

1-1-1991

# Curriculum planning in community colleges and the emerging technological economy.

James M. Connolly

*University of Massachusetts Amherst*

Follow this and additional works at: [https://scholarworks.umass.edu/dissertations\\_1](https://scholarworks.umass.edu/dissertations_1)

---

## Recommended Citation

Connolly, James M., "Curriculum planning in community colleges and the emerging technological economy." (1991). *Doctoral Dissertations 1896 - February 2014*. 4739.

[https://scholarworks.umass.edu/dissertations\\_1/4739](https://scholarworks.umass.edu/dissertations_1/4739)

This Open Access Dissertation is brought to you for free and open access by ScholarWorks@UMass Amherst. It has been accepted for inclusion in Doctoral Dissertations 1896 - February 2014 by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact [scholarworks@library.umass.edu](mailto:scholarworks@library.umass.edu).

UMASS/AMHERST



312066009200633

CURRICULUM PLANNING IN COMMUNITY COLLEGES  
AND THE EMERGING TECHNOLOGICAL ECONOMY

A Dissertation Presented

by

JAMES M. CONNOLLY

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

DOCTOR OF EDUCATION

February, 1991

Education

© Copyright by James M. Connolly 1991  
All Rights Reserved

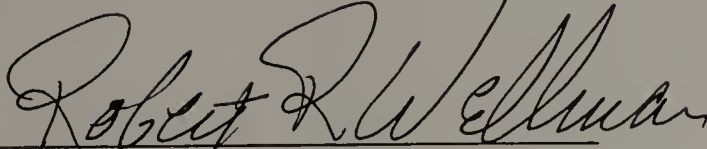
CURRICULUM PLANNING IN COMMUNITY COLLEGES  
AND THE EMERGING TECHNOLOGICAL ECONOMY

A Dissertation Presented

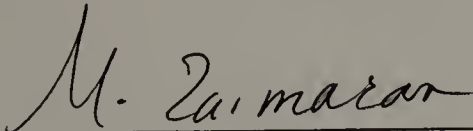
by

JAMES M. CONNOLLY

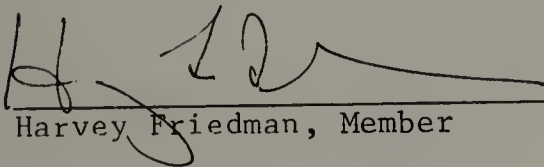
Approved as to style and content by:



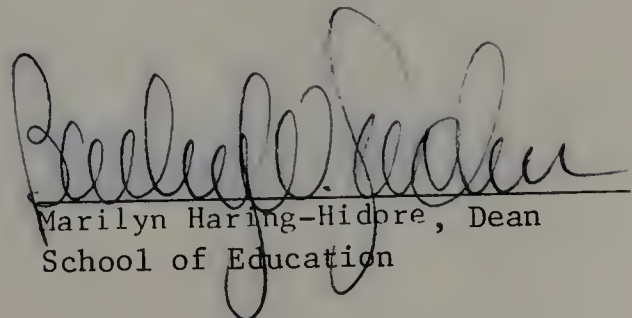
Robert R. Wellman, Chair



M. Zaimaran, Member



Harvey Friedman, Member



Marilyn Haring-Hidore, Dean  
School of Education

ABSTRACT

CURRICULUM PLANNING IN COMMUNITY COLLEGES  
AND THE EMERGING TECHNOLOGICAL ECONOMY

FEBRUARY, 1991

JAMES M. CONNOLLY, B.S., BOSTON COLLEGE

M.U.A., BOSTON UNIVERSITY

M.P.A., HARVARD UNIVERSITY

Ed.D., UNIVERSITY OF MASSACHUSETTS

Directed by: Professor Robert Wellman

This study examined curriculum planning strategies at four Massachusetts community colleges: Massachusetts Bay Community College, Bunker Hill Community College, Roxbury Community College and Middlesex Community College. This examination was done through an interview process conducted throughout 1990. The interviewees were three knowledgeable officials at each of the four community colleges.

The interviews were conducted in person and lasted approximately two hours each. It was the goal of the interview process to have interviewees respond to a number of questions related to the planning strategies used currently in the context of curriculum development, labor force preparation, and the emerging technological economy and questions related to planning strategies being contemplated for the future in the context of curriculum development, labor force preparation and the emerging technological economy.

The data from these qualitative interviews were summarized, analyzed, and compared. Additionally, this study gathered data from five-year plans of each community college.

Points stressed by those interviewed were compiled in the section on "Findings". From the "Findings," conclusions were drawn relative to the subject of this dissertation.

It is interesting to note that while many might not fully have appreciated the reality, community colleges are now and will likely continue to be significantly involved in remediation as a component of their respective missions.

## TABLE OF CONTENTS

	<u>Page</u>
ABSTRACT.....	iv
LIST OF TABLE.....	ix
LIST OF FIGURES.....	x
Chapter	
I    INTRODUCTION.....	1
Background of the Study.....	1
Chapter	
II   REVIEW OF THE LITERATURE.....	5
Evolution of Urban Higher Education.....	5
A Look At Specific Urban Institutions.....	20
The New Economy.....	33
Human Capital.....	36
Chapter	
III  METHODOLOGY.....	44
Design of the Study.....	44
Subjects.....	44
Limitations of the Study.....	45
Basic Assumptions.....	45
Research Questions.....	48
Chapter	
IV   ANALYSIS AND DISCUSSION OF THE DATA.....	50
Community Colleges: Introduction.....	50
Bunker Hill Community College.....	51
Programs of Study.....	52
Student Profile.....	54
Directions in the Future Curriculum.....	59
New Curricula and Programs.....	60
Student Assessment.....	60
The Chelsea Campus.....	61



Summary of Interviews.....	61
Roger Richards.....	61
Judy Lindamode.....	66
Carl Nelson.....	69
Middlesex Community College.....	73
Programs of Study.....	75
Student Profile.....	77
Directions in the Future Curriculum.....	80
English As A Second Language.....	81
International Education.....	81
Cultural Diversity.....	82
Individualized Instruction.....	82
Academic Standards.....	82
Summary of Interviews.....	83
Chris Brennan.....	83
Laurie Rose.....	86
Bryan O'Neil.....	89
Roxbury Community College.....	91
Programs of Study.....	92
Directions in the Future Curriculum.....	94
Humanities and Multicultural Education.....	95
Allied Health Sciences.....	95
Workplace and Community Education.....	96
Student Profile.....	96
Academic Affairs.....	100
Curriculum Improvement.....	100
Program Review, Revision, Development & Implementation.....	101
Institutional Support.....	101
Summary of Interviews.....	102
Henry Allen.....	102
Holly Guran.....	105
Susan Graham.....	109
Massachusetts Bay Community College.....	111
Programs of Study.....	112
Directions in the Future Curriculum.....	116
Writing Competency.....	116
Reading Competency.....	116
Critical Thinking Competency.....	117
Mathematics Competency.....	117
Computing and Technological Literacy Competency....	117

Global Understanding Competency.....	117
Core Requirement in Career-Technical Programming...	118
Continuing Education and Economic Development.....	118
Mid/High Technological Programming.....	119
Health Science.....	120
Student Profile.....	120

Summary of Interviews

George Luoto.....	130
James Wright.....	133
James Rice.....	136

Observations, Perspectives and Findings.....	140
--	-----

Chapter

V CONCLUSIONS AND IMPLICATIONS FOR THE FUTURE.....	146
--	-----

BIBLIOGRAPHY.....	153
-------------------	-----

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1	Bunker Hill Community College Headcount: Day, DCE, and Total; Fall Semester 1979-1989 (Credit Students) and Day Student Body: Ethnic Composition 1979-1989.....	57
2	Day Enrollments Summary.....	78
3	Day Head Count and FTE Enrollments by Campus.....	78
4	Continuing Education Enrollments.....	79
5	Program Cluster Profile by Age, Sex, Minority Status.....	128

LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
1	Bunker Hill Community College, Fall 1989 - Day Division Total Enrollment by Ethnic Group.....	57
2	Enrollment by City/Town and Ethnic Group.....	58
3	Day Enrollment Trends.....	124
4	Age Enrollment Trends.....	125
5	Primary Service Area Age Distribution.....	126
6	Secondary Service Area Age Distribution.....	127
7	Programmatic Clusters 1987.....	129

## CHAPTER I

### INTRODUCTION

#### Background of the Study

One of the most formidable challenges facing higher education in America is the education and training of the labor force for the emerging technological economy. Failure to adapt to that challenge could result in the United States becoming a much less significant economic power in the world.

In the post-World War II era, the United States did not face economic competition from elsewhere in the world. Sometime around 1973, the U.S. economic train was derailed. In the 1950's and 1960's real GNP rose by 4% or more in eleven years and that came to be considered the norm. Real GNP growth averaged 3.8% in the 1960's and the nation spent right up to its income. When growth slid to 2.8% in the 1970's, it barely fazed Americans. They simply made up the difference by borrowing. Spending has grown so much faster than income especially for imports that by 1986, the U.S. was consuming \$150 billion more a year than it was producing.

The United States is now just one player in a highly-competitive global marketplace. The European and the Japanese post-World War II reconstruction, third world industrialization, and more efficient world trade are some of the factors contributing to the new economic reality. Developing countries are emerging as world economic powers. Much of the world's steel, textiles, rubber, ships, and petrochemicals come from countries that only a few years ago were considered

economically stagnant. The trends in Asia and Latin America indicate clearly that they will also be forces with which the United States will have to reckon.

While economies always have and always will undergo change, today that change is occurring more rapidly than ever before, requiring the United States to be able to adjust to new labor force needs. There are many facets to the political and economic strategy that our society must employ to meet the challenges, but my concern is with one aspect: labor force preparation.

Education has consistently played a pivotal role in preparing the labor force. When America emerged from an agrarian society into an industrialized one in the mid-nineteenth century, the educational system in the United States had to reorient itself in order to provide a labor pool for the changing economy. Horace Mann often cited industrialization as an important rationale for a public educational system.

Numerous state colleges and universities were launched in the year following the passage of the Morrill Land Grant Act (1862) to prepare students for a changing industrial and agricultural environment. This act had an agricultural focus and was crafted to improve labor force skills and to help the economy continue its expansion. The Smith-Hughes Act of 1917 provided federal support for vocational education in the industrial arts. Between the two world wars there was a marked increase in the utilitarian course offerings in colleges throughout the United States.

The post-World War II G. I. Bill and the National Defense Education Act of 1958 expanded educational opportunities considerably

and thus helped to maintain a predominant place for the United States in the world economy.

Throughout our history the educational system has been called upon to meet the needs of ever-changing economic conditions. And schools within our educational system have been called upon to meet varying educational missions.

Since 1950 universities and colleges in the United States have been increasingly effected by urban growth and change. By 1970 more than 20% of the national population was located in the 200-odd metropolitan areas of the United States and most colleges were within urban settings.

As a result of urban growth and change, the city college or university has been particularly effected by increased enrollments. Because of the demands of increased enrollment, new institutions had to be created and incorporated into institutions born out of the land grant movement such as Chicago Circle (Illinois) and Wayne State University.

Just as the urban higher educational system emerged out of the long-standing tradition of the land grant movement to become a force in cities, community colleges developed from this orientation to provide programs geared to the following:

1. Transfer preparation-providing access and educational preparation to students who are not ready for a four-year college.
2. Vocational/technical education-teaching skills more complicated than that offered in high schools of a career-educational nature.



3. Continuing education—providing access and life-long learning opportunities to adults.
4. Remedial education—compensating for poorly-prepared secondary education.
5. Community service—acting as a community cultural center and offering short courses, workshops, non-credit courses, and specific events.

In recent years it has become apparent that urban community colleges will play a key role in providing manpower to the ever-changing economy. These community colleges will have to continually adapt curriculum to meet various manpower needs. This raises questions of educational planning at the urban community college level.

The purpose of this study is to examine, at the urban community college level, curriculum planning strategies geared toward improving the quality of labor, and the con-commitant impact of labor force preparation for the emerging technological economy.<sup>1</sup>



## CHAPTER II

### REVIEW OF LITERATURE

The literature review in this chapter examines material on the 1. evolution of urban higher education, 2. the emerging economy, and 3. the linkage between education and economics.

The literature on urban higher education is intended to gain perspective on appropriate "missions" for urban higher education in the emerging economy. The material on economic trends is geared toward establishing a clear picture of the "new economy" and the section on education and economics (human capital) seeks to establish substance to the argument that education plays a significant role on labor force preparation and economic development.

#### Evolution of Urban Higher Education

An important work by Murray Ross, The University: The Anatomy of Academe, 1976, identifies four stages of university development:

(1) Medieval University. Our universities are rooted in the Middle Ages of Europe. They began with little groups of students gathered around a man of learning. They were relatively informal, unstructured and spontaneous organizations.

(2) 1500 - 1850. This was a period of stagnation and retreat. The universities were dominated by religious influence and geared more to discipline and character-building than to intellectual development. They were male-dominated and restricted to upper class families.

During this period, the German university began to emerge. This emergence has a significant influence on the universities of England, Canada and the United States with its orientation toward intellectual development, research, and graduate education.

(3) 1850 - 1950. This period saw the rise to cities and the accompanying secularization of higher education as the influence of religion diminished.

Oxford and Cambridge were becoming a bit less elitist by providing career-based education for the middle class. In the United States, a new model was emerging: it was large, diverse, flexible, and gave support to both practical and theoretical studies at both the undergraduate and graduate levels.

During this period, higher education in the United States enlarged its horizons, curricula, and constituency. Opportunities were expanded for a wider populace in an effort to further social goals.

It was during this period that the character of higher education in the United States was forming. There was a ten-fold expansion in enrollment between 1900 and 1950.

(4) 1950 - present. This period took American higher education on an egalitarian tract through enrollment expansion, research development, and student revolution. The G.I. Bill and other governmental efforts were geared toward providing educational opportunity to anyone who sought it.

Thus, the Ross work in effect sets the stage for looking at the evolution of urban higher education.

Maurice Berube specifically addresses the evolution of the so-called urban university in his The Urban University In America (Westport, Conn., Greenwood Press, 1978).

The author suggests that the urban university emerged out of the long-standing tradition of the land grant movement.

Of particular note was the fact that the United States officially became an urban nation in the mass education era of the 1920's. Today, the typical American university is urban, public, and in receipt of government assistance. Fifty years ago, the typical American university was private and philanthropically-endowed and rurally-situated. Fifty years ago, private colleges educated sixty percent of the university population.

Berube argues that the urban university came into existence after World War I. By 1928, more students attending land-grant colleges came from cities than farms.

By the 1920's nine cities had followed New York City's lead and established their own colleges. It was also during this period that the Association of Urban Universities emerged.

Urban higher education had to battle such elitest notions as those found in Cardinal Newman's Idea of a University which posited that the university was the breeding ground for societies' upper class. Newman's university man was trained to be morally, economically, and socially superior. There was not room for women in his university.

Jacques Barzun's, The American University, offers a perspective that does not fit neatly into a discussion of the evolution of urban higher education today by promoting the philosophy that the mission of higher education was to offer the "medieval man" intellectual

pleasure. The author cites the imprint of the German model of higher education as that which exists for the academic specialist to pursue research. Students are necessary only insofar as they assumed roles as academic specialists. A countervailing force, of course, was the service function of the land-grant approach.

J. Martin Klotsche attempted to define the urban university in The Urban University and the Future of Our Cities (Harper and Row, N.Y., 1966). He pointed out that America's first colleges were located in the countryside, contrasting the European experience of locating them in cities such as Bologna, Paris, London, and Manchester. The peculiar geography of the two continents partly explains the locational decisions. Because most of the early American population was spread out into the countryside, colleges located there. As America became an urban nation, more and more institutions were established in urban settings. Therefore, Klotsche suggests that the emergence of urban higher education accompanied the urbanization of America.

Part of the problem as seen by Klotsche is simply defining the urban university.

Are Harvard, Yale, University of Pennsylvania and Columbia urban universities?

Are the post-revolutionary schools such as George Washington, Western Reserve, Boston University, or Temple urban universities?

Are the Jesuit institutions, many located in urban areas, urban universities?

Are the so-called technical schools, such as R.P.I., M.I.T., or Carnegie, urban universities?

Should we confine ourselves to municipally-funded institutions such as Cincinnati (1819), Omaha (1908), Toledo (1872), Akron (1870), or Washburn (1865), in our search for definition?

How should we define the urban branches of state universities? By 1962, almost 150 such branches were being operated by forty-three universities in thirty-one states and the curriculum that was offered took into consideration the constituency served.

The Municipal University, (Center For Applied Research in Education, Washington, D.C., 1962), by Williams S. Carlson defined the urban university narrowly--one at least partially-funded by local taxation, that links its mission to that of public education.

These universities respond to the following stimuli:

(1) A belief that our society has an obligation to provide equality of opportunity for all.

(2) A belief, rooted in Western civilization, that society is well-served. by an educated populace. For example, Aristotle's Politics pointed out that: "No one will doubt that the legislator should direct his attention above all to the education of youth; for the neglect of education does harm to the states."

(3) There has been a realization that urban centers need universities to respond to the inherent socio-economic needs of cities.

Colleges of the Forgotten Americans, by E. Alden Dunham, (Carnegie Commission of Higher Education, 1969), took a different approach to the origins of urban higher education: urban higher education evolved from normal schools which were the first teachers' colleges.



Normal schools were not colleges at the outset. They were institutions established in the mid-nineteenth century to prepare teachers for elementary and secondary school work. The first normal school opened in Lexington, Mass. in 1839, later becoming Framingham State College. In 1844, New York state established a normal school at Albany.

Normal school development paralleled the expansion of public education. Normal schools were eventually evolved into teachers' colleges to respond to the demand for education in the public educational system. Normal meant rule, model, or pattern to train teachers. In 1910, there were 264 normal schools enrolling 132,000 students in the United States. Of these, 151 were run by the states, 40 by cities, and 73 were private.

John T. Wahlquist and James W. Thornton pointed out in State Colleges and Universities, (The Center for Applied Research in Education, Washington, D.C., 1964), that the Land Grant Act of 1862 represented the resolution of a 100-year old debate on the need for practical education. The debate turned on the following points:

- (1) need for student access
- (2) need for diverse curriculum
- (3) need for the college to have a relationship with the community
- (4) need for relevant research
- (5) need for lifelong learning

The authors also identified three periods of development:

- (1) 1800-Civil War---lean, with only the barest of essentials for curriculum.

(2) 1862-1920---the curriculum expanded to true university breadth through the emphasis on scholarly research and graduate study. Professional schools were included within the structure of the university.

(3) 1920-present---a period when many urban campuses of state institutions sprung up.

In a work dealing exclusively with the establishment of the land grant system, Edward Eddy, Colleges For Our Land And Time, (Greenwood Press, Westport, Conn., 1973), traces its history.

Andrew Jackson's election signaled an era of populism and materialism. A new sense of egalitarianism permeated the county. A surge in economic development spurred a need for a labor pool to keep it going. A diminished influence of religion also helped to draw the government into higher education. All of these forces contributed to an environment that was conducive to the "land grant approach."

The foundation of the Morrill Act

(1) forced higher education to fit the changing social and economic patterns of the country;

(2) helped create equality in educational opportunity by offering education at public expense to the industrial classes;

(3) gave dignity to vocations; and

(4) forced education to become more utilitarian.

Eight years after its passage, thirty-seven states agreed to establish state-sponsored teaching of agriculture, mechanical arts, and military tactics. In 1890, another Morrill Act was passed which increased funding for the existing land grant system and provided for

the establishment of Negro land grant colleges. By the early twentieth century, higher education was being viewed as a necessity and its philosophy was service to youth, farmers, homemakers, industry, and the entire nation. Practical education was being integrated into the curricula of the colleges.

Higher Education in Twentieth Century America, (Harvard University Press, Cambridge, 1965), by William Clyde Devane, attempted to characterize the nature of higher education in the United States in the twentieth century.

American institutions began to reflect the reality of an urbanized, industrialized society. Contemporary democratic instincts greatly influenced the course of events that would lead to a determination to provide free education to all willing and able. The times witnessed the establishment of women's colleges, community and junior colleges, and the expansion of state colleges. Rigid classical curriculum requirements became watered down with electives and other similar options.

The author suggested that the service roots actually began with Franklin and Jefferson. Franklin hoped that the University of Pennsylvania would become a practical institution for training students in commerce, agriculture, and science. Jefferson had similar intentions for the University of Virginia.

The President's Commission on Higher Education, report published in 1947, has had a profound impact upon the direction of federal policy toward higher education in America. The report emphasized the need for free and universal access to higher education. From this philosophy evolved a variety of programs that have attempted to



achieve the goals of the commission report. Expanding opportunities for urban youngsters fits neatly into the basic thrust of report.

The International Encyclopedia of Higher Education. (Vol. 9, Jossey-Bass, Publishers) defined the urban university on pages 4309-4312. An urban university is an institution located in a city and serving an urban constituency. Harvard, Columbia and others might not qualify as an urban university according to that definition.

Three forces had a tremendous impact on the evolution of urban higher education:

(1) An expansion of assistance that included the G.I. Bill after World War II

(2) an expansion of land grant colleges into multi-campus systems with one or more branches in urban locations

(3) the civil rights movement of the 1960's focused attention on urban problems.

According to the Encyclopedia of Education, (Lee Deighton, editor-in-chief, volume 9, MacMillan Company and the Free Press), the roots of urban higher education can also be found through an examination of the evolution of normal schools. The normal school was established at the impetus of such noted educators as Horace Mann, Charles Brooks, Henry Barnard, and Calvin Stowe for single-purpose, publicly-controlled educational training. The first one was an all-women's school in Lexington, Massachusetts in 1839. Normal schools gradually became colleges after the Civil War.

Women's education went through a dramatic transformation in the nineteenth century in response to the development of teaching as a

profession. Teaching was the first profession that became open to women.

In the early 1800's, women were educated in various academies and seminaries for domestic science purposes. The establishment of common schools and the accompanying need for teachers in these schools provided the catalyst for normal schools.

The cause of women's education became synonymous with the cause of popular education. Except for normal schools, however, college education was rare for women in the mid-nineteenth century. Oberlin College was one of the first to accept women in 1837. Others did follow as the century progressed.

An article in Liberal Education, "The Mission of Urban Institutions," (Summer 1980, A.A.C., pp. 200-207), by Arnold b. Grobman reviewed the elitist origins of higher education in America and highlighted its transformation that was brought about by the Morrill Act.

The author contended that the "purest" form of urban college began around 1950 in response to egalitarian values. At that time, states began to realize their urban obligations by establishing urban campuses. Most of these urban campuses were designed for the commuter.

For example, there was Illinois at Chicago, Cleveland State, Portland State, Alabama at Birmingham, and Missouri at St. Louis.

The Carnegie Commission on Higher Education conducted a 1972 study entitled The Campus and the City, (McGraw Hill, New York), pointed out that the definition of the "urban university" has undergone changes over time. In 1914, when fourteen universities established the

Association of Urban Universities their interest was adult education, community service, and university extension. They were for the most part established to provide access to higher education to city residents at reasonable cost.

The study identified Cincinnati as having set-up the first municipal university in 1819. The school charged city residents nominal fees. New York city established the Free Academy which later became City University of New York (CUNY) in 1847. Philadelphia-based Temple University was begun in 1884 for students of limited financial means.

There are many types of institutions of higher education that could be classified as "urban" under different applications of that term.

