative methods, social sciences, and technology (The Rand Graduate School, 1989-90).

The three year program requires several comprehensive components and culminates with a degree of Doctor of Philosophy in Policy Studies. As delineated in TABLE 13, admission requirements include a master's degree or equivalent post-bachelor experience. The program requires that the student successfully complete 20 quarter-length courses, workshops, or tutorials, participate in ongoing policy research at Rand, written and oral qualifying examinations and complete a dissertation. In addition to the general degree, the

TABLE 13
 THE RAND GRADUATE SCHOOL OF POLICY STUDIES
 Ph.D IN POLICY ANALYSIS
 1989

CHARACTERISTICS	
Entrance/Admissions	<ul style="list-style-type: none"> - no official application form required - Master's degree and equivalent training and experience - personal resume including three academic and professional references - letter of application to the dean stating educational aims and reasons for graduate study in the field - scores on GRE or equivalent exams - copy of a research paper or study that the applicant feels reflects best work to date
Length of Term	- 10 weeks
Terms per Year	- 3 trimesters
Length of Program	- 3 years (full-time)
Units Required	- 20 courses and a dissertation
SOURCES: The Rand Graduate School of Policy Studies, 1989. American Council on Education, 1989; Goldstein and Sacchetti, Peterson's Guides to Graduate Study, 1987; Henne and Bohlander, Peterson's Higher Education Directory, 1987.	

TABLE 13 (cont'd)
 THE RAND GRADUATE SCHOOL OF POLICY STUDIES
 Ph.D IN POLICY ANALYSIS

 CHARACTERISTICS

- Instructional Method - analytical and academic classroom workshops, electives, tutorials and on-the-job experience telecommunication systems
- Cost per Annum - \$10,500 (most programs carry a \$15,000-35,000 stipend)
- Total Program Cost - \$31,500 for 3 year program incidental health fees, etc. not included)
- Governing Body - Board of Trustees
- Distinctive Educational Programs - Interdisciplinary program, special classroom telecommunication network
- Accreditation - Western Association of Schools and Colleges, and the Commission for Senior Colleges
- Enrollment - 66 students
- Student Aid - Scholarships, fellowships, grants, work study

 SOURCES: The Rand Graduate School of Policy Studies, 1989; American Council on Education, 1989; Peterson's Guides to Graduate Study, 1985; Peterson's Higher Education Directory, 1987.

student is provided an option of specializing in four areas: Soviet Studies, National Security Studies, Health Policy, and Population Studies. Some of these courses are offered through cooperative efforts with regional educational centers like the University of California at Los Angeles. The first doctorate degree was awarded by Rand in 1974. To date, 52 doctoral degrees have been granted. The current enrollment is 66 with students spread across the several areas of study in policy analysis and throughout the three year program (The Rand Graduate School of Policy Studies, 1988-89).

Tuition at RGS for the academic year of 1989-90 is \$10,500. All students receive renewable annual fellowships and are designated as Graduate Fellows. These fellowships range in size from the \$15,000 annual stipend provided for a student in Health Policy Studies to the \$25,000 to \$35,000 available to postdoctoral students in Population Studies (Reference TABLE 13).

In some cases, where familiarity with one of these fields is not considered sufficient, prerequisite courses

may be required at Rand or at neighboring institutions prior to entering RGS. The admissions process is moderately competitive because of the small field of study. In 1988, seventy-six applicants vied for the 10 to 15 positions available annually. The group of applicants for the program often includes graduates of Stanford and select Ivy League Schools who wish to pursue a career with government agencies or seek employment with an organization specializing in strategic studies. Acceptance is restricted to students who can participate on a full time basis in the educational workshops, tutorials on-the-training and research integral to degree (Brazziel, 1988; The Rand Graduate School of Policy Studies, 1989).

The application process is subjective as no formal application forms are required. The prospective student must submit a letter in which educational aims and reasons for graduate study in policy analysis are clearly stated. A personal resume and three letters of academic recommendation are required. The applicant

must submit both graduate and undergraduate transcripts, scores on Graduate Record Examinations (or equivalent tests), and a research paper, study or report which demonstrate what the applicant considers an example of excellent work. All applications are reviewed by the Admissions Committee. Notification of the applicant's status is generally received within 9 to 10 weeks following the admission deadline (TABLE 13).

The distinctive curriculum innovatively integrates the theories of policy analysis and the essential course work with practice. The program revolves around three methodologies of study (TABLE 14):

1. Analytical courses covering concepts, theories, tools and techniques central to policy analysis.
2. Seminar workshops based on policy studies completed.
3. On-the-job training in ongoing Rand policy research areas which may lead to the doctoral dissertation.

TABLE 14
THE RAND GRADUATE SCHOOL OF POLICY STUDIES
Ph.D IN POLICY ANALYSIS

ACADEMIC YEAR -1989

Fall

Microeconomics I
 Statistics and Data Analysis I
 Methods of Social Science Research
 The Politics and Technology of Public Budgeting
 Domestic Sources of Soviet Foreign Policy
 Policy Analysis
 Strategic and Arms Control Studies
 Application of Microeconomics to
 Regulatory Policy
 Development, Diffusion, and Regulation of Medical Technology
 Multivariate Statistics
 Chinese Politics and Foreign Policy
 NATO and the Conventional Balance of
 Power in Europe
 Background for Policy Making in the Pacific

Winter

Microeconomics II
 Statistics and Data Analysis
 Analytical Methods
 Behavioral Science Perspectives on Policy Analysis
 Uses of History
 Soviet Policy Toward East Asia
 Soviet Military Policy
 Soviet Research Seminar
 Objectives of Health Policy
 Special Topics in Research Methods
 Applied Econometrics

SOURCES: The Rand Graduate School of Policy Studies, 1989.

TABLE 14 (cont'd)
 THE RAND GRADUATE SCHOOL OF POLICY STUDIES
 Ph.D IN POLICY ANALYSIS - 1989

ACADEMIC YEAR - 1989	
Winter (cont'd)	Time Series Analysis European Military Manpower Risk and Uncertainty Workshop Soviet Military Policy and Strategy
Spring	Macroeconomics Econometrics Organizational Behavior Planning U.S. Conventional Forces Political Context of Policymaking Soviet Science and Technology Policy Soviet Policy Towards Eastern Europe Operations Research for Policy Analysis in the Health Field Civil and Military Technology Competition, Financing, and Regulation Systems Development, Diffusion, and Regulation in the Health Field
Summer	Effective Writing Mathematics for Policy Analysis

SOURCES: The Rand Graduate School of Policy Studies, 1989.

For graduation, RGS students must complete a minimum of 20 quarter length courses, workshops and tutorials. These are comprised of eleven analytical core courses, two policy research workshops, and at least seven elective courses. All required coursework must be successfully completed, with the exception of three of the seven required electives, prior to taking the written and oral qualifying examinations. The academic year is comprised of three trimesters (quarters) of ten weeks each. A full course load consists of three courses or workshops per trimester or nine per academic year(Rand Graduate School, 1989-90).

In summary, the Rand Graduate School is an innovative opportunity at the Ph.D. level offering both educational development and financial support. At the present time, there are three programs comparable to the one provided by Rand, however, they are offered at the Master's level: Harvard, Carnegie Mellon, and Berkeley. The interdisciplinary nature of the degree, through the combination of courses required,

concentrated study, and exercises requiring application of newly acquired knowledge, test the range of student capabilities. Through the years, the Rand Ph.D. has reflected the political, social, economic, and even military interests of the country. As a result of this philosophy, the courses have had an international flavor but with primary emphasis on Soviet Block countries.

Several changes have occurred at Rand since 1985. Requirements for graduation have increased from 17 courses and a dissertation to 20 courses and a dissertation. This has coincided with the addition of 8 new courses for 23 percent growth in the curriculum. These additions have tended to make the degree even more specialized in some geographic areas, however, they have expanded the number of regions on which a student can concentrate (TABLE 15). The new courses cover a wide range of study interests such as Multivariate Statistics, Chinese Politics and Foreign Policy, NATO and the Conventional Balance of Power in Europe and

TABLE 15
COMPARISON OF GRADUATION REQUIREMENTS FOR
THE RAND GRADUATE SCHOOL OF POLICY STUDIES 1985-1989

ACADEMIC YEAR	RAND GRADUATE SCHOOL (1985)	RAND GRADUATE SCHOOL (1989)
Fall	<p>Microeconomics I</p> <p>Statistics and Data and Data Analysis</p> <p>Methods of Social Science Research</p> <p>Values in Policy Analysis</p> <p>Risk and Uncertainty in Public Policy</p> <p>Development, Diffusion, and Regulation of Medical Technology</p> <p>Biostatistics</p> <p>Topics in Health Economics Research</p> <p>Pricing of Hospital Services</p> <p>Federal Tax Code and Merger</p> <p>Acquisitions Activity</p>	<p>Microeconomics I</p> <p>Statistics and Data Analysis I</p> <p>Methods of Social Science Research</p> <p>The Politics and Technology of Public Budgeting</p> <p>Domestic Sources of Soviet Foreign Policy Analysis</p> <p>Strategic and Arms Control Studies</p> <p>Application of Microeconomics to Regulatory Policy</p> <p>Development, Diffusion, and Regulation of Medical Technology</p> <p>Multivariate Statistics</p> <p>Chinese Politics and Foreign Policy</p> <p>NATO and the Conventional Balance of Power in Europe</p> <p>Background for Policy Making in the Pacific</p>
Winter	<p>Microeconomics II</p> <p>Statistics and Data Analysis</p> <p>Analytical Methods</p> <p>The Political Context of Policy Making</p> <p>Domestic Roots of Soviet Foreign Policy</p> <p>Soviet Policy Towards Western Europe</p> <p>Application of Microeconomics to Regulatory Policy</p> <p>Strategic Studies</p>	<p>Microeconomics II</p> <p>Statistics and Data Analysis</p> <p>Analytical Methods</p> <p>Behavioral Science Perspectives on Policy Analysis</p> <p>Uses of History</p> <p>Soviet Policy Toward East Asia</p> <p>Soviet Military Policy</p> <p>Soviet Research Seminar</p>

SOURCES: The Rand Graduate School of Policy Studies, 1985. The Rand Graduate School of Policy Studies, 1989.

TABLE 15 (cont'd)
 COMPARISON OF GRADUATION REQUIREMENTS FOR
 THE RAND GRADUATE SCHOOL OF POLICY STUDIES 1985-1989

ACADEMIC YEAR	RAND GRADUATE SCHOOL (1985)	RAND GRADUATE SCHOOL (1989)
Winter (cont'd)	Objectives of Health Policy Applications of Economic Theory to Child Health Problems	Time Series Analysis European Military Manpower Risk and Uncertainty Workshop Objectives of Health Policy Special Topics in Research Methods Applied Econometrics Soviet Military Policy and Strategy
Spring	Macroeconomics Econometrics Organizational Behavior and Analysis Technology and Policy Analysis Planning U.S. Conventional Forces Soviet Military Policy Operations Research for Policy Analysts Competition, Financing, and Regulation in the Health Field Special Populations and Health Delivery Systems Applications of Probabilistic Risk Analysis: Radioactive and Toxic Waste International Finance Topics in Oligopoly Theory	Macroeconomics Econometrics Organizational Behavior Planning U.S. Conventional Forces Political Context of Policymaking Soviet Science and Technology Policy Soviet Policy Towards Eastern Europe Operations Research for Policy Analysts Civil and Military Technology Competition, Financing, and Regulation Development, Diffusion, and Regulation in the Health Field
Summer	Effective Writing Mathematics for Policy Analysis Nursing Home Reimbursement Policy	Effective Writing Mathematics for Policy Analysis

SOURCES: The Rand Graduate School of Policy Studies, 1985. The Rand Graduate School of Policy Studies, 1989.

Background for Policy Making in the Pacific (Rand Graduate School, 1989).

Tuition increased from \$25,000 to \$31,000. This additional \$6000, represents approximately the same amount of increase charged by some of the more select or private colleges and universities across the country. This has been offset, however, by an increase in the funds available in the programs through larger stipends, increased fellowships and scholarships. Additionally the area of eligibility has been expanded to make these resources (TABLE 16) available to more students (Rand Graduate School, 1989).

