

DOCUMENT RESUME

ED 069 231

HE 003 557

**TITLE** A Regional Plan for Higher Education: Report from New York City.

**INSTITUTION** Pace Coll., New York, N. Y. New York City Regional Plan for Higher Education.

**PUB DATE** 9 Jun 72

**NOTE** 130p.

**AVAILABLE FROM** Regents Advisory Council, Pace College, 41 Park Row, New York, New York 10038

**EDRS PRICE** MF-\$0.65 HC-\$6.58

**DESCRIPTORS** \*Educational Development; \*Educational Planning; \*Higher Education; \*Regional Planning; \*Statewide Planning

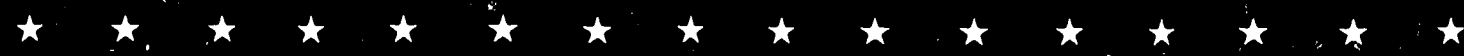
**ABSTRACT**

This report represents a regional approach to the immediate problems of higher education in New York City, and proposes a series of recommendations toward the cooperative resolutions of these problems. The Regents Advisory Council accepted as its charge a survey of the human, fiscal and physical resources of higher education institutions in New York City, as well as a delineation of specific regional problems, especially in the areas of admissions, counseling and guidance, data collection, facilities, finances, and programs and research. Five Task Forces were appointed to study (1) the full utilization of resources; (2) libraries and major facilities; (3) professional programs; (4) graduate programs; and (5) cooperative programs for the disadvantaged. The major recommendation of the report, that a Regional Coordinating Council for Postsecondary Education in New York City be created, was implemented by the Board of Regents on November 16, 1972 and will take over the work of the Regents Advisory Council in 1973. (HS)

ED 069231

# REPORT FROM NEW YORK CITY

U.S. DEPARTMENT OF HEALTH,  
EDUCATION & WELFARE  
OFFICE OF EDUCATION  
THIS DOCUMENT HAS BEEN REPRO-  
DUCED EXACTLY AS RECEIVED FROM  
THE PERSON OR ORGANIZATION ORIG-  
INATING IT. POINTS OF VIEW OR OPIN-  
IONS STATED DO NOT NECESSARILY  
REPRESENT OFFICIAL OFFICE OF EDU-  
CATION POSITION OR POLICY.



FILMED FROM BEST AVAILABLE COPY

## REGENTS ADVISORY COUNCIL

New York City Regional Plan For Higher Education

NEW YORK CITY • JUNE 9, 1972

155 557

ED 064271

Regents Recommendations on the Report  
of the Regents Advisory Council for New York City

---

**A Regional Plan for Higher Education:  
A Report from New York City**

THE STATE EDUCATION DEPARTMENT

ALBANY

JULY 1972

## Introductory Comment

*The Regents have received the report of their Regional Advisory Council for Higher Education in New York City and wish to express their appreciation to the members and commend them for their outstanding efforts. The Regents particularly acknowledge with special thanks the able leadership provided by the Council Chairman, President Edward Mortola, and the Study Director, Dr. William Fuller. This exercise in cooperation for planning and activity coordination will stand as a model for other higher education regions of the State.*

*In addition to the recommendations, the appendices and special studies incorporated in the report are deserving of close study and careful consideration by the higher education community, in all regions of the State. The work of the Council has clearly demonstrated that in a time of acute difficulty, facing both public and private institutions, the promise of cooperative action can be realized.*

*The Advisory Council has, in a spirit of realism, called the attention of the Regents to certain problem areas and certain fiscal implications of cooperative activity, e.g.: "It should not be expected that short-term savings will be realized by cooperative activities. Significant initial expenditures may be necessary to effectuate long-range savings and to use (most effectively) scarce human resources." The advice of the Council in this regard will require consideration and action by the Governor and the Legislature.*

## Recommended Regents Action

The Regents generally approve the report of the Advisory Council. The Regents wish, however, to respond to the 23 recommendations individually. Reference is made to each recommendation by number.

1. The Regents approve establishment of a Regional Coordinating Council for Post-secondary Education in New York City (#1) and suggest that at the appropriate time, steps be taken to incorporate the Council permanently under New York Education Law.
2. The proposal to transfer low-income students from the senior colleges of the City University by means of contracts to co-operating private institutions (#3) has been commented on by the Regents at an earlier date. The Regents are reviewing this proposal with relationship to their recommendations in Position Paper No. 13, *Financing Higher Education*, for a significant increase in the grant levels of the Scholar Incentive program throughout the State.
3. The Regents further approve the following recommendations of the Council:
  - (a) That a permanent coordinated admissions program be created under the aegis of the Council (#4);
  - (b) That in-service and professional training programs for counsellors be strengthened and cooperative relationships for counseling between the colleges and universities and the Board of Education of the City of New York be developed (#6);
  - (c) That a central data bank be developed under the Council (#7) to be compatible with:
    - (1) National Center for Higher Education Management Systems of WICHE;
    - (2) Higher Education General Information Survey of the U. S. Office of Education;
    - (3) Data requirements of the New York State Education Department;
  - (d) That, as one of the activities of the data bank, a Space Available Inventory be developed (#10);
  - (e) That the institutions be encouraged to develop continuing education programs for library personnel in conjunction with METRO (#14);
  - (f) That, based on consultations of department chairmen, appropriate arrangements for cooperative programs to eliminate duplication and provide enrichment be developed (#18);
  - (g) That a center for life-long learning programs be established (#19).
4. The Regents approve in principle, but at the same time request the Advisory Council to develop further, the following recommendations:
  - (a) That interinstitutional arrangements to provide minimum library (collection) and performance standards be developed in line with the recommendations of the Commissioner's Advisory Committee on Long-Range Planning for Academic Libraries (#11);
  - (b) That development of a method for financing a system of subregional or intermediate libraries to complement basic undergraduate collections be encouraged (#12);
  - (c) That, in order for concrete activities to be undertaken by a research clearinghouse and to guide further development of cooperative research, certain specific projects be identified (#23).
5. The Regents request the Advisory Council to study further and offer appropriate proposals related to these recommendations:
  - (a) That planning be done for the support of central facilities for laboratory and research equipment, and other limited resources (#8);
  - (b) That further attention be given to practical means of providing access, for graduate students and faculty, to research collections, on a full cost-recovery basis (#13);

- (c) That careful study of more intensive use of the special and expensive facilities necessary for television broadcasting and for computers be undertaken (#15).
6. The Regents recommend that the higher education institutions with the assistance of the Advisory Council continue to develop the following recommendations:
- (a) That policies be modified to permit expanded opportunities for cross-registration (#5);
- (b) That new educational patterns for more rapid opportunity for social and economic mobility (#17) be explored, these to include:
- (1) Undergraduate "mini-career" work-study programs.
  - (2) Life-long and retraining programs of various durations and levels.
  - (3) Postsecondary independent study programs;
- (c) That subregional consortia, to include public and private colleges and universities in geographical proximity, as well as high schools and other appropriate educational programs and agencies, be developed (#22).
7. The Regents will include in their legislative or budgetary program for FY 1973-74 the following recommendations:
- (a) That adequate funding for the support of Regional Coordinating Council activities be provided through State sources, and that such a council be free to seek funds from other public and private sources (#2);
- (b) That the current freeze on construction for the public higher education institutions be removed, and that the goal of 100 net assignable square feet per full-time

equivalent student be supported as reasonable for City University. The Regents note that the recent action of Governor Rockefeller in approving a priority list for construction in the amount of \$520 million will permit progress toward this goal. The Regents further will support continuing attention to the construction program to promote additional progress (#9).

8. The Regents have under consideration for inclusion in their legislative and budgetary program for FY 1973-74 the following proposals:
- (a) That the Scholar Incentive program be adjusted to cover part-time students and to allow for the economic reality of geographical situation (#16);
- (b) That per capita aid to private schools of engineering be provided on condition that long-range plans for financial stability be developed during 1973-74 (#20);
- (c) That institutional tuition differentials for students requiring remedial services during the first two postsecondary years be provided (#21).

## Conclusion

*The Regional Advisory Council for Higher Education in New York City has developed an excellent set of recommendations to implement regional interinstitutional cooperation in higher education. We urge the Governor, members of the Legislature, and the public to give careful consideration and support to the recommendations we have presented on the basis of the Council's report.*

THE UNIVERSITY OF THE STATE OF NEW YORK  
THE STATE EDUCATION DEPARTMENT

NEW YORK CITY REGIONAL PLAN FOR HIGHER EDUCATION

PACE COLLEGE, 41 PARK ROW  
NEW YORK, NEW YORK 10038

REGENTS ADVISORY COUNCIL

EDWARD J. MORTOLA, CHAIRMAN  
SISTER MARY DAVID BARRY, S.C.  
SAMUEL BELKIN  
ERNEST L. BOYER  
ARLAND F. CHRIST-JANER  
JAMES A. COLSTON  
JOHN R. EVERETT  
JAMES M. HESTER  
HAROLD HOWE II  
SEYMOUR HYMAN  
ROBERT J. KIBBEE  
LEONARD LIEF  
WILLIAM J. MCGILL  
ROBERT E. MARSHAK  
BROTHER GREGORY NUGENT, F.S.C.  
HENRY SALTZMAN  
KURT SCHMELLER  
REV. MICHAEL P. WALSH, S.J.

WILLIAM S. FULLER, DIRECTOR

212 285-3561

June 9, 1972

Hon. Joseph W. McGovern  
Chancellor  
Regents of the University  
of the State of New York  
Albany, New York

Dear Chancellor McGovern:

The Regents Advisory Council for New York City, established by you and your fellow Regents in September 1971, is pleased to present for your consideration and appropriate action a report of its findings and recommendations with respect to cooperative planning in the New York City region.