The Carnegie report suggests that an urban university would be one that is full-oriented toward urban concerns; would have developed its educational, research, and service programs to be responsive to urban needs; would have organized its decision-making mechanisms to work with those of the metropolis; and would conduct itself in its corporate role in a way that would make its presence in the city an asset.

In short, every urban college and university has its own personality. In general, it might be argued that if a college or university in a city takes its urban responsibility seriously, it might qualify as an "urban institution."

A publication of the U.S. Department of Health, Education, and Welfare, (Organization for Social and Technical Innovation, 1980), entitled Urban Universities: Rhetoric, Reality, and Conflict suggested

that the urban university was a variant of the land-grant model and appeared in the late nineteenth century. Their aim, according to the charter of Temple University, was to "provide meaningful education to the workingmen of Philadelphia." Like the land-grant college, they represented a response to the thrust for upward socio-economic mobility in the immigrant and lower-class groups. And also like the land-grant institutions, they represented a response to the changing economy of cities. However, unlike the land-grant schools they did not receive federal land or money in the nineteenth century.

They grew hand-to-mouth as a result of the efforts of local persons. Many were mergers of smaller schools. Cleveland State started as a branch of the local YMCA.

The growth of these schools seemed to take three tracks:

(1) Schools like Temple grew rapidly and evenly through amalgamation and the addition of new schools.

(2) Many were incorporated into state systems--State University at Buffalo, Cleveland State, Southern Illinois, University of Wisconsin at Milwaukee.

(3) Schools that maintained a liberal arts orientation--St. Louis, Southern Methodist University in Dallas, and the University of Southern California.

A study of the state college system in Massachusetts, People's Colleges, (A Report Prepared For the Massachusetts Advisory Council on Education, Boston 1971, chronicles the history of the state higher educational system.

In 1837, the nation's first board of education, voted to establish three normal schools for the preparation of teachers:

--Lexington in 1839 later moving to Framingham (Framingham State College)

--Bridgewater in 1840 (Bridgewater State College)

--Westfield in 1844 (Westfield State College)

--Salem in 1854 (Salem State College)

--Worcester in 1874 (Worcester State College)

--Hyannis in 1894 (Cape Cod Community College)

--Fitchburg in 1895 (Fitchburg State College)

--North Adams in 1896 (North Adams State College)

--Lowell in 1897 (University of Lowell)

--Massachusetts School of Art in 1873 was the first public college of art in the country. The school became integrated into the state college system in 1964.

--Massachusetts Maritime Academy in 1891 is the oldest maritime academy in the country.

--Teachers College of the City of Boston in 1852 was transferred by the city to the state in 1952 as Boston State College. It was recently absorbed by the University of Massachusetts/Boston.

--The former normal schools were designated state colleges in 1932 and state colleges in 1960, and many of these served urban constituencies.

Central to the examination of the development of urban higher education is a consideration of junior colleges and community colleges.

In The American Community College, Arthur Cohen and Florence Brauer, (Jossey-Bass, San Francisco, Washington, London, 1982), wrote



that the American community college began in the early twentieth century because:

- (1) there was a need for trained workers;
- (2) a desire to promote social equality; and
- (3) a need to respond to prolonged adolescence.

The programs and courses of the community college have been geared to the following:

- (1) Transfer preparation—providing access and educational preparation to students who are not ready for a four-year college.
- (2) Vocational/technical education—teaching skills more complicated than that offered in high schools of a career-educational nature.
- (3) Continuing education—providing access and life-long learning opportunities to adults.
- (4) Remedial education—compensating for poorly-prepared secondary school education.
- (5) Community service—acting as a community cultural center and offering short courses, workshops, non-credit courses, and specific events.

Up until 1940, so-called community colleges were known as junior colleges which referred to the lower divisions of four-year colleges. These colleges had their origins in California and the western part of the United States.

1909--there were twenty junior colleges

1919--there were 170 junior colleges

1922--37 of 48 states had junior colleges

1930--there were 450 junior colleges.

A distinction is drawn between the junior college and the community college in The Junior College, (The Center For Applied Research in Education, Inc., New York, 1965), by James Reynolds.

Four factors influenced the establishment of junior colleges:

- (1) desire to extend high school.
- (2) transformation of many church-affiliated colleges to two-year institutions.
- (3) desire to bring education to rural areas.
- (4) philanthropic desires.

The author distinguishes between community colleges and junior colleges by asserting that junior colleges are generally the lower division of a four-year program where community colleges have programs geared toward the community in which they are located. Community colleges are publicly-controlled.

Clark Kerr in The Uses of the University, (Godkin Lectures at Harvard, 1963), traces the origins of the the modern American university to George Ticknor of Harvard who advocated a broader curriculum with electives. Ticknor's ideas became realized when Eliot took over as Harvard's President (1869-1909). Eliot broadened the university's curriculum, and placed great emphasis upon the graduate school, the professional school and research. Other higher educational institutions followed Harvard's lead.

John Hopkins University President Daniel Coit Gilman also helped to shape the development of higher education by establishing the preeminence of the department in 1876; creating research institutes and centers; and expanding significantly the number of course offerings.

The Harvard and Hopkins experiments along with the land-grant movement dramatically transformed higher education in America. With the land grant schools, the doors of higher education were opened to the children of farmers and workers; service bureaus were established; and schools of agriculture, engineering, home economics, and business administration were established. Additionally, Kerr suggests, federal research grants and the post-World War II G.I. Bill sent seismic shocks through higher education--these forces led to the modern-day emergence of the "Multiversity."

Clark Kerr contends that today the "Multiversity" is marked by great variety--the large and the small, the private and the public, the general and the specialized. The total system of higher education in America is extraordinarily flexible and de-centralized, marked by a pluralism that reflects American society.

Kerr contends that higher education in the United States has combined the British system for undergraduate student life; the German system for graduate education; and the American system for service activities with its public orientation.

Urban higher education certainly resembles Kerr's description of a whole series of communities and activities held together by a common name and serving a variety of purposes. A closer look at specific urban institutions can shed further light on our endeavor.

#### A Look At Specific Urban Institutions

William Boyd's, The History of Western Education, (Adsam and Charles Black, London, 1947) and R.F. Butt's, The Education of the



West (McGraw Hill, New York, 1973) discusses the first urban higher educational institutions—Bologna and Paris.

The University of Bologna and the University of Paris provided the western model for higher education. Bologna, developed by students in the 11th century, became a great center for legal studies. It was a cosmopolitan school, attracting mature, wealthy men from throughout Europe. These students typically hired teachers to educate them in subjects of interest.

The students were mainly men who held office in some department of the church or the state—archdeacons, heads of schools, canons of cathedrals, and like functionaries.

Faculties of medicine and liberal arts were formed after 1200 and science in 1700. By the 18th century women were admitted as students and teachers. Although Bologna received its charter in 1252, it hadn't a fixed site until 1520, when special apartments were set aside for its professors. Pope Pius IV ordered the erection of a student building in 1563.

Paris developed as a school specializing in the liberal arts and theology in the 12th century. Started by its faculty, it was soon regarded highly by the international community as evidenced by its diverse student body.

It grew out of schools attached to the Cathedral of Notre Dame. Peter Abelard moved the school from the cathedral to the Left Bank, where it was officially established early in the 13th century. The most famous unit was the Sorbonne, originally a theological college. It soon overshadowed other university colleges and became a center for enlightened scholarship during the Renaissance.

Unlike Bologna, the teachers took the initiative in organizing the classes. The faculty view of what would be taught dominated. Bologna emphasized the practical and Paris the liberal arts: grammar, dialiectics, rhetoric, geometry, arithmetic, astronomy, and music. It was this tradition that would be emulated in England and the United States.

At Bologna and Paris, students organized themselves into "nations", where members from a "nation" gathered in a hostel. A natural outgrowth of this was the college, an endowed or privately-supported building in which members of the college live and study together.

The Emergence of the American University, By L.R. Veysey (University of Chicago Press, Chicago 1965) deals with the influence of Harvard and other trends that helped to shape American higher education.

Most of the early American colleges were started by religious groups to train learned men for the Christian ministry. This aristocratic orientation was to remain until the mid-nineteenth century when Jacksonian populism and the land-grant movement began to alter the view of higher education. Notably, a special committee of the Massachusetts legislature said of Harvard:

"The college fails to answer the just expectations of the people of the state. A college should be open to boys who need special learning for a specific purpose. It should give the people the practical instruction they want and not a classical literary course suitable only for the aristocracy. It should help young men to become better farmers, mechanics, and merchants."

Charles Eliot, president from 1869-1909, had a profound impact upon Harvard and higher education in the United States. He loosened the curriculum to allow students to choose courses they wished to study. He supported professional faculties, which gave rise to the establishment new schools such as business and other graduate programs. A new model of American higher education was emerging: It was large, diverse, flexible, and gave support to both practical and theoretical studies. It was during this period that urban higher education was developing.

In the United States, this new model that emerged reflected such societal issues as industrialization and an increasing dissatisfaction with the religious-oriented colleges which to many seemed oblivious to the changes taking place.

Two works discuss the development of C.U.N.Y.: S. William Rudy, The College of the City of New York: A History - 1847-1947, (New York: The City College Press, 1949); and a Ph.D. dissertation by Sheila C. Gordon, The Transformation of the City Univesity of New York, 1945-1970, Columbia University, 1975.

C.U.N.Y. was established in 1961 by combining New York city's several municipal colleges. The origins of the university date back to 1847 when the College of the City of New York was known as the Free Academy. The college was the first free municipal college in the country.

In 1910, an extension division for teachers was established in Brooklyn. During the formative years, courses were offered at the junior college level. It became Brooklyn College in 1930 and part of C.U.N.Y. in 1961.

A school of business and civic administration was established in 1919 in mid-Manhattan. This commuter business school became Bernard Baruch College in 1968.

Hunter College evolved from the Female Normal and High School in New York City which had been established in 1869. Today this commuter college awards a wide variety of degrees and has a program for mature and highly-motivated students, who are allowed to design their own programs. The Evening Division provides both degree and non-degree courses. The School of Health Sciences, located in a health science center, awards degrees in various health-related fields. The college also has consortium arrangement with Mannes college of Music and an exchange program with VIVO Institute of Jewish Research. Other offerings include a Junior Year in New York Program for students outside the city, a Seminar/Internship Program in New York City government, and study abroad.

Brooklyn's community leaders were instrumental in establishing Medgar Evers College in 1969 to serve the needs of the central Brooklyn community. A wide variety of two and four-year degree programs are offered in addition to special programs such as Search for Education, Elevation and Knowledge (SEEK), College Discovery, and English as a Second Language. An adult continuing education division provides both credit and non-credit course offerings.

Established in 1931, Herbert H. Lehman College in the Bronx conducts many degree programs in addition to the Health Professions Institute and the Institute for Bronx Regional Community History Studies.

The John Jay College of Criminal Justice established the College of Police Science in 1964 and set up satellite programs with Herbert Lehman College, Kingsborough Community College, Queensborough Community College, and the U.S. Military Academy. It also conducts the ASCENT Program for aspiring high school students.

The Harlem branch of C.U.N.Y. was established as a four-year liberal arts college to train students from minority groups in health-related careers. The program was designed to correct the low ratio of minority students in the senior units of C.U.N.Y. and to address the growing shortage of community health workers.

Community colleges in Staten Island, the Bronx, and New York City as well as York College, Queens College and Staten Island College were made part of the C.U.N.Y. in 1961.

The Mt. Sinai School of Medicine, a financially autonomous but affiliated commuter medical school, conducts the Brookdale Center for Continuous Education for medical and health practitioners. A Graduate School and University Center was also added in 1961.

The original goal of this urban institution was to "bring the advantages of the best education to city residents who had the capacity to benefit from it." In later years, it broadened that goal to include students not previously considered college material, providing remedial instruction to those students.

The desire to expand access to higher education to the city's minority population led to the establishment of an open admissions program in 1966. Admission was granted to any applicant from the New York City school system, irrespective of previous academic background. Poorly-prepared students were provided remedial work until they were



ready to commence the regular collegiate program. Although every one was admitted, many black students were tracked into the community college units, while whites were placed in the four-year program. To be considered for the senior colleges, a student needed an 85 average with a top 30% class ranking.

The financial crisis of the mid-1970s hastened the end of open admissions. The rapidly growing enrollment accompanied by the divergence of staff to remedial efforts forced an end to open admissions and free tuition. There was also concern that this maximum access effort was depreciating the value of the college degree.

The state was compelled to intervene financially with the stipulation that tuition was to be levied for the first time in the school's history. Although the state has been providing financial assistance since 1948, the university remains a municipal institution.

Brooklyn College today provides us with an example of how the atmosphere has changed since the crises of the 1970s. With one of the most tightly-structured core curricula in the United States, Brooklyn College requires thirty-four courses to graduate. A course load of ten per year, with exhaustive reading, writing, and thinking requirements. Subjects range from computer literacy to Homer.

According to Reginald C. McGrance, in The University of Cincinnati: A Success Story In Urban Higher Education (New York: Harper and Row, 1963), the Ohio legislature established Cincinnati College on January 22, 1819. This college evolved into a municipal university by 1871. It was voted municipal tax support in 1893 and in 1977 joined the Ohio state university system. In 1967, the university

became the first municipally-sponsored, state-supported institution in the country.

The University of Cincinnati is a public commuter and residential institution with more than 22,000 full-time and 16,000 part-time students. Units of the university include liberal arts and science, medicine, engineering, education, home economics, nursing, health, law, design, business administration and pharmacy. An evening college was set-up in 1920, and a two-year University College was founded in 1960.

University College is an open admissions college which confers associate degrees in arts and science subjects. Two-year general and technical colleges were founded in 1967 and 1972. These colleges grant associate degrees in applied science, business, and arts subjects.

The Division of Continuing Education conducts various credit and non-credit courses, workshops, conferences, and short-term courses. It includes the Center for Continuous Learning which administers the Senior Citizen and other programs for part-time adult students. The Professional Practice Program offers cooperative educational opportunities.

Wayne State University is discussed in A Place of Light: The History of Wayne State University, by Leslie L. Hannawalt (Detroit: Wayne State University Press, 1968).

Located in Detroit, the university began in 1868 as the Detroit Medical College. In that year the College of Education also was established under the authority of Detroit Board of Education. The

present university was formed under state control in 1956 and currently enrolls more than 33,000 students.

In addition to the many colleges and schools of the university, Wayne State includes Montiel college for interdisciplinary training through such methods as tutorials and seminars. In conjunction with the University of Michigan, it conducts the Graduate Division of Instruction and Research, the Division of Adult Education, the Institutes of Labor and Industrial Relations, and Continuing Legal Education.

The College of Lifelong Learning, set-up in 1973, grants bachelor of general studies degrees to adult students. It also conducts educational centers throughout the metropolis.

The university has also developed a Division of Community Education and a University Studies/Weekend College Program in addition to maintaining a Professional Co-op Program which offers work/study opportunities for professionals.

Wayne State conducts educational centers in a variety of diverse areas: Black Studies, Chicano-Boricua Studies, the Study of Cognitive Processes, Health Research, Urban Studies, and Peace and Conflict Studies.

Temple University was started in 1884 by a Baptist clergyman and pastor of Grace Baptist Church in Philadelphia. Rev. Russell Conwell began with a class of seven students, who met one night a week in his study. The group expanded, teachers were added, and eventually a building was rented. There were 590 students by 1888 when the minister founded Temple College. It became Temple University in 1907.



Public College and Universities, by John F. and Shirley M. Ohles, (Greenwood Press, New York, 1986), is the source for information on Temple University and a few others.

On the 76-acre main campus in the center of Philadelphia are located ten of the sixteen schools and colleges. There is a 186-acre campus eighteen miles northeast of the city and a 20-acre Health Science Campus in Philadelphia.

Classes in forty extension centers are conducted in this public commuter and residential university of 31,000 full-time students. Undergraduate and graduate degrees are offered in a large number of subjects, utilizing many separate locations in Philadelphia and its suburbs. Special attention is given to the large number of part-time and evening students as well as students with inadequate previous preparation.

In 1965, an act of the state legislature made the university, though still privately controlled, state-related as a unit of the Pennsylvania system of higher education.

Public Colleges and Universities describes the University of Illinois at Chicago Circle as an institution established as a branch campus for the land-grant-created University of Illinois.

Chicago Circle was formed in the fall of 1982 with the merger of the campuses of the University of Illinois Medical Center and the University of Illinois at Chicago Circle, which emerged from the University of Illinois at North Pier (1946). The University of Illinois at Chicago Circle occupies a 106-acre location in the southwest side of Chicago.

It is a public, commuter and residential university, organized into a number of colleges including Urban Planning, Jane Addams College of Social Work, and Liberal Arts and Science.

The university conducts the Centers for Research in Law and Justice; Jane Addams Center for Social Policy and Research; Urban Economic Development; Nathalie P. Voorhees Center for Neighborhood and Community Improvement and Urban Transportation.

The catalogue describes Northeastern University as a private "urban university," founded in 1898 and located in the heart of Boston. From its beginning, Northeastern's dominant purpose has been the discovery of community educational needs and developing servicable ways of meeting those needs. It has been conscious of avoiding duplication by pioneering new areas of educational service.

Cooperative Education, begun in 1909, offers students the opportunity to gain practical experience as part of their college program. This educational approach has been designed to assist students in financing their educations.

Cooperative education is based upon the philosophy that what students learn in the workplace is just as valuable as what they learn in the classroom. Work assignments are intended to be integrated carefully into the course-load. The work experience is designed to facilitate career decisions early in college years as well as provide potentially worthwhile professional contacts.

The curricula leading to degrees generally requires five years. Typically, a freshman year of three consecutive quarters of full-time study is followed by four upper-class years in which students alternate periods of classroom attendance with cooperative work

assignments. Students are assigned a faculty coordinator and a counselling team that is responsible for all phases of the program

Kenneth Ryder, former president of the university, asserts in the introduction to the school catalogue that Northeastern tries to combine a quest for knowledge with the forging of a productive career path. As an urban university, it endeavors to provide a practical approach to higher education without diminishing academic content.

Massachusetts General Court documents (House 485, 1915 Report of the Board of Education relative to establishing a State University), suggest that the Commonwealth of Massachusetts first entertained plans to establish a state university in the metropolitan Boston area in 1915. The proposal called for an institution that would be accessible to a large number of day students living at home; that would be located near other institutions of higher learning; and that would be accessible to commercial and industrial establishments where students could find employment.

The proposal was opposed on the basis of cost, availability of private institutions and state facilities (The Agricultural College at Amherst, Lowell Textile, New Bedford Textile, and Fall River Textile), and that money would be better spent on prisons and correction units. Nothing happened.

In the ensuing years, studies were made, adopted, and placed on file until 1965 when the University of Massachusetts opened a branch campus in Boston. It was merged with Boston State College in 1982. Boston State was originally established in 1852 as the Boston Normal School for the training of teachers.

Public Colleges and Universities describes UMass/Boston as a public commuter university with colleges of Arts and Sciences, Management, Public and Community Service, Nursing, the Institute of Learning and Teaching, the College of Public and Community Service, and the John W. McCormack Institute of Public Affairs. The Division of Continuing Education offers courses in a variety of off-campus urban and suburban locations. The Extended Day Program provides evening courses. Foreign study and international student exchange programs are also offered.

The University of Massachusetts had been established as the Massachusetts College of Agriculture by state legislation in 1863 as the state's land-grant institution. The name was changed to Massachusetts State College in 1931 and to the University of Massachusetts in 1947. The Boston branch was opened in 1965.

UMass/Boston adopted a credentialing or competency-based program of assembling academic credit for work experience accompanied by classroom and seminar study. This was intended to enhance students' capacity for careers in public and community service.

In a Time magazine article on April 28, 1986 (Vol. 127, no. 17), entitled "Those Hot Colleges Climb," chancellor Robert Corrigan described UMass/Boston's mission as "taking the land-grant concept of service, research, and teaching and bringing it to an urban area to be a force in the community." Sixty percent of the special programs in Boston's public school system are sponsored by UMass/Boston. Notably, the average age of students in twenty-seven years.

## The New Economy

Several works on the emerging economy have received a great deal of attention over the past couple of years.

In Megatrends, Naisbet describes future forces that are occurring in the United States:

(1) The shift from an industrial to an information society has been taking place since 1957 when the Soviet Union launched Sputnik, thus introducing the era of global satellite communication.

(2) The shift from a national to a world economy will see the developed nations lose their industrial dominance to the Third World. By the year 2000, the Third World will manufacture as much as thirty percent of the world's goods. These industries will include steel, automobiles, railroad equipment, machinery, appliances, textiles, shoes, and apparel.

(3) The shift from the customary short-term business orientation to the realization that long-term vision is crucial to developing workable business strategies. (Long-term vision is important to higher educational planning strategies because it will have to adapt to these changed business conditions.)

(4) The shift to a more decentralized workplace, with the help of the personal computer and wordprocessor, will enable more people to work at home either tied into a central network or in an entrepreneurial endeavor. (Whether this is beneficial to society is questionable, but it certainly reflects economic change.)



(5) The disillusionment with institutions has caused people to turn away from existing schools to alternative schools in an attempt to improve education.

(6) Businesses are shifting away from the hierarchical structures to networking because the former is recognized as no longer workable to today's society.

(7) The shift from North to South is economically demonstrated by the fact that between 1968 and 1978, two out of three new jobs were created in the Sunbelt or western states. While the country gained 18.4 million jobs, the Northeast and Midwest gained only 6.1 million to the South's and West's 12.3 million. The North lost hundreds of thousands of jobs as we shifted out of the industrial era.

(8) There is a shift from traditional nine-to-five employment to one of multiple options: part-time, flex-time, working at home, working partly away from home, and job sharing.

Robert Reich's The Next American Frontier devotes his work to explaining why the U.S. economy has changed and warning why the United States does not have the option of a leisurely transition.

Simply stated, the world has become a single, highly-competitive marketplace. Finance, physical resources, and finished goods have become markedly more mobile as the world economy has improved its communication and transportation mechanisms.

The events that explain what has changed the order of things, according to Reich, are European and Japanese reconstruction after World War II, third world industrialization, and more efficient world trade. America is now just one among several mature industrialized countries.

In America II, Richard Louv discusses how the emerging economy will change America. It will determine where and how people live; the nature of how people govern themselves; and the orientation of the workplace.

America is disbursing. This is producing a blurring of lines that previously have divided cities from suburbs, suburbs from small towns, and small towns from the countryside.

Public services are being replaced by private ones as the number of condominium associations multiply. In 1980, the number of "condo" associations surpassed the amount of tax revenue collected by these small towns. This suggests a diminished role for the public sector and "could" facilitate a down-sizing of government.

The deconcentration of the population is causing work and home to become clustered together. Two-way cable T.V., conference picture phones, rapid teleletters, and computer networks facilitate the location of the workplace in the home itself. This may become a significant reality in future American society.

Daniel Bell's The Coming of Post-Industrial Society points out that there is very little offered in the current education and training area that is particularly useful as we confront post-industrial realities. Job opportunities in the emerging economy will probably depend more on solid secondary school preparation than college degrees. The knowledge-based economy will depend more on basic skills than specific skills if the United States is to be competitive in the global economy.

In The American Opportunity, Edwin Hartwich observes that creative foreign aid programs can help us to compete more successfully. He

suggests providing incentives to third world countries to cooperate with us. The United States must revive and rebuild its share of world trade.

Finally, Alvin Toffler warns us that the "Future" will "Shock" us if we are unprepared for it.