In 1985, the school had granted 27 degrees; by 1988 the number had increased to 52. Currently, 66 students from all over America and several foreign countries are enrolled in the three year program. Graduates of the 1987 class were offered employment at the Pentagon, in the U.S. Congressional Budget Office, in the Brookings Institute, and with the U.S. Office of Management and Budget (Brazziel, 1989).

TABLE 16
COMPARISON OF ENTRANCE REQUIREMENTS FOR
THE RAND GRADUATE SCHOOL OF POLICY STUDIES 1985-1989

CHARACTERISTICS	1985	1989
Entrance/Admissions Requirements	<ul style="list-style-type: none"> - no official application form required - Master's degree or equivalent training and experience - personal resume including three academic and professional references - letter of application to the dean stating educational aims and reasons for graduate study in the field - scores on GRE or equivalent exams - copy of a research paper or study that the applicant feels reflects best work to date 	<ul style="list-style-type: none"> - no official application form required - Master's degree and equivalent training and experience - personal resume including three academic and professional references - letter of application to the dean stating educational aims and reasons for graduate study in the field - scores on GRE or equivalent exams - copy of a research paper or study that the applicant feels reflects best work to date
Length of Term	- 10 weeks	- 10 weeks
Terms per Year	- 3 trimesters	- 3 trimesters
Length of Program	- 3 years (full-time)	- 3 years (full-time)

SOURCES: The Rand Graduate School of Policy Studies, 1985. The Rand Graduate School of Policy Studies, 1989.

TABLE 16 (cont'd)
 COMPARISON OF ENTRANCE REQUIREMENTS FOR
 THE RAND GRADUATE SCHOOL OF POLICY STUDIES 1985-1989

CHARACTERISTICS	1985	1989
Units Required	- 17 courses and a dissertation	- 20 courses and a dissertation
Instructional Method	- analytical and academic classroom, workshops, electives, tutorials, and on-the-job-experience	- analytical and academic classroom workshops, electives, tutorials and on-the-job-experience
Cost per Annum	- \$8500 (fellowships and loans available)	- \$10,500 (most programs carry a \$15,000-35,000 stipend)
Total Program Cost	- \$25,500 for full three years (no additional fees listed)	- \$31,500 for 3 year program (incidental health fees, etc. not included)
Accreditation	- Western Association of Schools and Colleges	- Western Association of Schools and Colleges, and the Commission for Senior Colleges

SOURCES: The Rand Graduate School of Policy Studies, 1985. The Rand Graduate School of Policy Studies, 1989.

Potentially Rand can anticipate a number of dynamic changes in its courses precipitated by the recent shift in political and military philosophy towards Eastern Europe. The courses which dealt with socio-economic elements in this area of the world will probably show some growth as monetary support is provided to assist certain nations in the rebuilding of their economy. Those which have emphasized manpower and strategic studies could be in difficulty and candidates for revision.

As the economic, military and strategic interests our government shift to other geographic areas, the emphasis on Eastern Europe will be redirected to other emerging areas of the world to include Central and South America, China and Southwest Asia. The change and redirection which must occur in the Rand program should prove to be an interesting area of future study. Corporate colleges have prided themselves on the ability to be responsive to change and flexible in determining emerging trends. Historical events will

probably challenge Rand to once again identify and serve the needs of its clientele.

Case Study 2

The American College, located in Bryn Mawr, Pennsylvania, is one of the two oldest corporate colleges (along with General Motors Institute founded in 1919) and represents one of the best examples of an "open university." Founded in 1927, this school is also representative of a number of institutions which did not begin as degree-granting but which in time evolved to this status. The American College was founded with strong support from the National Association for Life Underwriters as a result of national scandals relating to ethics in the insurance business. Problems within the industry had been severe enough to lead to legislation for control. Corporate leaders, however, felt that education could also serve

as a means of teaching its representatives about ethical standards in areas of customer sales, and practices (Eurich, 1985).

During the early stages of trying to develop an educational solution to improving quality within the industry, numerous efforts were made to obtain cooperation from local universities but academicians were either not interested in the undertaking or felt that it was a form of professional education. As a consequence of this indifference, the industry decided to make its own provisions and what was to become The American College was born (Eurich, 1985; The American College, 1989).

The school first began in the attic of a walk-up building. When it outgrew this facility, it moved to a lovely old house near the University of Pennsylvania. As the program continued to expand and became more diversified, it relocated a second time to its present site, a 45-acre campus in picturesque Bryn Mawr which is only a short drive from Philadelphia. Today, the campus

of The American College looks much like that of any traditional institution (The American College, 1989).

The institution has continued to acquire additional acreage to expand the facilities. There are several two or three storied buildings which were designed by some of Philadelphia's better-known architects. The grounds have been expertly landscaped enhancing the impressive setting. Central to this complex is the Gregg Conference Center which serves, not only as home to the students during the residency phase of the program, but also includes an academic wing with classrooms for both large and small groups, a dining/commons area with a cafeteria, a dining room and an informal recreational area (The American College, 1989).

For approximately the first half century of its existence, the institution was known as the American College of Life Underwriters. In 1976, it legally shortened its name to The American College and was reincorporated by the Commonwealth of Pennsylvania as a degree granting institution, fully authorized to bestow

the Master of Science Degree in Financial Services. As time passed, The American College continuously broadened its curricular programs. This growth was a contributing reason for the change in institutional names. In 1987, it was given authority to grant the Master of Science of Management, the degree which we will study and analyze in this research. (Eurich, 1985; The American College, 1989).

In addition to graduate degrees in management and financial services, the college also grants a diploma and designation for financial consultants. Over the years, the curriculum has characteristically reflected changes in the world economic climate. With the tremendous growth in the types of financial services, the student body has also evolved and now represents a broad range of participants other than those from insurance companies. In this respect, the college is serving a need which has not been met in more traditional institutions. The demand for several of the programs offered by American is attested to by the more

than 50,000 participants in the program and the over 2,500 diplomas granted annually (Eurich, 1985).

The American College has long recognized the need for professional management education. Beginning in 1930, courses leading to certificates, and later diplomas, were provided in agency and company management. These courses were supplanted by a Management Learning Series and eventually by management education. The present curriculum is flexible, performance-oriented and offers several scheduling options. Frequently, students begin with a few courses without formally entering the degree program. Later, as their professional commitments allow, they can apply for full admission. The student is allowed to transfer up to nine credits from other accredited institutions, however, these credits can only apply to "distance" courses. Credits can also be considered for transfer if they are approved by the American Council of Education (ACE) and the New York State Board of Regents (The American College, 1989).

According to the college catalog (1989), The American College "specializes in education offered on a distance basis to students located throughout the nation who study in local classes or independently and take course examinations locally." The Masters of Science in Management (as well as other programs) combines the innovative methodology of "distance" learning with periods of residency study on the Bryn Mawr campus.

Through the "distance" learning system, part-time study and degree programs can be completed exclusively through evening and week-end study except in limited areas where the two week residency sessions are required. There are several hundred classrooms located across the country where students from a number of companies meet in formal classes, with peers or independently. This approach has been a factor in the designation of The American College as an "open university" (The American College, 1985; The American College, 1989).

The course materials, including study guides, cassette programs, text, and audiovisuals, are prepared by staff and faculty on the central campus. All distance courses are concluded with two-hour computerized, objective examinations administered in a network of test centers located in 60 major cities across the country. The computerized exams are patterned after the college's Examinations on Demand (EOD), also utilized in other degree programs at The American College. Residency courses, however, conclude with paper and pencil examinations which are administered during the on-campus or residency sessions. The faculty is a combination of resident and full-time. Most of them have either a Ph.D or Doctor of Jurisprudence degrees (The American College, 1989).

In the past, admission requirements were highly flexible giving significant consideration to professional qualifications and recommendations. According to the American Council on Education, The American College accepted 98 percent of its applicants

in 1983, a significant number of which were non-degreed. More recently, however, the school has been seeking students with degrees and the level of the educational background has been increasing. Although the admissions criteria remains flexible, (TABLE 17) most of the applicants are now college graduates (The American College, 1989).

The Master of Science in Management available at The American College is a 40 credit program, 24 of which are offered through "distance," or off-campus study. The residency component of the program is 14 credits with an additional two acquired (total of 16) through an independent research project. The highlights of the residency program are the two, one week sessions held on the main campus (The American College, 1989).

During each of the two residency sessions, the student takes 3 courses for 8 credits (see TABLE 18). The first one week residency is scheduled shortly after the program begins. During this phase, the student takes courses which emphasize planning and applications.

TABLE 17
 ADMISSION/PROGRAM CRITERIA
 FOR THE MASTER OF SCIENCE IN MANAGEMENT
 THE AMERICAN COLLEGE - 1989

CHARACTERISTICS	
Application/ Admission Requirements	<ul style="list-style-type: none"> - candidates with undergraduate degrees from accredited colleges and universities upon review of transcripts - candidates without undergraduate degrees with two options: <ul style="list-style-type: none"> * complete a 4 course certificate program * submit 3 letters of recommendation from the employer, a supervisor and/or associate - candidates must submit transcripts from colleges attended whether or not graduation was completed
Length of Term	<ul style="list-style-type: none"> - two, one week residency sessions - 'distance' courses of varying length
Terms per Year	<ul style="list-style-type: none"> - 3
Length of Program	<ul style="list-style-type: none"> - Up to 7 years
Units Required	<ul style="list-style-type: none"> - 14 course of 4 credits
Instructional	<ul style="list-style-type: none"> - classroom sessions, computerized testing peer sessions, independent

SOURCES: The American College, 1989

TABLE 17 (cont'd)
 ADMISSION/PROGRAM CRITERIA
 FOR THE MASTER OF SCIENCE IN MANAGEMENT
 THE AMERICAN COLLEGE - 1989

----- CHARACTERISTICS -----	
Cost per Course	- \$435 for 3-credit course (\$145 per credit hour)
Program Cost per Course/Session	- \$250 Admission/Application Fee \$435 X 8 distance courses \$1200 each residency session (X2) \$75 Graduation fee
Governing Body	- Board of Governors
Distinctive Programs	- Distance learning, 2 week residency sessions
Accreditation	- Middle States Association of Colleges and schools
Student Aid	- Grants, scholarships, tuition assistance
----- SOURCES: The American College, 1989 -----	

TABLE 18
CURRICULUM FOR THE MASTER OF SCIENCE IN MANAGEMENT
THE AMERICAN COLLEGE -1989

CHARACTERISTICS	COURSES
Residency Courses (8 Credits)	First Residency Introduction to Computer Applications Accounting Applications and Planning Managing the Financial Services Enterprise
(8 Credits)	Second Residency Ethics and Human Values Strategic Management and Planning Research Project Presentation
Distance Courses (15 Credits)	Professionals and Organizational Behavior Human Resource Management Marketing Management of Services Decision Making in Financial Services Professional Self Management

* SOURCES: The American College, 1989-90

TABLE 18 (cont'd)
CURRICULUM FOR THE MASTER OF SCIENCE IN MANAGEMENT
THE AMERICAN COLLEGE - 1989

CHARACTERISTICS

COURSES

Electives

Financial Institutions

Business Valuation

Advanced Pension and Retirement
Planning I

Advanced Estate Planning I

Advanced Estate Planning II

Personal Tax Planning

Executive Compensation

Advanced Pension and Retirement
Planning II

Advanced Pension and Retirement
Planning III

Business Tax Planning

* SOURCES: The American College, 1989-90

During this week long session, a student has the choice of completing three of four courses: accounting applications, financial services, and computer applications.

The elective or "distance" portion of the program at American includes a wide range of courses in pension planning, estate management, taxes, and financial institutions. The group of distance courses also stress such principles as organizational behavior, human resources and development, decision making and self-development. Electives are a minor segment of the program since only three credits are accepted from this component (Reference TABLE 18).