The Council's major recommendation calls for the creation of a Regional Coordinating Council for Postsecondary Education, which would assume responsibility for exploring, developing and implementing many of the more specific recommendations contained in Chapter Three of this report. We believe that the Regents' support of this major recommendation will provide a climate conducive to the development of an effective and responsive organization to encourage and support cooperative endeavors. Such an organization will also provide the New York City region with positive leadership in representing and reporting the needs of postsecondary education to the Regents and others.

I am pleased to report that the Council's deliberations have been marked by a sense of mutual understanding and cooperation. More specifically, this spirit of cooperation has been manifested in the Council's unanimous support of a plan for the immediate voluntary transfer of incoming freshmen from the overcrowded City University to the private institutions at a funding level equivalent to that provided by the State and City for full-time City University students. We urge early favorable consideration of this plan by the Regents. It presents, we believe, the possibility

REGENTS ADVISORY COUNCIL  
NEW YORK CITY REGIONAL PLAN FOR HIGHER EDUCATION

Hon. Joseph W. McGovern

-2-

June 9, 1972

of a landmark program that will assist both sectors of higher education in New York City and that will again identify New York State as a leader in innovative measures to assist its higher education institutions.

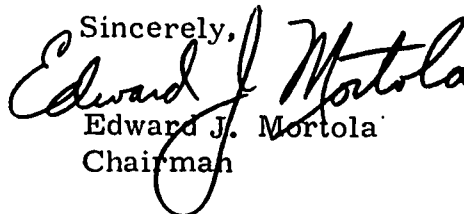
The Council, in addition, provided a forum for discussion of the difficult issues surrounding the efforts of New York University to dispose of its Bronx campus and the Polytechnic Institute of Brooklyn's proposal for consolidating its engineering program with that of New York University at the former's Brooklyn campus.

We believe that we have both learned and demonstrated that cooperation among institutions can work. The Council recognizes that agreements are not easily reached, particularly when there is fear that institutional identity and prestige may be lost or special interests debilitated. Furthermore, we are painfully aware that agreements and proposals reached through cooperative efforts at the regional level may be nullified by action at the State level, although we are hopeful that the creation of the proposed Regional Coordinating Council will minimize this possibility.

This letter of transmittal would not be complete if it did not acknowledge the individual and institutional contributions that made the report possible. All members who were named by the Regents played an active role in the Council's work. Many institutions shared in supplying the manpower for the Task Forces that prepared individual reports. Several institutions were most generous in permitting important personnel to devote virtually all of their time to the work of the Council. The staff assignments made by the State Education Department were outstanding. Without the knowledge, energy and dedication of Dr. William Fuller and his staff we could not have achieved our objective nor have met your timetable.

Despite the constraints of time, we believe that the report is responsive to the charges accepted by the Council. We are hopeful of approval of the major recommendations so that we may continue in the same spirit of cooperation and mutual concern to expand and implement the important work begun.

Sincerely,

  
Edward J. Mortola  
Chairman



## A Regional Plan for Higher Education: A Report from New York City

### Summary of Recommendations

1. *The Regents Advisory Council recommends that a New York City Regional Coordinating Council for Postsecondary Education be created as a permanent body to assist institutions in New York City in meeting the postsecondary educational needs of the City through maximum effective use of available resources. Toward this end, the Council will explore obstacles to cooperation and seek solutions, create mechanisms which will implement specific solutions, and develop policy for the operation of the Council. (Page 9).*

2. *The Council further recommends that adequate funding be provided from the State to support the basic operations necessary to carry out the role of the Regional Coordinating Council, and that the Regional Coordinating Council be permitted to seek funds from governmental agencies, foundations, institutions, and other sources for special studies and supportive services. (Page 9).*

3. *The Regents Advisory Council has proposed and forwarded to the Board of Regents a limited, immediate transfer program for the Fall, 1972. This proposal would facilitate the voluntary transfer of up to 4,000 low-income students who have been accepted for admission to the senior colleges of the City University. These students would attend instead a private institution of their choice, according to certified availability of space. The private institutions would receive support for each student at the funding level received by the City University for the academic year 1972-73. (Page 11).*

4. *The Council strongly recommends the creation of a permanent coordinated admissions program for New York City under the aegis of the Regional Coordinating Council that would facilitate the most efficient use of institutional resources commensurate with student desires and needs. (Page 12).*

5. *The Council recommends that institutions modify their policies to permit expanded opportunities for cross-registration. (Page 12).*

6. *The Council recommends that:*

a) *In-service and professional training programs be strengthened and expanded to enable counselors to better serve the disadvantaged and other non-traditional students.*

b) *Cooperative arrangements should be developed between the institutions of higher education and the Board of Education to enable high school, college and university counselors to play more effective roles with regard to secondary schools of the region. (Page 12).*

7. *The Council endorses the recommendation of the Association of Colleges and Universities of the State of New York for the development of a central data bank under the aegis of the Regional Coordinating Council and a uniform reporting system, which would "... maintain information on manpower needs and development as well as inventories of all institutional resources, and would serve as the basis for drawing up regional plans and for continuous updating." (Page 12).*

8. *The Council recommends that the Regional Coordinating Council develop a plan for the support of existing and future centralized facilities for special laboratory and research purposes. (Page 12).*

9. *The Council recommends the removal of the current "freeze" on construction programs for the public institutions in New York City, and that these institutions be permitted to expand present plants to achieve a net assignable square feet per full-time equivalent student ratio (NASF/FTEs) of 100. (Page 13).*

10. *The Council recommends the development of a space available inventory, as part of the services provided by the regional data bank recommended previously, and further exploration of ways in which higher education institutions in New York City might be able to achieve full utilization of available resources. (Page 13).*

*The Council endorses several recommendations made by the Task Force on Libraries and Major Facilities:*

11. *A regional agency should encourage and support inter-institutional arrangements which would develop minimum library and performance standards within New York City. (Page 13).*
12. *A regional agency should develop and find a method for financing a system of sub-regional or intermediate libraries, either at existing institutions or between or among institutions. These sub-regional libraries would complement basic undergraduate collections. (Page 13).*
13. *A mechanism should be established to provide graduate students and faculty members access to specific and distinctive portions of research collections on a full cost-recovery basis in the libraries of higher educational institutions, the Research Libraries of the New York Public Library, and perhaps certain other specialized research libraries. (Page 13).*
14. *Institutions should be encouraged to develop innovative and comprehensive continuing education programs for library personnel. (Page 13).*
15. *The Council recommends that the Regional Coordinating Council explore and develop recommendations for fuller use of television and computer systems. (Page 13).*
16. *The Council recommends that the Scholar Incentive Awards provide for the part-time student as well as the full-time student, and that these benefits be adjusted to take into consideration the economic realities of varying geographic locations. (Page 14).*
17. *The Council recommends that institutions explore new educational patterns which are viable and relevant, and which provide expanded opportunities for social and economic mobility. These include:  
a) *Professional mini-career programs which provide opportunities for work-study in legal, medical and other professional fields at an undergraduate level.**

*b) Programs of various duration for life-long training and retraining, such as (1) terminal certificate programs in specific occupational areas, including short courses, and (2) shorter baccalaureate programs where appropriate.*

*(c) Independent study programs at the postsecondary level, whether or not they take place in a formal institutional setting. (Page 14).*

18. *The Council recommends that undergraduate and graduate department chairmen of public and private institutions meet on a planned schedule, under the aegis of the Regional Coordinating Council, to formulate recommendations for cooperative programs which will help to eliminate unwarranted duplication. (Page 14).*

19. *Concomitant with the development of data about traditional degree programs, the Council recommends the creation of a Center for Life-Long Learning which would, among other things, inventory existing postsecondary non-degree programs and courses at collegiate and non-collegiate institutions. (Page 16).*

20. *The Council recommends immediate aid to engineering schools on a per capita basis for full-time equivalent undergraduate and graduate students. During 1973-74 the engineering schools will be required to develop long-range plans to achieve financial stability. (Page 16).*

21. *The Council recommends that institutions be awarded a tuition differential for each student requiring remedial services for the first two years of his postsecondary educational career. (Page 16).*

22. *The Council recommends the development and support of sub-regional consortia which would include public and private colleges and universities within geographic proximity, as well as high schools and other appropriate educational programs and agencies such as Talent Search, Upward Bound, street academies, community centers, and centers for continuing education. (Page 17).*

23. *The Council recommends that the Regional Coordinating Council explore and develop plans for cooperative research programs and for a research clearinghouse. (Page 17).*

# **A Regional Plan for Higher Education: A Report from New York City**

---

*A report from the Regents Advisory Council to the  
New York State Board of Regents concerning regional planning  
for higher education in New York City.*

**Regents Advisory Council  
New York City Regional Plan for Higher Education  
*New York City, June 9, 1972***

## Regents Advisory Council

Edward J. Mortola, Chairman  
President, Pace College

Sister Mary David Barry, S.C.  
President, College of Mt. St. Vincent

Samuel Belkin  
President, Yeshiva University

Ernest L. Boyer  
Chancellor, State University of New York

Arland Christ-Janer  
President, College Entrance Examination Board

James A. Colston  
President, Bronx Community College

John R. Everett  
President, New School for Social Research

James M. Hester  
President, New York University

Harold Howe II  
Vice President, Ford Foundation

Seymour Hyman  
Deputy Chancellor, City University of New York

Robert J. Kibbee  
Chancellor, City University of New York

Leonard Lief  
President, Herbert H. Lehman College

Robert E. Marshak  
President, City College

William J. McGill  
President, Columbia University

Brother Gregory Nugent, F.S.C.  
President, Manhattan College

Henry Saltzman  
President, Pratt Institute

Kurt Schmeller  
President, Queensborough Community College

Reverend Michael P. Walsh, S.J.  
President, Fordham University

### INVITED OBSERVERS

John Chandler  
Chairman, Executive Committee  
Commission on Independent Colleges

Lester W. Ingalls  
Secretary, Association of Colleges and Universities

John I. Kirkpatrick  
President, Commission on Independent Colleges

## Acknowledgements

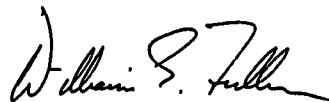
Approximately nine months ago, the Regents Advisory Council was charged by the Board of Regents to develop a regional plan for higher education in New York City. The United States Office of Education provided support for this project in part through a grant awarded under Title I of the Higher Education Facilities Act of 1963 (as amended). The New York State Education Department provided administrative guidance and additional support through staff who acted as resource persons to the Task Forces. The City University Construction Fund supplied funds for staffing and consultants with a grant of \$42,000. Additional support came from part- and full-time staff members contributed by Pace College, New York University and Manhattan College, and administrative and faculty members from over thirty institutions who served on the Task Forces of the Council.