John Naisbet's most recent work, Megatrends 2000, (Marion & Co., New York, 1990) describes the emerging economy as clearly becoming a global economy with a single, integrated marketplace. The most recent changes in eastern Europe, the Soviet Union, and the economic cooperation that is continuing between China and the United States reinforces that view.

That single marketplace puts enormous pressure on all countries to be competitive in a variety of areas, not the least of which includes an educated and trained workforce.

The most challenging labor force segment to be educated and trained reside in urban areas. That responsibility falls to urban higher education and particularly urban community colleges. Urban community colleges will play a vital role educating the neediest of our society. If these community colleges are not able to do the job, it won't get done.

### Human Capital

Heilburn (Urban Economics) argues that higher education can help the supply side of the economy by:

(1) identifying industries and businesses that can take advantage of an area's physical location;



(2) helping to examine the local supply of labor, land, capital, and entrepreneurship;

(3) improving the supply of labor through education;

(4) promoting the investment in infrastructure such as schools.

Man, Education, and Manpower by Venn discusses how national manpower policy has emphasized education as a development agent throughout most of our history. Improving the education of the labor force in order to provide the necessary manpower for the economy was reflected in the following:

--Morrill Act, 1862--expanding higher educational opportunities considerably.

--G.I. Bill, 1944--expanding higher educational opportunities for veterans.

--National Defense Education Act, 1958--low interest loans for post-secondary education.

The Carnegie Commission on Higher, "Higher Education and the Labor Market," presented the University of California as a case study on the pitfalls associated with adapting curriculum and programming to the labor market. Essentially the author asserts that programming lags behind the labor because decision-making is shared by some many interests including faculty, deans, chancellors, regent bodies, state legislatures, governors, administrative committees, and sometimes even voters. The business community is an important interest group.

Student demand seems to be the most active force in shaping higher education programming eventhough this may not be the most reliable indicator of what the economy needs.

In Does College Matter, Solomon explains how the economy allocates college trained manpower. When shortages develop in a field, wages rise, and students respond to such changes by choosing major fields. However, the market response would be very slow if, for example, the shortage field is a new one and academic departments are not organized to educate new entrants. The cost to the economy could be high if the adjustment period is delayed.

Another Carnegie study (Margaret Gordon, 1976) discusses that complicating higher education programming is the fact that student skills have been declining. Colleges have had to devote considerable resources to remedial and compensatory programs to meet basic skill requirements.

Education and Jobs: The Great Training Robbery, by Ivar Berg, asserts that improvements in the marketability (quality) of labor is a major source of economic growth. Improvements come about through training and education which makes two fundamental contributions to economic development:

(1) New techniques and ideas flow from higher levels of education. These new techniques can be embodied in human capital, which in turn determines the rate at which the economy expands.

(2) The more rapidly labor quality is improved and skills given to members of the workforce, the more easily the economy adjusts.

Fritz Machud (Education and Economic Growth) points out that all levels of education have been found to improve the quality of labor through better hygiene, better working habits and discipline, improved skills, better comprehension of work requirements, prompt reaction to

job situation changes, and increased capability to move into more productive occupations when opportunities arise.

Grant Venn in Mann, Education, and Manpower cites numerous studies that have been conducted by economists in recent years designed to quantify the link between education and economic growth. A body of economic analysis has emerged from these efforts through:

- (1) determination of the relationship between expenditures in education and growth in income;
- (2) the residual approach in determining the contribution of education to the Gross National Product (GNP); and
- (3) the calculation of the rate of return from expenditures in education.

From these analyses, economists have estimated that between 20% and 40% of our economic growth is the result of expenditures for schooling.

In Urban Economics, David Rasmussen presents the view that education is an investment in human capital that yields a benefit stream in the form of increased income to individuals throughout their lives and increased productivity to the overall economy. A method of analyzing these human capital decisions is described in Net Present Value Theory:

$$NPV = (E - C) / (1 + r) + (E - C) / (1 + r) + \dots + (E - C) / (1 + r)$$

E is an increase in earnings as a result of increased schooling. C is the cost of acquiring the schooling including the opportunity cost of forgone earnings.

Hence, (E - C) is the net benefit of increased education in year 1 and r is the rate at which the benefit stream is discounted.

The above framework makes it possible to analyze the position of the poor when faced with the decision of whether to invest in education. People in need of skill upgrading might not perceive it to be a net benefit compared to cost. People from a poverty environment might prefer immediate modest increases in income to a larger but deferred ones.

A method of evaluating human-capital investment decisions suggests important variables that influence the anticipated economic pay-off of continued schooling:

(1) The high cost of education to the poor and the high rate at which they discount future benefits are in part a product of their low income.

(2) The culture of poverty, based on a lack of hope for the future causes many of the poor to underestimate the return from schooling.

Arthur Schreiber (Economics of Urban Problems) points out the difficulty of applying cost/benefit analysis to decision-making to continue education. The costs would involve out-of-pocket expenses and the benefits future earnings. However, a short-coming associated with this type of analysis of adding benefits and subtracting costs, though yielding a positive net benefit, is the requirement to figure present value to benefit streams that may run forty-six years.

Ronald Grierson (Urban Economics: Readings and Analysis) suggests that educational decisions cannot be looked at in a rational sense. The higher number of high school dropouts indicates that decisions are not very "rational." Many students leave school before marginal private benefits drop to marginal private costs, a point where an

individual would be maximizing educational decisions from an economic perspective. This implies that dropouts have a higher propensity to consume than invest.

Financial incentives may not be the formula for encouraging continued schooling, although these economic incentives—low tuition and open admissions for example—have been the basis of policies from Bentham to Conant.

Galbraith comments that investments in human capital are as important as investments in physical capital. The improvement in human capital is almost wholly dependent upon investment in education. Modern economic activity requires a great number of trained and qualified people.

In an article in the Chronicle of Higher Education (page 1, 1986), it is argued that the more important skills for the emerging labor market are speaking, writing, reasoning, reading, mathematical, and scientific. These skills form the necessary foundation for the highly complex, intellectual skills necessary in an increasingly sophisticated and versatile work environment.

An article in Industry Week, entitled "2000: Labor shortage Looms," experts contend that seventy-five percent of all new jobs by 1990 will require some post-secondary education. At least two years of college will be standard for workplace literacy in the future where not long ago a ninth grade education was sufficient. Approach to life, including the work portion of life, that takes into account what is happening in the economy. Graduates will face increasingly more job insecurity if not properly prepared for the changed job market.



In Change ("Jobs: A Changing Workforce, A Changing Education") it is suggested that post-secondary educational programs should be more closely tied to the labor market. This could be done by allowing employers to collaborate more actively in designing educational curricula. Furnishing business with that kind of clout, however, will not come about easily.

Contact between the educational community and the employer could be strengthened by setting up programs where students hold down actual jobs while attending college. This approach is discussed in another article in Change, ("How should We Educate Workers For The Future.")

Corporate Classrooms, by Nell Eurich, devotes a great deal of attention to the problems of retraining the workforce. In it he estimates that workers will retire from their jobs three or four times during their lifetime, each time requiring new skills to meet new needs in new organizations. Workers in such fields as engineering, business, management, and teaching are among those who will require periodic retraining.

Japan's economic success has been helped by the continual upgrading of its workforce. A system of lifelong learning, involving continuing education, the training of entrepreneurs, and foreign language proficiency, will have to be developed if we are to be successful in the emerging economy.

Companies have attempted to work with colleges with limited success. Consequently, companies have resorted to the development of their own in-house efforts. Companies seem to prefer to run their own programs because they can control them directly and adjust content for changing circumstances as well as to introduce new time frames and

schedules quickly. There is general consensus that if retraining is to be successfully carried out in collaboration with the educational system, business will have to have control over the program, including the curriculum. Schools are reluctant to surrender control over the process of how they educate those matriculating in their institutions.

Overcoming the impediments that stand in the way of preparing the labor force for the new realities of a more economically competitive world will not be easy and may not happen in the short-run. Dealing with all of the problems, associated with urban life (poverty, language values) and the failings of our secondary schools are not the only obstacles.

A national will to surrender narrow self-interest and parochialism will have to emerge if urban higher education is going to be able to help prepare the labor force for the emerging technological economy.



## CHAPTER III

### METHODOLOGY

#### Design of the Study

This dissertation will deal specifically with the following:

1. What planning strategies are currently being used, if any, in urban community colleges, in the context of curriculum development to move the community colleges toward preparing the labor force for the emerging technological economy?

2. What planning strategies are being considered, if any, in urban community colleges, in the context of curriculum development to move the community colleges toward preparing the labor force for the emerging technological economy?

#### Subjects

Three individuals each from Massachusetts Bay Community College, Bunker Hill Community College, Roxbury Community College, and Middlesex Community College will be interviewed. These qualitative interviews will last approximately two hours each. The interviewees will be asked to respond to a series of questions intended to be responsive to the above questions. The individuals interviewed will be various senior individuals with knowledge of curriculum planning issues.

## Limitations of the Study

This study will be limited to the examination of curriculum planning strategies at four Massachusetts' community colleges: Massachusetts Bay Community College, Bunker Hill Community College, Roxbury Community College, and Middlesex Community College. Even though this study is restricted to Massachusetts, it is hoped that the descriptive analysis will have broader implications for labor force preparation approaches in both two year and four year higher educational institutions.

I believe that this study may also be of some use to private sector businesses that depend upon a skilled workforce for their competitiveness.

## Basic Assumptions

Although economies always have and always will undergo change, today that change is occurring at an unrelenting pace. Pressures to adjust to the so-called "high tech/information economy are complicated by the fact that the United States is faced with serious global competition.

Macroeconomic policies, such as managing the federal budget and trade imbalance, is surely one part of the strategy needed to guide the economy through transition. But macroeconomic policy alone is insufficient as evidenced by policies of currency devaluation that have not led to an improved foreign trade situation.

Microeconomic policy will play a pivotal role in the emerging economy. Specifically, policies that address the supply side of the labor market will have to be utilized. These policies would involve improving the quality and quantity of the labor force and reduce the level of inefficiencies in the labor market such as discrimination and the lack of job and career information.

Improving the quality and quantity of the labor force involves investing in, what economists call, human capital. Training and education are the investment vehicles for human capital. The more effective the human capital investment, the more easily the economy adjusts and expands. Economists have estimated that between twenty and forty percent of our economic growth has been the result of human capital investment.

Human capital investments are arguably most necessary in our urban areas because of the level of under-education. However, Net Present Value Theory suggests that the urban poor tend not to perceive the economic benefit as worth the cost, especially as measured by deferred income. Low cost tuition and open admission policies may not be the most important aspect of efforts designed to encourage the urbanite to invest in education.

Higher education has been used as a vehicle to improve the quality and quantity of our labor force since the passage of the Morrill Act in 1862. Typically, higher education programming has evolved, in part, as a response to student demand and the labor market. Student demand seems to be one of the most active forces in shaping higher educational programming.

Manpower studies seldom serve as the basis for proactive decision-making in program design. The reactive posture of higher educational programming is explained to a large extent by the fragmented nature of decision-making shared by faculty, deans, chancellors, regional bodies, state legislatures, governors, administrative committees and sometimes even voters.

The private sector has been playing a more significant role in labor force preparation through various advisory committees because of the failure, for whatever reason, of the higher educational system to adapt more quickly. Part of the problem is the rigidly bureaucratic nature of colleges and universities. Another part of the problem is explained by the watering down and overspecialization of the higher educational curriculum. Many private sector firms are required to provide even basic skills education to both the college and non-college individual.

Many companies conduct their own "colleges and universities" and education centers which not only provide basic skills instruction but also technological and scientific.

To meet the challenges posed by the new economic order, the United States would be well-served if urban higher education worked collaboratively with the private sector to insure that the American labor force was furnished with an adequate supply of skill. These skills would include a broadly-educated workforce that could move readily from one area of economic need to another.

The American economy would benefit from a more proactive urban higher educational system that could anticipate economic needs rather than merely reacting to those needs in a delayed fashion.

The more effective the labor force preparation strategies, the more easily the economy can adjust and expand. Because of the level of under-education in our urban areas, the need for effective labor force preparation is most pressing.

### Research Questions

The following questions will be the focus of the interview process. Interviewees will be encouraged and allowed latitude to offer additional observations relevant to the study. Interviewees will be asked to also comment on the respective five-year plans of the individual community colleges.

Do you see a need for expanded remedial program because of inadequate secondary school preparation?

How accommodating is your curriculum and program to different scheduling needs—evening, Saturday, locations, etc.?

Do you have consortiums with other entities?

Do you have cooperative educational programs?

Do you have programs that offer non-credit courses?

How accessible is your institution to the poor?

Does your curriculum accommodate the non-English-speaking?

Do you have career institutes—social work, urban affairs, etc.?

Do you have programs that reach into secondary schools to help prepare students for college or the workplace?

Does your institution attempt to recruit students who you know need remediation?

How competitive is your admissions—open, etc.?

How many courses are required to graduate? How many per semester?

What percentage graduate?

Do you have a program that works to retain students?

What kinds of degrees do you confer and what are the requirements?

Do you have programs that are geared to senior citizens?

Does your curriculum offer tutorials?

Do you offer work—study opportunities?

Do you offer programs in the urban economic development area?

Does your institution see a need to alter its mission in the context of curriculum in order to respond to emerging economy?

Has the private sector communicated with your school about the need to better prepare students for employment?

How expeditiously can your institution alter curriculum to respond to economic conditions?

To what extent does cost constrain your institution in establishing a mechanism to adjust curriculum to the changing needs of the labor market?

Does your institution attempt to coordinate curriculum with businesses and industries?

What is the decision-making process with regard to curriculum?

Do manpower studies play a role in curriculum decisions?

Do you offer programs in entrepreneurship?



## CHAPTER IV

### ANALYSIS AND DISCUSSION OF THE DATA

#### Community Colleges: Introduction

In this chapter, I will present the results of interviews I conducted at Bunker Hill Community College, Middlesex Community College, Roxbury Community College, and Massachusetts Bay Community College. At these institutions I engaged three senior individuals, knowledgeable in curriculum planning issues, at each school. The interviews lasted approximately two hours in duration and covered the broad range of questions listed in Chapter III. Additionally, I relied upon the relevant components of the respective five-year plans.

To begin this chapter historical perspective seems useful. Throughout the history of Massachusetts, studies have been conducted relative to adapting curriculum to changing economic conditions. The so-called Willis-Harrington study in 1964 looked at the entire scope of public education in the state. Its basic thrust was to identify what public education should be doing.

The Willis-Harrington study saw community colleges as training "middle manpower", a group the report contended that outnumbered the academically motivated at least two to one.

The 1964 study was conducted when the United States was without serious economic competition. The changed economic circumstance of the 1990s with serious global competition suggests a need to look at how community colleges should fit in today's world.<sup>2</sup>

The awarding of the first associate of arts degree at the University of Chicago in 1900, followed by the establishment of a junior college in Mexico, Missouri in 1901, marked the beginnings of the community college movement.

William Rainey Harper, president of the University of Chicago and an aggressive advocate of the junior college, saw it as a place where students could prepare for transfer to a senior college and could terminate at the end of the sophomore year.

Since the 1920s, public community colleges have dramatically expanded. By 1960, there were about 400 public community colleges in the United States, enrolling a little over three-quarters of a million students. In the decade that followed, enrollments grew sixfold and new community colleges opened at the rate of about one a week. Community colleges have become the largest single sector of higher education in the United States.<sup>3</sup>

### Bunker Hill Community College

Bunker Hill Community College offers twenty-four associate and certificate programs for day and evening students. Located in Charlestown, Bunker Hill Community College has its own M.B.T.A. subway stop which helps to insure easy access to the institution.

Bunker Hill's mission statement asserts that it provides a variety of programs and educational methods to meet the needs of a student body with diverse educational backgrounds and career expectations.<sup>4</sup>

## Programs of Study

Associate in Science Degree. These programs are designed for students who seek to gain employment upon graduation or who might seek to transfer to four-year colleges. These areas include Business Administration, Computer Programming, Criminal Justice, Culinary Arts, Electronics Technology, Fire Protection, Graphic and Visual Communication, Hotel Management, Human Services, Media Technology, Medical Radiography, Nuclear Medicine, Nurse Education, and Office Education.

Certificate Programs. One year certificate programs offer training in the following areas. Culinary Arts, Dental Assisting, Electronics, ESL Clinical Assistant, ESL Electronics Art, Photography, Music, Theater, Office Education, and Pre-health Sciences.

Courses For Elders. This program for elders meet one day per week for three hours in subjects like American History, Western Literature, and Music.

International Education. This program invites educators from other nations to participate in faculty exchange. Guest lecturers and prominent foreign scholars visit the campus frequently.

International Business. This program assists companies interested in entering the area of international trade.

Office of Business and Industry Relations. This office coordinates college activities with the Boston area business community. It works closely with the business community to meet training needs of local business and industry.

Satellite Campuses. Bunker Hill Community College offers a variety of courses at branch campuses at Somerville High School, Medford High School, the Tynan Community School in South Boston, Winthrop High School, several sites in Chelsea, and the Fitzgerald School in Cambridge.<sup>5</sup>

Division of Continuing Education. DCE provides credit and non-credit classes and programs offered outside the usual workday. It is a self-supporting organization, and is required to operate at no expense to the Commonwealth. Since its inception in 1974, enrollments in DCE have increased from 700 students to over 4000 students, ranging in age from ten to seventy-five.

The Division of Continuing Education, in conjunction with the Office of Business and Industry, coordinates the offering of customized training courses to meet the needs of business and industry in the Greater Boston area. Past clients have included Massachusetts General Hospital, Honeywell Corporation, New England Telephone and Telegraph, Docktor Pet Centers, Deaconess Hospital, Massachusetts Turnpike Authority, and the Office for Children.<sup>6</sup>

Cooperative Education. Cooperative Education can either be a one or a two semester course, each three credits. The office attempts to help students to secure paid employment that is relevant to the field of interest. Students are offered weekly seminars to assist in developing job search skills and issues that relate to the business world. A faculty coordinator visits and evaluates students at their worksites.

Educational Outreach Program. This program provides assistance to A.F.D.C. recipients, educationally disadvantaged adult students, and

women returning to school. It tries to eliminate barriers to educational development. Pre-admissions counseling includes diagnostic testing, career/life planning, admissions, procedure assistance, financial aid application assistance and academic program planning.

Support services include ongoing individual counseling, support group seminars, skill workshops, and advocacy.

Individualized Learning Programs. Students have the opportunity to earn course credit in a variety of ways. The Alternative Learning Accreditation Program awards academic credit for learning acquired through life experiences. The Community Educational Services Program gives academic credit for study in community-based educational programs. The Contract Learning Program allows independent study.

Learning Center. The Learning Center provides both diagnostic facilities and multi-media resources for individualized, independent instruction. More than a thousand learning programs in various fields are available.<sup>7</sup>

### Student Profile

A primary population served by Bunker Hill Community college are those individuals facing educational barriers and who, thus have the most critical need for community college service.

BHCC's total student minority enrollment is one of the largest among public institutions of higher education in Massachusetts. Black, Hispanic, and Asian students comprise over thirty-seven percent of the college's day student population. Included in the 1988 Fall



enrollment (1988) were 233 international students from countries such as the People's Republic of China, Japan, Cameroon, Morocco, Costa Rica, El Salvador, Venezuela, Mexico, Canada, Ireland, United Kingdom, Portugal, Greece, Denmark and nearly 550 refugee students from Vietnam, Cambodia, Czechoslovakia, and the U.S.S.R. Moreover, students who are refugees from countries such as Vietnam, Cambodia, and the U.S.S.R. make up nine percent of the student body.

During the Fall, 1988, semester, the school served 6,456 credit students in the Day and Continuing Education divisions. The full-time student equivalent for the Day Division was more than 2,600. The enrollment figure represents a decline over previous years. This was a direct consequence of the State's budget crisis, which required the college to reduce admissions by 500. Given the current fiscal climate, Bunker Hill's enrollment will not likely be able to meet student demand.

Under the circumstances, day enrollment projections for the main campus in Boston must be held to modest annual increases of about 100 students per year. This would bring day enrollments to about 3,600 by the Fall of 1992. On the other hand, DCE continues to grow and expand based on student and tuition revenues.

The State budget crisis also impacts on the ability to expand the Chelsea campus, despite the ever-increasing demand of students.

In general, participation among Black and Asian students is expected to remain at the current levels of about twenty percent and fifteen percent, respectively. Analysis of current demographic data suggests that as a percentage of the population the Hispanic students



appear to be under-represented. The college plans to re-double its efforts at reaching out to the Hispanic population.