The second residency period is conducted as the last requirement in the program. This block of study emphasizes issues, related ethics and human values, all industry concerns which prompted the establishment of the school. Additional courses during the second residency, include strategic approaches to planning and management and the culminating experience: presentation

of the research project. The research project consists of the presentation of a two-credit independent writing/project selected in consultation with a faculty advisor (The Americann College, 1989)

A Comparative Analysis

The management program at East Carolina University was randomly selected as the institution and program to be compared with The American College. This school is a moderate sized, comprehensive institution located in Greenville, N.C. As one of the six constituents of the Greater University of North Carolina, it serves as a member in one of the larger university partnerships in the country. As a public institution, it first serves students from the state and then students from the greater population including numerous students from other states and several countries. East Carolina University States that its purpose is to "provide an environment and atmosphere conducive to the pursuit, discovery, and dissemination of knowledge and to serve the region, as well as the broader national and international community by developing its material and

human resources." Originally established as the Eastern Carolina Teachers College, it has evolved over the years and received authority from the state and accreditation agencies to award 19 graduate degrees at the Masters and Doctorate level (Goldstein and Sacchetti, 1987; The East Carolina University Bulletin, 1988-90 and The East Carolina Graduate Catalog, 1988-90).

The university has a constitutionally authorized Board of Governors responsible for the "general determination, control, supervision, management, and governance of the constituent institution." Each of the constituent institutions under the Greater University of North Carolina system has its own faculty and student body. As a member of this larger body, the primary source of financial support is from the state (East Carolina, 1989-90).

The school has a combined enrollment of 15,000 students, most of whom are resident. The Graduate School for Business, which includes the management

program, has 110 full-time students matriculated in the program and another 110 in the part-time program. There is a sizeable evening and weekend program to accommodate the working and part-time students. The campus is large and attractive, encompassing over 370 acres adjacent to downtown Greenville. The main campus is comprised of an attractive blend of new buildings scattered among older structures. The institution has experienced significant growth in the past two decades; growth which can be readily measured by the addition of several new dormitories and classrooms, several of which are less than ten years old (East Carolina University, 1989-90).

In recent years, the business department has also expanded to meet the demand for degrees in business administration. Admission criteria for the degree, both at undergraduate and graduate level are relatively high with an acceptance rate of 68 percent. The average age for a student in the program is 26 years which supports statistics that many students today represent an older

more experienced group (Goldstein and Sacchetti, 1987 ; US Census Bureau, 1987).

The graduate portion of the ECU program is a 36-50 semester hour course, and requires the successful completion of a wide range of business, accounting, marketing and management courses prior to admission in the graduate school. The cost of tuition is computed on in-state or out-of-state residency and on a part-time or full-time rate demonstrating the diversity of its student body (TABLE 19).

Admission to the graduate program in management at East Carolina requires a bachelors degree from an accredited institution, a 2.5 overall GPA with a 3.0 in the major area of study, satisfactory scores on the GRE (or equivalent test), letters of recommendation from professors, a personal interview, and in some cases, optional tests. These requirements appear to be more stringent than those required at The American College which will still accept some non-degreed students and participants who do not have a background in business

TABLE 19
**ADMISSION/PROGRAM CRITERIA EAST CAROLINA UNIVERSITY
 1989-90**

CHARACTERISTICS	
Application/ Admission Requirements	<ul style="list-style-type: none"> - bachelors degree from regionally accredited institution - transcript with a 2.5 overall average in the major area of study or work taken in the senior year - satisfactory scores on the GRE or - letters of recommendation from professors (number not specified) - personal interview
Length of Term	- semester system
Terms per Year	- semesters and summer sessions
Length of Program	- Up to 9 years for two-year programs
SOURCES: East Carolina University, 1989	

TABLE 19 (cont'd)
 ADMISSION/PROGRAM CRITERIA EAST CAROLINA UNIVERSITY
 1989-90

 CHARACTERISTICS

Units Required - 36 to 60 hours

Instructional - classroom lectures, case studies, computer laboratory

Cost per Course/
 Semester - \$187 N.C. day student (3-5 hours)
 \$310 N.C. partime (6-8 hours)
 \$489 N.C. fulltime (9 + hours)
 \$1,280 out-of-state (3-5 hours)
 \$1,950 out-of-state (6-8 hours)
 \$2,675 out-of-state (9 + hours)

Accreditation - Southern Association of Colleges and Schools
 and the American Assembly of Collegiate
 Schools of Business

 SOURCES: East Carolina University, 1989

or management (The East Carolina College Bulletin and Graduate Catalog, 1988-90 and The American College Catalog, 1990).

The course of study at East Carolina contains both a common body of courses for specialized areas and a breadth component (TABLE 20) which provides educational balance to the curriculum and the student. The elective component is flexible and the number of hour in this block are at the discretion of the Dean of the Graduate School for Business and Management who makes this determination based on the student's educational background and needs. The common body portion of the program includes 12 courses in accounting, statistics, computer management and financial services which are completed over a number of semesters (The East Carolina University Graduate Catalog, 1988-90).

In conclusion, The American College of 1989 is not the same institution studied in 1985. Curricular offerings at The American University have steadily

TABLE 20
MASTER OF BUSINESS ADMINISTRATION
EAST CAROLINA UNIVERSITY 1989-90

CHARACTERISTICS

Common Body Components

- Accounting for Decision Making
- Quantitative Methods
- Management Information Systems
- Analysis of the Business Environment
- English
- Financial Management
- Government Regulation of Business
- Management and Organization
- International Business
- Production Management
- Market Management

Breadth Component

- Analysis of the Business
- Strategic Management and Planning
- Environment
- Research Project Presentation
- Macroeconomic Analysis
- Statistical Methods
- Business Policies
- Business and Marketing Research

Electives

Determined by the Dean of Graduate Studies

 * SOURCES: East Carolina University, 1989-90

broadened over the years. The programs have become less professionally restrictive to outside participants and now include a wide spectrum of professionals. They have expanded the content of the courses and integrated some theoretical concepts. Where new programs have evolved at American, they have become more closely aligned with those we associate with four-year business schools. A review of courses at both institutions shows that "Introduction to Computer Applications" at The American College is not significantly different from "Management Information Systems" at East Carolina. The same similarity can be found in the content of courses at American in "Financial Institutions," "Managing the Financial Services Enterprise," and "Decision Making in Financial Services" with ECU's "Financial Management," "Market Management" and "Analysis of the Business Environment." The content in several other courses parallel each other as do the concepts and theories stressed although courses may carry somewhat different titles (East Carolina University, 1989; The American College, 1985; The American College, 1989).

It is obvious that there are a number of characteristics shared by The American College and East Carolina University (TABLES 21 AND 22). There is also a correlation between the type of electives offered by both institutions and the manner by which they are selected. The faculty at both institutions have strong academic and professional credentials.

There remains little doubt, however, that the program at East Carolina is more structured and comprehensive. It also provides more opportunities for the student to pursue some courses of special interest or courses which will enhance educational credentials. The diversity of degrees within the business and management department do not limit or channel the student into a particular career field but provides more diverse options. The program at East Carolina, because it offers more interaction and feedback from instructional staff, allows the student to become a part of the collegiate experience and to capitalize on the advice and guidance of recognized educational

TABLE 21
COMPARISONS OF ADMISSION/PROGRAM CRITERIA

CHARACTERISTICS	THE AMERICAN COLLEGE 1989	EAST CAROLINA UNIVERSITY 1989
Application/ Admission Requirements	<ul style="list-style-type: none"> - candidates with undergraduate degrees from accredited colleges and universities upon review of transcripts - candidates without undergraduate degrees with two options: <ul style="list-style-type: none"> * complete a 4 course certificate program * submit letters of recommendation (3): from the employer, a supervisor or associate - candidates must submit transcripts from colleges attended whether or not graduation was completed 	<ul style="list-style-type: none"> - bachelors degree from regionally accredited institution - transcript with a 2.5 overall average or a 3.0 in major or work taken in the senior year - satisfactory scores on the GRE or letters of recommendation from professors - (number not specified) - personal interview - optional tests may be required
Length of Term	<ul style="list-style-type: none"> - two, one week residency sessions - 'distance' courses of varying length 	<ul style="list-style-type: none"> - semesters system
Terms per Year	- 3	- 2 semesters and summer sessions
Length of Program	- Up to 7 years	- Up to 9 years for two-year programs
SOURCES:	The American College, 1989	East Carolina University, 1989

TABLE 21 (cont'd)
COMPARISON OF ADMISSION/PROGRAM CRITERIA

CHARACTERISTICS	THE AMERICAN COLLEGE 1989	EAST CAROLINA UNIVERSITY 1989
Units Required	- 14 courses/4 credits	- 36 to 60 hours
Instructional	- classroom sessions, computerized testing peer sessions, independent	- classroom lectures, case studies computer laboratory
Cost per Course	- \$435 for 3-credit course (\$145 per credit hour)	-
Total Program	- \$250 Admission/Application Fee \$435 X 8 distance courses \$1200 each residency session (X2) \$75 Graduation fee	- \$187 N.C. day student (3-5 hours) \$310 N.C. partime (6-8 hours) \$489 N.C. fulltime (9 + hours) \$1,280 out-of-state (3-5 hours) \$1,950 out-of-state (6-8 hours) \$2,675 out-of-state (9 + hours)
Accreditation	- Middle States Association of Colleges and Schools	- Southern Association of Colleges and Schools and the American Assembly of Collegiate Schools of Business

SOURCES: The American College, 1989 East Carolina University, 1989

TABLE 22
CURRICULAR COMPARISONS BETWEEN THE AMERICAN COLLEGE AND EAST CAROLINA UNIVERSITY (1989)

CHARACTERISTICS	MASTER OF SCIENCE IN MANAGEMENT AMERICAN COLLEGE 1989-90	MASTER OF BUSINESS ADMINISTRATION EAST CAROLINA UNIVERSITY 1989-90
Residency Courses (8 Credits)	<p>First Residency</p> <ul style="list-style-type: none"> Introduction to Computer Applications Accounting Applications and Planning Managing the Financial Services Enterprise Business Tax Planning 	<p>Common Body Components</p> <ul style="list-style-type: none"> Accounting for Decision Making Quantitative Methods Management Information Systems Analysis of the Business Environment English Financial Management Government Regulation of Business Management and Organization International Business Production Management Market Management
(8 Credits)	<p>Second Residency</p> <ul style="list-style-type: none"> Ethics and Human Values Strategic Management and Planning Research Project Presentation 	<ul style="list-style-type: none"> Breadth Component Analysis of the Business Environment Macroeconomic Analysis Statistical Methods Business Policies Business and Marketing Research
Distance Courses (15 Credits)	<p>Professionals and Organizational Behavior</p> <ul style="list-style-type: none"> Human Resource Management Marketing Management of Services Decision Making in Financial Services Professional Self Management 	
* SOURCES:		East Carolina University, 1989-90
		The American College, 1989-90

TABLE 22 (cont'd)
CURRICULAR COMPARISONS BETWEEN THE AMERICAN COLLEGE AND EAST CAROLINA UNIVERSITY

CHARACTERISTICS Electives Financial Institutions Business Valuation Advanced Pension and Retirement Planning I Advanced Estate Planning I Advanced Estate Planning II Personal Tax Planning Executive Compensation Advanced Pension and Retirement Planning II Advanced Pension and Retirement Planning III Business Tax Planning	MASTER OF SCIENCE IN MANAGEMENT AMERICAN COLLEGE 1989-90 MASTER OF BUSINESS ADMINISTRATION EAST CAROLINA UNIVERSITY 1989-90 * Determined by the Dean of Graduate Studies
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* SOURCES: The American College, 1989-90 East Carolina University, 1989-90

professionals. The depth and latitude provided by the availability of additional courses at East Carolina and the increased period of instruction of the semester length courses represent still another advantage inherent to the traditional institution.

There have been other changes which impact on the students, faculty, facilities and services. The admission criteria has increased with more college graduates applying. The educational credentials of the faculty have also strengthened. Student career and counseling services are frequently assessed for effectiveness and library facilities maintain current materials for student use. Other institutional changes have occurred but are more subtle and less substantive. They reflect the economic climate and demographic groups to be served (Goldstein and Sacchetti, 1987; Hegner, Rowan and Goldstein; The American College, 1985; The American College, 1989).