The members of the Regents Advisory Council, under the dedicated leadership of Chairman Edward J. Mortola, have been exemplary in the giving of their time and energies to the total project.

The final report could not have been produced without the full-time ministrations of Dr. Ronald Lee Gaudreau, who has served as a consultant and staff writer for the past four months. Judyth Schaubhut has coordinated production through the many drafts and rewrites, and has enabled the staff to meet all deadlines. Dr. Joseph Gruber, on leave from Pace College, has served as editor of the report. Dr. Robert Vizza, on part-time loan from Manhattan College, has been of great assistance in developing the organization of and charges to the Task Forces.

Curtis Baker on part-time leave from New York University, provided much valuable input to the staff reports as well as the statistical base for the final report. Mary Frances Hoban of New York University assisted in the researching of staff papers. And last, but certainly not least, Lynda Lann of Pace College and Nancy Williams provided vital secretarial services.

To all of the above and to many others unnamed, I owe all that is good in this report.



William S. Fuller  
Director

## Contents

Members of the Regents Advisory Council.....	III
Acknowledgements .....	IV
INTRODUCTION .....	I
CHAPTER ONE: Higher Education in the New York City Region .....	3
CHAPTER TWO: Recommendations for the Establishment of The New York City Regional Coordinating Council for Postsecondary Education .....	9
CHAPTER THREE: Findings and Recommendations .....	11
<hr/>	
APPENDIXES .....	
A Statistics on Population, Enrollments, and Assignable Space .....	21
B Long Range Estimate of Demand for Higher Education in the City of New York .....	29
C Regents Advisory Council Proposal for the Allocation of Students Among Public and Private Institutions in New York City.....	37
D Reports of Five Task Forces .....	41
E Roster of Institutions of Higher Education in New York City.....	121
<hr/>	
BIBLIOGRAPHY AND REFERENCES .....	
Part I Books, Periodicals and Other Publications .....	128
Part II Supplementary Sources of Data .....	139
Members of the Regents Advisory Council Task Forces .....	141
Members of the Regents Advisory Council Staff.....	143

## Introduction

This report represents a regional approach to the immediate problems of higher education in New York City, and proposes a series of recommendations toward the cooperative resolution of these problems. While the Regents Advisory Council recognizes that there are many governmental and institutional levels at which these problems can be attacked, the regional nature of the scope and charge to the Council, as defined by the Board of Regents, has dictated the extent of its deliberations and recommendations.

Furthermore, a full exploration of issues fundamental to the nature and direction of higher education in New York City in the next decade was limited due to the constraints of time imposed upon the Council, with specific regard to the immediacy of problems concerning finances and facilities. Of particular significance was the omission of the following in the Council's deliberations:

1. The maintenance of quality educational programs;
2. Manpower needs for the City of New York for the next two decades;
3. The educational needs of the student of the 1970's and '80's;
4. Other non-collegiate postsecondary experiences;
5. The survival of existing institutions in their present form;
6. The nature of the teaching/learning process;
7. The maintenance of free tuition at public institutions.

### Background

Regional planning in higher education received its current impetus from Governor Rockefeller's December, 1970 Executive Order No. 44, requiring that all State agencies plan on a regional basis. Since that time, prior to and during the operation of the Regents Advisory Council, the Jonas Committee (March, 1971), the Citizens Commission on the Future of the City University (April, 1971 and March, 1972), the Executive Committee of the Association of Colleges and Universities of the State of New York (March,

1971), and the State Task Force (Hurd Committee) on the Financing of Higher Education in New York State (February, 1972) have expressed their support of regional planning for higher education.

In September of 1971, the Board of Regents of the State of New York designated the five boroughs of the City of New York as a "pilot planning region" for higher education, and appointed the Regents Advisory Council, an 18-member board which includes seven chief executives of public institutions, nine presidents of private institutions, and two "public at large" representatives. This Council was charged with the development of a report to be submitted in June of 1972 to the Board of Regents. The Council accepted as its charge a survey of the human, fiscal and physical resources of higher education institutions in New York City, as well as a delineation of specific regional problems, especially in the area of admissions, counseling and guidance, data collection, facilities, finances, and programs and research. In addition, the Council planned to recommend mechanisms and structures which would lead to a greater sharing of institutional resources.

To accomplish these objectives, the Regents Advisory Council appointed five Task Forces in November of 1971: The Full Utilization of Resources; Libraries and Major Facilities; Professional Programs; Graduate Programs; and Cooperative Programs for the Disadvantaged. Task Force members were selected by a subcommittee of the Regents Advisory Council from nominations submitted by the chief executive officers of all institutions of higher education in the New York City region. These Task Forces met frequently from December to March to formulate findings and recommendations for presentation to the Council. (See Appendix D).

### Scope of the Task Force Reports

The report of the Task Force on the Full Utilization of Resources was limited to an investigation and analysis of undergraduate educational programs, faculty and staff, enrollment, and physical facilities, excluding libraries.

The Task Force on Libraries and Major Facilities was primarily concerned with an analysis of current library holdings and personnel, existing cooperative activities and the potential sharing of computer and television facilities.

The Task Force on Professional Programs concentrated on the major problems of engineering education and research.

The report of the Task Force on Graduate Programs was confined to an analysis and discussion of doctoral programs in the liberal arts, excluding education, engineering, business, law and medicine.

The Task Force on Cooperative Programs for the Disadvantaged emphasized an analysis of guidance and counseling, financial aid, and alternative approaches to remediation and other academic programs for the disadvantaged.

### **Scope of the Regents Advisory Council's Report**

The body of the report is organized into three chapters: Chapter One highlights the national and statewide impact of institutions of higher education in New York City, their great diversity, and current problems. Chapter Two presents a description of the role, powers, membership and organization of the proposed New York City Regional Coordinating Council for Postsecondary Education. Chapter Three reports specific findings and recommendations addressed to: (1) functions and activities of the proposed Regional Coordinating Council, (2) more immediate problems of higher education institutions in New York City, and (3) exploration of alternative solutions to longer range problems.



## CHAPTER ONE

# Higher Education in the New York City Region

### A National and International Center

New York City is one of the most important national and international centers for higher education. It is comprised of 24 public and 57 private campuses enrolling over 340,000 undergraduate and graduate students, and embraces the entire range of institutional systems from the multiversity to the small specialized two-year college. Its students personify all levels of the socio-economic and political spectrum. New York City's educational programs reflect its position as a world center of cultural, economic, intellectual, political, religious and social activities, as well as its ethnic diversity.

Institutions of higher education in the New York City region enroll more undergraduate students than all but six other states, more first professional students (law, dentistry, and medicine) than all but three states, and more graduate students than all but one state. In the 1969-70 academic year, 4 per cent of the students in higher education in the United States were enrolled in institutions in the City of New York; in the same year these institutions awarded 6 per cent (1,800) of all the doctoral degrees in the United States, 5.9 per cent (2,078) of the first professional degrees, 7.3 per cent (15,232) of the master's, 3.4 per cent (26,925) of the baccalaureate degrees, and 3.6 per cent (7,378) of the associate degrees. (See Table 1).

### A State Resource

The New York City region is the most important educational center in New York State. As indicated by Table 2, in Fall, 1970 New York City's institutions enrolled 42.8 per cent of the total students attending higher education institutions in New York State. Yet this highly diversified educational center is provided with only 30.5 per cent of the non-residential net assignable square feet (NASF)\* of space devoted to higher education in New York State. (See Appendix A, Tables A-5 -- A-10).

\*Non-residential net assignable square feet (NASF) at an institution of higher education includes all space used for instruction, research, library, administration and auxiliary services. This space does not include student and faculty housing space, nor does it include such space as corridors, lobbies, mechanical and building services, and construction space such as walls, partitions, elevator shafts, etc.

In the academic year 1969-70, New York City's institutions awarded 54.7 per cent of all the doctoral degrees in New York State, 59.1 per cent of the first professional degrees, 56.8 per cent of the master's, 39.9 per cent of the baccalaureate degrees, and 27.2 per cent of the associate degrees. (See Table 1).

In spite of New York City's qualitative and quantitative position in higher education in New York State, in Fall, 1970 the total non-residential net assignable square feet per full-time equivalent student (NASF/FTES), an accepted planning measure, was 82.9, or 39 per cent (43.3 NASF/FTES) below space provided for public and private institutions outside the New York City region. (See Table 3, and Appendix A, Tables A-5 -- A-10).

Governmental and private support attest to the commitment to higher education in New York City. For example, during fiscal year 1970 public and private higher education expenditures for operation and capital construction totalled in excess of \$1 billion dollars. The current book value of land, building and equipment exceeds \$1.3 billion; and the market value of endowment funds at the end of fiscal year 1970 was \$670 million.<sup>1</sup>

### The Immediate Pressures on Higher Education in New York City

Given the seemingly limitless resources available in New York City and New York State, and despite significant public and private fiscal commitments to capital and annual operating funds, the higher education institutions in New York City find themselves facing serious pressures. During the past decade, institutions of higher education have been widely encouraged to respond to immediate societal needs. In the ensuing years, the support level from outside agencies has not kept pace with the ever-increasing commitments to this mission. In New York City, this situation is currently exemplified by the fiscal crisis of the private institutions and the lack of adequate facilities in the public sector.