Additional trends include:

- a slight increase in average age (currently 27 in day programs and 31 in evening programs;
- financial aid awards in which students emphasize grants versus loans and work-study;
- an increase in working parents as students;
- a slight decrease in ethnic minority enrollment;
- more students deliberately choosing BHCC over four-year colleges;
- continued strong participation of ESL and refugee students;
- continued strong participation of international students; and
- likely future increases of students from Chelsea, Medford, Malden, Everett, Revere, Winthrop and East Boston.<sup>8</sup>

TABLE 1

9

**BUNKER HILL COMMUNITY COLLEGE**  
**Headcount: Day, DCE, and Total;**  
**Fall Semester 1979-1989 [Credit Students]**

Year	Day	DCE	Total
'79	2,299	3,112	5,411
'80	2,739	2,930	5,669
'81	2,893	2,817	5,710
'82	3,193	3,237	6,430
'83	3,423	3,250	6,673
'84	3,829	3,148	6,977
'85	3,653	2,956	6,609
'86	3,682	3,203	6,885
'87	3,669	2,822	6,491
'88	3,417	3,039	6,456
'89	2,993	3,214	6,074

**BHCC's Day Student Body: Ethnic Composition 1979-1989**

Year	Black	Hispanic	Asian	Nat. Amer	CVerdean	White	Total
'79	105	21	16	7		2,150	2,299
'80	201	43	27	12		2,456	2,739
'81	229	86	68	10		2,500	2,893
'82	210	119	193	10		2,661	3,193
'83	252	145	286	17		2,723	3,423
'84	395	184	423	13		2,814	3,829
'85	562	177	503	14	34	2,363	3,653
'86	628	268	539	15	48	2,186	3,682
'87	649	264	527	16	36	2,177	3,669
'88	567	276	452	10	27	2,085	3,417
'89	506	198	374	7	30	1,878	2,993

**BUNKER HILL COMMUNITY COLLEGE**  
**Fall 1989 - Day Division**  
**Total Enrollment by Ethnic Group**

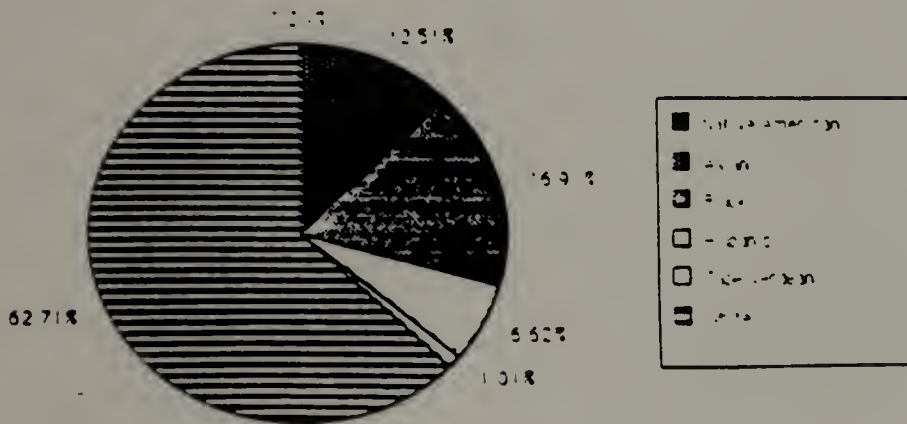
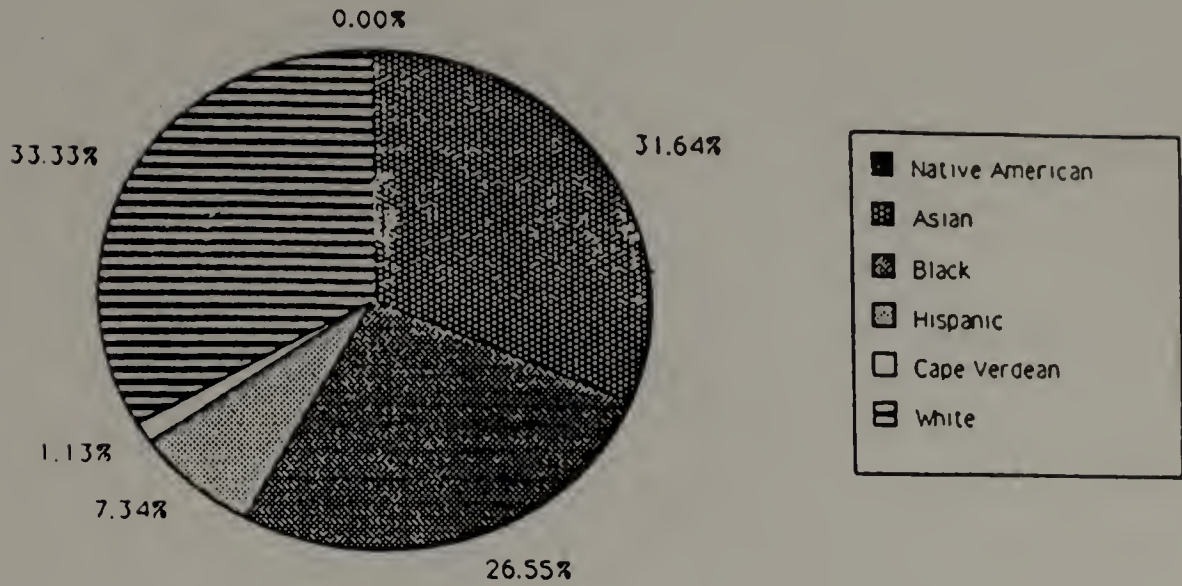


FIGURE 1 Bunker Hill Community College, Fall 1989 - Day Division  
 Total Enrollment by Ethnic Group

10

**BUNKER HILL COMMUNITY COLLEGE**  
**Fall 1989 - Day Division**  
**International (Visa) Students by Ethnic Group**



Thirty-five percent of all BHCC students reside in Boston, followed by Somerville with ten percent and Malden and Medford each with seven percent. [See Appendix "X" (F) for details regarding BHCC Fall 1989 Enrollment Characteristics.]

**BUNKER HILL COMMUNITY COLLEGE**  
**Fall 1989**  
**Enrollment by City/Town**

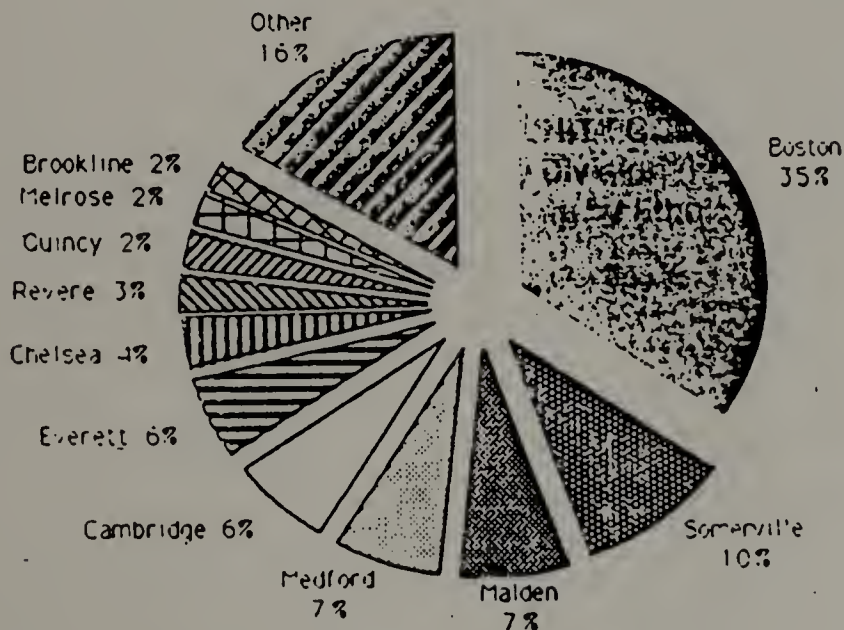


FIGURE 2 Enrollment by City/Town and Ethnic Group

## Directions in Future Curriculum

Bunker Hill plans to strengthen and expand developmental educational services in order to respond to the needs of a major segment of the student body.

As a result of the College's new assessment endeavor for incoming students, it has become clear the BHCC must be prepared to serve a substantial number of enrollees who, despite high school diplomas and GEDs, need extensive remediation. Excluding ESL students, twenty percent of new students may be reading below a sixth grade level, and about two-thirds may be unable to solve arithmetic problems involving basic concepts.

During the next five years Bunker Hill will:

- (1) provide the fundamentals of education for underprepared students, using new and re-allocated resources to expand developmental instruction in reading comprehension, writing and mathematics;
- (2) require students to successfully complete developmental courses appropriate to their placement level as a prerequisite to more advanced work in the field in which remediation was required;
- (3) develop policies requiring exit testing in selected core areas;
- (4) review the effectiveness of developmental courses; and
- (5) investigate ways to identify those students with learning disabilities, design workshops to increase faculty and staff awareness, and expand services to refer students to alternatives.

Bunker Hill plans to integrate an international perspective in all courses as well as establish a full degree in International Business and a certificate degree in International Studies.

The college also plans to augment programs that will sensitise faculty and staff to the multi-ethnic, multi-national diversity of the student body.

### New Curricula and Programs

BHCC will develop new certificate and degree programs in the areas of International Business, International Studies, Early Childhood Education and Development, ESL Umbrella Programs, and Waste Water Treatment and Management.

Additionally, the college plans to enhance curriculum design and teaching effectiveness; assess the appropriateness of a core curriculum; expand the honors program; integrate computer applications in all certificate and degree programs; and assure Continuing Education students access to all college services.

### Student Assessment

Bunker Hill is committed to establishing a comprehensive assessment component that will involve establishing an Assessment Center; refine student placement in courses based on skill level; work toward assessments in outcome for ESL, English, writing, reading and mathematics programs; and improve mainstreaming of students in the ESL programs.



## The Chelsea Campus

Based on an extensive study of potential student demographics and community need for additional quality postsecondary educational services, BHCC has established a satellite campus in Chelsea. The community and student response has confirmed the educational need and the student demand. In order to expand the efforts in Chelsea, the college will:

- (1) expand and enhance educational programs and services offered through the Chelsea satellite campus currently located in the Commandants' House, Chelsea Soldiers' Home;
- (2) seek release of the State Capital Outlay Budget with respect to the Chelsea campus; and
- (3) develop a future facility plan in conjunction with the State Division of Capital Planning and Operations (DCPO).

Bunker Hill Community College will also continue to develop linkages with public schools, four-year colleges and universities, community agencies, BHCC alumni, and local business and industry.

## Summary of Interviews

### Roger Richards

Bunker Hill is extremely sensitive to labor force preparation issues, but there are constraints. Notably funding and faculty union contracts are limitations. We pride ourselves on our ability to gear



up a program on a very short notice. However, we have to use grant funding or continuing education vehicles to respond quickly.

We are doing something in Chelsea now. A program to train non-english speaking people to become engineering aides has been set up with part-time instructors and grant funding. The funding source--vocational education--also allowed us to offer programs in Electronic Assistant and Health Clinical Assistant programs.

Another problem with adapting curriculum with the job market is the difficulty in getting good data. There are many sources but they don't all agree with each other.

There is no formal mechanism at Bunker Hill to monitor the labor market, but we do try to keep our eyes and ears open to what is going on. For example, we had a meeting recently here on what type of jobs would be generated by the "Big Dig" in Boston. That is the project to depress the Central Artery.

We have a number of advisory boards that exist ostensibly to help us determine appropriate curriculum.

Each career program has its own board made up of representatives from businesses in the area. These boards don't really alert us to new things however. Perhaps, there could be a different working relationship.

We do a lot of outreach for students. Most grant programs require us to recruit actively. The admissions office has a lot of contact with business and high schools.

For example, the Dental Assistant program began when Northeastern dropped all their certificate programs.

Whenever anyone wants to set up a new program in the day division, it has to go through an internal review process and receive the approval of the Board of Regents. Normally, that process takes two years to complete. It is long and we're trying to speed up the process.

We are currently proposing an Associate Degree Program in Early Childhood Education because of the tremendous need for people in the day-care industry. Also, we are putting the finishing touches on a program in international business. These programs must travel through the internal review process and receive the go-ahead from the Board of Regents.

There is built-in tension between the rapid changes in the job market and the collective bargaining process in such that it impedes our effort to adapt quickly to those changes. We have never hired anyone on a non-tenure track. There is a lot of resistance to cutting off programs that don't seem to be useful.

We do not have programs that are specifically designed to re-train, but when we do set up programs many of the entrants are those in career change. Our evening program attracts many career changers.

I don't think our mission will change in the future, although our community-Greater Boston-will have changed needs that we will have to address.

Those needs will probably move us into basic skills and remediation. Our founding president was philosophically opposed because he felt it branded people, damaged their self-esteem. However, before he retired, he began to see the need. The Board of

Regents came out with a requirement to assess all students for their basic skills competency. If they don't make the cut-off scores, students will be required to enter programs in remediation. These are people who should have received this instruction in high school. For whatever reason they did not receive the necessary education.

Unfortunately, we don't have enough faculty to do the remediation job effectively. We're just dealing with the very bottom layer of students. The cut-off is in the tenth percentile range. We would like to raise the cut-off level. The tenth percentile is pretty.

We continually attempt to be more flexible in class scheduling. For example, we will be offering classes at 7:00 a.m. through 5:00 p.m. Heating expenses don't allow us to offer Saturday classes.

We have a number of articulation agreements with four-year colleges and we're trying to develop them with public schools. Suffolk University and Bunker Hill work to avoid course duplication.

We are a member of an international consortium where we educate foreign students. We took sixteen students from Central America last semester. These students typically return home after they receive their training. We also have programs in faculty exchange.

We have a four-year old cooperative education program begun with a grant. It's called a parallel program. They must be in a job where they're learning something. They work fifteen hours a week while taking courses. These students work in banks, hotels, and retailing firms.

Some non-credit courses are offered in Continuing Education.

We are extremely accessible to the poor. We are located on the Orange Line. But we are particularly proud of the fact that we are

"attitudinally accessible" in that we make the poor feel comfortable here. In addition to Blacks and Hispanics, we have a large Southeast Asian population.

We have the largest ESL program of any two-year college in Massachusetts, and we could even expand that if we had the faculty.

We would like to have more programs that reach into the high schools. It is an area that will get much more attention in the future. We are starting a grant-funded program with Somerville and Charlestown High School students. We will teach them basic skills and study skills.

We are starting a fiber optics program with NYNEX that will be taught at Bunker Hill and linked into Charlestown and Snowden High Schools. Calculus will be offered at Bunker Hill.

Even though we have an open admissions policy, we will now have to begin to refuse admission to students because of the state budget problems.

The paradox is that by getting into basic skills instruction we are forcing the public to pay twice-once in high school and now here.

It is very difficult to get a handle on retention because students enter, leave, return, leave and sometimes return. Very few students actually complete the program in the four semesters. Life has changed for many. We attempt to intervene with students who we feel are in danger of dropping out of school.

We do not offer career courses for senior citizens. Our offerings for seniors are of an enrichment nature.

Interestingly, our liberal arts courses are drawing better these days than the career track courses. Many of the jobs don't demand

college training--why pay the money if you can get a job without it. Those in the liberal arts courses seem to be interested in four year college transfer.

We are not able to change curriculum in areas like starting career programs. We can of course make changes in course offerings fairly quickly.

Anticipating the needs of the future labor market is difficult because things change. By the time you gear up a program new manpower information becomes consequential. Additionally, the type of jobs that seem to be emerging really don't fit into the associate degree category. Service level jobs do not require any degree and technical jobs require bachelor degrees.

I think our future will be in the area of basic skills education. If we can turn that around, I think the business sector will be satisfied. Business doesn't seem to mind doing their own training. They want people who want to be trained.

Judy Lindamode

I've been on the committee for a couple of years and the chair this past semester. As chair, I am the coordinator of the group. It is not a position of authority per se. Anything that is initiated comes from a department and I work with them to assess how the change will affect other people, does it fit within the guidelines. Don't initiate the changes. Sometimes we identify the problems and communicate accordingly. The committee does not have very much power.



There are lots of things that are of concern to people like "what's the job market out there." But it may be a more theoretical kind of concern rather than let's develop a program. Part of the consideration of course emanates from the obvious budgetary constraints.

We do have initiatives that happened even though there is a process that often kills ideas. I came here two-and-a-half years ago as coordinator of early childhood education which is very much a labor force issue.

Money is often used as an excuse not to do something. If you really want to do something you can usually figure out a way to do it.

Examples of some programs that successfully came through the curriculum committee include a grant in the international area to develop a degree program that takes the global situation into account. Additionally, we have another program that offers a degree in international business. It is often a long process but approval is possible.

When there is an effort to begin a program, the person doing the proposing will utilize manpower studies in an effort to convince the powers that be that approval should be granted. The Office of Education Department comes to mind. That department identified changes in the office environment to support curriculum change to accommodate the workplace.

The process for changing the curriculum is as follows: the department initiates the proposed change; from there it goes to the division chair for comment and assessment. After that, other departments have a chance to comment. The Dean of Academic Affairs



and the Vice President for Academic Affairs enter the process for comment and input. After that, it goes to the college forum (the senior staff of the college). After the college forum votes on it, the proposal goes to the President and then to the Board of Regents, where it can remain for a long period of time while it is reviewed.

A lot of curriculum changes are coming in the area of basic skills. We call them developmental. Particularly in Math, English and language areas. We are trying to change the ways we once did things. There is little debate on the need to make sure that students are better educated in the fundamentals.

We can all speculate and we all have our opinions on the causes of the decline in basic skills competence. I think the problem may not be high school but rather the earlier grades. Family situation and lower expectations might explain the source of the problem.

We are trying to improve the English As A Second Language (ESL) program. We find that many who have successfully completed the ESL program are still not prepared to enter the classroom. It is a real dilemma because how long can you realistically keep students in developmental or remedial courses and not cause discouragement and eventually a drop-out.

Parent involvement is a suggested remedy, but how many parents are ill-equipped to handle the challenge.

Our mission will not change in the future. Curriculum will certainly change, but the on-going debate between liberal arts and vocational education will continue. That debate has been taking place for centuries and what is in fashion will shift with the times.

If we can answer this question, we have the answer to the appropriate curriculum: What is education for?

Community colleges are assuming the job of the secondary schools. As a taxpayer I don't like that reality.

We have not, but perhaps should do more with programs for senior citizens. Seniors are vast reservoir of potential for the labor force.

Budget, especially now, is always a constraint in curriculum adjustment. Personnel costs are particularly decisive.

Community colleges will always be struggling with issues of quality education because of our open admissions policy.

We are so caught up in the crisis of the moment that it is difficult to plan long-term. The now always takes priority eventhough curriculum planning in a proactive sense could be valuable. We are not even good at the now. We certainly are not long-term oriented.

Carl Nelson

You like to think that you are responsive to the aboutmarket conditions. If you examine the statutory requirements of Continuing Education, you'll find that we have a lot of flexibility. We are different from the day division where taxes support the operation. We are a self-supporting entity-the salaries of faculty and administrators and all expenses are paid from revenues we generate.

Part-time faculty and non-tenure requirements gives us more latitude. We hire faculty for any course where there is demand. We are forced to be responsive to labor force issues.

To give you an example, we have a MacIntosh here and there is a term called desk-top publishing. We saw a need for courses in desk-top publishing. Our day division couldn't do it because of a hiring freeze and an ability to respond. It only took us several weeks to start-up a course. We can be responsive. Whether we are as responsive as we should be is another story.

We don't have a formal component for monitoring labor force conditions because we don't have staffing ability. What you usually see at this level is a planning office. Most of the monitoring is done by the Board of Regents staff. Whether the Regents staff is doing it as they should is debatable.

We have a lot of contractual relationships with businesses. We do a lot of training for them but we are not that formal with them.

Now, most colleges do a lot of marketing that they wouldn't have done a few years ago. We advertise and visit high schools to reach out to prospective students.

We are serving people who are already working and older (over 30). We are less involved in job preparation and upward mobility issues. Our courses are different than the day. We are current to current demand issues. We wouldn't survive otherwise.

For some reason, enrollments here and elsewhere are strongest when the economy is doing well. That runs contrary to what probably should happen. When people are out of work they probably should be using there time educationally.

The new water treatment plant that is going to be built as part of the clean-up of Boston Harbor will require certain type of technical

manpower skills. That workforce does not now exist. We are working with the MWRA in an effort to prepare the workforce for that project.

We are unique in our international studies program. Forty-two percent of our student body is minority and twenty-five percent is foreign born.

Basic skills have undergone a significant change over the years. The need for basic skills remediation is daunting. Part of the reason for that is the number of ESL students. The competency level has steadily gone down over the past ten years in the basic skills area. This information comes to us from our placement exams. We are now mandated by public higher education to test for basic skills. We are required to place many of our students in remedial programs. For whatever reason, secondary schools are sending us students who need more high schools.

Unfortunately, we are forced to rewrite our curriculum in response to this decline in basic skills. In almost every major, we will have a series of developmental courses.

We are very flexible and accessible with our various satellite campuses.

While most community colleges are heavily into non-credit courses, we are not because the Boston area is flooded with non-credit course opportunities.

There is a lot of potential with the elderly population but we are not doing a lot. Retirement Trouble Shooting is a program we have. SCORE (a group of retired executives) sponsors a program where we train retirees for health care industry trouble shooters and

ombudsmen. It is designed to help with health care issues. We could do a lot more.

We have 3700 students, growing 5% a year and we graduate 100 students a year. The vast majority of our students aren't seeking a degree. They are mainly taking courses or seeking certificates.

We have a relationship with Roxbury Community College where students can cross register. We also have a transfer component with other schools—not a lot of formal relationships. Many companies are quite helpful with tuition reimbursement opportunities.

Every single major has an advisory board where industries provide input on curriculum needs. How effective they are is another question.

The health care industry is active in advising us on curriculum. We also have to follow national guidelines for certain certificate programs. Sometimes these national guidelines conflict with local input.

Manpower studies seldom surprise us and our frequently out of date by the time they are published. A combination of our planning department and the Board of Regents furnishes us with most of curriculum guidelines.

Hiring freezes and cost pressures constrain us. We'd do a lot more in the health care industry if we had more resources.

The two changes that I see for continuing education in the future will be work-place education and international studies. More and more companies are doing in-house training and we should be a part of that. Additionally, because so many companies will be dealing with the global economy, we should play a role in educating the workers.



## Middlesex Community College

Middlesex Community College is a public associate degree-granting college with campuses in Bedford, Burlington, and Lowell, serving the northwest region outside Boston, primarily the cities and towns of Middlesex County. The college serves the largest population area of the state, with nearly one-quarter of the state's population within a fifteen mile radius. Instructional centers in Acton, Arlington, Chelmsford, and Lexington are supplementary sites where continuing education courses are conducted.

The mission of the college is to provide high quality learning opportunities that are accessible, affordable, and effective. Middlesex has aligned its programs and politics with the critical national need for post-secondary education that is diversified enough to meet present economic and social realities. In that framework, the college builds on the traditions of open admissions, instructional excellence and comprehensive, flexible programming.

The addition of an urban campus (Lowell) in 1987 indicates a commitment to serving the Greater Middlesex area, extending educational facilities into the city, where the need and desire for formal academic and career preparation have intensified. Suburban campuses in Burlington and Bedford reflect a certain characteristic diversity-contributing to increased multi-cultural and intergenerational exchange among students.

Open admissions, low cost tuition and financial aid policies are augmented by vigorous initiatives that assist area residents in utilizing the college as a community resource. Expansion of the



Division of Continuing Education and Community Services under the designation of the Open Campus further enlarges the number and variety of programs and activities scheduled for evenings, late afternoons, weekends, and Summers, allowing the pursuit of coursework for credit, for professional and personal development, and for a vocational or specialized interests.

Open Campus initiatives link the college with elementary and high school retention and enrichment programs, with vocational and credit courses in prisons, with municipal and corporate management programs, and a growing number of community resource alliances. An Ethnic Folklore Institute promotes local pride and respect through programs exploring the languages, customs and tradition of resident ethnic communities.

A realistic approach to scheduling and credit accumulation is geared to inclusiveness. Many programs are structured so that attendance may be full or part-time, day or evening, culminating in the award of a degree or certificate, with further options of preparing for direct entry into a chosen field of work or transfer to a four-year college.

More than forty programs of study are available in the day division and twenty-two offered through the Open Campus. Advisory boards made up of representatives from the regions professional, technical, corporate and municipal sectors assist in keeping program development current and viable.<sup>12</sup>

## Programs of Study

Associate in Arts and Science Degree. The Liberal Arts and Science program offers a broad core of requirements in the liberal arts plus flexibility in providing electives for concentration in such areas as Liberal Studies, Communications, Computer Science, Engineering Science, Finance and Performing Arts, Studio Arts, and Theatre Concentration.

Associate in Science Degree in Business Administration. The Business Administration Degree allow students to concentrate in various business areas for career or transfer goals. Areas of concentration include business Administration, Accounting, Computer Applications, Hotel and Restaurant Management, Management, Marketing, Retail Management, and Fashion Merchandising.

Associate in Science Degree in Office Administration. The Office Administration Degree offers students preparation in office sciences for direct employment or transfer. Areas of concentration include Business Education, Executive Office Administration, and Information Processing.

Associate in Science Degree in Health Careers. The Health Career program prepares students for entry in various specialized health fields. These fields include Dental Assisting, Dental Hygiene, Dental Laboratory Technology, Diagnostic Medical Sonography, Medical Assisting, Medical Laboratory Technician, Nursing, and Radiologic Technology.

Associate in Science Degree in Human Services. The Human Services program prepares students for entry into various human services fields

that include Criminal Justice-Law Enforcement, Early Childhood Education, Fire Science and Safety Technology, Mental Health, and Mental Retardation.

Associate in Science Degree in Technology. The Technology program prepares students for entry into certain technology occupations including Automotive Technology, Electronic technology, Electro-Mechanical Drafting Technology.

Transition Program. The Transition Program is a two-year post-secondary program for individuals with learning disabilities. Graduates receive a certificate of completion.