Case Study 3

Wang Laboratories is a research and development-based manufacturer of computers and word processing equipment. The Wang Institute of Graduate Studies was founded 1979 as a personal initiative of An Wang, CEO and founder of Wang Laboratories with a \$3 million gift (Magarell, 1981; Baker, 1983). From the time the corporation decided to enter the education and degree-granting business, the Wang Institute was considered an outstanding institution for education in software development (Eurich, 1985).

Established as a result of industry concern, this institution was often credited for the quality and integrity of its highly technical program. At the time of its founding the software industry was in disarray. The mission for the institution was to assist the struggling software industry by providing more highly skilled software engineers and specialists (Magarell, 1981 and Eurich, 1985).

The educational facilities of Wang Institute of Graduate Studies were located in Tyngsboro, Massachusetts on a 200-acre site in the rural Massachusetts countryside. Housed in a large, substantial granite building which dominated its setting along the Merrimac River, the institute provided a motivational environment for study and research (Eurich, 1985).

Unlike other institutions in the corporate sector, it operated as one of the few totally independent, nonprofit corporate colleges. Despite the strong commitment of Wang Laboratories to the unique program of software engineering, they did not limit the services of its institution to corporate employees. This was consistent with the mission of the institution and, as a result, the programs were designed with flexibility to allow the admission of other students (Baker, 1983).

When Rand Graduate Institute was founded only a few institutions offered a degree comparable to the one at Wang. Although the Wang program was often cited as

the first to offer a Master's Degree in Computer Software, there was always some controversy about both the precedence and numbers of institutions with this particular degree. According to Maeroff (1981), Wang created its program "partly because the company could only identify two other programs which were somewhat similar." On the other hand, Brickell and Aslanian (1981), asserted that the Wang program was "one of only four offered in the nation." Despite these references to other programs, the 18th edition of the COLLEGE BLUE BOOK, the issue most directly related to this timeframe, only one other institution, Seattle University (Washington) offered a comparable degree. Characteristics of the Wang program are offered at TABLE 23.

As illustrated in this table, a bachelors degree was required for admission with specification that the undergraduate grade point average must be a 3.0 or B. Each student who applied was required to take the Graduate Record Examination (GRE) as a prerequisite. Two

TABLE 23
 WANG INSTITUTE OF GRADUATE STUDIES
 MASTER OF SOFTWARE ENGINEERING

CHARACTERISTICS	REQUIREMENTS
Entrance Requirements	<ul style="list-style-type: none"> - bachelors degree from an accredited institution - 3.0 GPA - 2 years professional experience in software related field - GRE aptitude test - expertise in computer science and math with knowledge of PASCAL, ALGOL, or PL/1, applied applied - written and oral communication skills - formal interview
Accreditation	<ul style="list-style-type: none"> - New England Association of Schools and Colleges
Length of Program	<ul style="list-style-type: none"> - 1 year full-time - 2/3 years part-time
SOURCES: Wang Institute of Graduate Studies 1985; Baker, 1983.	
* NOTE: Students at Wang were placed on academic probation if their semester average was below 85. They were then allowed one semester to raise the average to 85 (2 semesters for part-time students)	

TABLE 23 (cont'd)
 WANG INSTITUTE OF GRADUATE STUDIES
 MASTER OF SOFTWARE ENGINEERING

CHARACTERISTICS	REQUIREMENTS
Time Limit	- must complete within 4 years
Length of Term	- 15 weeks
Units Required	- 33 semester units
Distinctive Programs	- Masters Degree in Software Engineering
Instructional Methods	- lecture, laboratory
Cost of Tuition	- \$235 per credit hour (#30 per semester registration fee)
Total Program Cost	- \$7,845 for 1 year program \$7,935 for 2/3 year program

SOURCES: Wang Institute of Graduate Studies 1985; Baker, 1983.
 * NOTE: Students at Wang were placed on academic probation if their semester average was below 85. They were then allowed one semester to raise the average to 85 (2 semesters for part-time students)

years experience in a software engineering-related area had to be demonstrated as well as expertise in mathematics and computer sciences including documented ability in "blocked-structured high-level languages such as PASCAL, PL/I, AND ALGOL."

The program at Wang was designed to be completed in one year of full-time study (12 months) or over 2-3 years on a part-time basis (24-36 months). Terms were comprised of 15 week semesters with 33 semester units necessary for graduation. Instruction is delivered by lecture or laboratory experiences implemented in small classes to allow for the personalization of course materials. As stated by the course catalog, "each student has an individual study area equipped with a video display terminal" (Wang Institute of Graduate Studies, 1985).

Tuition charges were computed at cost per credit hour of instruction. Course costs at Wang were \$235 per semester hour with an additional \$30 registration fee. This brought the total cost for a one year full-time

program to \$7,845 (Reference TABLE 22). Total cost for the part-time program was slightly higher at \$7,935 (Wang Institute of Graduate Studies, 1985).

Scholastic standards at Wang Institute of Graduate Studies were high. While enrolled in the Wang program, the student was required to maintain a grade point average of 85 or the equivalent of a B in most traditional programs and consistent with admission requirements. The student was allowed to transfer up to three courses into the Wang program with the restriction that the courses had been taken within the past three years. A time limit of four years was imposed for the completion of the program. Any credits transferred into the program must be within the stipulated four year timeframe. The Wang program was divided into three required components: a core of six courses, elective or optional courses, and a two-semester team project designed to provide experience in all aspects of software engineering. The Wang Program was characterized as containing a strong managerial orientation as in seen in the curriculum (TABLE 24).

TABLE 24
 WANG GRADUATE SCHOOL
 GRADUATION REQUIREMENTS-1985

CHARACTERISTICS	GRADUATION REQUIREMENTS
Core (18 Semester Units)	Management Concepts (3 units) Programming Methods (3 units) Computing Systems Archiving (3 units) Applications of Formal Methods (3 units) Project Management (3 units) Software Engineering (3 units)
Electives/Options (9 Semester Units)	May be technical or managerial but 6 of the 9 units must be in the same concentration of study.
Team Project (6 Semester Units)	A two semester team project in all phases of software development.

Baker, 1983; Wang Graduate School 1985.

In addition to the required core of six courses, students were required to complete three courses or nine semester units in elective subjects. These electives could be either a managerial or technical subject as long as six of the units are from the same concentration. The final requirement for the Master's Degree was the completion of a two semester team project. For this project, the student participated as a team member to plan, design, specify, implement, test, document and modify a software system. This allows the student to put into application what had been learned during the more formal coursework (Baker, 1983).

In summary, the Master's Degree in Software Engineering from Wang Graduate Institute provided a challenging program of study in a narrow specialized field. It emphasized the use of software engineering in a management environment. Although it did not necessarily share many common characteristics with the more traditional programs, it did parallel collegiate programs closely enough to become integrated into the computer program at Boston University in 1986-87.

Although the Wang Institute has ceased to be an independent corporate college, it represented the best example of a technically-oriented institution when the Carnegie Study was published in 1985. The ease with which this transition occurred demonstrated the parallels which could be established between the traditional and non-traditional institution.

CHAPTER 6

CONCLUSIONS

The purpose of this study was to determine the characteristics of corporate colleges in 1989 and to compare them with the attributes associated with these institutions in 1985. This information was to facilitate a study of the two groups of schools in order to ascertain if the corporate colleges had become more like traditional institutions. Although limited to these aspects of study, the scope and rationale for development and growth of these institutions ultimately became a part of the research. The findings of this study document the characteristics of these institutions, the degree of change within them, and the gradual evolutionary trend to shape their structure to more closely resemble that associated with institutions of higher education. The findings of this research indicate that, although this transition has occurred more definitively in some institutions than others, and may be taking place in others, it is gradual process.

A number of the institutions included in this study, however, have not significantly changed since 1985 and plan to retain their present structure and educational programs. Despite the projections for significant growth in the number of these institutions (Eurich, 1985; Boyer, 1987), there has been only limited incidence of new degree programs within the 18 identified in 1985 and no indication that significant numbers of new institutions have sprung up. While it is evident that this sector is expected to demonstrate some continued growth in both credit and non-credit courses, the results did not reveal wide-scale development of new corporate degree programs to date. Research did indicate that this unregulated sector of educational services should be an area of concern to those in higher education (Lynton and Elman, 1987).

Corporate Colleges in 1989

The corporate colleges of 1989 are different from the institutions of 1985. In some cases, these changes

are substantive; in others, they have remained much the same, concentrating on what they feel they do best to meet the needs of their clientele. A summary of the characteristics of corporate colleges include the following:

1. In 1985, corporate colleges were either independent institutions or integral to the sponsoring organization. One of the most significant changes in corporate colleges in 1989 has been the tendency of these institutions to move towards greater independence. This has been a two step process which involved institutional efforts to become more independent and separate itself from the fostering organization and to open its doors to a broader population which is not tied to a particular profession or industry. The American Institute of Banking is most representative of this as it now accepts students from various organizations and has made a move for independent status by trying to separate itself from its corporate sponsor, the American Banking Association (Marks, 1989).

2. In 1989, most of the corporate colleges are still nonprofit institutions but now receive some financial support or assistance from outside sources. Rand is perhaps the best example of this policy since it receives financial support from the parent organization, the state of California, and several federal agencies (Rand, 1989). The corporate colleges also receive additional income from students who are granted tuition aid from organizations other than the sponsoring company. In the intervening period from 1985 to 1989, a number of the institutions expanded the concept of "open admissions" and once all qualified students have been admitted from their sponsors, the enrollment is opened to other academically qualified candidates (American Institute of Banking, 1989; The American College, 1990).

One of the institutions, DeVry, has become a for-profit institution since 1985. Bell and Howell acquired DeVry under the leadership of CEO, Donald N. Frey, an advocate of quality education. Although owned by the corporation and given credit for much of the growth and

improvement of the company, many of the institution's programs were available to other students. After resisting a takeover by the National Education Corporation, which already owned 47 technical schools, DeVry was purchased from Bell and Howell by the Keller Management Group in August 1987 which now operates the institutions. Since the mission and student constituency are different, the Keller Graduate School and DeVry Institute are individually accredited by the Commission on Institutions of Higher Education and the North Central Association of Colleges and Schools. The profit factor, however, places DeVry in a different category (DeVry, 1990; North Central Association of Colleges and Schools, 1990).

Because these institutions receive support from a corporate sponsor, the programs must justify themselves in terms of quality and cost effectiveness. In order to maintain student quotas or population, a number of institutions have expanded into non-credit courses since this market has, at times, proven to be more sustaining.

These activities support Eurich's (1985) philosophy, that a profit can be made from training and education.

3. The educational programs have continued to demonstrate growth. They are comprehensive and reasonably intense ranging in length from several days to several weeks. Night study is an integral part of the program and students quickly learn that extracurricular activities are not a component of the program (Wilcox, 1987). Most of the degree programs are part-time but others, like Rand, demand a full commitment from the student (Rand, 1990). In these institutions, degrees are available from the Associate to the Ph.D.. The degree area which has experienced the most significant growth has been at the Master's level. The American College has added a Master's Program in Management and the National Technological University (NTU) has expanded the number of degrees available for engineering and computer students. Its list of subscribers has increased to include 25 universities and colleges of engineering across the country. NTU and

Rand are unique among corporate colleges for their coordination of programs and joint efforts with traditional institutions. It is in this last dimension that much future growth should occur (American College, 1990, National Technological University, 1990).

4. The applicants continue to be older and more mature than those applying at traditional institutions as demonstrated by statistics published by the U.S. Census Bureau in 1987 and 1989 (Reference TABLE 12). In many cases, the pursuit of additional education is voluntary; in others it is mandated by the corporation. In either case, employers have become more actively involved in educational and training programs for employees because of the increasing short-life of technology, changes in organizational mission, product mix changes and the international spirit of competition for markets and products. Budgets dedicated to education and training have grown at impressive rates during this time frame with no indication that the trend

will reverse in the near future (Carnevale, 1986; Carnevale, 1989).

5. Faculty members or instructors are closely evaluated for their professional knowledge, experience and job performance credibility. In many cases the "subject matter expert," "technician," or experienced field employee with a "proven track record" still serves as the primary instructor for the programs. This is particularly true in some of the management programs and technical areas of study. Since students are provided with numerous benefits and pay-offs are high for participating in the programs, efforts are made to maintain quality professional instruction (Wilcox, 1989).