The major contemporary pressures on higher education institutions in the New York City region are variously attributed to "open admissions" at the City University and attendant problems of remediation, the decline in enrollment in private institutions, the projected continuing decline in the pool of college-bound students who have traditionally sought

Higher Education Degrees Granted, by Level of Degree in New York City,  
New York State and United States, Academic Years 1965-66, 1967-68 and 1969-70

Table 1

Group	1965-66 <sup>1</sup>		1967-68 <sup>2</sup>		1969-70 <sup>3</sup>	
	Number	NYC Percentage	Number	NYC Percentage	Number	NYC Percentage
<b>New York City</b>						
Associate .....	4,424	100%	6,099	100%	7,378	100%
Baccalaureate .....	21,128	100	24,835	100	26,925	100
Master's .....	12,947	100	13,033	100	15,232	100
First Professional* .....	2,266	100	2,470	100	2,078	100
Doctor's .....	1,232	100	1,573	100	1,800	100
Total .....	41,997	100	47,010	100	53,413	100
<b>New York State</b>						
Associate .....	19,630	22.5	21,272	28.7	27,158	27.2
Baccalaureate .....	48,268	43.8	59,865	41.5	67,481	39.9
Master's .....	19,037	68.0	22,204	58.7	26,811	56.8
First Professional* .....	3,389	66.9	3,654	67.6	3,517	59.1
Doctor's .....	2,122	58.0	2,676	58.1	3,292	54.7
Total .....	92,446	45.4	109,671	42.9	128,259	41.6
<b>United States</b>						
Associate .....	111,740	3.9	160,054	3.8	206,753	3.6
Baccalaureate .....	524,117	4.0	636,863	3.9	798,070	3.4
Master's .....	140,772	9.2	177,150	7.4	209,387	7.3
First Professional* .....	31,496	7.1	34,728	7.1	35,252	5.9
Doctor's .....	18,239	6.8	23,091	6.8	29,872	6.0
Total .....	826,364	5.1	1,031,886	4.6	1,279,334	4.2

\* Includes Chiropody or Podiatry, Dentistry, Medicine, Law and Theology.

<sup>1</sup> *Earned Degrees Conferred*, Chandler, M. O. and Rice, M. C. Higher Education Studies Branch, Division of Statistical Operations, U.S. Office of Education, 1965-66.

<sup>2</sup> *Earned Degrees Conferred*, Hooper, M. E. and Chandler, M. O. Higher Education Surveys Branch, U.S. Office of Education, 1967-68.

<sup>3</sup> *Earned Degrees Conferred*, Hooper, M. E. National Center for Educational Statistics, Higher Education Surveys Branch, U.S. Office of Education, 1969-70.

admission to the private institutions, operating deficits and the expansion of the State University system. Although these factors are interrelated, they have been isolated below for general analysis and discussion.

### "Open Admissions" at the City University

The education of New York City's heterogeneous population is a herculean challenge. It has been aggravated in the last ten years by a rapid and significant change in the racial and ethnic composition of the region, at the same time that the aggregate population of 7.9 million has remained relatively stable. This change has required policies that reflected and responded to immediate social, economic and political needs. In elementary and secondary education it was ultimately manifested in the decentralization

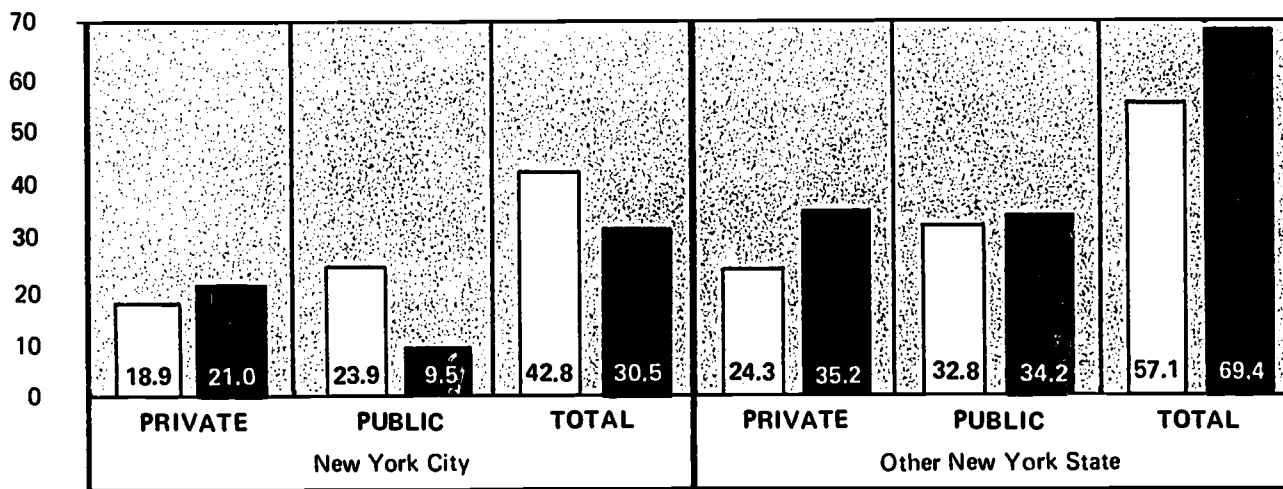
plan, and in higher education in the "open admissions" program.

The "open admissions" program of the City University of New York began in Fall, 1970, five years in advance of the 1975 target date, and guaranteed some form of tuition-free postsecondary education to every graduate of a New York City high school, a commitment endorsed by the Mayor, the Board of Regents and the Governor.

"Open admissions" resulted in a 100 per cent increase in first-time admissions to the City University from Fall, 1969 (19,559) to Fall, 1971 (39,211). This enrollment increase further compounded an existing space shortage that was met by leasing academic facilities at an annual cost of \$10-12 million. Solutions to the space shortage in the City University appeared to have been indefinitely postponed in December, 1971 when a "freeze" was imposed on

Space and Enrollment Comparisons As a Percentage of  
New York State Totals for Institutions of Higher Education, Fall 1970

Table 2

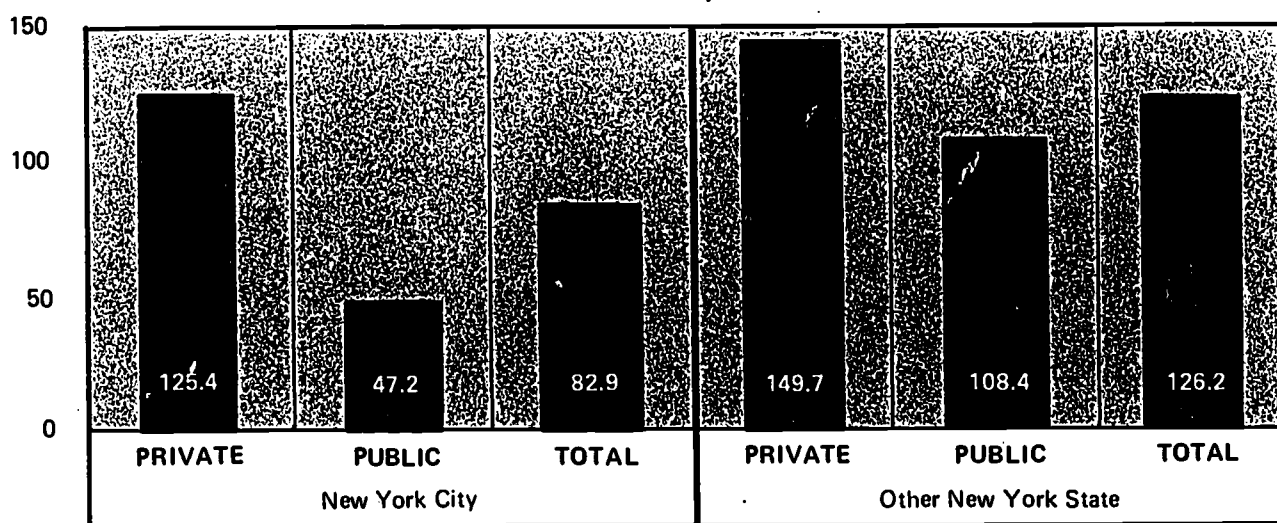


□ Head count enrollment    ■ Total non-residential net assignable square feet

Source: Derived from Draft of *Facilities Inventory Report, Part A, New York State Fall Semester 1970-71*, State Education Department, undated.

Net Assignable Square Feet (NASF) Per Full-Time Equivalent Students (FTES),  
Less Residential, New York State, Fall 1970

Table 3



Source: Derived from Draft of *Facilities Inventory Report, Part A, New York State Fall Semester 1970-71*, State Education Department, undated.

the construction program of the City University by the Governor of the State of New York -- an action induced by the State fiscal crisis.

An attendant problem for the City University, to which specific recommendations have been addressed in Chapter Three, has been the need to provide remediation for the increased number of underprepared students. This has extended the traditional time required for students admitted under the "open admissions" program to complete their degree requirements. For example, in 1971, 24,620 of the 39,211 students in the freshman class at the City University were retained as freshmen from the previous year, as compared to 13,902 in 1970 and 9,987 in 1969. Thus, the public institutions in the New York City region have been committed to costly remedial programs and increased costs per student.

A study of the effect of "open admissions" indicated that it had relatively little effect on the aggregate enrollments at the private institutions in the region. It did, however, affect the enrollments of those private institutions which had maintained low tuition charges and which had accepted students who were not traditionally eligible for admission to the senior colleges of the City University. Several of these private four-year institutions had offered special programs for disadvantaged students, but with the advent of "open admissions," these students now became eligible for admission to the City University.<sup>2</sup> Moreover, the private institutions which were severely affected by "open admissions" had de-

veloped their plans around enrollment projections based on the implementation of "open admissions" in 1975. The advancement of the target date and the sudden implementation of the program had serious consequences for these institutions.