Certificate Programs. Certificate Programs are offered to students as an alternative to receiving associate degrees. These offerings include Liberal Studies, Hotel and Restaurant Management, Paralegal Studies, Travel Services Management, Information Processing, Administrative Office Assistant, Dental Assisting, Diagnostic Medical Sonography, Health Careers, and Early Childhood Educations.<sup>13</sup>

The Open Campus. the Open Campus includes the Division of Continuing Education and Community Services and ten institutes. Day, evening, weekend, and summer programs serve more than 11,000 students a year in a network of instruction centers. Currently, the Open Campus offers classes and workshops in Acton, Arlington, Bedford, Burlington, Chelmsford, Lowell, and at Two locations in Lexington, the Kennedy School and the Minuteman Regional Vocational Technical High School. The Open Campus attempts to accommodate the schedules of the nontraditional student. Course offerings, for the most part, are the same as those in the college.

In addition, a number of programs address needs of specific populations, such as displaced homemakers, retired persons, military personnel, municipal employees, single parents, corporate executives, and refugees and immigrants.

Support services are provided in the form of individual counseling, workshops in self assessment, career planning, academic survival skills, financial aid, and a range of other areas. Tutoring is also available in both writing and mathematics.

The Open Campus Institutes center on particular aspects of community activity and interest. They are the following: Business and Industry; Municipal Management; Servicepersons; International Trade and Language; Ethnic Folklore and International Studies; Prisons; Emerite; Single Parent; Small Business Leadership Training; and School-College Partnership.

Business and Industry Programs. Middlesex works with local business and industry in offering a wide range of education and training services. These relationships involve training and education of a company's own employees; the development of consortia of area companies to train in an industry-wide or occupation-wide area; and involvement of business and industry directly in courses and programs.<sup>14</sup>

### Student Profile

With respect to students attending MCC during the day, 97% are enrolled as full time students (taking classes which total 12 or more credit hours). Ten percent of the students report they are married and 12% report that they have children. Typical of community colleges

TABLE 2

Day Enrollments Summary

SEMESTER	Fall 1984		Fall 1988	
	HEAD COUNT		FULL TIME EQUIVALENT	
Fall 1984	2258		2073	
Fall 1985	2428		2124	
Fall 1986	2597		2240	
Fall 1987	2825		2415	
Fall 1988	3603		2970	

TABLE 3

Day Head Count and FTE Enrollments by Campus

SEM	Fall 1984				Fall 1988				TOTAL	
	BEDFORD-VA		BEDFORD-NO		BURLINGTON		LOWELL		HC	FTE
	HC	FTE	HC	FTE	HC	FTE	HC	FTE	HC	FTE
F-1984	721	648	567	508	970	916			2258	3072
F-1985	880	773	496	381	1052	970			2428	2124
F-1986	933	777	556	473	1108	990			2597	2340
F-1987	902	759	523	450	1008	890	392	316	2825	2415
F-1988	996	805	585	477	947	815	1075	873	3603	2970

TABLE 4

Continuing Education Enrollments

SEMESTER	Fall 1984	Fall 1988
	HEAD COUNT	FULL TIME EQUIVALENT
Fall 1984	6,469	
Fall 1985	6,278	
Fall 1986	4,986	
Fall 1987	5,035	755
Fall 1988	5,286	888

In terms of the head count enrollment by academic division, 33.6% of the day students were enrolled in Business Programs with Business Administration (offered in Lowell and Burlington) having the greatest enrollment of any college program. Health Careers programs accounted for 15.5% of the day headcount enrollment with the Health Career Certificate having the greatest enrollment. The two Human Service programs, Mental Health and Criminal Justice, accounted for 10.5% of the Fall 1988 headcount total. Liberal Arts/Transfer Programs accounted for 34% of the semester total with Liberal Arts and Sciences being the second largest program at the College. The smallest headcount enrollment by program area was 5.1% in the Technology area.



## Directions in the Future Curriculum

Middlesex Community College has a majority of its students entering with inadequate skills. The school is committed to providing developmental programs to remediate these shortcomings. Intensive, personalized support, in a quiet and caring environment is necessary to accomplish the task.

Middlesex has an Academic Support Center that provides an environment that has produced a 71% success rate. In 1988/1989 there was a 180% increase in the number of students utilizing the services of the center over the previous year. The total number of students served college-wide in these two semesters was 1,047, with an average of four visits per student. The college plans to maintain massive support for the center.

In addition, there are the following recommendations for the future:

- labs that provide intensified developmental courses in reading, writing, math, ESL, and to academic support in other areas
- providing tutoring in developmental and content areas
- hiring additional tutors as needed
- providing adequate space for tutoring
- establishing a college-wide developmental committee composed of faculty providing developmental courses, faculty from other divisions, counselors, auxiliary lab staff, and appropriate administrators.
- having an administrator coordinate tutoring services and lab support at each campus site in concert with the Academic Support Services

Center. 16

## English As A Second Language

Because the acquisition of English competence is essential to successful college-level work, appropriate courses in reading, writing, and math must be provided for the non-native English speaker. Twenty-five percent of the population of Lowell is Southeast Asian and of those seeking access to higher education ESL course work is often needed to ensure success.

Special efforts should be made toward the linguistic and ethnic minorities existing in the communities served by the college. Further development of cultural diversity programs is essential to the development of a college that will attract, retain, and serve the variety of people seeking the benefits of a community college.

In addition, there are the following recommendations for the future:

- establishing an ESL program in the continuing education area
- expanding professional resources for non-native English speaking students.<sup>17</sup>

## International Education

The emerging international economy requires that American college students broaden their perspectives so as to avoid isolationist value systems. As a result of these economic changes Middlesex plans to:

- create international courses and modules based upon international perspectives where appropriate in finance, marketing, world religions and world history

- create an international studies program
- promote an interdisciplinary approach to international courses
- display visible signs of international perspective such as maps, flags, globes, art, newspapers, and books.

### Cultural Diversity

The culturally diverse world requires that Middlesex do the following:

- forster an environment that reflects the nature of life in the modern world
- increase multicultural activities through exchange programs, travel opportunities, and scholarships for students, faculty, and staff to explore other cultures
- promote the study of languages, history, culture, and ethnic groups.<sup>18</sup>

### Individualized Instruction

Expanding the Center for Individualized Instruction is planned to accommodate the need to educate non-traditional students of the future. Certain students do very well in the self-paced format.<sup>19</sup>

### Academic Standards

The college is considering a revision of its core curriculum, paying particular attention to the number of credits and course

distribution required. Also, an important component of the future curriculum is the Writing Across the Curriculum program.<sup>20</sup>

### Summary of Interviews

#### Chris Brennan

I work in three different areas. One is contract training. That is 50% of my work. I develop a course or a program and bring it to a business site. It could be anything from a short course on stress management to a full degree program. At Mitre Corporation, a Bedford defense contractor, we have an associate degree program in business administration. Students can proceed at their own pace. The major rationale for the company is that it is good for retention. This is a general business degree program rather than a specific career track.

We do a lot of workplace ESL programming. The companies pay for it. It started out with hospitals and hotels. Now a lot of manufacturing concerns are realizing its benefits.

We do a criminal justice program at Billerica House of Correction for correction officers.

The second area of my concern is consortium programs. Companies need help in training their workers for industry-wide needs. The environment is a popular area. These courses are on campus rather than company sites.

My third area of concern is sitting on the Private Industry Council. Some companies are looking at improving productivity and

labor force quality. Computer literacy and materials management are areas of typical concern.

One thing that seems to work is making adult basic education a preparatory requirement for technical courses. This allows us to deal with the basic skills problem with a minimum of stigma. Stigma seems worse when the course is taken on site. Employees don't like to put their failings on display. They have faked it for so long.

The Regents are becoming very heavy-handed in the basic skills area. The problem is that by requiring more basic skills courses that are essentially non-credit, you tend to discourage students from continuing their education.

We were a totally suburban campus until we established the Lowell campus. Three years ago we set up a campus in leased space. Thirty percent of the students in Lowell are Cambodians. Our suburban kids, although somewhat deficient in basic skills, are in better shape than the urban kids.

Here we have a lot of students who were unmotivated in high school and look to Middlesex as an option because of their late start. Then we have the student that sees Middlesex as an affordable option. Many students also are interested in transfer to a four-year college and see M.C.C. as the first two years because it is less expensive. We also have a lot of women who have returned to school--many in health fields.

One of our weaknesses is that we don't have shorter duration retraining programs.

Most of our students are career-oriented, but many do desire transfer to four-year institutions.



We essentially set up programs in response to business input.

I try to sell the companies on the need to train workers to be versatile. We don't do enough long-term looking. There isn't a lot of planning. Ideally, you should have a dynamic staff that works exclusively on long-term issues. The process is very much dependent on staff. We also need an external component. Companies should be involved in curriculum planning. Our planning and research office could do more curriculum planning.

I am a resource person to faculty and deans. I work with them on curriculum planning. The faculty does feel threatened when curriculum planning takes place.

We haven't had a big problem with basic skills here with the suburban students. That seems more of a problem with the urban student.

The formula is to engage the business community, talk to them. Communication is simple, but the essence of forging relationships between the college and business community. Active business advisory committees are useful. Perhaps encouraging business executives to teach here would be helpful.

We try to dress up our basic skills courses so as not to stigmatize students. Retention would be dead if you overloaded them with non-credit courses.

I think we should look at some general courses that all students would have to master. I traveled to California and examined some requirements in computer literacy, multicultural studies, and international issues. These type of courses would be part of the future curriculum.

I also think we will be forging closer relationships with business. We'll be a resource for companies.

The third area of debate will be between the liberal arts and vocational education advocates. I just don't know how that debate will play out.

Laurie Rose

Middlesex Community College serves a very large, diverse population as a result of the addition of the Lowell campus. Until recently, the school served a largely suburban constituency. With all of the socio-economic problems associated with the urban Lowell community, we have to look more closely at our curriculum. That has been very healthy for us. The addition of the Lowell campus has been a good change catalyst for us.

M.C.C.'s new president, Evan Dobbelle, has been a very good thing for the school. He was appointed two years ago. He is a very good leader who has empowered the staff and faculty.

I head the development operation which is concerned with external funding for the school. A major thrust of my job is to be future-oriented and innovative. I try to be a change agent. I also think that M.C.C. is a change agent.

The key for me is to agenda match. Find a funding source and match that to our agenda. It is very important, however, that we do not let the funding agent dictate the agenda.

For example, Raytheon came to us and asked us to establish a program for newcomers--Cambodians and other immigrants. Raytheon had a need for someone to prepare these newcomers for the workplace. Our program established outreach mechanisms with community-based programs and offered career guidance, counselling, ESL instruction, and the like.

Some of the examples of innovation that I've been involved with include programs for displaced homemakers, vocational education for the disadvantaged, and early awareness program for kids and middle school, and school/college problem-solving collaboratives. We have also set-up a STEPs program with attempts to reach down to lower grades to interest students in science.

The key to our mission is maximizing the number of students gaining certificates. We are not primarily transfer-oriented. Many students do go on to four-year colleges, but the certificate is the key.

Let me say this about the future--where we are going. The president has established a Future's Committee. This committee is a large, inclusive, school-based committee designed to identify where the school is going. The process is a healthy one because it involves so many with worthwhile input. While I am not at liberty to provide you with a copy of the report at this time, it seems that in terms of curriculum for the future we are attempting to keep all our options open. We are trying to be prepared for anything that might emerge. There is not a clear--this is where we are going. So much is happening and we want to be prepared for new developments.

The priorities that the Department of Education (federal government) have in the curriculum area-where there is available program funding is in the following areas:

adult population; career changers; gerontology, drop-out prevention; drugs and alcohol; partnerships; math and science; intervention issues; intercultural issues; television and computers; learning techniques; environment; and volunteerism.

We are in the process of curriculum reform. We are trying to change how we teach certain courses as well as what we teach. We are concerned with how we deliver it. Some examples to bolster what we are doing in this area revolves around faculty renewal. Faculty renewal involves professional development, executives-in-residences, and team teaching.

There is also a Catch 22 in curriculum areas. Because so many students have weak basic skills. Middlesex and other community colleges run the risk of becoming alternative high schools. It is a Catch 22 because someone has to teach the reading, writing and arithmetic. Shouldn't the pressure be placed upon the secondary school? The answer is obviously yes. But for whatever reason they, in general are not doing the job. So should community colleges become alternative high schools? Even if you argue that we should become de facto alternative high schools, we can't do in two years what has taken many years in the past.

At any rate, there are lots of needs and opportunities, educationally speaking, and we have to have a curriculum that is prepared for all of it.

Bryan O'Neil

We have been sensitive, much more in the last couple of years, to labor force preparation issues. I don't believe that was the case previously. One of the reasons that the new president came on board was to bring a more national and global perspective to the community college. We are very excited about the new leadership.

I am working on the development of an international business program.

The president believes in empowering the faculty in crafting the future for Middlesex. He has set up the Futures Committee intended to look at where the college is heading.

We try to look at the future as much as we can. It is not as easy as it sounds.

I am a member of the Chamber of Commerce. I try to stay in touch with the real world of the labor force. We have to look out. We can not just sit here and design programs.

There are different philosophies on basic skills. I believe in basic skills. But the state and industry should not just pay lip service to it. It must be funded properly.

I sit in the middle. I don't think you can just become a remediation college. Although remediation is indisputably needed, you have to maintain a delicate balance between the integrity of the college program and the need to provide remediation. I would like to think we can do both.

Business has a more focused perspective on what they need. They have a clearer bottom line. Although they won't articulate it as



such, they want well-rounded employees. They want people with global perspectives. This relates to the liberal arts. So we try to fashion programs that attempt to address that. Business won't say they want liberal arts training, but you can conclude from their comments that liberal arts education has value.

Business becomes a little concerned that if they invest too much in their employees' education that they will lose their employees.

Communication makes for a constructive relationship between business and educators. You should do a lot of talking and listening. That works to break down the barriers that can exist between the two sectors.

Although there is a bureaucratic process that must be followed when starting a new program, here the environment is very receptive to change. There is a certain amount of turf issues, it is not a big problem.

I try to show my faculty that the change is beneficial to them. Sometimes I have to back-off. You have to be willing to be realistic.

In the future, I see programs changing, but not our mission. We try to get around the involved process of the Regents. We don't circumvent, but we do try to be innovative. Bunker Hill has an international business program sitting with the Regents for a couple of years. Hopefully, our newly-proposed international business will not get bogged down like that.

Courses don't really change that much, but the content of those courses should change.

We are in a global economy. We have to be concerned with what the rest of the world is doing. That is not that much different from what

we are now doing except that we are on a bigger more diverse playing field. Textbooks will have to be upgraded and updated to reflect the multicultural, international marketplace.

### Roxbury Community College

Roxbury Community College is the only college in New England that serves a primarily minority population. It is coeducational and offers programs leading to an Associate of Arts Degree, and Associate of Science Degree, and Certificates for one-year programs of study in technical areas.

Roxbury Community College focuses its mission on those who have been historically deprived of access to postsecondary schooling, who have not had an adequate preparation for college or the workplace, and who are newcomers to Boston and America. This minority population lives predominantly in the Roxbury, Mattapan, Dorchester, Jamaica Plain, South End, Mission Hill and Chinatown communities. Many of the students come from families whose incomes are below the poverty line.

Classes are scheduled day and evening; full-time or part-time; throughout the calendar year. Some graduates go on to further academic study. Others go directly into the job market. Still others take one or two courses for career advancement or personal fulfillment. An on-site child-care center allows parents to study while their children are cared for professionally.

While students range in age from sixteen to sixty-five, most are in their mid-twenties. Virtually all students work full or part-time while attending classes during the day or evening. Many students are

parents. Some eighty-five percent of all students receive federal or state financial assistance. Day and evening enrollment is 2,500 students.

### Programs of Study

Associate of Arts Degree. These programs are designed for students who intend to transfer to four-year colleges. These degree programs are in the following areas: Business Administration, Biology, English, Mathematics, Physical Sciences, Pre-nursing, and Social Sciences.

Associate in Science Degree. These programs offer training in particular career fields for students seeking to immediately enter the job market upon graduation. These degree programs are in the following areas: Accounting, Business Management, Computer Programming, Early Childhood Education, Engineering, Architectural Design, computer-assisted Drafting, Electronics, Nursing, Office Technology, Retail Management, and Word Processing.

Certificate Programs. One year certificate programs offer in-depth, technical training in a specific occupational area. These programs are designed for entry-level employment. The certificate programs are in the following areas: Computer Programming, Early Childhood Education, Engineering and Architectural Drafting, Computer-assisted Drafting, and Word Processing.

Boston Business School. This school has been affiliated with R.C.C. since 1984 and has programs that prepare students for entry-level office positions. Programs are in the following areas:

Accounting, Bookkeeping, Executive Secretarial, Machine Transcription, and Shorthand.

Preparatory/Developmental Courses. (Basic skills) Students whose placement test scores indicate a pre-college level of understanding in English, reading, mathematics and related areas are recommended for pre-college level courses to strengthen their educational background and prepare them for college instruction.

Cooperative Education and Internships. These are academic programs designed to assist students in gaining work experience in their academic major or career interest.

English As A Second Language-ESL. This program is designed to help non-native english and foreign-speaking individuals with English, reading, writing, and conversation skills. It is intended to help students make the transition to college level work.

The Center For Community and Workplace Education. Three thousand individuals are offered courses at workplaces and union halls in conjunction with many varied community-based agencies.

GED Preparation. Courses are offered to assist students in taking the High School Equivalency Test.

The Minority Business Training and Resource Center. This center provides free business counseling and referral services, and low-cost workshops for minority business owners and entrepreneurs.

The Urban Environmental Practice Program. This program trains students for urban landscaping careers.

Teaching/Learning Center. This is a tutorial center for students seeking academic reinforcement.<sup>21</sup>

Learning Resource Center. This is a multidimensional resource facility housing an extensive library with computer and audio-visual equipment.<sup>22</sup>

### Directions in the Future Curriculum

Excluding ESL students, the bulk of each semester's entering students produce placement test scores within a wide range of developmental skills levels. Over the years Roxbury Community College has been attempting to meet the needs of these students and fulfill the commitment to open admissions through the Teaching/Learning Center. Recently, full-time faculty positions have been added in English, Math, and ESL and assigned to the Learning Center. Currently the college's budget supports only a fraction of the cost of the program; Title III, Board of Regents grants and a federal special services grant make up the bulk. Budgetary considerations will resurface in future years as the need for more individualized, non-traditional, student-centered approaches intensifies.

RCC has realized that it cannot adequately serve the wide range of student needs without having a comprehensive and well-coordinated effort receiving appropriate resources. A task-force has been reviewing the scope of services and the organizational structure best suited for efforts in the developmental skills area. Possible outcomes might include: sharply defined academic assessment and achievement goals, articulation and collaborative efforts with high schools and community agencies, a program structure reorganization, and a further re-allocation of resources.<sup>23</sup>



## Humanities and Multicultural Education

It has become apparent that the RCC humanities offerings have received an almost second-class status and that the students were not receiving the benefits of a full-time staffed and developed humanities program. The potential opportunities for outreach and collaborations with the surrounding arts community and for accessible and low-cost programs to attract the broader community to the campus is great.

Tapping the multicultural wealth of knowledge and talent from the very ranks of the RCC community will enable the college to incorporate a series of culture-based curriculum initiatives (the Spanish, French, and English-speaking Caribbean area) for the enhancement of a multicultural sensibility within the college community. One of the innovations planned will require each RCC student to become familiar with one other culture found on campus.

Another facet of this initiative will be a review of the present bilingual program and re-shape the focus and offerings to be more attuned to the learning modes of students and degree program requirements which, when combined, will shorten the length of time needed to graduate by students in the current bilingual/ESL program.<sup>24</sup>

## Allied Health Sciences

The thrust of new academic program development over the next five years will be in the allied health science area. These programs will be a natural extension of the new nursing program. There is great

expectation that collaborative arrangements can be developed with the Boston-area clinical and teaching services. There will be major push to expand the accessibility to people of color in the health professions. The noted high demand for skilled allied health workers will increase employment opportunities for minority persons.<sup>25</sup>

### Workplace and Community Education

The increased need for community college programs will be in direct response to the increase in the adult population of people of color and new immigrants. The resources of the public and private sectors will combine to serve the educational needs of the greater Boston area. They suggests that the college will be called upon to provide education for entry level technical positions, re-training for displaced workers, and to provide open admissions access for collegiate transfer preparation. RCC also plans to increase the capacity of the Adult Literacy Resource Institute and to secure state funding for the Center for Community and Workplace Education.

The Minority Business and Training Resource Center will play a vital role in providing community education training targeted to the development of the minority business community. In order to facilitate this development, the Center will nurture programs for entrepreneurs.<sup>26</sup>

### Student Profile

Roxbury Community College is unique among New England's institutions of higher education—it is the only public college with a

primary commitment to people of color. In the past decade, RCC has been an integral part in educating Boston's inner city population.

Approximately 80% of the students are first generation college students. Some RCC students train and re-train in new skill areas to get good jobs immediately, others prepare for transfer to four-year colleges to pursue bachelor's degrees. Over 40% of RCC graduates continue their education upon graduation. This is well above the national average for community college graduates. A composite profile of the RCC student is that of an older, working, more-motivated individual than in many traditional colleges. This student might be a parent of an immigrant, English might not be the first language, personal funds are probably scarce, and access to education very precious. This student is attending college to expand available opportunities which will lead to jobs, a career and a better future.

There are 3,500 students in the day and evening divisions. People of color comprise over 90% of the growing student body. Twenty-five percent have Spanish as their primary language. More than 95% of RCC students have family incomes below \$10,000 a year and receive some form of financial assistance. The average age of an RCC student is 28 years. Almost half possess G.E.D. certificates rather than high school diplomas. Most RCC students who have graduated from public school are not recent high school graduates. The largest segment of the student population is single, female heads of families struggling to make ends meet. Due to initial placement in developmental/ESL programs, work and family responsibilities, the average graduate takes six semesters to complete the two-year degree.

The Southwest Corridor and the new MBTA Orange Line stations near the new campus are expected to lead to an accelerated growth in enrollment, as well as increased community involvement with the college. Access to Chinatown via the Orange Line has led to a recent surge in Asian students.<sup>27</sup>

#### BENCHMARKS

Among the documented results expected to be accomplished during this five-year plan are the following:

- a- Implementation of the timetable for development of new programs in the Health Sciences (Stages 1 or 2 as indicated on chart)
  
- b- Completion of successful audits of financial aid disbursements and trust accounts monitoring beginning FY89.
  
- c- Development and implementation of an institutional affirmative action plan.
  
- d- Development and implementation of an admissions recruitment plan based on researched marketing strategy.
  
- e- Refinement and expansion of present computerized program for student data collection which will allow for longitudinal assessment of student academic development
  
- f- Implementation of multi-cultural materials across academic departments, specifically: Humanities, Languages, Social Sciences, English, ESL and Early Childhood.

g- Develop and implement a professional development plan for administrative and classified staff based on a survey of institutional needs in the areas of staff training.

h- Achieve a yearly goal of between 2 and 3 million dollars of external support through the Grants and Contracts Office.



## Academic Affairs

### Curriculum Improvement

Reviewed ESL curriculum and started revising it.

Reviewed and revised curriculum in the Office Technology Programs.

Started curriculum articulation with Boston Business School.

Piloted computerized accounting course.

Designed and implemented a common core for Management programs.

Developed and offered Children's Literature course.

Reviewed the Developmental English courses and revised curriculum.

Re-instituted RCC choir.

Reviewed and revised CAD programs.

Completed science improvement program under MISIP grant.

Developed a cultural (Caribbean) emphasis for Social Science and Humanities courses.

Reviewed and revised Early Childhood Education program.

Reviewed the Liberal Arts curricula.