Rand and The American College are excellent examples of another philosophy. These institutions point with pride to the educational credentials and experience of their instructional staff. Most of the staff at Rand and American hold doctorals degrees. The American College, has conscientiously and consistently

increased the educational level of their staff (Rand, 1985; Rand,1989-90; The American College, 1985; The American College, 1989-90).

6. Although lecture, discussion, and seminars are still the primary instructional delivery systems, educational and training technology has grown significantly in the few years. More of the institutions have added or expanded computer laboratories and electronic delivery systems in order to and diversify the educational programs or to reach a broader audience (Eurich, 1986; American College, 1989). As a consequence, the educational process is steadily conveyed out of the conventional classroom via modern technology. This year, Geber (1990) has projected that in the decade of the 90s only 25 percent of instructional activity will occur in a conventional classroom (Bowsher,1990). This projection means, that while the corporate educational process has been highly innovative, more international, and more tele-communicative in the 1980s, that greater change will

come in the next decade (The American College, 1989; National Technological University, 1989; Geber, 1990).

7. The courses in corporate degree programs now include more theory and emphasis on human resource development, problem solving, decision-making, and creative thinking activities. This could possibly be interpreted as a corporate reaction because of their attitude that traditional colleges and universities do not offer their graduates sufficient courses which can develop valuable management skills. Members of both the corporate and education community feel that education system is in trouble and still stresses process over content (Cheney, 1987; Spille, 1989).

This development of programs which emphasize creative strategies and applications for management has occurred coincidentally with a movement from the concentration on pure job-specific programs. This is not to imply that the job-specific emphasis has disappeared because it has not. It is still prevalent, particularly in institutions like McDonald's Management

Institute, Massachusetts General Hospital, General Motors Institute and the Boston Architectural Center and School (McDonald's Management Institute, 1989; Massachusetts General Hospital, 1989; General Motors Institute, 1989; Boston Architectural Center and School, 1989).

What this does mean is that, in becoming more like traditional programs, corporate education now offers some courses which have become more theory-based. Where theory has been integrated into the degree programs, it is done with the same objectives that are found in traditional settings. Much of this has occurred more coincidentally with techniques which develop problem-solving, decision-making and creative management strategies which the students can apply to various types of problems in the workplace (The American Institute of Banking, Marks, 1989, The American College, 1989-90; The College of Insurance, 1989-90).

8. Not only have the courses taken on more of the appearance of those in traditional institutions but

corporate colleges have also become more sophisticated in developing and emphasizing the physical facilities and environment of their institutions than they have in the past. Several institutions boast of their "campus-like settings" and advertise the presence of many of the same types of facilities found on campuses of traditional post-secondary institutions. This includes the maintenance of extensive libraries and research centers, dormitories, computer labs and student recreational areas provided by institutions like The American Graduate School of International Management (Thunderbird Institute), The American College, Wang, and the The Rand Graduate School. (The American Graduate School of International Management 1989 (Thunderbird Institute); The American College, 1989; Wang, 1986; Rand Graduate School, 1989).

For example, The Rand Graduate School is located on a 13 acre site in Santa Monica, California. It advertises that it interacts with other state educational institutions like UCLA and the University

of Southern California. This provides an abundance of opportunities to provide extended campus and collegiate experiences (The Rand Graduate School of Policy Studies, 1990).

The Institute of Textile Technology is housed in a number of beautiful old buildings in Charlottesville, Virginia. Separate classroom facilities are available where specialized classes are conducted "on all phases of the textile industry" and students are "trained to solve complex industry problems" (Institute of Textile Technology, 1989)

The American Graduate School of International Management (Thunderbird) has a 160 acre campus. Approximately 60 acres of the campus are occupied by classroom buildings and dormitories, some of which have units for married students. The 11 dormitories are arranged to form 3 quadrangles, an arrangement traditional with many older institutions of higher learning. The institution also has an extensive library, which contains over 101,000 volumes, and two

research centers (American Graduate School of International Management, 1990).

9. Since 1985, a number of the corporate colleges have ceased to be "closed institutions" moving to a policy of open admissions. This move probably represents the second most significant change which has occurred in the period from 1985 to 1986 (Fenwick, 1989). Although preference is still given to employees of the parent organization, the institutions will accept students from other related organizations or from the general public. According to Peterson's 1987 Graduate and Professional Programs (Goldstein and Sacchetti, 1987), The American College currently accepts 98 percent of its applicants, which includes significant numbers of applicants from fields other than the insurance industry. The McDonald's Management Institute is still the best example of a closed institution (McDonald's 1989). The Rand Graduate School is also restrictive, however, this can be attributed to the selectivity and specialization of the program.

Unqualified candidates are naturally prohibited from applying to this institution (Rand Graduate School, 1990).

10. It is apparent that corporate colleges are sponsored by large industrial and business corporations or consortiums which have the resources to development and implement educational institutions for the advancement of their personnel. On the other hand, small employers, (fewer than 500 employees) account for approximately 50 percent of all jobs in the United States and 40 percent of the new jobs now being created. As the creator of these new jobs, development of employee knowledge and skill is important to them, however, they operate in relatively limited markets, personnel usually have broad areas of responsibility, and staff can not relieved of responsibilities for formalized instructional purposes. Because they are small, they cannot afford employee time away from the job to attend classes. Programs for employees of small companies tend to be less formal and of short duration.

In some instances, arrangements are made with corporate colleges or local institutions of higher education and technical schools (Hamilton and Medoff, 1988).

The institutions which Eurich and Hawthorne et. al. identified as corporate colleges span a broad spectrum of missions, objectives, programs, and populations. As illustrated in Chapter 2 (TABLES 1 and 2), their numbers fluctuated from 14 in 1983 to 18 in 1985. Since then, the numbers have continued to vacillate and no additional lists have been published since 1985 recognizing changes to this list. The publication of this updated status might be timely in terms of the scrutiny imposed on all sectors of the educational enterprise. For example, Wang Institute was absorbed by Boston University in 1986 and can no longer be included. In 1985, the Carnegie Study identified The Institute of Management Competency as a corporate college with plans to apply to the Middle States Association of Colleges and Schools for accreditation. The Middle States Association received no request for evaluation,

so it is highly questionable that they would be included on a current list (The Middle States Association, 1990).

In 1987, DeVry became part of a for-profit organization, the Keller Management Group. In the future, accreditation for the institutions, comprised of both DeVry and the Keller Schools for Management, may revert to professional agencies. Since most regional accreditation agencies do not evaluate for-profit institutions.

When asked in an interview if the National Technological Institute was a corporate college, Baldwin, president of the institution responded: "No, not really. The money overwhelmingly, to start the program came, from industry. And the governing board of the school (comprises) people who work in industry. So the ties and roots are industrial." But he feels that NTU is no more a corporate college than any of the 25 educational institutions that participate in the network. Based on the assessment of the institutional leader, serious questions could be raised about the legitimacy of NTU remaining on the list (Wilcox, 1987).

In 1985, these institutions represented a broad and diverse group of missions, objectives, philosophies, products and students and had few common characteristics (Hawthorne, Libby and Nash, 1983; Eurich 1985). This was still basically true in 1989 because for every set of attributes developed as descriptors for these institutions a probable exception could be identified. The characteristics that have been identified in this study represent as nearly as possible the few similar characteristics shared by these institutions.

Accreditation for these institutions is a complex process and raises some questions about the latitude, scope and standards of quality. The degrees offered by these institutions are as diverse as the institutions themselves ranging from the Associate Degree in Fashion Merchandising offered by Watterson College to the Ph.D. in Policy Analysis offered by Rand Corporation. The accreditation agency which grants approval to Watterson College and its various programs, also confirms the quality of the courses at the Institute for Textile

Technology and most of the state and private colleges in the southeast, The Southern Association of Colleges and Schools (Southern Association, 1989-90).

New Directions in Corporate Education

Previous research had predicted significant growth in this sector (Eurich, 1985; Solozano, 1986). This has not occurred to the degree expected. The vast majority of the institutions included in this research were not planning to broadly expand their college-level, degree-granting programs. Also, with the number and diversity of degrees which they presently offered, they did not anticipate significant growth. To the contrary, Wang is no longer a separate corporate entity, the Institute for Management Competency, has not applied for accreditation, DeVry has become an independent, for-profit institution, and NTU may not fit the profile for a corporate institution. A list published today could well well reflect that probably no more than 14 (TABLE 25) of these institutions are corporate colleges.

TABLE 25
CORPORATE COLLEGES (1989)

NAME OF INSTITUTION	ORIGINAL SPONSOR	LOCATION	YEAR DEGREE GRANTING	NONGOVERNMENTAL ACCREDITATION	DEGREES AWARDED
*American College	National Assoc. of Life Underwriters	Pennsylvania	1976	Middle States Association of Colleges/Schools	M.S.F.S. M.S.M.
*American Graduate School of International and Management	Banks Individuals, and US Government	Arizona	1940	North Central Association of Colleges/Schools	Masters
American Institute of Banking	Boston Chapter, Inc. of AIB	Massachusetts	1979	Candidate for Accreditation from New England	Associate
Arthur D. Little Management Educ. Inst.	Arthur D. Little	Massachusetts	1973	New England	Masters
Boston Architectural Center	Boston Architectural Club	Massachusetts	1979	National Architectural Accrediting Board	Bachelors
College of Insurance	Insurance Society	New York	1962	Middle Atlantic States	Associate Bachelors
General Motors Institute	General Motors Corporation	Michigan	1945	North Central NATTS and ABET	Bachelors Masters

* SOURCES: National Accreditation Boards; Kaye, Henne and Bohlander, Peterson's Higher Education Directory, 1989; Hegener, Rowan and Goldstein, Peterson's Guides Who Offers Part-Time Degrees; Goldstein and Sacchetti, Graduate and Professional Programs: An Overview, 1987.

** Devry Institute purchased by the Keller Group, a privately held, for profit entity, in 1987.

TABLE 25
CORPORATE COLLEGES (1989) cont'd

NAME OF INSTITUTION	ORIGINAL SPONSOR	LOCATION	YEAR DEGREE GRANTING	NONGOVERNMENTAL ACCREDITATION	DEGREES AWARDED
*Industrial Management Institute	Midwest Industrial Management Institute	Illinois	1982	Application to North Central and New England	Associate Applied for Masters
Institute of Textile Technology	Various U.S. textile mills	Virginia	1944	None	Ph.D. Masters
*MGH Institute of Health Professions	Massachusetts General Hospital Corporation	Massachusetts	1977	Application to New England	Masters
McDonald's Hamburger University	McDonald's Corp.	Illinois	Applied 1981	None	Applying for Assoc-
Northrop University	John Northrop Industries	California	1959	Western States and State Bar of California	late Bachelors Masters, Law
Rand Institute	Rand Corporation	California	1970	Western States	Ph.D.
Watterson College	MetriData Corp.	Kentucky	1971	Southern Assoc., AICS, New England	Associate

* SOURCES: National Accreditation Boards; Kaye, Henne and Bohlander, Peterson's Higher Education Directory, 1989; Hegener, Rowan and Goldstein, Peterson's Guides Who Offers Part-Time Degrees; Goldstein and Sacchetti, Graduate and Professional Programs: An Overview, 1987.

** National Technological University is funded by a diverse groups of sponsors which include private state and federal groups.

*** Wang Institute of Graduate Studies - Merged with Boston University in 1986.

(Wilcox, 1987; DeVry Institute, 1989; Middle States Association for Colleges and Schools, 1989). This does not mean that other institutions have not developed to take the place of those no longer included, because in all probability they have, however, this issue has not been addressed since it was not an objective of the research for this study.