### *The Decline in Enrollment at the Private Institutions*

During the last three years there has been a general decline in the undergraduate enrollments at the private institutions in New York City. This decline has been attributed to high tuition rates, exaggerated characterizations of conditions in New York City, and the expansion of the State and City University systems. The significant decrease in the aggregate number of out-of-city undergraduate students attending the private institutions (as indicated by Table 4) has increased competition for the relatively stable pool of high school graduates from New York City. To offset this decline many private institutions have lowered traditional admissions standards. In some cases, more than 90 per cent of their applicants have been accepted.

Enrollment data developed by the Council, and discussed in Chapter Three, indicate that under existing conditions the pool of available high school students will remain relatively stable during the next fifteen years. Significant social and economic incentives and educational innovations instituted in the elementary and secondary schools could increase the pool of high school graduates. This would in turn

Summary of Out-of-State Enrollment of Full-Time Students  
Private Institutions in New York City,\* Fall 1969, 1970, 1971

Table 4

Year	First-Time Freshmen		Undergraduate		Graduate	
	Enrollment	% of Decrease	Enrollment	% of Decrease	Enrollment	% of Decrease
1969	3,475	—	13,767	—	8,626	—
1970	3,302	4.97	13,273	3.58	8,574	.6
1971	2,742	16.95	12,049	9.22	7,053	17.73

\* Data not available from Mills College of Education, New School for Social Research, Hebrew Union College, Jewish Theological Seminary, Columbia Law School, Fordham Law School, New York University Law School, St. John's University Law School, Columbia Medical Center, New York University Medical Center, Albert Einstein College of Medicine, Brooklyn College of Pharmacy.

Source:

*Comparative Summary of Geographic Origin of Students, Private Institutions in New York City, Full-Time Students, Fall 1969, 1970, 1971, prepared by Regents Advisory Council staff, 15 pp.*

increase the projected number of full-time undergraduate students by as much as 16 per cent during that period, from 174,517 in 1971 to 202,524 in 1985.<sup>3</sup>

### Operating Deficits

The inflationary costs of goods and services have been detailed in every major economic survey and need not be discussed in this report. It is important, however, to note that sources of revenue for the private institutions from students, governmental agencies, interest on investments, and donors have not increased at the same rate as expenditures. Attempts to cut expenditures through the decrease in programs and the number of faculty require long-range planning; many institutions have not been prepared to meet the demands of the current fiscal crisis, although some have made drastic cuts in programs and staff to regain fiscal solvency. Attempts to combat growing deficits by raising additional revenues have not been generally successful.

**Tuition.** Net revenues have not been substantially increased by raising tuition rates. Rather, they have been generally offset by a decline in enrollment and a need to increase scholarship assistance in order to attract and retain academically qualified students.

**Governmental agencies.** Federal and State funds for specific academic programs, research, equipment and facilities have often resulted in a significant long-range commitment of institutional resources without continued governmental support.

**Investments.** Income generated from endowments during the past few years has not produced anticipated yields. The market value of the portfolios of institutions in New York City decreased by 15.4 per cent (\$121 million) from fiscal year 1969 to fiscal year 1970, as a result of general economic conditions and the forced premature sale of securities to meet current expenditures.<sup>4</sup>

**Donors.** Despite the current general economic conditions, individual donations to institutions appear to have remained stable. However, a greater percentage of undesignated gifts is being applied directly against current expenditures.

### Expansion of the State University System

In addition to the expansion of the City University (detailed on pages 4 and 6) and the decline in out-of-state students attracted to private institutions in New York City, competition for students, faculty and funds has been further aggravated by a significant increase in the State University system. As indicated by Table 5, the State University increased enrollment by 88,757 during the period 1968-1970, 76,483 at units outside New York City and 12,274 at units within New York City. Included in this figure is a 5,634 enrollment increase in out-of-state and foreign students, 4,707 at units outside New York City and 927 at units within New York City.

Table 5

State University of New York Enrollment Trends for All Full- and Part-Time Credit Course Students Fall 1968, 1969, 1970

	Enrollment		
	Fall 1968 <sup>1</sup>	Fall 1969 <sup>2</sup>	Fall 1970 <sup>3</sup>
<b>Origin of Students</b>			
<b>At SUNY Units Outside New York City</b>			
New York State Outside...	171,027	215,492	240,364
New York City			
New York City .....	5,911	8,087	8,350
Out of State and .....	4,673	8,433	9,380
Foreign			
Sub-Total .....	181,611	232,012	258,094
<b>At SUNY Units Within New York City*</b>			
New York State Outside...	1,435	2,150	3,426
New York City			
New York City .....	48,241	50,370	57,597
Out of State and .....	1,109	1,400	2,036
Foreign			
Sub-Total .....	50,785	53,920	63,059
<b>TOTAL</b> .....	<b>232,396</b>	<b>285,932</b>	<b>321,153</b>

\* Includes community colleges sponsored by the Board of Higher Education plus Maritime College, Fashion Institute of Technology, and Downstate Medical Center.

<sup>1</sup> *Geographic Origins of Students*, Report No. 5. Office of Institutional Research, State University of New York, Albany, N.Y.

<sup>2</sup> *Geographic Origins of Students*, Report No. 12. Office of Institutional Research, State University of New York, Albany, N.Y.

<sup>3</sup> *Geographic Origins of Students*, Report No. 21. Office of Institutional Research, State University of New York, Albany, N.Y.



## CHAPTER TWO

# Recommendations for the Establishment of The New York City Regional Coordinating Council For Postsecondary Education

Cooperative efforts should ultimately lead to the full utilization of human, fiscal and physical collegiate and non-collegiate resources available within the New York City region to provide opportunities for postsecondary education to every resident desiring it, regardless of his ability to pay. Such efforts should also result in improved educational services, greater program effectiveness and long-term economies, and the development of new programs and institutional arrangements.

The Regents Advisory Council has been impressed by the fact that all of the Task Force reports call for the establishment of a regional coordinating body to assist in such efforts. Although supporting this recommendation, the Council has not requested immediate powers of control or administration for the Regional Coordinating Council because it believes that there are many foreseeable impediments to the long-range success of regional cooperative activities that must be explored during the coming year. These include the real and fancied fears that institutional prestige and identity will be lost through regional planning, and fundamental differences in tuition charges and admission standards. Furthermore, institutions will require sufficient time to examine the degree to which adjustments in administrative and academic programs are possible, and to elicit support for such adjustments from their constituencies, especially from professional labor organizations. In addition, the role of existing "cooperative" endeavors in New York City, and the relationship of the Regional Coordinating Council to State agencies must be explored and clarified to insure the possibility of supplementary services and avoid wasteful duplication.

- (1) Accordingly, the Regents Advisory Council recommends that a New York City Regional Coordinating Council for Postsecondary Education be created as a permanent body to assist institutions in New York City in meeting the postsecondary educational needs of the City through maximum effective use of available resources. Toward this end, the Council will explore obstacles to cooperation and seek solutions, create mechanisms which will im-

plement specific solutions, and develop policy for the operation of the Council.

The Regional Coordinating Council will identify and explore the immediate major educational issues and problems affecting postsecondary institutions in New York City. Impetus for identification and exploration of such issues and problems may come from the Council membership, constituent postsecondary institutions, or the New York State Board of Regents.

The Council will serve as a planning and coordinating body for the New York City region and as an advisory body to the Board of Regents. It will be authorized to:

1. Develop mechanisms for the programming, implementation and maintenance of a continuous planning cycle for gathering, interpreting, and disseminating information about postsecondary education in New York City through a regional data system;
2. As requested by the Board of Regents or member institutions, review and recommend action on new academic programs, new institutions, major construction projects, major institutional reorganizations and on State fiscal policies which have an impact on postsecondary institutions;
3. Provide supportive services to the regional institutions for the planning and implementation of joint or cooperative ventures.

*The Council further recommends that adequate funding be provided from the State to support the basic operations necessary to carry out the role of the Regional Coordinating Council, and that the Regional Coordinating Council be permitted to seek funds from governmental agencies, foundations, institutions, and other sources for special studies and supportive services.*

(2)

### Membership and Organization

The Regional Coordinating Council membership will consist of not more than 17 chief executive officers appointed from among all chartered postsecondary institutions in the New York City region, and

three public representatives. The Chancellors of the State and City Universities will serve as *ex officio* members with vote. The remaining 18 Council members will be appointed by the Board of Regents.

The term of office of the Council members will be three years with a system of staggered years to provide six new members each year. A member will not be reappointed unless he is filling a partial term which has been vacated by a regular member.

The Regional Coordinating Council will invite the active participation of outside observers who will represent a broad range of public and educational constituencies. Such participants will not be granted the power of vote.

The Chairman will be selected for a term of two years by a majority vote of the membership. If this term exceeds the Chairman's current term of office,

the appointment as Chairman will be extended accordingly.

The Council will have authority to select an Executive Director for staff operations. The Executive Director will provide administrative leadership as well as serve the Council in a liaison capacity to establish appropriate relationships between the Council and all pertinent agencies.

The Council believes that the implementation of the recommendations in this and the following chapter will provide a climate conducive to the development of an effective and responsive organization to encourage and support cooperative endeavors in New York City. In addition, it will provide positive leadership in representing and reporting the needs of postsecondary education in the region to City, State and Federal agencies.

## CHAPTER THREE

# Findings and Recommendations

The recommendations that follow represent a positive first step toward extending the cooperative use of the resources of the New York City region for postsecondary education. The Council has found that there is a desire among institutions to participate in cooperative activities in spite of obstacles which must be explored in detail, if such activities are to be effective. As presented in Chapter Two, the Council has recommended an organization and structure to develop mechanisms for accomplishing desirable objectives and overcoming obstacles. In addition, specific recommendations have been made to resolve immediate enrollment and space problems.

In presenting the following recommendations, the Regents Advisory Council has been mindful that such cooperative activities will necessitate specific institutional, legislative and Regents' action legitimizing or clarifying the following: (1) use of public facilities by students attending private institutions; (2) responsibility for joint registration of courses; (3) manner of accounting for students in order for institutions to qualify for State funds, especially under Article 129 of the Education Law; and (4) ability to modify existing regional boundaries of jurisdiction and financing for community colleges, libraries and vocational programs.