Introduced computers in Science.

Through Title III, identified and purchased equipment for Computer Aided Instruction (CAI) and Audio-Visual (AV) for Nursing and Mathematics.

With Title III money, purchased 16 IBM PC's to add Computer/Aided Instruction (CAI) to Nursing curriculum.

Reviewed and revised Computer Information System curriculum.

Reviewed and revised all Developmental Math courses and with Title III money purchased Apple Computers and software to add Computer Aided Instruction (CAI) to Math.

Continued to improve Instructional Support by adding equipment and para-professional staff.

### Program Review, Revision, Development & Implementation

Inactivated the Court Reporter program.

Implemented the Nursing program.

Re-investigated the need for the Medical Lab. Technician program.

Set up an ad-hoc advisory committee for the Physical Therapy program and did research for Stage 1.

Set up an ad-hoc advisory committee for the Library Technician program and did the research for Stage 1.

Set up an Advisory Committees for all career programs, wrote and printed an Advisory Committee Guide.

Developed a proposal for an Adult Basic Education (ABE) program for those students who test below the 4.7 grade level.

Re-started Cooperative Education program.

Piloted the Coordinated Studies program.

### Institutional Support

Implemented the Department Chair concept at RCC.

Reviewed and revised Advising System and revised Handbook for Advisors.

Re-allocated two positions to Humanities, one to Music and the other to Drama and started the development of Music and Theater programs.

Developed and implemented safety procedures in Science.<sup>28</sup>

## Summary of Interviews

### Henry Allen

We are extremely responsive to labor force issues with the caveat that there is always tension between those who favor a liberal arts core curriculum and those that favor career education. The core curriculum people are interested in having students transfer to four-year colleges. By and large the liberal arts people have had the upper hand; therefore, transfer education has been stressed more than occupational education. But we do have many advisory groups and committees and we do design curriculum with the advice and input of the business community.

We are more reactive than proactive. We'll get as much information as possible on the job markets of the future but we are not as proactive as we might like. We have just put on a person as Director of Institutional Research who is supposed to be more proactive and long-term oriented in his approach to planning. It is very difficult for community to adapt and retool because of its limited resources.

We have strong-linkages with community-based agencies. In trying to coordinate educational programs in the area of adult literacy and basic skills there is a strong infrastructure. Because of limited resources here at Roxbury and at the agency level we attempt to work closely together. We conduct a Pathways program that attempts to communicate with students who are enrolled in community-based endeavors and who are prospective enrollees at RCC. This program with

thirty agencies attempts to provide transition help for students. We've done a similar thing with the private sector on a case by case basis rather than on a grand scale.

The best example of this is our computer-assisted drafting program. Digital Corp. was looking for skills and we were looking for partnerships. We did an on-site degree program where a student could receive an associate degree in nine months.

In basic skills we marketed our services with companies. Collaborative programs involving the union to serve six hundred students in ten different companies has been successful. So I guess we did do some proactive work here in the basic skills area.

Traditional outreach, like marketing and high school contact, has been done historically. I don't think we do it as well as we could. For example, Bunker Hill Community College has as many minority students as Roxbury Community College suggesting a more effective marketing and outreach effort.

The core mission of Roxbury Community College will remain the same but fiscal issues may change the mission somewhat through consolidation or the like. Tension between liberal arts and career proponents will continue.

We have a small number of retraining programs. It is limited. Other colleges seem to do more.

We do an extensive amount of remediation. We estimate that between 60 and 70 percent of our students with high school diplomas don't have reading, writing, and math skills anywhere near where they should be. We euphemistically call it developmental rather than remedial. We have different levels of basic skills instruction - a

core program that requires students to test out at the eighth grade level. In a semester or two we try to get them to a tenth grade level. The following year we hope to plug them into a college program.

We also have a pre-eighth program that we operate with grant money where we actually teach students to read and write.

One problem with basic skills courses is the lack of financial aid available for onon-credit courses. We can only serve a small number of students because of limited resources.

We had to suspend our cooperative education program because of financial constraints. Continuing education could do more in the flexible scheduling area.

We have four programs that reach into the secondary schools. We have an upward bound program called New Beginnings. It works with Madison Park and Boston Technical High Schools. We have vacation programs where students come when they are not in school for coursework.

We have a program with the Humphrey Center where students majoring in health care or drafting come to the college for after-school tutoring.

We work with Boston school teachers in a staff development effort providing them with exposure to multicultural issues and the like.

We have an extensive tutorial program that faculty uses to refer students in need of help. Tutoring takes place during the day and on weekends.



We also have a required program designed to teach students study skills. Also, we have a survival seminar that is geared toward retaining students in college.

Our students have a lot of problems that are associated with poverty and consequently we conduct a counselling program intended to help them deal and resolve personal problems.

We do not have any programs that deal specifically with senior citizens.

We conduct a Minority Business and Training Resource Center that works with minority business entrepreneurs. One-on-one counselling is used.

We also have worked with the parcel 18 Taskforce to let them know that we will help in training people for any businesses.

On a regular but limited basis, businesses contact us for training. We get a lot of calls from public agencies. The Massachusetts Turnpike Authority asked us to help in career enhancement.

I don't think there has been a decline in basic skills over the years. The problem has always been there. Now, because business is requiring higher levels of skills for jobs, an emphasis has emerged. People realize that if they wish to advance economically they need to upgrade their skills.

Holly Guran

The college made a tremendous effort to design programs to make people marketable. In any community college there is an on-going

struggle between those who believe that the mission is to prepare you for the job market immediately and the other is saying that the community college is a place for those who have lacked access to get a college education and then move into the middle class occupations.

Career counselling began in 1980 with me. Before that time there wasn't any career counselling component. To prepare for the responsibility I visited various colleges to learn what they were doing. I also did a lot of reading and research into how to set up a career counselling program.

I made it a point of talking to all the faculty in order to have a needs assessment. I did a lot of marketing and outreach. I also began an on-campus recruiting effort. Ironically, not all community colleges have on-campus recruiting.

I also devoted time to help students prepare for the recruitment interviews.

The business sector gave us a lot of attention because of its interest in hiring minorities. The problem was finding students who were well-schooled for the companies.

When the economy was doing well there was considerable economic opportunity. Now things have changed because of the slow-down in the economy.

One of the biggest parts of the challenge was making the students believe in themselves. Many of the students have low self-esteem.

Most students are offered jobs in the low level category. A two-year college degree does not prepare students for the better-paying positions. The type of jobs that are offered include aides, office help, human resource workers and some entry level

management positions in places like supermarkets. There has also been a big demand for word-processors.

Sadly, because businesses expected deficiencies in basic skills areas, they did not complain too much.

You really can't develop more sophisticated skills without a stronger foundation in the basic skills. People seem to have a lot of trouble with math. A lot of adult learners seem to have an unusually difficult time with math. We have not found a way to teach math as effectively as we'd like to to adult learners.

I have not sought feedback from the companies in any systematic fashion. It would have been a good idea to get a better handle on problems and needs.

A lot of students do not seek out counsellors. That is just the way it is. Having counselling program effectively utilized is important. It would be great if we could bring all the students into the process.

In the area of curriculum, you need a curriculum that will help people to learn how to solve problems. How to think. People who can think on their feet and be flexible in the workforce will do best in the emerging economy. Curriculum should be more geared to that and less to giving back to the teacher what has been given out in class. It should be more interactive and demanding.

There is not a formula. It takes good teachers who are dedicated. Teachers need support to help them be creative. Resources should be directed there.

Basic skills in my opinion is thinking and solving problems.

There should be a change in the two-year community college program. We can't take a student with an eighth grade reading level and turn that around in two years. They probably need three or four years.

In a multicultural society teaching students those basic skills becomes more challenging because different cultures process information differently.

One of the most productive efforts undertaken by Roxbury community College was the hiring of a consultant to assist teachers in understanding and educating the multicultural student body.

It is difficult to be systematic and proactive in integrating the curriculum and the labor market. There has never been a concerted effort to be systematic and proactive. Planning is very much current demand oriented. Survival requires that.

The faculty has consistently resisted business collaboration, fearing that they would become co-opted and lose their upper hand. The faculty becomes isolated and self-interested. Their bottom line is their own survival.

Ideally, the college should focus on thinking and basic skills and let the companies do the training. It is not easy to integrate business and academic programs because of turf battles.

Companies could do a lot of career counselling themselves on college campuses and help to provide direction for students desiring entry into the workforce.

I think we are getting more sensitive to labor force preparation issues because of the new president. He held a forum with the business community last fall to discuss labor force needs. My understanding is that some of our programs like the computer program and the electronics technology program are being more tailored to meet industry needs.

Traditionally, the orientation here has not been career track but rather transfer preparation to four-year colleges. Paradoxically though, 60% of the graduating students do so in the career-track. Forty percent of the students transfer to four-year colleges and seventy-five of those persist.

We do have formal articulation agreements with many four-year colleges. We also have a number of less-structured agreements.

I think that it is important to realize that so many worthwhile jobs require a four-year college degree. So as we plan to be more job market oriented, we should not forget the importance of transferring.

The skill levels of students exiting Roxbury Community College do not seem to differ too much from those from other community colleges. We serve a population that has been inadequately prepared in their previous schooling. And we have about three years to take a student with an average eighth-grade level of schooling and prepare him/her for transfer. So it is not difficult to understand why there are skill deficits, particularly in math and writing.

There has been in my opinion a general decline in expectation levels at the secondary school level. We don't demand enough.



Most of our students are older. The average age is between twenty-four and twenty-seven.

Many students with English as their primary language have as much difficulty with the language as do ESL students. Academic English is different than the English that they have been accustomed to using.

We have not been able to replace Holly Guran as placement counsellor because of budget constraints. We should have a person but we have been unable to resolve the finance issues.

We do not have retraining programs per se.

Holly brought in Roxbury alumni and had them speak about their careers. She brought in representatives of businesses to discuss the type of skills necessary for certain jobs. In the spring we will have about thirty companies on campus recruiting. Up until this year we had an internship program. Funding inability terminated the internship program.

I work with faculty to identify students eligible for college transfer. We look at schools that will best meet the career aspirations of the student. So we do a lot of career counselling. You try to get a handle on the career goals of the student.

Ninety percent of our students get some form of financial assistance. But that doesn't come close to covering their needs. Our students are poor and have all of the problems associated with poverty.

Self-esteem issues are a big problem with students who seek transfer as well as job placement. They don't feel they have the ability. They don't feel they can make it. Without help it is hard for them to overcome those fears.

The four-year colleges are very receptive to our students. They have a desire to attract minorities. Our problem is preparing them well enough for transfer.

Only about eight percent of those transferring to four-year colleges actually graduate. Students have too many outside responsibilities to take a traditional course load per semester.

The years in which the economy was booming we did not get as many students seeking transfer to four-year colleges. Now it seems more are thinking to transfer. Many older students come here looking to pick up specific skills as quickly as possible. Upgrading skills and job advancement are the goals of many older students.

A couple of years ago we did change curriculum to adapt to the new realities. All students must now complete English Composition, Intermediate Algebra, Literature, and a Lab Science. It was felt that the so-called basic skills needed attention. All community colleges are now integrating remediation into their college curriculum, even though they usually call it developmental or pre-college instruction.

This is a place where students can continue to return, inexpensively, and acquire new skills.

#### Massachusetts Bay Community College

Massachusetts Bay Community College, located on a scenic 84 acre site in Wellesley Hills, is a publicly supported associate degree and certificate granting institution. The college was founded in 1961 and was originally located in Boston.

The college offers career and transfer opportunities as well as programs for part time study and personal and professional enrichment through non-credit courses.

The Framingham campus was opened in 1986 as a full service campus. The campus offers programs in Licensed Practical Nursing, Court and Conference Reporting, Electronics, Secretarial Service, Travel and Tourism, and Automotive Technician. Mass. Bay also offers courses at a number of centers in the Metro-West area.

The primary mission of Massachusetts Bay is to serve the Metro-West region as an open access, comprehensive, student-centered institution. The secondary mission is to provide specialized educational programs, training, and services to the remaining citizens of the state. The college encourages life-long learning and actively promotes its services to minorities and economically/educationally disadvantaged persons.

The college requires all graduates to demonstrate competency in reading, writing/communications, mathematical computations, critical thinking techniques and applications, technological literacy, and racial and cross-cultural understanding. Mass. Bay also requires all its graduates to be familiar with computer applications.<sup>29</sup>

### Programs of Study

Depending upon the program in which the student is enrolled, a student may earn either an Associate in Arts Degree or an Associate in Science Degree.

Associate degree programs carry a minimum requirement of sixty credits with many specified courses. They are designed to be

completed in four semesters by full-time students over a two-year period. Students attending part-time will require additional time as well as students who are in need of remediation.

The associate degree programs are intended for students seeking personal fulfillment; wishing to complete the first two years of their collegiate education before transferring to a four-year college; or desiring education and training in an occupational field for immediate employment upon graduation.

#### Associate Degree Programs:

Accounting

Automotive Technician (General Motors)

Automotive Technician (Toyota)

Banking and Finance

Business Management

Canadian Studies

Communications

Computer Information Systems

Computer Science

Court and Conference Reporting

Criminal Justice

Data Processing

Early Childhood Education

Electronics

Engineering

Executive Administrative Management

Fire Science

General Studies  
Horticulture  
Hospitality Management  
International Studies  
Legal Office Management  
Liberal Arts  
Life Sciences  
Marketing  
Medical Laboratory Technician  
Medical Laboratory Technician  
Medical Records Technology  
Microelectronics Technology  
Nursing  
Occupational Therapy Assistant  
Office Automation Management  
Ophthalmic technician  
Paralegal  
Plastics Technology  
Radiologic Technology  
Real Estate  
Retail Management  
Social Work  
Theatre Arts  
Travel and Tourism  
Certificate Programs:  
Accounting  
Accounting with Microcomputer applications



Banking  
Banking Administration  
Coding and Medical Record Review  
Communications  
Computer Maintenance  
Data Processing  
Diagnostic Ultrasonography  
Early Childhood Education  
Executive Administration  
Finance  
Financial Planning  
Government Procurement and Contract Management  
Horticulture  
Hospitality Management  
Interior Design  
Liberal Arts  
Licensed Practical Nursing  
Management  
Marketing Sales  
Massachusetts State Building Code  
Office Automation  
Paralegal  
Plastics Technology  
Printed Circuit Manufacturing  
Printing Press Technician  
Small Business Management  
Social Work<sup>30</sup>

## Directions in the Future Curriculum

Completion of minimum competencies and, most importantly, developing a methodology for evaluating the degree of success in student achievement is an important component of the future curriculum. Minimum competencies are required in the following areas: Writing, Reading, Critical Thinking, Mathematics, Computer Literacy, Technological Literacy, and Global and Ethnic Understanding.

Each division of the college is required to develop a plan of action with certain deadlines to assess achievement on a consistent and program-wide basis by June, 1990 and to develop a methodology to assist students who are unable to meet the competency standards through the primarily prescribed methods.

### Writing Competency

Initial evaluation of student writing competency for placement in writing courses will be based upon college-wide tests. The test will be administered to all entering freshmen and transfer students. Based upon the results students will be placed in either remedial writing courses or into college writing courses.

### Reading Competency

Students whose placement tests require them to enter remedial (non-credit) writing courses will also be required to enter a remedial reading program. Reading will be reinforced on a college-wide basis

and achievement levels will be accountable to the Literacy Across the Curriculum task force.

### Critical Thinking Competency

A critical thinking skills course will be required of all students. This course will be designed to assist students to organize the basic concepts of critical thinking and applying these concepts in a college environment.

### Mathematics Competency

The science and mathematics division will undertake a review of the mathematics placement test in light of the need to raise mathematics competency levels.

### Computing and Technological Literacy Competency

The computer science division will develop a new course to incorporate both technological and computer literacy into one integrated presentation.

### Global Understanding Competency

Currently, there is no integrated approach that looks at the concept of "a shrinking world community" and its implications for racial and ethnic issues—both at home and abroad. A global and ethnic

understanding course will be developed using a team teaching approach incorporating guest lectures, films, field trips, and possibly a societal internship.

#### Core Requirement in Career-Technical Programming

The Board of Regents for Higher Education has directed that all Associate of Science and Associate of Applied Science degrees reflect a minimum core of general education. Necessary modification in current programs will be made in order to bring these programs into line with Board of Regents policies.<sup>31</sup>

#### Continuing Education and Economic Development

Massachusetts Bay Community College has set a goal of expanding enrollments by 100% by the end of the summer session, 1990.

In order to accomplish this, an administrator will be designated "marketing czar." Additionally, another administrator will be designated "advocate" to ensure delivery of support services. All relevant offices that are open during the day, such as counseling, financial aid, library, business office, learning center, cafeteria, and bookstore, will be open to accommodate continuing education students. Job fairs, open houses, transfer admissions fairs, etc. will be scheduled at times convenient for evening students.

Enrollment can be increased by opening the door to a larger segment of the population by providing a GED program at the main campus and satellite locations.

It is hoped that the continuing education program can play a more vital role in economic development through education, training and retraining of the workforce.<sup>32</sup>

### Mid/High Technological Programming

The proportion of technical and professional workers on the workforce has increased nationally from 9% to 16%. This trend toward more specialized work has accelerated. More education of a different kind will be needed if a new generation of Americans are to enter the workplace. In order to address the employment need of a highly automated and computer-managed service area, workers need to be prepared to have a common cluster of skills. Skills required of technicians in the information society include the abilities to: understand the basic principles of technology; connect practice and theory with the work world; identify and then analyze problems, test and troubleshoot to find solutions; integrate the interests of a complementary work areas; work independently.

To address these realities, Mass. Bay intends to enhance its Automotive Technology program with the addition of a full-time faculty member and improve the facilities for its Computer and Engineering programs. New initiatives are planned with Electronic Technologies, Telecommunications Technology, Communications Production Technology, and computer Information Systems Technicians Programming.<sup>33</sup>



## Health Science

Current health science education programming will be strengthened and supported, with little new programs anticipated. Enhancements generally revolve around improving laboratories, space, and equipment for its nursing and radiology programs. New initiatives are planned with a one-year Surgical Technician certificate and degrees of Dental Hygienist and Dental Assistant. The Division of Employment Security lists the dental area as a significant place for employment growth.

New programs under consideration, but without sufficient financial support, are Ophthalmic Technician, Pharmacy Technician, Dietetic Technician, Operating Room Nurse, and Athletic Trainer.<sup>34</sup>

## Student Profile

The profile of the average Mass. Bay student has changed significantly since 1983. In that year the average student was seen as a Caucasian woman, about 18-20 years of age, unmarried, pursuing her education on a full-time basis. In 1987, the average student is still likely to be a woman (61%) but she is on the average 25-29 years of age, may be a part-time attendee (38% compared to 3% in 1983), is more likely to be married (29%), and could be a member of a minority race (1% in 1983 compared to 14% in 1987). A larger percentage of these students now need developmental assistance (44% as compared to 12% in 1983) and 68% receive some form of government sponsored financial assistance (40% in 1982).

Sixty percent of the students say they attend the college primarily because of program breadth, 54% because of location, and 41% because the school offers special assistance to developmental and learning disabled students. Thirty-seven percent of all students commute 11-25 miles, while 9% commute as many as 50 miles to school. the average student travels about 10 miles to school (40%).

The availability of financial assistance is an important factor for 74% of those freshmen who enroll at Mass. Bay. About 67% of all students have part-time jobs, with 28% of the students having full-time jobs. Twenty-two percent of all students attending Mass. Bay identify some type of visual impediment short of handicap status, while 8% have a hearing loss. Ten percent of enrolled students consider themselves as learning disabled.

The Associate Degree is sought by 70% of all students attending the college, while 48% plan on obtaining a Bachelor's Degree. Seventy percent seek immediate employment after graduation. Students major particularly in the career field (80%), with computers, nursing, business, court conference reporting, electronics, automotive electronics technology, allied health, and travel and tourism as the leading fields of study.

Thirty-seven percent of the students commute up to twenty-five miles to the campus. Off-campus instructional sites are of particular importance in reaching out to the minority and disadvantaged populations of Framingham, Waltham, and Watertown.

Since it is projected that the technical and allied health fields will consistently expand in the metropolitan area, MBCC plans to position itself in the forefront of those programs. Because of its

location in the 128 High Technology Corridor, the college attempts to work with those firms in adapting curriculum.

As recently as ten years ago, students who opted for career track certificates or degrees were dead ended. Few senior institutions would allow those students to transfer. Programs such as electronics, data processing, and medical laboratory technology were not considered of college transfer quality.

Now, however, with the decline in enrollments at four-year colleges, these institutions are much more responsive to facilitating transfer. Even though career programs are designed for immediate employability, students now have the option to transfer if they so choose.

Out of 80% of MBCC students who pursue career-technical and professional certificates or degrees, 55% of these graduates are regularly employed in their fields upon graduation, while 20% are employed in related fields. Forty percent pursue further academic training or either a full or part-time basis.

The 25-year and older student population is the fastest growing segment of the MBCC service area. The recruitment and activities efforts aimed at the older adult through upgrade and laddering programs, skill enhancement, and business and industry training programs, provides a continuing base for college programming.

In addition to the adult population, the minority market is also approximately 13%, and is significantly underserved. MBCC has increased its minority enrollment from 1% to 14%. Support services, quality programming, and accessibility are credited with much of the growth.