While frequently cited in the literature as companies (McQuigg, 1980; Brazziel, 1982) offering corporate degree programs, International Business Machines, American Telephone and Telegraph, General Electric, R.J. Reynolds have chosen not to join the ranks of degree granting corporate institutions. These organizations have elected to support tuition-assistance programs for personnel through local accredited institutions or in an institution of their choice. This is particularly noteworthy as several of these industrial giants have elaborate and finely equipped training centers and highly trained personnel who could easily be utilized to provide organizationally

sponsored degrees. The training centers operated by both Xerox and IBM provide a broad range of skill and knowledge building programs. The facility which Xerox maintains at Leesburg, Virginia has all of the qualities of a college campus including dormitory areas, a library, cafeteria and dining facilities, computer laboratories and staff which could be dedicated to full-time education and training functions. They conduct seminars and courses for numerous and diverse groups which include agencies from both federal and state governments but do not have plans to become degree granting (Enmon, 1989).

The corporate degree-granting programs found to be in existence were primarily offered in the fields of management, computer science and engineering. Since these are the areas of greatest concern to industry and business, these findings were not surprising. The amount of non-technical coursework identified in these programs was of interest and reflected corporate concerns with the competitive environment in today's

economy. Many of the programs required courses in the general sciences, behavioral sciences and mathematics. Significantly, there was a pervasive trend to require study in interpersonal relationships, problem-solving, decision-making, and organizational development. These courses represent a response to the organizational complexity within the corporate sector (Rand, 1989; The Thunderbird Institute, 1989; American Institute of Banking, 1989)

Since many of these courses have begun to contain more and more theoretical concepts, the inclusion of them in the requirements for matriculation represents a further shift towards a traditional curriculum (The American College, 1989-90; East Carolina University, 1989-90). It is of some interest, that during a period when corporations express such dissatisfaction and frustration with the collegiate education and offer educational alternatives, that a considerable portion of what they are designing parallels, if not mirrors collegiate programs. There is a logic in modeling the

successful, but by doing so they have forfeited what they feel is their major advantage, bridging the gap between work and education.

An analysis of the curricula in the corporate degree programs, identified that these programs are, in many respects, comparable to those found in traditional college and universities. The courses are often sanctioned by and received certification from the same regional or national agencies which confirm those for higher education. In many cases, the corporate colleges had similar entrance requirements, instructional methodology, course content, staff requirements, student services and facilities, and scholastic standards. The cost of tuition for the corporate programs was often comparable to that of private institutions or out-of-state fees charged by public institutions. When changes had occurred in these programs, it was to align them more closely to traditional programs, to serve a wider population and make them more attractive to a different constituency

(Marks, 1989; East Carolina University, 1989-90; The American College, 1989-90; National Technological University, 1989-90).

Financial and high tech firms are more likely to provide their personnel with educational and training opportunities than those in other types of industries. As separate industries, however, the insurance and financial community maintain the heaviest investment in education as evidenced by the number of corporate colleges supported by these groups. The insurance industry enthusiastically supports corporate education through the sponsorship of two corporate colleges: the College of Insurance and The American College; both of which list over 500 insurance firms among their sponsorship (The College of Insurance, 1989; The American College, 1989).

The American Institute of Banking has over 600 sites across the country where courses are offered which equate to credit for an Associate Degree of Business Administration in Banking Studies. In the past two

years, additional programs in Computer Science have been added. They have also expanded the short day-long and one week workshops and seminars for people who are seeking updated or skills or maintenance which have been recognized by the American Council of Education. These have been efforts to better serve a more diverse population and to attract outside clients (Marks, 1989).

Currently, the evening degree programs offered by the American Institute of Banking in the Washington, D.C. Chapter, have an enrollment of about 3,300 students. An interesting development in the corporate educational community has been the planned departure of the Boston Chapter of the American Institute of Banking from the American Banking Association. This chapter has moved to secede from the American Banking Association over issues related to autonomy and standardization of procedures and curriculum. As a separate, independent entity, they no longer will recognize the national bylaws of the national organization (Marks, 1989; The American Institute of Banking, 1989).

Even though the exact total for educational expenditures per corporation or employee is not always clear, it is obviously significant. These figures are difficult to quantify because education and training are often considered as a part of the cost of conducting business. Also the sums are not always separated into categories for corporate degree students, courses for credit with other institutions, credit courses for personal development, and training seminars and workshops. Despite the inability to identify exact amounts, it is estimated to exceed \$453 billion and encompass 77 million people in the coming year (Carnevale, 1989, Spille, 1989). It is also clear that this extensive enterprise will likely expand in one form or another in the coming decades (Anderson, 1983; Lynton, 1984; Finkel, 1987, Carnevale, 1989).

Coursework will continue to be intensive but is moving from the corporate environment and will not follow a traditional academic calendar. Although instructional delivery systems will continue to contain

the tried-and-true methods of on-the-job instruction, lecture, laboratory classes, independent study, and electronic delivery systems will play a more significant role (Geber, 1990). The National Technological University could be called an "electronic" university and represents an emerging trend. Through use of advanced educational and telecommunication technology, NTU delivers instructional programs to graduate engineers and technical professionals in their employment locations and in the classrooms of over 25 participating national universities (National Technological University, 1988-89).

As a result, a high school student of the 1990s can expect to substantially earn a college degree without attending a significant number of formal classes on a college campus. While many colleges and universities are capitalizing on electronic delivery systems, others have not readily recognized the scope or opportunity offered by these "electronic" or institutions without walls.

Where expansion is evident, it has included efforts to widen the scope of educational opportunities to all levels of employees. In 1977, only about 60 percent of managerial employees attended some type of company-sponsored management course. Across the organization, only about 36 percent of the corporate employees had been given the opportunity to participate in courses sponsored by their respective organizations; most of this was in a technical area. Instead of sending large numbers of managers or executives to college-based programs, many companies offer internal credit or non-credit courses. This need for constant training or updating can be partially explained by the expanding corporate education capacity. Also policy changes with increased competition, a climate of mergers, personnel reductions, corporate mergers, changing corporate cultures and the need to facilitate organizational change and adaptability can be cited as influencing factors (Enmon. 1989).

Corporate educators and trainers are beginning to view themselves as professionals. Nowlen (1988)

estimates there are a minimum three thousand national professional associations in existence today. Two of the more prominent organizations are the American Society of Training and Development (ASTD) and the National Society for Performance and Instruction (NSPI). In 1942, ASTD began with 200 members (Steinmetz, 1976). By 1989, this number had increased to more than 40,000 workplace educators and professionals. This growth was motivated by professionalization and the desire to recognize and elevate personnel standards (Nadler, 1980; Gayeski, 1981, Hansen, 1984; Hawthorne, 1987).

One of the primary steps in the professionalization of an occupation is the establishment of formal education. In the past two decades, there has been substantial growth in the establishment of academic programs to prepare people to be professional trainers. Programs have been developed in education, organization theory, management theory and application, and psychology. Corporate educators can earn degrees from Baccalaureate to Ph.D in such diverse locations as

schools of education, business schools, and psychology departments in major colleges and universities throughout the United States. There has been an accompanying growth in the number of professional publications with such monthly magazines as **TRAINING** and the **TRAINING and DEVELOPMENT JOURNAL**. There have also been efforts to establish standards for instructor certification or credentialing boards to recognize staff and instructors. (Nadler, 1980; Gayeski, 1981, Hansen; 1984; Hawthorne, 1987).

Much corporate education continues to exist largely as an ad hoc and reactive function because of the perception in many highly competitive industries that it is a strategic tool. Often what has occurred in corporate education has been related to current trends or emerging needs by new or unserved groups and strong dissatisfaction from those currently served. An example of this is the employers evaluation and attitude about the quality of high school and college graduates now entering the workplace. Historically, during times of

dissatisfaction with quality, habits, attitudes or values, or rapid technological developments, there have been reactive calls for new approaches. As long as new concepts, equipment and materials are adapted or developed, there will be a continuing need for education on several levels (McQuigg, 1980; Frey, 1984; Kearns, 1987).

The life-long learning movement has been, in part, a result of dynamic changes in society. More recently, it can be attributed to the information explosion, rapid development of technology, and the emotional, intellectual, and technical adjustments which must follow. All elements of society are struggling to cope with these changes. It is not clear who will best meet the need for an educated society during an era of transition precipitated by frequent and dramatic change. In the past two decades, corporations have shifted their focus from the uneducated, semi-skilled, and unskilled, to managers, and finally to technical personnel. According to Boyer (1987), "the world of

learning and the world of work are beginning to intersect, and the "definition of college student and what it means to go to college will continue to change" (Fullerton, 1987; Leslie, Noah, Hutchinson, Springer, 1988; Nelton, 1988).

Many education, corporate, government, and union leaders have addressed the condition of America's system of higher education. The feeling that the system is in trouble has persisted through the 1980s. Much of this difficulty can be traced to a sense of fragmentation. The system as it exists today, both corporate and traditional, contains many providers. Some of them operate independently, while others operate within carefully structured and controlled systems. Often the end result is the same, piecemeal education (Frey, 1984; Kearns, 1987; Spille, 1989).

In the traditional system, a student attitude has often persisted that graduation was a terminating process and that additional formal education will not be required. In our knowledge society, education is never

finished but requires adults to return again and again for advanced schooling. Given this, perhaps education should not be confined to traditional schools. Employing institutions should be the teacher for certain specific types of skills; doing what they know and do best just as colleges and universities should continue to do what they do most effectively, educate (Frey, 1984; Drucker, 1989).

As we continue to see the levels of educational requirements increasing, it is easy to visualize that some business, which deal with high-technology, sciences and some intellectual businesses in a search for the best and brightest, will expand their educational programs to the extent that budgets for this function could equal what other, smaller companies may expend for raw materials (Solozano and Rachlin, 1988). This could continue to expand into education as a marketable product available to outsiders; a process viewed as a trend today, but with significant potential for the future. Aslanian and Brickell (1981) offered a scenario

in which corporations might persuade certain groups of students (women, minorities, and gifted) to enter these institutions or transfer from colleges in order to acquire education, jobs, employment, and promotion potential. They also suggested another possible scenario which involved the acquisition of existing colleges and universities, complete with faculty, and facilities rather than establishing an additional institution. This type of acquisition is no longer a scenario but fact (Fenwick, 1989; Manning, 1989; Phillips, 1989).

Expanded efforts of this nature, coupled with an era of reduced financial resources and increased expectations, places an additional mandate on the need of institutions and accrediting agencies to initiate a more comprehensive and coordinated approach. This is because we no longer have the option of sustaining overlapping and misguided initiatives. There are many indicators that strategies will be taken on a national level to correct problems which have developed in all dimensions and levels of the educational community as a whole (Frey, 1984; Kearns, 1987; Spille, 1989).

Detractions to the Corporate College Movement

Corporate colleges are not without their detractors who quickly point out the weaknesses of these institutions. The placement of the education function is a typical case in point. The educational function is often shared by different divisions, departments, or instructors, who from course offering to course offering may be responsible for only a few specific courses. These may not be considered important by other organizational members. Educational programs may also have to compete in resources with other departments and functions may experience a shift in priority (Houle, 1980; Hohmann, 1980; Puetz, 1985; Cervero, 1988).

A second weakness can result from the role of association staff conducting the educational function. If they do not have the support of leadership, they are unable to take the initiative in programming because they may be seen as subordinate to other organizational members. Directors of these educational departments may

be involved in so many other corporate functions, that their ability to provide leadership and guidance to the development of programs is seriously restricted (Houle, 1980; Hohmann, 1980; Puetz, 1985; Cervero, 1988).

Another potential shortfall of the corporate programs may be inherent to what they feel is their major advantage, responsiveness to changing organizational needs, changing technology and changing populations. Programs may be developed in response to a short-term need or demand, only briefly serving a legitimate population. Developed as a rapid and ad hoc response to a limited population, they may fail to achieve their objective or support the mission of the institution. Educational developers should be cautious that the educational format is not simply used to promote a product, thus lacking credibility of content (Houle, 1980; Hohmann, 1980; Puetz, 1985; Cervero, 1988).

More importantly, another weakness of these institutions may be the lack of physical facilities and support activities. Meeting spaces vary from elaborate

campus facilities provided by the sponsor to available classroom space in local public schools, libraries, conference rooms , community colleges or other public centers. The availability of a library with related research materials, student services, counseling, and placement centers are still absent in a number of these institutions. If there are yearly changes in the leadership or in the education departments, long-term planning is seriously impaired (Houle, 1980; Hohmann, 1980; Puetz,1985; Cervero, 1988).