The Council membership endorses the principle that planning regions for "professional" or "doctoral" programs should not be defined too narrowly. Distinguished graduate, engineering, law and medical schools attract national and international faculty and students. In future planning for such programs in New York City, consideration must be given to what is being done elsewhere in the State and in the public and private institutions of the entire Northeast, as well as in other university centers across the country. The extension of this principle should minimize unnecessary, destructive and expensive competition for limited professional and graduate faculty and students, thereby encouraging improved utilization of resources.

### *Specific Recommendations*

Specific recommendations in this chapter have been addressed to functions and activities of the New York City Regional Coordinating Council for Postsecondary Education (Recommendations 4, 7,

8, 10, 18, 19 and 23); more immediate problems of higher education institutions in New York City (Recommendations 3, 9, 16, 20 and 21); and exploration of alternative solutions to longer range problems (Recommendations 5, 6, 11, 12, 13, 14, 15, 17 and 22). In order to permit full discussion of the rationale supporting these recommendations, they have been organized according to function: Admissions, Counseling and Guidance, Data Collection and Evaluation, Facilities, Finances, and Programs and Research. Additional documentation is contained in the Task Force reports in Appendix D.

### **Admissions**

Several proposals to transfer students from public to private institutions of their choice have been presented during the past few months. *The Regents Advisory Council has proposed and forwarded to the Board of Regents a limited, immediate transfer program for the Fall, 1972.*<sup>1</sup> This proposal would facilitate the voluntary transfer of up to 4,000 low-income students who have been accepted for admission to the senior colleges of the City University. These students would attend instead a private institution of their choice, according to certified availability of space. The private institutions would receive support for each student at the funding level received by the City University for the academic year 1972-73. (3)

This student transfer program was submitted to the Board of Regents which accepted it for consideration as an alternative to substantially increasing Scholar Incentive benefits.<sup>2</sup> The Council's program was subsequently introduced in the New York State Senate as "An Act to amend the education law, in relation to establishing the city of New York cooperative college scholarship program,"<sup>3</sup> but failed of passage. As an immediate step, the Council urges that the Regents establish a pilot program designed in accordance with this transfer program, but limited in numbers (500-600 students), and limited in funding to the amount actually expended by the City University for full-time students. Additional costs incurred through the Scholar Incentive Program would not be involved so that the program would, in fact, require no additional funding above that already approved for the City University.



- (4) In addition, *the Council strongly recommends the creation of a permanent coordinated admissions program for New York City under the aegis of the Regional Coordinating Council that would facilitate the most efficient use of institutional resources commensurate with student desires and needs.* This is essential if further deterioration of private institutions' enrollments below the Fall, 1972 figures is to be prevented and if the problem of extensive overcrowding in the City University is not to be aggravated. The coordinated admissions program office would also provide counseling and guidance services as well as general information about program offerings throughout the region.

- Current cross-registration opportunities are minimal, even within the City University system, and efforts to increase these opportunities have largely failed because of basic problems of scheduling, standards and tuition differentials. *The Council recommends that institutions modify their policies to permit expanded opportunities for cross-registration.*
- (5)

### Counseling and Guidance

Counseling and guidance programs in the colleges and universities within the New York City region are generally adequate in meeting the needs of the traditional student. However, there appears to be a significant lack of qualified counseling staff for disadvantaged and "open admissions" students.

- (6) To strengthen counseling and guidance programs at the secondary and postsecondary level, *the Council recommends that:*

1. *In-service and professional training programs be strengthened and expanded to enable counselors to better serve the disadvantaged and other non-traditional students.*

2. *Cooperative arrangements should be developed between the institutions of higher education and the Board of Education to enable high school, college and university counselors to play more effective roles with regard to secondary schools of the region.*

Cooperative arrangements between the institutions of higher education and the Board of Education should provide responsive counseling and guidance programs that would result in the early identification of academically well qualified and academically underprepared students. This identification would result in special enrichment programs for the former, including early admission to college, and remediation for the latter.

In addition, the collective efforts of secondary and postsecondary guidance and counseling staffs could lead to joint sponsorship of in-service programs, the development of counseling materials, and research.

### Data Collection and Evaluation

The staff and the Task Force representatives found institutional information and data to be lacking in compatibility and comparability. *Therefore, the Council endorses the recommendation of the Association of Colleges and Universities of the State of New York for the development of a central data bank under the aegis of the Regional Coordinating Council and a uniform reporting system, which would "... maintain information on manpower needs and development as well as inventories of all institutional resources, and would serve as the basis for drawing up regional plans and for continuous updating."*

The availability of accurate and consistent data could enable the Regional Coordinating Council to maintain inventories of all institutional resources and manpower needs, and to serve as the basis for regional planning in conjunction with State and national data systems. It is anticipated that the data and evaluation unit would assist the Council in conducting periodic surveys of cooperative programs, and research. This service could also assist individual institutions in measuring educational output and cost effectiveness.

### Facilities

The Council found that certain cooperative arrangements for the sharing of facilities between and among institutions already existed on an informal basis. More formally, cooperative programs and research are being conducted at the following facilities: Columbia University Library, Lamont-Doherty Geological Observatory, American Museum of Natural History, Metropolitan Museum of Art, New York Public Library, Brookhaven National Laboratory, and New York Botanical Garden.

*The Council recommends that the Regional Coordinating Council develop a plan for the support of existing and future centralized facilities for special laboratory and research purposes.*

As previously reported, the institutions in New York City enroll 42.8 per cent of the total students attending institutions of higher education in New York State, with only 30.5 per cent of the non-residential net assignable square feet (NASF). There exists a significant difference in net assignable square feet per full-time equivalent student (NASF/FTES) between the public and private institutions in New York City, and their counterparts in New York State. (See Appendix A, Tables A-5 -- A-10). Particularly noteworthy is the 47.2 NASF/FTES at the City University as compared to 125.4 for private institutions in New York City, and 108.4 for public and 149.7 for private institutions outside of New York City.

To accommodate enrollment increases in the past few years the City University has, of necessity,

(9) resorted to costly rentals amounting to \$10-12 million per year; additional space must be rented or constructed to meet future needs and to achieve parity with the other public institutions in New York State. To achieve this end, *the Council recommends the removal of the current "freeze" on construction programs for the public institutions in New York City, and that these institutions be permitted to expand present plans to achieve a net assignable square feet per full-time equivalent student ratio (NASF/FTEs) of 100.*

Implementation of this recommendation to meet presently projected 1980 enrollment needs would require public institutions in New York City to acquire or construct over 16 million gross square feet of new space.<sup>5</sup> The ultimate cost of this expansion program is estimated at between \$1.3 and \$1.8 billion depending on several variables: the ability of the public institutions to transfer students to the private institutions in order to maximize utilization of available space for higher educational activities, the speed of State and City approvals, and the subsequent expeditious design and construction of the facilities.

(10) It has been reported by the Commission on Independent Colleges that the present facilities of private institutions in New York City could accommodate over 16,000 additional full-time undergraduate students and 8,600 additional graduate students in Fall, 1972.<sup>6</sup> To achieve maximum utilization of all physical resources, *the Council recommends the development of a space available inventory, as part of the services provided by the regional data bank recommended previously, and further exploration of ways in which higher education institutions in New York City might be able to achieve full utilization of available resources.*

**Libraries.** Although New York City contains two of the largest libraries in the world — the New York Public Library and the Columbia University Library — library research and study space for students and faculty is generally inadequate. The New York Public Library, which has traditionally served as the major resource of the New York City collegiate community, has now been forced to limit and may further curtail these services because of significant budget cuts. The generosity of Columbia University in making its library available to faculty and students of other institutions may also be curtailed as the needs of its own programs place increasingly heavy burdens on personnel, space and collections.

The Council found great variations in size, quality and even fundamental purposes of the libraries within the City. The majority are primarily collegiate libraries supporting a wide range of programs of instruction. Even among the collegiate libraries there are significant differences in breadth and depth, extending from basic collections to those of distinctive research quality. Finally, there are a few large gen-

eral collections of substance. Two specific mechanisms for inter-institutional cooperative library programs — the Medical Library Center and the New York Metropolitan Reference and Research Library Agency (METRO) — appear to have had some modest success.

*The Council endorses several recommendations made by the Task Force on Libraries and Major Facilities:*

1. *A regional agency should encourage and support inter-institutional arrangements which would develop minimum library and performance standards within New York City.* (11)

2. *A regional agency should develop and find a method for financing a system of sub-regional or intermediate libraries, either at existing institutions or between or among institutions. These sub-regional libraries would complement basic undergraduate collections.* (12)

3. *A mechanism should be established to provide graduate students and faculty members access to specific and distinctive portions of research collections on a full cost-recovery basis in the libraries of higher educational institutions, the Research Libraries of the New York Public Library, and perhaps certain other specialized research libraries.* (13)

4. *Institutions should be encouraged to develop innovative and comprehensive continuing education programs for library personnel.* (14)

**Television and Computer Systems.** The use of television to supplement instruction has not been fully examined, nor has the potential of sharing the instructional and administrative use of computers. One example of the use of television on a small scale is the City University Mutual Benefit Instructional Network (CUMBIN). Since the costs of these activities are high, every opportunity for inter-institutional sharing of the benefits at minimum institutional cost should be explored. Accordingly, *the Council recommends that the Regional Coordinating Council explore and develop recommendations for more extensive use of television and computer systems.* (15)

It is already evident that the sharing of facility and program resources could be enhanced by the development of a regional television center. This center appears to offer unlimited possibilities for the development of independent study programs, perhaps directly related to Empire State College and to the External Degree Program of the State Education Department.

## Finances

With rare exception all private institutions in New York City are anticipating significant deficits for the current and next academic years. These deficits have been attributed variously to the "open admissions" program at the City University, the ex-

pansion of the State University, rapidly accelerating costs, increases in tuition, a decrease in out-of-city students, and a general failure to predict the leveling off of enrollments during the 1970's.