Massachusetts Bay officials believe that they must continue to attract a substantial minority and adult population if they are to meet their projected 5.5% enrollment per year.<sup>35</sup>

# DAY ENROLLMENT TRENDS

## GRAPH 2

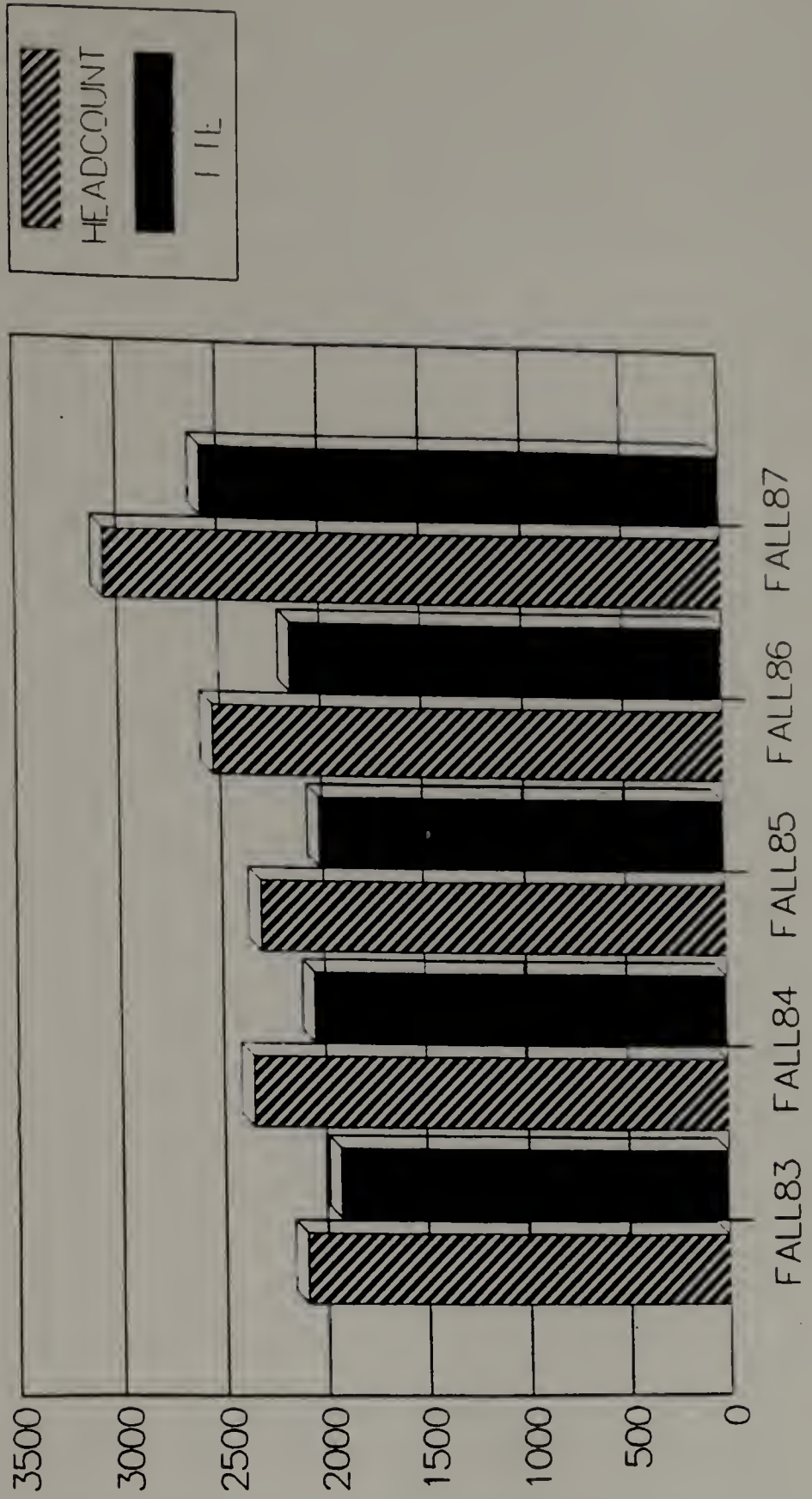


FIGURE 3 Day Enrollment Trends



# AGE ENROLLMENT TRENDS

## GRAPH 3

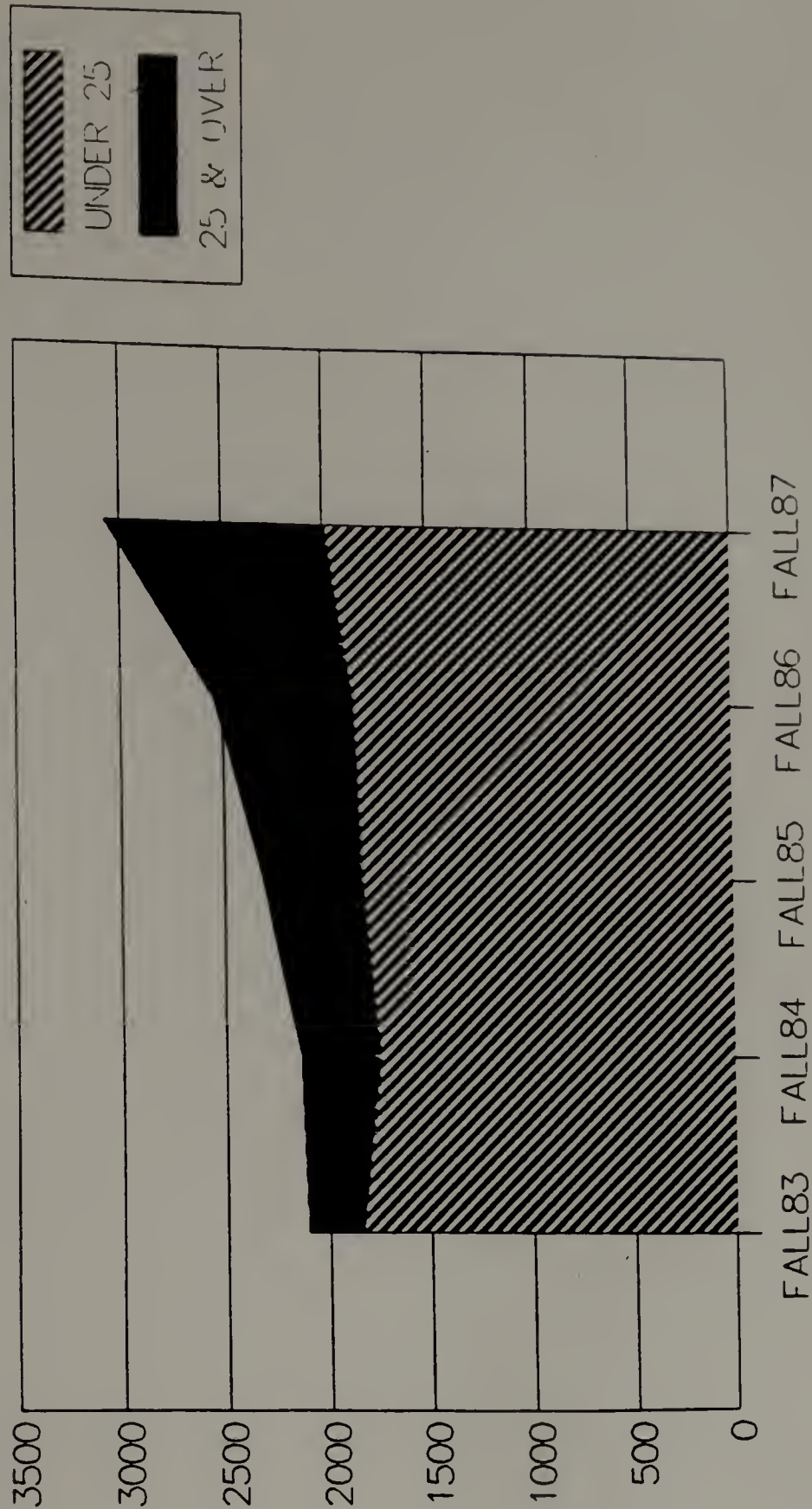


FIGURE 4 Age Enrollment Trends



# PRIMARY SERVICE AREA AGE DISTRIBUTION

## GRAPH 4

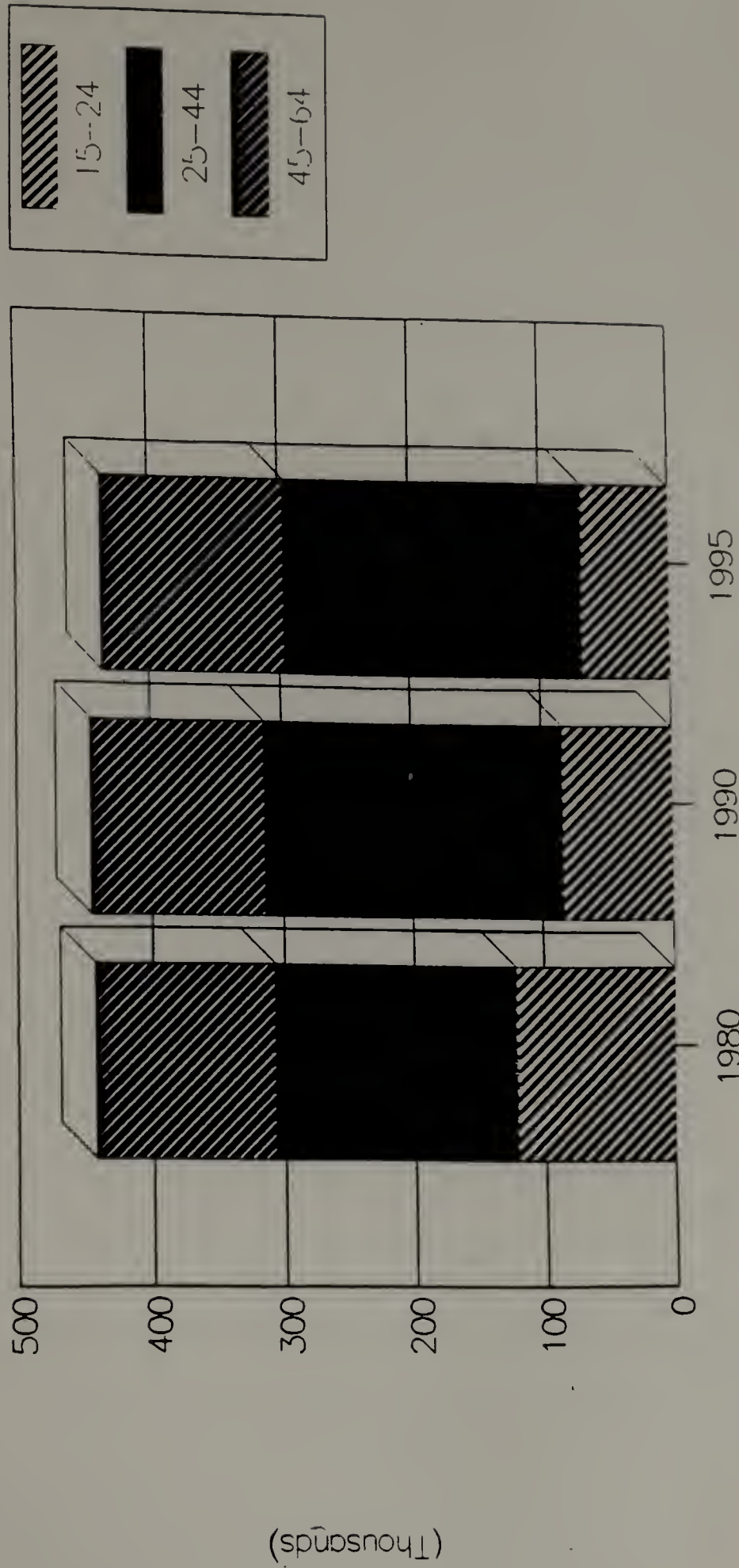


FIGURE 5 Primary Service Area Age Distribution

# SECONDARY SERVICE AREA AGE DISTRIBUTION

## GRAPH 5

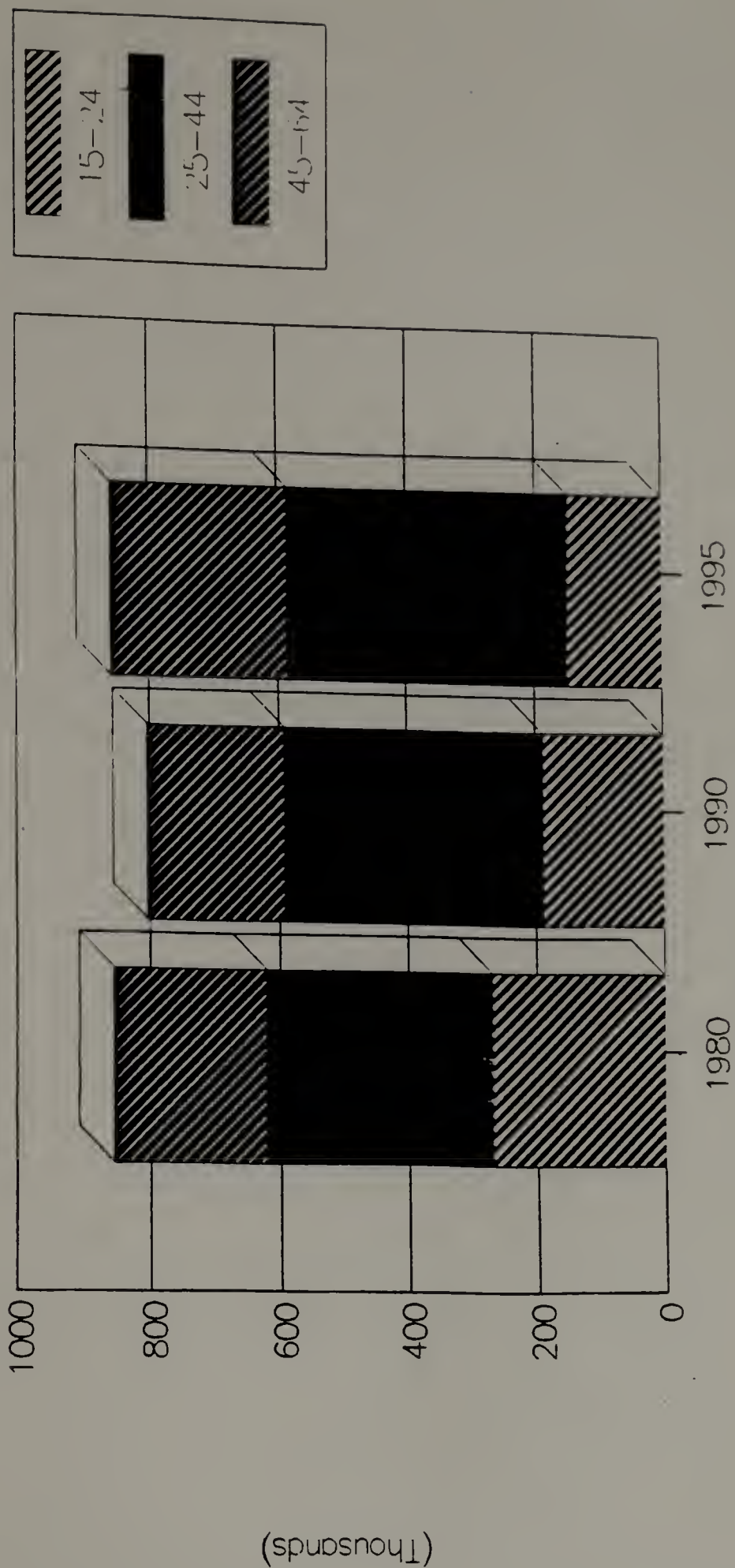


FIGURE 6 Secondary Service Area Age Distribution

TABLE 5

Program Cluster Profile by Age, Sex, Minority StatusBusiness and Careers

30% 25 years or older  
 58% Female  
 35% Male  
 10% Minority

Advanced Technology

41% 25 years or older  
 17% Female  
 83% Male  
 25% Minority

Allied Health/Nursing

79 % 25 years or older  
 92% Female  
 8% Male  
 24% Minority

Liberal Arts/Sciences

28% 25 years or older  
 56% Female  
 44% Male  
 9% Minority

# PROGRAMMATIC CLUSTERS 1987<sup>36</sup>

## GRAPH 6

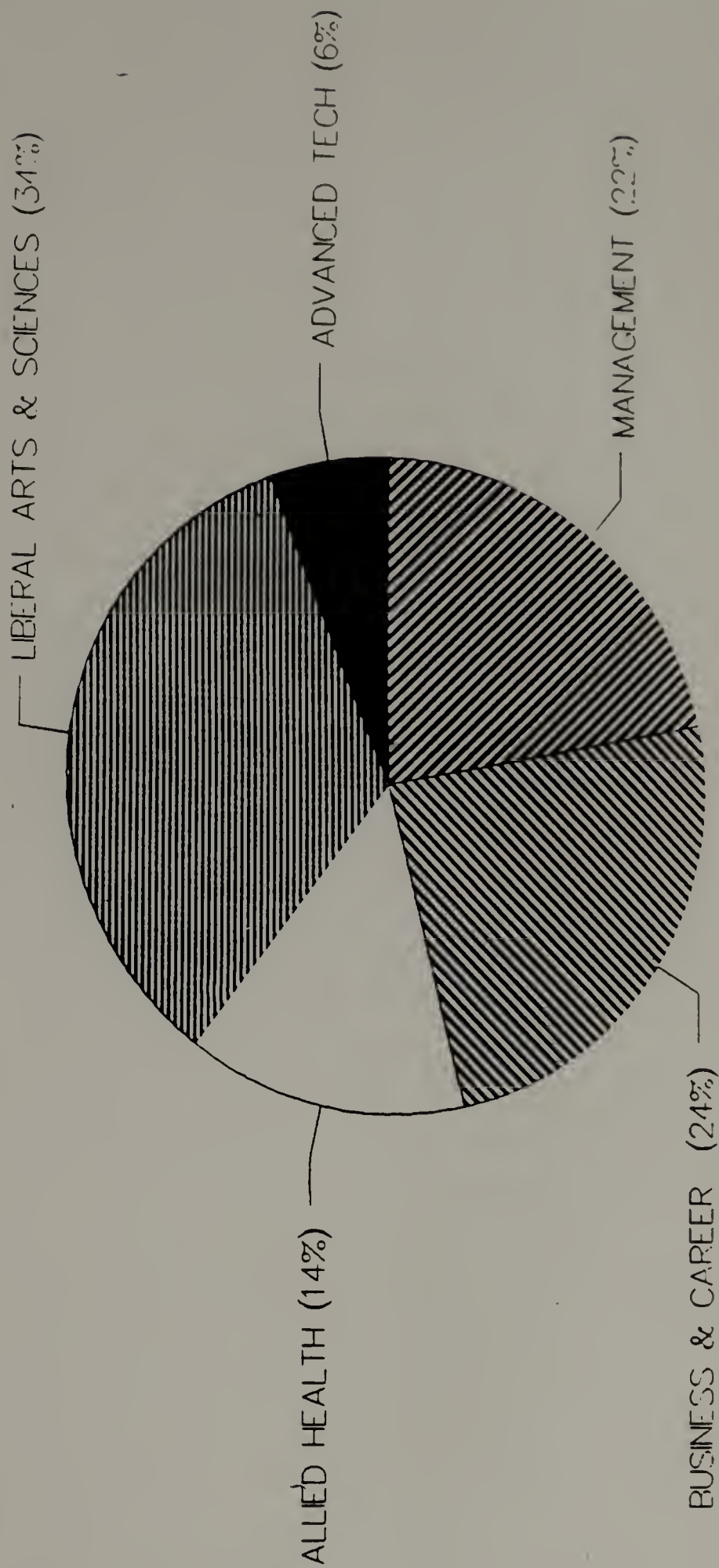


FIGURE 7 Programmatic Clusters 1987

## Summary of Interviews

### George Luoto

Massachusetts does not use its community colleges effectively in economic development. If you look around the country, you'll find that most states employ their community colleges in economic development development strategies. Here, it is really disgraceful.

Although Massachusetts was a pioneer in the community college movement, it saw them more as stepping stones to the four-year colleges.

I see community college students as career-oriented not transfer oriented.

Mass. Bay moved from the inner city to Wellesley. When it was located in Boston and until the new president arrived in 1983, it had been traditionally a two-year transfer school.

The Board of Regents also moved Mass. Bay in to the career field with its allied health and technology programs.

The state is very cheap with its funding. It if were not for help from the private sector, we would be in tough shape. We try to work closely with business. For example, we set up a program to train technicians with General Motors and Toyota. This was not the typical mechanic program, but because of modern technology, more sophisticated mechanical training was offered.

There is a lot of hope and hype with the biotechnology, but I'm not sure where the community college fits into the picture. I am just not that optimistic about its potential to create jobs.



Another area where the state shortchanges the community college is in the area of continuing education. Only Alabama and this state provides no assistance to continuing education. Every other state assists their continuing education programs. Here, it must be self-supporting.

Community colleges, in my mind, are intended to train the lower end of the workforce.

The reason why there is a bias against community colleges relates to the overall bias against public education generally in Massachusetts. Only ten percent of the Massachusetts legislature have degrees from state schools. This is a dramatic contrast with other states. Private schools have more prestige here and are looked upon for leadership. Public schools have lower status and hence have fewer resources allocated to them.

We work closely with companies in an effort to develop programs. We attempt to be responsive by maintaining contact. We pride ourselves on being able to start up new programs quickly. We have the same number of bureaucratic constraints as other community colleges, but I think we do a better job of acting expeditiously.

If you are really serious about economic development missions, you need a group of people on staff who are working aggressively to promote it. It would also be useful to work closely with other community colleges.

One problem that I see with the vocational education programs at the community college level is that they attract the problem person--special education, etc. It costs too much to train these students and they are not smart enough to do the increasingly more

complicated jobs. The emerging economy needs smarter, better trained workers.

A lot of the technology schools are programatically way behind the times. There is a big investment in equipment that must be continually upgraded. Mass. Bay tries to utilize vocational facilities at various high schools to promote efficiency. The technology skills of today really require better-trained people.

The new economy also needs smarter workers. It is very difficult to make people smart in a couple of years. Hence, the pre-college schooling must be improved. We are kidding ourselves if we think we can accomplish in two years what twelve years of schooling failed to accomplish.

Additionally, guidance counsellors in high schools do not do a very good job of career counselling.

A lack of basic skills competency is a big part of the problem. If the state wants us to make a serious effort in this area, they have to give us some financial help. You also have to acknowledge that you cannot graduate students in two years.

Community colleges should play a major role in economic development strategies. While we need to provide programs in basic skills remediation, we cannot be expected to do an acceptable job without help.

In the future, I see a merger of various community colleges to avoid duplication and promote efficiency.

In a college-wide sense, we have instituted six competencies that students have to demonstrate. This is in response from continual feedback from employers in terms of what they need from employees. So in addition to doing their coursework, every student who graduates from our colleges must demonstrate a proficiency in reading, writing, math, computers, technological literacy, and critical thinking. These form the foundation of our degree. They demonstrate these competencies through testing or particular courses they take. They get credit from these courses.

We are trying to make sure that all our students will be able to demonstrate these competencies. This is a direct response from input from the private sector.

If you read any article from any corporate CEO, it will say that we want people who can read, write, do math, know about technology, and think critically.

We have a seventh competency in global understanding that we are working on. I am working on a course myself on global business strategies.

We are trying to respond to the realities of the emerging economy.

Community colleges face an interesting dilemma. On the one hand wanting to preserve quality as a bona fide college and on the other hand we have an obligation to provide access to anyone who wants to come. Those two orientations oppose each other often. It is a constant challenge.

Mass. Bay was a little bit ahead of other schools when five years ago we instituted a student assessment program. If students scored below a certain level they were advised to go into pre-college courses. Now it is mandatory.

I call the courses pre-college. Others call them developmental or remedial. Some call them basic skills.

Students do not get college credit for the remedial courses, but they are eligible for financial aid.

Every student who comes in will take assessment tests. A significant number of students need remediation-probably thirty percent. They are not allowed into college courses until they are remediated.

It has been the mission always for community colleges to respond to the needs of the community-e.g., filling the gap left by high school failing. Massachusetts is not typical of community colleges elsewhere. Here it took a long time for community colleges to become open access places. Community college here were very transferred oriented.

Cooling Out was a term that allows maximizing access. Recently, the community colleges have had pressure from both the quality and access side. The refugees, older students and other groups want access. At the same time, where do you draw the line to insure college quality.

As long as community colleges are required to provide access, it will happen.

We have moved aggressively on this assessment in order to serve the students better and also so we can show to the people allocated resources what we're doing.

We have been so preoccupied with setting up the system that we haven't done much evaluation of how we are doing. It is still early in the process. We are building into our computer system methods to help us evaluate.

In Maine, both through the university system and the post-secondary technical institutions, the state subsidizes economic development activities through appropriation. The private sector has to kick in some money, but the state is a real player in the process. In Massachusetts, the state is not really a player. If a company wanted a program of instruction in some new equipment operations, the college or institute could go to the state and indicate economic development. The Bay State Skills Corporation is the only vehicle that replicates what they do in Maine's community colleges. Community colleges and the state of Massachusetts do not work in concert to promote economic development.

In other states, the state involvement is subsidizing both continuing education and business and industry partnerships is considerable. Our evening programs are self-supporting.

If public funds were provided for continuing education, those funds should go to raising the salaries of faculty and public/private partnerships.

As long as continuing education courses are self-supporting, courses will be demand responsive. Long-term planning is not



facilitated by this type of system. If resources were available, presumably greater attention could be applied to long-term issues.