Faculty members or instructors, across the spectrum of corporate institutions, are closely evaluated for their professional knowledge, experience and job performance. Many of the schools prefer instructors who have acquired their knowledge of the company and topic from practical or field experience rather than from an academic environment. Since students are provided with numerous benefits for participating in the programs, efforts are made to ensure quality instructional staff (Wilcox, 1987).

Many corporations still offer degrees which cover narrow and specific areas and for this reason pose no major threat to the traditional college and university (McDonald's, 1989; Boston Architectural Center and School; and Massachusetts General Hospital, 1989). Growth is expected to continue in this sector but the number of institutions has not increased as rapidly as projected. The growth has occurred in the number and diversity of degrees, many of them in broad areas of management.

Recommendations

Most of the growth in corporate education has occurred in the area of human resource development. As a result, higher education should examine its connections to the movement. The reality of changing demographics among college students pose financial, social and educational stress on both public and private institutions. The more mature adult will continue to return for updated and additional skills. By the year 2000, the number of people between the ages

of 35 and 47 will increase by 38 percent. The percentage of the population aged 48 to 53 will jump by 67 percent (Spille, 1989). According to Ostar (1989), president of the American Association of State Colleges and Universities, "the nontraditional students of the past 353 years of higher education are becoming the traditional students of tomorrow."

Today, the perception persists among industrial leaders that traditional institutions should remain aloof and unmindful of these directions in education. Society as a whole should be more concerned that this population find appropriate educational opportunities whether it be within the confines of a corporate or a traditional institution. Any isolation of academic institutions from the constituency could be the reality which has caused widespread disillusionment with higher education. The restraint and absence of interaction between academic and business sectors can serve to increase the widening gap between theory and practice. Increased cooperation between education and industry

could result in a better balance between specificity and breadth, immediate needs of both sectors and long-range strategies which could prove beneficial to both groups.

There is growing recognition that the American system of education is flawed. Unfortunately, many feel that this has been the case for the past 20 or 25 years (Brock, 1987, Croft, 1987; Spille, 1989). It is comprised of numerous providers, most of which operate independently thus creating fragmentation. From the research conducted, it is now clear that many of these providers can be grouped into four major groups: colleges and universities, professional associations, employing agencies, and independent providers, of which corporate colleges are a small sector (Houle, 1981; Lynton, 1983; Cervero, 1988). There is nothing to indicate, however, that need exists for new corporate institutions.

The solution can perhaps best be found in the support of existing institutions. According to Spille (1989) of the American Council on Education, "as the

United States struggles to educate and train its citizens to remain productive and to compete with foreign nations....our nation no longer has the luxury of sustaining misguided and overlapping initiatives. Efficient and effective cooperation must be the modus operandi. The result then will be a systematic and comprehensive lifelong learning system for all Americans."

One method of ensuring the best education system would be the continued collaboration between education and industry. New corporate and university links continue to be forged reflecting a desire on the part of interested parties to make a more effective utilization of resources and assets. In efforts to obtain additional funding, colleges and universities are actively seeking areas of common interest to form new linkages with corporations (Rizzo and Kasarda, 1989; Olson, 1986).

When compared with the budgets expended for corporate education, the scope of these collaborative

efforts remains small. Many of the efforts are basically unstructured and occur outside the parameters of long term programs or agreements. They may center on utilization of faculty as consultants, use of facilities, or special hiring agreements for new graduates. More programs should be structured which focus on internships, work-study programs, or contracts for on-site courses. The corporate sector could investigate more direct gifts to update facilities or equipment which they could in turn share with traditional institutions in collaborative efforts. (Kavanagh, 1989).

Summary

The results of this study indicated, that while only a few industrial corporations are offering college-level degree-granting programs, that some of these programs are substantive and provide educational opportunities. These institutions have developed over the last two decades with significant growth occurring in the 1980s. Numerous reasons have been cited for this

phenomenon. Technology has probably been the most significant factor in the development of these institutions, however, other forms of motivation must not be overlooked and include: job and knowledge obsolescence, skill development, organizational complexity, a competitive labor market, human resource development, cost savings, external regulation, inadequate preparation of potential employees, the indifference of the collegiate community and the opportunity to provide employees with tailored educational experiences.

These institutions have few common characteristics. The attributes identified in this study may not be shared by the entire group but serve as a means to identify some of the institutional features such as sponsorship, mission, degrees granted, constituency, and educational philosophy. These attributes encompass: the active involvement by a sponsoring corporation for which it provides educational services, a non-profit status because of this relationship, comprehensive,

intensive educational programs with varying degrees of job specificity, instructors who are often selected for their job knowledge or performance, and human resource development-oriented programs. When and where the programs differ or have evolved since 1985, it has been to become more-traditionally directed in both content and philosophy or to model those of traditional post-secondary institutions.

Companies now practice what Lynton (1984) calls "occupational Maintenance." This is the routine practice of retraining employees to keep their current occupations or jobs that have changed through the adoption of new processes, equipment, procedures techniques or technology. Corporate colleges are at the forefront of this process. Furthermore, this retraining will be a continual process and may occur at intervals throughout an employee's association with a company. This will occur by necessity in some of the more technical fields or areas related to medical science. Many business firms have answered their needs for

constant training and updating by developing their own credit and non-credit courses and degree granting institutions. Other reasons have also become a part of this development.

Four of the insitutions on the 1985 list may no longer qualify as corporate colleges: Wang was assimilated by a traditional institution, the Institute of Management Competency failed to seek and achieve accreditation, DeVry is now a part of a for-profit network of institutions and NTU may no longer fit the profile (Wilcox, 1987; Middle States Association of Schools and Colleges, 1989). The fact that they exist and survive means that these programs can no longer be considered a passing trend but have become a contributor of some significance to the educational community.

Universities are separate from professional and work settings and generally do not have the option of linking what is taught to practice. Even the National University Continuing Education Association recognizes that most educational institutions cannot also be

responsible for integrated learning and practice. Some universities are making attempts to overcome this through actual practice or internship programs. One major issue should not be omitted from this study. Even among the detractors of higher education and those who feel that it is slipping in its role, there is still a strong perception that colleges and universities are quality institutions and that quality remains its greatest attribute (Cross, 1981).

APPENDIX A

REFERENCES

REFERENCES

- Anderson, Richard E.. "Problems of Collecting Financial Data for Adult Education and Training." Proceedings of the ASTD National Issues Forum. American Society for Training and Development. Washington, D.C. 1983.
- ASTD, Directory of Academic Problems in Training and Development/Human Resource Development. Washington, D.C. American Society for Training and Development, 1981.
- "Bell and Howell Sharpens Its Product Focus." Business Week. May 5, 1973.
- Baker, Jeanette Sledge. An Analysis of Degree Programs Offered By Selected Industrial Corporations. University Microfilms International. Ann Arbor, Michigan, 1983.
- Bok, Derek. Higher Learning. San Francisco: Josey-Bass Publishers, 1986.
- Bowsher, Jack E. "IBM Gets It Arms Around Education." Training and Development Journal. Januar, 1989.
- Boyer, Ernest L. The Undergraduate Experience in America for The Carnegie Foundation for the Advancement of Teaching, Harper and Row. New York, 1987.
- Boyer, Ernest L. Corporate Classrooms: The Learning Business. Carnegie Foundation Special Report. Princeton, N.J., Princeton, Press. Carnegie Foundation for the Advancement of Teaching, 1985.
- Branscomb, Louis M. and Paul Gilmore. "Education in Private Industry." Daedalus, Winter, 1975, 222-223.

- Brazziel, William F. "Corporation As College." Innovative Higher Education. Spring/Summer, 1988.
- Brazziel, William F. "Corporate-College Partnerships in Higher Education." The Educational Record, no. 62, Spring, 1981.
- Bruce, J.D., W.M. Silbert, L.D. Smullin, and R.D. Fano. "Lifelong Cooperative Education." Report of the Centennial Study Committee. Cambridge, Mass: MIT Press. 1982.
- Carnevale, A. P. and Leila J. Gainer. "The Learning Enterprise." U.S. Department of Labor Employment and Training Administration Report. The American Society for Training and Development, 1989.
- Carnevale, A. P. "The Learning Enterprise." Training and Development Journal, 1986, 40 (1), 18-26.
- Carnevale, A. P. and H. Goldstein. Employee Training: Its Changing Role and an Analysis of New Data for the American Society of Training and Development. Washington: ASTD Press. Washington, D. C. 1983.
- Cervero, Ronald. Effective Continuing Education for Professions. San Francisco: Jossey Bass, 1988.
- Cass, James and Max Biernbaum. Comparative Guides to Two-Year Colleges and Career Programs. Harper and Row Publishers. New York. 1986.
- Cheney, Lynn. "Indicting the Educationalists." Post. September 7, 1987.
- Clark, Harold F. and Harold S. Sloan. Classrooms in the Factories. New Jersey: Institute of Research, Fairleigh Dickenson University, 1958.
- Coler, C. S. "Westing-School-House, East Pittsburgh." School Life. April, 1932.

- College Blue Book: Degrees Offered by College and Subject. 18th ed. New York: McMillan Publishing Company, Inc.. 1981.
- "Company Courses Go Collegiate." Business Week. February 26, 1979.
- Craig, Robert L. and Christine J. Evers. "Employers As Educators: The Shadow Educational System." In Business and Higher Education: Toward New Alliances. edited by G. Gold, 29-46.
- Croft, Nancy L.. "Where We Are." Nation's Business. September, 1987.
- Cross, K. Patricia. "New Frontiers for Higher Education: Business and the Professions." Current Issues in Higher Education, no 3. Washington, D.C. 1981. 1-7.
- Davis, Eleanor. Company Retraining Programs. Princeton, N.J. Princeton University Press, Industrial Relations Section, 1975.
- De Gruyter, Walter. American Universities and Colleges. 12th Edition. Compiled and edited by the American Council on Education. New York. 1983.
- Deigh, Robb, Jill Rachin and Amy Saltzman. "Best Jobs for the Future." U.S. News and World Report. April 25, 1988.
- Dilts, Susan W., Deborah L. Martin and Mark A. Zidzek. Peterson's Guide to Four-Year Colleges, 1990, 20th Edition. Peterson's Guides. Princeton, N.J..
- Drucker, Peter F.. The New Realities - In Government/ In Economics and Business/and In Society and World View. New York: Harper & Row Publishers. 1989.

- Dunlop, John T.. Human Resources: Toward Rational Policy Planning. Report No. 669. New York: The Conference Board, 1975.
- "Earning an Undergraduate Degree at the Plant. "Social Issues. Staff Report. Business Week. August 4, 1980.
- Eurich, Nell P. Corporate Classrooms: The Learning Business. A Carnegie Foundation Special Report. Princeton Press, Carnegie Foundation for the Advancement of Teaching, 1985.
- Eurich, Nell P. "Classrooms and America's Schools." Education Digest. January, 1986.
- Feuer, Dale. "The Skill Gap - America's Crisis of Competence." Training Magazine. December, 1987.
- Fowler, Elizabeth M. "Education and Training: The Key to Corporate Success." Daily Press/Times Herald. July 3, 1989.
- Finkel, Colman Lee. "The True Cost of a Training Program." Training and Development Journal. September, 1987.
- Frey, Donald N. "Developing Corporate Classrooms - An Investment in Human Resources." Vital Speeches. May, 1984.
- Fullerton, Howard N. Jr. "Labor Force Projections: 1986 to 2000." Workforce 2000. The Hudson Institute for the U.S. Department of Labor.
- Galagan, Patricia. "IBM Gets Its Arms Around Education." Training and development Journal. January, 1989.