The State of New York has provided relief to the private institutions in the region through (1) student aid (scholarships and loans), (2) institutional aid (Bundy Aid and special appropriations to the Polytechnic Institute of Brooklyn), (3) aid for professional programs (medical, nursing and dental schools), and (4) loan programs for capital construction through the Dormitory Authority of the State of New York.

Most recently, the Board of Regents proposed the increase of Scholar Incentive Awards. The Council supports this principle of providing additional financing of students unable to pay the increased costs of education at the institution of their choice.

As previously discussed, the Council has proposed a short-range, limited, low-cost transfer program that would enable low-income students from the City University to attend a private institution at the same funding level supporting such students at the City University. This program represents one possible approach to meeting the immediate space and fiscal problems of higher education in New York City, while at the same time providing students with a wider choice of educational opportunities. Such a proposal would also allow private and public institutions to adjust their programs and expand their facilities to meet current and future enrollment and space needs.

- (16) *As an additional measure, the Council recommends that the Scholar Incentive Awards provide for the part-time student as well as the full-time student, and that these benefits be adjusted to take into consideration the economic realities of varying geographic locations.*

It should not be expected that short-range savings will be realized by cooperative activities. Significant initial expenditures may be necessary to effectuate long-range savings and to utilize scarce human resources. The Council anticipates that the current operating deficits of the private institutions in New York City will be considerably reduced by 1974, if the Scholar Incentive Award is increased and adjusted according to economic market indicators for New York City, and if the Council's student transfer program is adopted.

### Programs and Research

- (17) *The liberal arts education has long been the traditional academic pattern guaranteeing social and economic mobility. While access to this pattern should be broadened, the Council recommends that institutions explore new educational patterns which are viable and relevant, and which provide expanded*

*opportunities for social and economic mobility. These include:*

1. *Professional mini-career programs which provide opportunities for work-study in legal, medical and other professional fields at an undergraduate level.*

2. *Programs of various duration for life-long training and retraining, such as (a) terminal certificate programs in specific occupational areas, including short courses, and (b) shorter baccalaureate programs where appropriate.*

3. *Independent study programs at the postsecondary level, whether or not they take place in a formal institutional setting.*

With limited time and resources, it has been particularly difficult to assess the impact of new methods of instruction, as well as the use of technical aids such as teaching machines, television and other audio-visual devices, and the implications of new degree programs such as the Regents External Degree Program, "Universities Without Walls," Empire State College, etc. Thus far, these innovative programs appear to have had minimal impact upon New York City higher education institutions. If, however, significant interest is generated and adequate resources are committed, colleges and universities should be prepared to encourage and implement these new developments in higher education.

### Programs

Generally, there are a number of strong, flourishing undergraduate and graduate programs in the same discipline now being offered at several institutions within such fields as business, education and the social sciences. (See Table 6). Yet, certain subspecialties of these and other programs which have limited enrollments are inadequately supported by student demand and may suffer from duplication on multiple campuses.

*The Council recommends that undergraduate and graduate department chairmen of public and private institutions meet on a planned schedule, under the aegis of the Regional Coordinating Council, to formulate recommendations for cooperative programs which will help to eliminate unwarranted duplication.*

(18)

**Continuing Education and Life-Long Learning.** The Council did not specifically address itself to programs broadly catalogued under the rubric of *Continuing Education* or *Life-Long Learning*. The Task Forces on Graduate Programs and Cooperative Programs for the Disadvantaged did consider this important program area, but found difficulty in reaching general agreement on which programs and courses might be considered under this heading. In addition, they found that little information was available about programs offered outside of higher education institu-

Full-Time and Part-Time Degree Credit Enrollment\* By Major Program Category  
and Level of Study, Colleges and Universities in New York City, Academic Year 1970-71

Table 6

	Undergraduate		First Professional		Graduate		Total	
	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time
Architecture.....	1,367	179	-	-	228	75	1,595	254
Area Studies .....	191	37	-	-	78	123	269	160
Biological Sciences .....	4,760	635	-	-	828	534	5,588	1,169
Business & Commerce .....	16,680	8,226	-	-	2,001	6,161	18,681	14,387
Communications .....	1,737	294	-	-	207	201	1,944	495
Computer Sciences.....	1,646	752	-	-	181	929	1,827	1,681
Education .....	13,261	3,377	-	-	3,544	17,426	16,805	20,803
Engineering .....	11,766	2,925	-	-	1,094	3,114	12,860	6,039
Fine & Applied Arts .....	6,516	781	-	-	1,270	818	7,786	1,599
Foreign Languages.....	3,519	881	-	-	836	1,203	4,355	2,084
Geography .....	71	22	-	-	21	5	92	27
Health Professions.....	8,135	1,599	4,091	-	447	354	12,673	1,953
Home Economics.....	786	163	-	-	14	95	800	258
Language Arts .....	6,250	1,409	-	-	877	1,494	7,127	2,903
Law .....	6	-	4,349	1,691	234	545	4,589	2,236
Library Science .....	1	-	-	-	294	521	295	521
Mathematics .....	3,766	767	-	-	328	659	4,094	1,426
Philosophy .....	828	138	-	-	315	249	1,143	387
Physical Sciences .....	3,065	666	-	-	937	596	4,002	1,262
Psychology.....	6,144	1,325	-	-	1,209	1,381	7,353	2,706
Public Services Curriculums....	861	150	-	-	1,743	835	2,604	1,285
Religion & Theology .....	173	8	585	7	334	323	1,092	338
Social Sciences.....	15,646	4,315	-	-	2,571	3,781	18,217	8,096
Interdisciplinary Studies .....	12,001	2,531	-	-	20	246	12,021	2,777
Other.....	31,103	43,360	16	-	401	6,793	31,520	50,153
Totals .....	150,279	74,840	9,041	1,698	20,012	48,461	179,332	124,999

\* Excludes extension and organized occupational students.

Source:

Fall, 1970 Statistical Analysis of Enrollment, Program, and Finances for New York City Region, Higher Education Data System, New York State Education Department, October 29, 1971.



(19) tions. Accordingly, concomitant with the development of data about traditional degree programs, the Council recommends the creation of a Center for Life-Long Learning which would, among other things, inventory existing postsecondary non-degree programs and courses at collegiate and non-collegiate institutions.

The development of such a Center should provide an opportunity to create a clearinghouse for information about educational programs for life-long learning; and to serve as a guidance, counseling, and referral center; a catalyst for the development of cooperative programs to meet regional needs; a contractor for specific programs and services under State and Federal grants; an evaluator of the success of long-range plans and programs developed under the Center's aegis; and a coordinator of intra-regional programs and such inter-regional programs as the University Without Walls, Empire State College, and the Regents External Degree.

**Engineering.** During the period 1967 to 1971, there has been a 15 per cent decline in full-time enrollment at engineering schools in New York City: 13 per cent at the undergraduate level, 22 per cent at the master's level, and 20 per cent in the doctoral programs. The Task Force on Professional Programs reports that this decline in enrollment is expected to influence total enrollments for the next four or five years. In addition, based upon national trends, increases in undergraduate, master's and doctoral engineering enrollments in New York City above the Fall, 1971 level are not likely to occur within the next decade.

The deficits for private engineering institutions in New York City for the academic year 1970-71 totalled some \$8.1 million. The fiscal crisis caused by enrollment decreases is exemplified by the Polytechnic Institute of Brooklyn, which has been able to operate for the last three years due to a State subsidy, e.g. \$2.7 million for the academic year 1972-73, and New York University's School of Engineering and Science, which has suffered serious enrollment declines in the past two years.<sup>7</sup>

Recognizing the severity of the situations at these two institutions, the State Legislature mandated during its Spring, 1972 session that, among other things, "...New York university and polytechnic institute of Brooklyn shall immediately undertake negotiations and shall not later than July first, nineteen hundred seventy-three, merge the appropriate educational and research programs and such faculty of New York university's school of engineering and science as may be necessary into the polytechnic institute of Brooklyn."<sup>8</sup>

In the academic year 1969-70, New York City's eight engineering schools produced 3.8 per cent (1,691) of all the engineering baccalaureates produced in the United States, 7.4 per cent (1,149) of the master's, and 4.4 per cent (161) of the doctorates.

It is anticipated that these percentages will be maintained through 1980, although the actual enrollments will decline slightly.<sup>9</sup> The Council membership recognizes the important local, State and national contributions made by the New York City engineering schools, especially in the area of graduate education and research, and supports the continuance of viable engineering programs to meet future technological needs. Accordingly, *the Council recommends immediate aid to engineering schools on a per capita basis for full-time equivalent undergraduate and graduate students. During 1973-74 the engineering schools will be required to develop long-range plans to achieve financial stability.*

**Remedial Programs.** There are a large number of programs for disadvantaged students in public and private institutions of higher education in the New York City region. However, information on program effectiveness is spotty, and research, evaluation, and systems for dissemination of techniques and practices have been given insufficient attention at both the collegiate and legislative levels.

Evidence indicates that with sufficient support educational opportunity programs for the disadvantaged can be successful. However, present funding to meet the high costs of these programs appears to be inadequate. Funding for such programs ranges from the simplest forms of scholarship aid (which are also the most common) to a wide range of supportive services such as the SEEK program of the City University and the HEOP program for the private institutions.

The private schools in particular appear interested in expanding programs for the disadvantaged but are limited in such expansion by the financial commitments involved. As indicated earlier, most students in this category require intensive remedial support.