James Rice

We look at the picture. We call it "writing across the curriculum." We address the very specific needs of developing writing skills--communication skills. We try to approach it from a global perspective. The changes in the state and international economies receive our attention. We are not teaching specific courses on the global economy, but we make an effort to integrate that into many of the courses.

As the "director" of the Experimental College (Evening College), we can try a lot of things. Often times the day division will embrace something that we have done and found to have been successful. We have so much flexibility in the evening program.

Because the evening students are older and more mature, they give us a lot of feedback of course deficiencies--what we can do to improve programs.

It is a free market program in the evening session. No students, no program.

If you want to run a course, you can usually get it approved.

We do a lot of work in the technology area. We are constantly out talking to businesses and chambers of commerce. Our curriculum is very demand responsive--the here and now. There won't be a demand usually for a market on a long-term basis.

There is a great demand for English As A Second Language (ESL) because of the multicultural population.

Business goes in cycles. In recent years, MBCC and other community colleges experienced a growth in student population. When the economy is booming, we get more students. Now that the economy is slowing down, our student numbers will decline. This causes revenues to fall off, both in the school and the state. The state is forced to cut back. It is a vicious, unfortunate cycle. Ideally, the state should be encouraging students to continue their educations in order to be prepared for the upturn. But it does not happen that way.

Our student population has become more non-traditional-older women, immigrants, minorities, etc. Hispanic numbers have also risen. Ten years ago these students were not here. We are servicing a very special need with these non-traditional students. We should be able to absorb these students and young people when times are bad, so that they are not at a disadvantage when the economy improves.

Curriculum planning is done on an immediate basis because it is difficult to look long term. I would look at curriculum planning as playing the business cycle. Preparing for the down-turns and the up-turns.

I am against state support for continuing education. With funds would come strings and bureaucracy.

Many of the evening students come in here in need of remediation. We have a lot of pre-college credit courses, but they don't count toward a degree. So you look, typically, at two semesters of remedial work. We have a Learning Center that is utilized by many of the students.

The average student here at night is thirty years of age, female, mother with a couple of kids at home. Many are timid. The pre-college courses work well with them.

We have excellent teachers here who are adept at reaching students.

We have a curriculum mandate to teach critical thinking, the global economy, and other basic skills. A lot of students are relieved that these courses are available. They are not as intimidated. On the other hand, in the day division loading down students with remedial courses hurts retention.

In the future, basic skills will be where the action is, especially in urban schools, that draw in immigrants and poor people. We are getting into that in a bigger way because our student population has changed.

I see two-year community colleges becoming three year institutions, with the first year becoming like a prep school.

We're able to fill the gap left by high school deficiencies in part because students are usually more motivated and there are a number of resources available to help students.

To do real curriculum planning, you need leadership from the political officials. I don't think money is as important. I think it is direction. Now the political leadership does not know where it is or really where it is going.

In a lot of southern states, they use community college buildings twenty-four hours a day. You have a lot of capacity that could be better utilized.

In most places outside of Massachusetts, a business will sit down with a community college and tell them what they need. Here it is a day-to-day operation. Public higher education does not have as much respect here as elsewhere.

The mission of the community colleges a few decades ago was primarily transfer preparation. Mass. Bay has a different role today. Many of our leaders do not understand the changes that have occurred.

Community colleges could be more effective as economic development tools. Businesses are interested in payback. Real communication needs to take place between businesses and community colleges. We went to General Motors in Framingham to offer our assistance, but neither the company nor the union was interested. I'd like to see business and the community colleges sit down and plan for the long term. But there has to be a carrot for everyone involved.

This dissertation attempts to answer two questions:

I What planning strategies are currently being used, if any, in urban community colleges, in the context of curriculum development to move the community colleges toward preparing the labor force for the emerging technological economy?

II What planning strategies are being considered, if any, in urban community colleges, in the context of curriculum development to move the community colleges toward preparing the labor force for the emerging technological economy?

I have processed the interviews and reviewed the data in an effort to develop a sense of where community colleges are now and where it is

thought they should be to accommodate the emerging economy. By interviewing a variety of knowledgeable people at a reasonably diverse number of community colleges that serve urban student constituencies, I feel that I have been able to assemble credible observations that can be useful to those interested in curriculum planning.

Community colleges have become the largest sector of higher education in the United States and as such can play a significant role in labor force preparation for the emerging economy.

Their mission is enormously challenging. Most students are commuters who attend part-time with other personal commitments. The young, not-so-young, and old comprise the student body. What works with full-time, single, well-prepared, residential students does not necessarily work with part-time students who have jobs and families - and who have often experienced less academic success in their previous schooling.

The Observations, Perspectives and Findings section is organized to respond to the two central questions of my dissertation.

### Observations, Perspectives and Findings

I What planning strategies are currently being used, if any, in urban community colleges, in the context of curriculum development to move the community colleges toward preparing the labor force for the emerging technological economy?

1. Community colleges are called upon to meet often conflicting objectives-maintaining bona fide college quality and providing maximum access to anyone who desires entry.



2. The two-year community college is irrelevant to the current world and it should be changed.
3. Programs that rely on external sources of funding and continuing education programs offer the best chance for making expeditious curriculum changes. Starting new programs and changing curriculum in the traditional day division is very time consuming. Program and curriculum changes usually take about two years and involve the Board of Regents.
4. Virtually every state in the United States provides financial assistance to its continuing education programs with the exception of Massachusetts.
5. In continuing education, most are taking courses rather than seeking "degrees." Many older students want to pick up skills as quickly as possible.
6. Basic skills for the emerging economy has been defined as reading, writing, math, computer and technological literacy, critical thinking, and global understanding. Many community colleges seem to be moving toward establishment of a core curriculum that incorporates the basic skills.
7. The process of curriculum usually follows along thusly: Once the department approves the change, the division chair comments on the change. Other departments have a chance to comment. The Dean of Academic Affairs enters the process at this point. A college-wide group often votes on the change before it goes to the President. After Presidential approval, it goes to the Board of Regents where it can languish.

8. Curriculum committees are not vested with much authority because faculty does not wish to forfeit its options.
9. Curriculum planning is heavily geared toward the short-term market demand for jobs. It is difficult to have long-term planning because survival and the present takes precedence.
10. In Massachusetts, community colleges were established as transfer institutions unlike other states. In other states, community colleges are involved effectively in economic development strategies-not in this state.
11. Business is reluctant to invest in employee education because of fears that employees will leave them once skills are upgraded.
12. So many of the worthwhile jobs require four-year college degrees. Consequently, community colleges prepare students for the lower level economic jobs.
13. Vocational education programs attract many problem persons who are expensive to train and not smart enough to perform many of the more complex jobs in the emerging economy.
14. Community colleges serve a very large, non-traditional population of immigrants, minorities and older people. Consequently, a major focus of curriculum attention is in the area of ESL education.
15. Complicating labor force preparation efforts is the fact that data often conflicts with one another. What numbers do you rely upon? Although the staff of the Board of Regents appear to monitor labor force issues, they are probably too far removed from various communities.

16. So-called business advisory groups that exist to provide input on curriculum seem to be more pro forma. They don't seem to have much significance.
17. Community colleges are compelled to be active marketers of students to insure their own survival.
18. Because so many of the community college students have all of the problems associated with poverty they find it difficult to maintain traditional course loads.
19. Having programs that are designed to prepare students for the job market is different than actually preparing them for the job market. Building self-esteem is an often overlooked need in job preparation.
20. Tuition reimbursement is a major source of funding for continuing education.
21. Many students do not take advantage of the various counselling programs available at the community college.
22. Faculty resist collaboration with business because they fear co-optation. In order to have meaningful planning between business and college in curriculum there must be identifiable benefits for both.
23. The community colleges seem to have the appropriate components for adaptation to the emerging economy--outreach, collaboration, advisory groups, etc. - but the key is how effective can they be.
24. There is a bias against public higher education in Massachusetts because of the reliance on private institutions.
25. Not much is being done to train senior citizens for the emerging economy. Most senior citizen courses are intended for intellectual enhancement.

26. Community college students are older than those at other schools.

II What planning strategies are being considered, if any, in urban community colleges, in the context of curriculum development to move the community college toward preparing the labor force for the emerging technological economy?

27. Remediation will be a major part of the curriculum of the future because so many of the entering students are deficient. Eventhough community colleges will be duplicating what secondary education should be doing, there is little alternative.

28. Two major challenges facing efforts at remediation is the fact that the stigma associated with it makes it difficult to retain students and the fact that many students are so far behind academically.

29. Although there is intense disagreement, many believe that basic skill instruction should be a major focus of the mission.

30. Business may come to rely on the community colleges to perform the basic skills education as a pre-requisite to their own training efforts.

31. Most assert the need and desire for meaningful long-term planning, but few believe that it can happen to any significant degree.

32. Some suggest that the best formula for long-term planning is to be prepared for anything, because it is so difficult to predict the future.

33. Community colleges could play an important role in labor force preparation for the emerging economy, but they need determined aggressive internal staffs working within a supportive environment.

34. While continuing education can be quite responsive to present market conditions, it isn't able to have a meaningful long-term orientation because of its self-supporting nature.
35. There is a general consensus among the community college staff that international studies should be a part of the curriculum to accommodate the emerging economy.
36. Community colleges should become a part of the in-house training programs of the businesses in their communities.
37. The emerging economy could benefit from a curriculum that teaches students how to think and solve problems. To do that teachers would need help in re-orienting their teaching strategies.
38. Different culture process information differently and teaching methods should reflect that.
39. Financial issues may force consolidation and altered missions.
40. Community colleges should offer first-rate technical education and career-related programs to prepare students for working in the Information Age.
41. Reaching into high schools—physically and technologically—could help bolster basic skills and prepare students for college.



## CHAPTER V

### CONCLUSIONS AND IMPLICATIONS FOR THE FUTURE

In 1964 the Willis-Harrington report on public education surveyed the needs of the Commonwealth of Massachusetts and made a number of recommendations relative to public education. Of concern to this dissertation was its perspective on community colleges.

The world in which the above report was issued was far different than it is in 1990. The Willis-Harrington report saw community colleges as fostering two major goals: transfer preparation and vocational training. Transfer preparation provides opportunities for individuals to complete two years at a "junior college" and then transfer to a four-year college. Vocational training refers to providing students with education in a trade or technical skill.

It is a major conclusion of this dissertation that the changed world has placed the community colleges in a position where they are now compelled to add another goal to their respective missions: remediation.

It is my sense that although many at the community colleges are reluctant to admit and accept this reality, reality indicates that community colleges are now heavily involved and logic suggests that some element of our overall educational system must respond to the need of preparing students in the so-called basic skills.

It has been well-chronicled that American students are completing their studies inadequately grounded in the basic skills. Coupled with the fact that the emerging technological economy is in

dire need of a better educated and trained work force than ever before in history, our region and our country face economic stagnation if the educational system fails to meet the challenge.

It is in our urban areas where the challenge is most vexing. Nagging poverty and the dissolution of the family unit, the rise in the number of non-English speaking immigrants puts an enormous, if not insurmountable, burden on urban elementary and secondary schools to graduate students who are educationally competent and prepared for higher educational training.

Ideally, implementing a way in which urban elementary and secondary schools can more effectively educate students is one of the most obvious courses to follow. Realistically, overhauling that component of our educational system does not lend itself to short-term action.

In past world economics we would have had more time to adjust to changing labor markets. Now those markets are changing more rapidly, than ever before thus making short-term adjustment and re-adjustment pressing.

The community colleges reviewed in this dissertation have all added what they euphemistically refer to as developmental or pre-college courses to their curricula. They have done this because more and more students have entered their institutions without the necessary competencies in "reading, writing, and arithmetic."

It is my sense that these community colleges now have remediation as a significant component of their missions. Most officials would only regretfully admit to it. It appears to me that remediation will

become a clearly articulated facet of the missions of urban community college.

By incorporating remediation into the missions of urban community colleges, its current two-year community college format becomes a misnomer as it attempts to adequately remediate as well as provide meaningful post-secondary education.

The current community college serves an increasingly large, non-traditional population of immigrants, minorities and older people, many of whom cannot speak English fluently. The fact that so many of the students come from the lower socio-economic groups, many are compelled to spend long hours in the work force.

Gaining public and political support to provide the resources necessary to do what is necessary becomes all that must more difficult in this untimely regional recession. This would be an opportune time to enter students to school as employment prospects decline, but when economics recede so to do state financial resources.

Fortifying and boosting basic skills levels will likely worsen because of diminished community college resources. Many community colleges will be forced to consolidate and cutback on program offerings. This necessarily will affect the missions of community colleges and adversely affect that component that attempts to remediate.

The regional recession does provide opportunities and impetus for collaboration between the business sector and community colleges. Diminished resources in both sectors could encourage meaningful pooling of resources because of the need of business to have an

adequate labor pool and community colleges to have external funding sources as less state money is available.

It is doubtless that additional collaboration will take place, but not to the extent that it could. Mutual self-interest encourages some collaboration but discourages too much.

The schools resist surrendering independence and faculty does not wish to give up control over curriculum decisions. Businesses are understandably interested in cost-benefit relationships and impatient with a curriculum process that compromises the bottom line.

Beyond the conclusions that have been articulated in the area of community colleges and remediation, these schools will be involved in educating students who seek transfer to four year colleges and in training individuals for the emerging technological economy.

This emerging technological economy will require flexibility and curriculum anticipation in community college in order to insure adequate labor force preparation. However, long-term curriculum planning is unrealistic because present survival takes precedence over long-term planning. While all agreed that long-term planning is desirable, meaningful efforts become difficult.

Curriculum decisions are oriented toward the succeeding semester or the next academic year. Any substantial change in program offerings can take up to two years to effectuate.

Continuing education offers the best hope for making expeditious curriculum changes and launching new programs to respond to economic need. Continuing education is a self-supporting component of community colleges. This independence relieves continuing education of the bureaucratic burdens present elsewhere in curriculum decisions.

The state does not provide any financial support to continuing education.

Massachusetts is one of only two states without financial support to continuing education. Arguably, allocating financial support would be money well-spent. However, with financial assistance, strings would likely become attached. These strings might interfere with the current flexibility.

It has been the intent of this effort to identify what is currently being done and what is being contemplated in the area of curricula and labor force preparation for the emerging technological economy.

I have not been concerned with evaluating how well curricula prepares the labor force for the emerging technological economy. Further research would be useful to assess the effectiveness of curricula. The results of that assessment could help curriculum planners in the future technological economy.



## REFERENCES

1. The Next American Frontier, Robert B. Reich, Times Books, New York, New York, 1983.  
America II, Richard Louv, Houghton Mifflin, Boston, MA, 1985.  
Future Schools, Alvin Toffler, Random House, New York, New York, 1970.  
Megatrends, John Naisbitt, Warner Books, New York, New York, 1982.  
Man, Education and Manpower, Grant Venn, American Association of School Administrators, Washington, D.C., 1920.  
"Higher Education and The Labor Market," Carnegie Commission on Higher Education, Margaret S. Gordon, McGraw-Hill, New York, New York, 1974.  
Does College Matter? Ed. by Lewis C. Solomon and Pual J. Taubman, Academic Press, New York, New York, 1973.  
"Giving Youth A Better Chance," Carnegie Council on Policy Studies in Higher Education, Jossey-Bass, San Francisco, 1979.  
The American Community College, Arthur M. Cohen and Florence B. Brawer, Jossey-Bass, San Francisco, 1982.  
Corporate Classrooms: The Learning Process, The Carnegie Foundation For The Advancement of Teaching, Princeton, New Jersey, Nell Eurich, 1984.
2. "Quality Education for Massachusetts: An Investment in the People of the Commonwealth," Special Commission Relative To Improving and Extending Educational Facilities In The Commonwealth, 1969, p.6.
3. "Building communities: A Vision For A New Century," Report of the Commission on the Future of Community Colleges, pp. 5-6.
4. Bunker Hill Community College, Catalogue 1909-90, pp. 5-6.
5. Ibid., pp. 55-95.
6. Ibid., p. 30.
7. Ibid., pp. 150-154.
8. Institutional Long Range Plan, Bunker Hill Community College, January, 1990, pp. 11-15.
9. Ibid., p. 12.
10. Ibid., p. 13.

11. Institutional Long Range Plan, Bunker Hill Community College, January, 1990, pp. 4-8.
12. Middlesex Community College, Catalogue, 1990-92, pp. 3-5.
13. Ibid., pp. 34-86.
14. Ibid., pp. 31-33.
15. From material provided by Chris Brennan, Director, Business and Industry Program, Middlesex Community College.
16. The Futures Committee Report, M.C.C., January, 1990, pp. 10-11.
17. Ibid., pp. 7-8.
18. Ibid., p. 6.
19. Ibid., p. 10.
20. Ibid., pp. 4-5.
21. Roxbury Community College, Catalogue, 1989, pp. 6-10.
22. Ibid., p. 23.
23. Roxbury Community College Report on the Five-Year Plan, September, 1988, p. 24.
24. Ibid., p. 25.
25. Ibid., p. 26.
26. Ibid.
27. Ibid., p. 6.
28. Ibid., pp. 35-50
29. Mass. Bay Community College, Catalogue 1989-90, p. 4.
30. Ibid., pp. 4-10.
31. Mass. Bay Community College, Long Range Plan, October, 1988, pp. 76-82.
32. Ibid., pp. 83-86.
33. Ibid., pp. 56-62.
34. Ibid., pp. 63-67.
35. Ibid., pp. 14-26.
36. Ibid, pp. 18-24

## BIBLIOGRAPHY

- Aristotle, Politics.
- Becker, Ernest, The Denial of Death, Free Press, N.Y., 1973.
- Bell, Daniel, The Coming of Post-Industrial Society, Harper, N.Y., 1976.
- Benton, Itschak, Stalking the Wild Pendulum, E.P. Dalton, N.Y., 1977.
- Berg, Ivar, Education and Jobs: The Great Training Robbery, Center for Urban Education, Philadelphia, 1971.
- Berry, Wendell, The Unsettling of America, Avon Books, N.Y., 1978.
- Bish, Robert and Nourse, Hugh O., Urban Economics and Policy Analysis, McGraw Hill, N.Y., 1978.
- Bolling, Richard and Bowles, John, America's Competitive Edge, McGraw Hill, N.Y., 1982.
- Bunker Hill Community College, Catalogue, 1909-90.
- Bunker Hill Community College, Institutional Long Range Plan, January, 1990.
- Carnegie Council on Policy Studies in Higher Education, Giving Youth A Better Chance, Jossey-Bass Publications, 1979.
- Chardin, Pierre Teilhard, Toward The Future, Harcourt Brace, 1975.
- Clarke, Arthur, Profiles of the Future, Pam Books, London, 1962.
- Committee on Science, Engineering and Public Policy of the National Academy of Sciences, Frontiers In Science and Technology, A Selected Outlook, W.H. Freeman & Co., N.Y., 1983.
- Coors, Phillis, Boston Globe, "Mother, Sons Get Second Chance at Education," Tuesday, June 16, 1987.
- Davis, J. Morton, Making America Work Again, Grown Publ., N.Y., 1983.
- Dertouzos, Michael, The Computer Age, MIT Press, Cambridge, 1979.
- Drucker, Peter, The Age of Discontinuity, Harper & Row, N.Y., 1978.
- Eurich, Neil, Corporate Classrooms, The Learning Process, Carnegie Foundation, Princeton, N.J., 1985.

- Ferguson, Marilyn, The Aquarian Conspiracy, J.P. Thatcher, Los Angeles, 1980.
- Ferkliss, V., Braziller, George, The Future of Technological Civilization, N.Y., 1974.
- Greeley, Andrew, No. Bigger Than Necessary, New America Library, N.Y., 1977.
- Greison, Ronald E., Urban Economics: Readings and Analysis, Little Brown, Boston.
- Harman, Willis, An Incomplete Guide to the Future, Norton and Co., N.Y., 1979.
- Hartrich, Edwin, The American Opportunity, MacMillan Publishing, N.Y., 1983.
- Hawken, Paul, The Next Economy, Ballantine Books, N.Y., 1984.
- Hawken, Paul, Seven Tomorrows, Bantam Books, N.Y., 1982.
- Heilburn, James, Urban Economics, St. Martins Press, N.Y., 1981.
- Heilburn, James, Urban Economics and Public Policy, St. Martins Press, N.Y., 1981.
- Henderson, Hazel, Creating Alternative Futures, Berkeley Publ., N.Y., 1978.
- Hirsch, Werner, Urban Economics Analysis, McGraw Hill, N.Y., 1973.
- Hordon, Harris E., Urban Economics: Analysis and Policy, Prentice Hall, Inc., Englewood Cliff, N.J., 1973.
- Lasch, Christopher, The Minimal Self, W.W. Norton Inc., N.Y., 1984.
- Lewis, Thomas, The Lives of the Cell, Bantam Books, Inc., N.Y., 1975.
- Louv, Richard, America II, Viking Penguin Inc., N.Y., 1985.
- Machud, Fritz, Education and Economic Growth, University of Nebraska Press, Nebraska, 1970.
- Mass. Bay Community College, Catalogue, 1989-90.
- Mass. Bay Community College, Long Range Plan, October, 1988.
- Middlesex Community College, Catalogue, 1990-92.
- Middlesex Community College, The Futures Committee Report, January, 1990.

- Miller, G. William, Regrowing the American Economy, Prentice Hall, Englewood Cliffs, N.J., 1983.
- Mumford, Lewis, The Myth of the Machine, Harcourt Brace, N.Y., 1966.
- Naisbett, John, Megatrends, Warner Books, New York, N.Y., 1982.
- Rasmussen, David, Urban Economics, Harper and Row Publ., N.Y., 1975.
- Reich, Robert, The Next America Frontier, Penguin Books, N.Y., 1986.
- Robertson, James, The Sane Alternative, River Basin Publ., St. Paul, 1978.
- Ross, Murray, The University: The Anatomy of Academia, McGraw Hill, New York, N.Y., 1976.
- Roxbury Community College, Catalogue, 1989.
- Roxbury Community College, Report on the Five Year Plan, September, 1988.
- Ruthaven, Kenneth, Society and the New Technology, Cambridge University Press, N.Y., 1985.
- Sagan, Carl, The Dragons of Eden, Random House, N.Y., 1977.
- Satin, Mark, New Age Politics, Whitecap Books, Vancouver, 1978.
- Schreiber, Arthur, Economics of Urban Problems, Houghton Mifflin, Boston, 1976.
- Shumcacker, E.F., Small Is Beautiful, Harper & Row, N.Y., 1973.
- Slater, Philip, Earthwalk, Bantam Books, N.Y., 1975.
- Solomon, Lewis C., Does College Matter, Academic Press, N.Y., 1972.
- Somers, Gerald, Retraining the Unemployed, University of Wisconsin Press, 1968.
- Thompson, William, At The Edge of History, Harper & Row, N.Y., 1972.
- Toffler, Alvin, The Adaptive Corporation, McGraw Hill, N.Y., 1985.
- Toffler, Alvin, Future Shock, McGraw Hill, N.Y., 1984.
- Turkle, Sherry, The Second Self Computers and the Human Spirit, Simon and Schuster, N.Y., 1984.



Uller, Herbert, The Children of Frankenstein, University Press,  
Bloomington, IN., 1970.

Venn, Grant, Man, Education, and Manpower, Am. Assoc. of School  
Admin., Washington, D.C., 1970.

Winner, Langdon, Autonomous Technology, Cambridge, MIT Press, 1977.