- Gayeski, Diane. "Educating the Trained Professional." Training and Development Journal 35, no 8. August, 1981: 60-66.
- Gilpatrick, Eleanor. Education for Work: A Full Employment Strategy. The Annals of American Academy of Political and Social Science. March, 1975.
- Goldstein, Amy J. and Raymond D. Sacchetti. Peterson's Guide to Graduate and Professional Programs: An Overview, 1987. Peterson's Guides. Princeton, N.J.
- Gordon, Jack and Ron Zemke. "Making Them More Creative." Training Magazine. May 1986.
- Gould, Samuel B. Diversity by Design. San Francisco: Jossey-Bass, 1973.
- Gould, Samuel B. and K. Patricia Cross. Explorations in Non-Traditional Study. San Francisco: Jossey-Bass, 1972.
- Hansen, Gary. "Professional Education for Careers in Human Resource Administration." Training and Development Journal. 1984, 38, no. 1, 54-56.
- Harman, David. "Why Business Spends Billions Educating Workers." U. S. News and World Report. February 10, 1986.
- Hawthorne, Elizabeth M. Evaluating Employee Training Programs. New York: Quorum Books, 1987.
- Hawthorne, Elizabeth M., P.A. Libby and N. S. Nash. "Emergence of Corporate Colleges." Journal of Continuing Higher Education. 1981, 31 1-9.
- Hendeschoff, F.C. "Corporation Schools: A New Form of Vocational Training." The Independent. March 6, 1913.

- Hodgkinson, Harold, Business and Higher Education: Toward New Alliances. Gerald D. Gold (ed). San Francisco: Josey-Bass, 1981.
- Houle, Cyril O.. Continual Learning in the Professions. Jossey-Bass, 1980.
- Jacobs, Frederic and Donald Phillips. "Beyond the Little Red Schoolhouse." Change. July/August, 1979.
- Jacobs, Bruce. "Bringing the Campus to the Corporation." Industry Week. December, 1980.
- Jacobson, Robert. L. "Bell and Howell Schools Seek Academic Acceptance." The Chronicle of Higher Education. July 27, 1981.
- Kavanagh, Maria. "Academia, High-Tech Union is Working." The Washington Post. August 7, 1989.
- Kaye, Kim R., Robert E. Henne and Richard Bolander. Peterson's Higher Education Directory. Peterson's Guides, Princeton, N.J. 1989.
- Keller, George. Academic Strategy - The Management Revolution. Baltimore: The Johns Hopkins Press, 1983.
- Kelly, Roy Wilmarth. Employment Management and Industrial Training, ed. by Edward D. Jones. Federal Board for Education. Bulletin no. 48, Employment Management Series no. 4, October, 1919.
- Lehman, Anderson E. and Eric A Suber. Peterson's Guide to Two-Year Colleges, 1987. 17th edition. Peterson's Guides. Princeton, N.J..
- Leslie, Connie, Timothy Noah, Susan Hutchinson and Karen Springen. "Graying of the Campus." Newsweek.
- Levine, Arthur. Handbook on Undergraduate Curriculum. San Francisco: Josey Bass, 1978.

- Likert, R. New Patterns in Management. New York: McGraw-Hill, 1961.
- Lusterman, K.M. "Education in Industry." Relating Work and Education. San Francisco: Josey-Bass Publishers, 1977.
- Lusterman, K.M. "Trends in Corporate Education and Training." A Research Report from the Conference Board. 1985.
- Lusterman, K. M. Managerial Competence: The Public Affairs Aspects. Report no. 805. New York: Conference Board, 1981.
- Luxenberg, Stan. "Education at AT&T." AGB Reports. December-January, 1978-1979.
- Lynton, Earnest A. "Colleges, Universities, and Corporate Training ." In G.G. Gold (ed.) Business and Higher Education: Toward New Alliances. New Directions for Experimental Learning, No. 13. San Francisco: Josey-Bass Publishers 1981.
- Lynton, Earnest A. "A Crisis of Purpose: Reexamining the Role of the University." Change. 1983.
- Lynton, Earnest A. "Occupational Maintenance: Recurrent Education to Maintain Occupational Effectiveness." CAEL News 1983b, 7 (1), 6-8, 19.
- Lynton, Earnest A. The Missing Connection Between Business and the Universities. New York: ACE/Macmillan Publishers 1984.
- Lynton, Earnest A. and Sandra E. Elman New Priorities for the University. San Francisco: Josey-Bass Publishers 1987.

- Lynton, Earnest A. "The Roles of Colleges and Universities in Corporate Education." Unpublished working paper. Boston, MA: Center for the Study of Policy and the Public Interest, University of Massachusetts, undated.
- Maeroff, Gene I. "Business Is Cutting Into the Market." The New York Times. Section XIII, August 30, 1981.
- Magarell, Jack. "As Students Flock to Computer-Science Courses, Colleges Scramble to Find Professors." The Chronicle of Higher Education. February 9, 1981.
- Mahler, Walter M. "Executive Development." In Training and Development Handbook, 2nd Edition, edited by Robert L. Craig. New York: McGraw-Hill, 1976.
- Maidment, Fredrick M. "Characteristics of University-Based Executive Education Programs at Doctoral Granting Institutions in Business." Innovative Higher Education. Spring/Summer, 1986.
- Mayhew, Lewis B. Legacy of the Seventies. San Francisco: Jossey-Bass, 1977.
- McGregor, D. The Human Side of Enterprise. New York: McGraw-Hill, McQuigg, Beverly. "The Role of Education in Industry." Phi Delta Kappan. January, 1980.
- McQuigg, Beverly. "The Role of Education in Industry." Phi Delta Kappan. January, 1980.
- Miner, Mary Green. Management Training and Development Programs. Washington, D.C.: Bureau of National Affairs, no. 116, 1977.
- Mitroff, Ian I. and Ralph Kilmann. "The Failure of Education." Corporate Tragedies. New York: Praeger, 1984.

- Nadler, Leonard. "A Model for Professional Development." Training and Development Journal 34, no. 5, 1980.
- New Directions for Experimental Learning, No. 13 San Francisco: Josey-Bass. September, 1981.
- Nowlen, Phillip. A New Approach to Continuing Education for Business and the Professions: The Performance Model. New York: McMillan, 1987.
- Ostar, Allan W. "What the Future Holds for American Colleges and Universities." Vital Speeches of the Day. February 2, 1989.
- Peters, Tom. Thriving on Chaos. New York: Alfred A. Knopf, 1987.
- Peterfund, Stanley. "Education in Industry - Today and in the Future." Training and Development Journal 30, no. 5 (1976): 30-40.
- Porter, Jack. "Corporations That Grant Degrees." Business & Society Review.. Spring, 1982.
- Puetz, Belinda E. and Faye Peters. Continuing Education for Nurses - A complete Guide to Effective Progress. Denver, CO: Aspen Publishers. 1981.
- Quinn, Robert P. and Graham L. Staines. The 1977 Quality of Employment Survey. Ann Arbor, MI. Survey Research Center, 1977.
- Reilly, Kevin, Director. New York Regents Program on Non-collegiate Sponsored Instruction, interview. January 22, 1982.
- Rizzo, Paul J. and John D. Kasarda. "Preparing MBAs for the Real World." Newsweek. November 27, 1989.

- Rodney, Joel. "More Old Wine in More New Bottles - Liberal Education and Careers." Vital Speeches of the Day. October 10, 1986.
- Samuelson, Robert J. "The College Charade." Washington Post. June 13, 1990.
- Sculley, John. "The Power of Ideas and Information - Networking and Education." Vital Speeches of the Day. February 2, 1989.
- Serbein, Oscar N. Educational Activities of Business. Washington, D.C. The American Council on Education. 1961.
- Smith Geoffrey. "Coping with the Coming Labor Shortage." Vital Speeches of the Day. May 11, 1989.
- Smith Wendell. "A Changing Norkforce." Adults and the Changing Workplace. The American Vocational Association. 1985.
- Sovern, Michael I. "Higher Education - The Real Crisis." The New York Times Magazine. January 22, 1989.
- Solozano, Lucia. "Why Business Spends Billions Educating Workers." U. S. News and World Report. February 10, 1986.
- Steinmetz, Cloyd S. "The History of Training." In Training and Development Handbook, 2nd Edition, edited by Robert L. Craig. New York: McGraw-Hill, 1976.
- Talbot , J. R. and C.D. Ellis. Analysis and Costing of Company Training. London: Gower Press, 1969.
- Townley, Preston. "Business and Education Reform - Lots of Action....Any Impact?" " Vital Speeches of the Day. April 1, 1989.

Vroom, V. H. Work and Motivation. New York: Wiley, 1964.

Wilcox, John. "A Campus Tour of Corporate Colleges."
Training and Development Journal. May, 1987.

Wilhelm, Donald. "The Big Business Man as a Social
Worker." The Outlook. October 28, 1914.

INTERVIEWS

Enmon, W.C., Manager of Educational Services, Xerox Corporation, Leesburg, Va. September 7, 1989.

Fenwick, Dorothy, Executive Director of the Accrediting Commission for the National Association of Technical and Trades Schools (NATTS), Washington, D.C. May 19, 1989.

La Rocco, Teresa, Course Evaluation and Accreditation for The Center for Adult Learning and Educational Credentials, the American Council on Education. January 26, 1989.

Manning, Thurston E., President, Council on Postsecondary Education (COPA), Washington, D.C.. May 19, 1989.

Marks, Peter C., Executive Director of the Washington Chapter of the American Institute of Banking. Washington, D.C.. July 26, 1989.

Phillips, James M., Executive Director of the Accrediting Commission for the Association of Independent Colleges and Schools (AICS), Washington, D.C. . May 19, 1989.

Spille, Henry A., Vice President and Director of The Center for Adult Learning and Educational Credentials, the American Council on Education. July 26, 1989.

Wilcox, John, Editor of the National Report on Human Resources, the American Society for Training and Development. June 22, 1989.

COLLEGE BULLETINS

American Graduate School of International Management
Bulletin/Catalog. Glendale, AZ. 1989-90.

American Institute of Banking Student Catalog. Boston,
Mass. 1989-90.

Arthur D. Little, Management Education Institute, Inc.
Cambridge, MA. 1989.

Boston Architectural Center Catalog. Boston, Mass. 1989-
90.

De Vry Institute Academic Catalog, Volume 6. Chicago,
Ill. 1989-90 .

East Carolina University College Bulletin. Greenville,
N.C. 1989-1990

Institute of Textile Technology. Charlottesville, VA.
1989-90.

ITT Technical Institute. Educational Services, Inc.
1989.

MGH Institute of Health Professions. Massachusetts
General Hospital, Boston, Mass. 1989-90.

National Technological University Bulletin. Fort
Collins, Co. 1989-90.

Northrop University Catalog. Los Angeles, CA. 1989-90.

The American College Catalog. Bryn Mawr, PA. 1985-86.

The American College Graduate Bulletin. Bryn Mawr, PA.
1989-90.

The College of Insurance Academic Bulletin. New York,
N.Y. 1989-90.

The RAND Graduate School of Policy Studies. The RAND
Corporation. Santa Monica, CA., 1985-86.

The RAND Graduate School of Policy Studies. The RAND
Corporation. Santa Monica, CA., 1989-90.

DIRECTORIES AND HANDBOOKS

Accredited Institutions of Postsecondary Education -
Program Candidates. American Council of Education.
Washington, D.C. 1989.

Criteria for Accreditation. Commission on Colleges.
Southern Association of Colleges and Schools.
Decatur, GA. 1989.

Directory of Educational Institutions. Association of
Independent Colleges and Schools. Washington, D.C.
1988.

Directory of Middle States Association of Colleges and
Schools. Accredited Membership and Candidates for
Accreditation. Philadelphia, PA. 1989.

National Association of Trade and Technical Schools.
Washington, D.C. 1989.

Northwest Association of Colleges and Schools.
Commission on Colleges. Seattle, WA. 1988.

The COPA Handbook. The Council on Postsecondary
Accreditation. Washington, D.C., 1989.

WASC, Western Association of Schools and Colleges, Inc.
Accrediting Association for Senior Colleges and
Universities. Oakland, CA., 1988-89.

OTHER SOURCES

Cook, Charles M.. Commission on Higher Education. New England Association of Colleges and Schools. 1989.

Rogers, James T.. Southern Association of Colleges and Schools. 1988.

Thrash, Patricia A.. Commission on Institutions of Higher Education. North Central Association of Colleges and Schools. 1989.

Simmons, Howard L.. The Middle States Association of Colleges and Schools. 1989.