In order to assist colleges to recruit, tutor, and otherwise assist disadvantaged students, *the Council recommends that institutions be awarded a tuition differential for each student requiring remedial services for the first two years of his postsecondary educational career.*

In its report, the Task Force on Cooperative Programs for the Disadvantaged noted that:

If the high schools could be more effective in preparing their students for college, then obviously the remedial burdens thrust on the colleges would not be so great. We would still have to cope with accommodating large numbers of poorly prepared students. While we cannot avoid the task now confronting us, we do not believe the high schools should be allowed to continue at their present level of effectiveness. Somehow they must be supported in their efforts to produce graduates among the disadvantaged who are prepared to go on with their education. The colleges will be seriously hurt if they must

(20)

(21)

shoulder this burden alone.<sup>10</sup>

The Task Force on Cooperative Programs for the Disadvantaged has also recommended the development of sub-regional consortia which would consider the establishment of the following cooperative activities:

1. Recruitment, pre-college and counseling and remediation centers;
2. Summer remediation programs;
3. Programs in basic academic areas;
4. In-service training programs for teachers, tutors and counselors, and seminars on the use of appropriate educational approaches to the remedial students;
5. Research programs to develop teaching approaches and curricular materials.

(22) *The Council recommends the development and support of sub-regional consortia which would include public and private colleges and universities within geographic proximity, as well as high schools and other appropriate educational programs and agencies such as Talent Search, Upward Bound, street academies, community centers, and centers for continuing education.*

### *Research*

There are few major shared research projects in the New York City region. Institutional funds for research efforts are minimal, and in recent years governmental support for major programs has diminished, while the guarantee of continued funding has been unreliable. Although research tends to be costly, it is generally agreed that large programs and individual opportunities for research attract the best faculty and graduate students.

*The Council recommends that the Regional Coordinating Council explore and develop plans for cooperative research programs and for a research clearinghouse.*

(23)

---

### **Conclusion**

The Regents Advisory Council believes that implementation of the foregoing recommendations contained in this and the preceding chapter would give genuine meaning to the concept of regional planning by providing New York City with effective leadership and direction in the development of innovative regional programs that are responsive to the needs of this national and international center for higher education.

Implementation of these recommendations would also serve to:

-- Provide the framework for expansion of the educational opportunities available to New York City residents;

-- Preserve effective diversity, while eliminating costly and unnecessary duplication;

-- Assure equality of educational program opportunities and facilities;

-- Facilitate long-term economies, while increasing the quality of the educational experience.

The Council believes, however, that such goals are only possible if the proposed New York City Regional Coordinating Council for Postsecondary Education benefits from the cooperation and support of its constituent institutions of higher education as well as the Board of Regents and appropriate State and City agencies.

## Footnotes

### CHAPTER ONE

---

- <sup>1</sup> *Fall, 1970 Statistical Analysis of Enrollment, Program, and Finances for New York City Region*. Higher Education Data System, New York State Education Department, October 29, 1971, pp. 170-178.
- <sup>2</sup> *Impact of CUNY's Open Admissions Policy on Private Institutions*. Staff Report, Regents Advisory Council, February 25, 1972.
- <sup>3</sup> *Long Range Estimate of Demand for Higher Education in the City of New York*. Staff Report, Regents Advisory Council, February 25, 1972.
- <sup>4</sup> *Fall, 1970 Statistical Analysis of Enrollment, Program, and Finances for New York City Region*. op. cit.

### CHAPTER THREE

---

- <sup>1</sup> *Regents Advisory Council Proposal for the Allocation of Students Among the Public and Private Institutions in New York City*, January 20, 1972.
- <sup>2</sup> *Financing Higher Education Needs in the Decade Ahead*, Regents Position Paper No. 13, New York State Education Department, January, 1972.
- <sup>3</sup> *Senate Bill #9806*, New York State Legislature, Spring, 1972.
- <sup>4</sup> *Recommendations Adopted by the Executive Committee of The Association of Colleges and Universities of the State of New York*, meeting in special session at The Institute of Man and Science, Rensselaerville, New York, August 3-5, 1971.
- <sup>5</sup> *Report of the Task Force on Full Utilization of Resources*, Appendix D of the Regents Advisory Council Report, June 9, 1972.
- <sup>6</sup> *Results of Survey of Additional Full-Time Enrollment Accommodations Expected at Private Higher Education Institutions in New York State in Fall, 1972*, Commission on Independent Colleges and Universities, State of New York, December 27, 1971.
- <sup>7</sup> *Report of the Task Force on Professional Programs*, Appendix D of the Regents Advisory Council Report, June 9, 1972.
- <sup>8</sup> *Assembly Bill #12353-A*, New York State Legislature, Spring, 1972.
- <sup>9</sup> *Report of the Task Force on Professional Programs*, op. cit.
- <sup>10</sup> *Report of the Task Force on Cooperative Programs for the Disadvantaged*, Appendix D of the Regents Advisory Council Report, June 9, 1972.

## APPENDIXES



## Appendix A: Statistics

### Table No.

- A-1 Total Population and Populations Aged 18-20 and 18-34 of New York City, New York State and U.S. Census Years 1950, 1960 and 1970.
- A-2 Full-Time and Part-Time Degree Credit Enrollment By Type of Institution and Level of Study in Colleges and Universities in New York City, Academic Year 1970-71.
- A-3 Full-Time and Part-Time Undergraduate Degree Credit Enrollment By Type of Institution and Class Level in Colleges and Universities in New York City, Academic Year 1970-71.
- A-4 Full-Time and Part-Time Undergraduate Degree Credit Enrollment By Type of Institution, Class and Sex in Colleges and Universities in New York City, Academic Year 1970-71.
- A-5 Comparative Summary of Enrollment and Net Assignable Square Feet (NASF) -- Total Public-Private in New York City, Fall 1970.
- A-6 Comparative Summary of Enrollment and Net Assignable Square Feet (NASF) -- Public Institutions in New York City, Fall 1970.
- A-7 Comparative Summary of Enrollment and Net Assignable Square Feet (NASF) -- Private Institutions in New York City, Fall 1970.
- A-8 Comparative Summary of Enrollment and Net Assignable Square Feet (NASF) -- Total Public-Private in New York State Outside New York City, Fall 1970.
- A-9 Comparative Summary of Enrollment and Net Assignable Square Feet (NASF) -- Public Institutions in New York State Outside New York City, Fall 1970.
- A-10 Comparative Summary of Enrollment and Net Assignable Square Feet (NASF) -- Private Institutions in New York State Outside New York City, Fall 1970.

Total Population and Populations Aged 18-20 and 18-34 of New York City,  
New York State and U.S., Census Years 1950, 1960 and 1970

Table A-1

Group	1950 <sup>1</sup>		1960 <sup>2</sup>		1970 <sup>3</sup>	
	Number	NYC Percentage	Number	NYC Percentage	Number	NYC Percentage
<b>New York City</b>						
Total .....	7,891,957	100%	7,781,984	100%	7,895,563	100%
18-20 .....	305,875	100	271,333	100	364,361	100
18-34 .....	2,101,159	100	1,719,129	100	1,964,479	100
<b>New York State</b>						
Total .....	14,788,960	53.4	16,783,604	46.4	18,236,967	43.3
18-20 .....	574,467	53.2	564,242	48.1	885,240	41.2
18-34 .....	3,841,919	54.7	3,504,055	49.1	4,246,275	46.3
<b>U.S.*</b>						
Total .....	151,325,798	5.2	179,323,175	4.3	203,211,926	3.9
18-20 .....	6,529,370	4.7	6,997,613	3.9	10,816,849	3.4
18-34 .....	39,592,122	5.3	38,422,477	4.5	48,604,769	4.0

<sup>1</sup> *United States Bureau of Census, United States Census of Population: 1950. Volume 11, Characteristics of Population, Part 1, U.S. Summary.* Washington, D.C., U.S. Government Printing Office, 1952. Table 94.

*United States Bureau of Census, United States Census of Population: 1950. Volume 11, Characteristics of Population, Part 32, N.Y.* Washington, D.C., U.S. Government Printing Office, 1952. Table 51, New York State; Table 53, New York City.

<sup>2</sup> *United States Bureau of Census, United States Census of Population: 1960. Volume 1, Characteristics of Population, Part 1, U.S. Summary.* Washington, D.C., U.S. Government Printing Office, 1962. Table 155.

*United States Bureau of Census, United States Census of Population: 1960. Detailed Characteristics, New York. Final Report, P.C.(1)-34D.* Washington, D.C., U.S. Government Printing Office, 1962. Table 94, New York State; Table 96, New York City.

<sup>3</sup> *United States Bureau of Census, United States Census of Population: 1970. Final Report P.C. (1) B1, U.S. Summary.* Washington, D.C., U.S. Government Printing Office, 1972. Table 51.

*United States Bureau of Census, United States Census of Population: 1970. General Population Characteristics. Final Report, P.C. (1) B34,* New York. Washington, D.C., U.S. Government Printing Office, 1972. Table 19, New York State; Table 24, New York City.

\* Including Alaska and Hawaii all years.

Full-Time and Part-Time Degree Credit Enrollment\* By Type of Institution and Level of Study  
Colleges and Universities in New York City, Academic Year 1970-71

Table A-2

	Undergraduate		First Professional		Graduate		Totals	
	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time
<b>City University</b>								
Two-Year Colleges .....	29,408	26,455	-	-	-	-	29,408	26,455
Four-Year Colleges .....	67,247	34,938	164	-	1,883	22,790	69,294	57,728
Doctoral Programs .....	-	-	-	-	1,493	487	1,493	487
Sub-Total .....	96,655	61,393	164	-	3,376	23,277	100,195	84,670
<b>State University</b>								
Two-Year Colleges .....	1,985	3,222	-	-	-	-	1,985	3,222
Four-Year Colleges .....	695	2	-	-	-	50	695	52
Doctoral Programs .....	200	-	817	-	107	18	1,124	18
Sub-Total .....	2,880	3,224	817	-	107	68	3,804	3,292
<b>Private Institutions</b>								
Two-Year Colleges .....	1,352	826	-	-	-	-	1,352	826
Four-Year Colleges .....	16,684	6,644	-	-	901	3,659	17,585	10,303
Doctoral Programs .....	29,913	6,306	5,605	767	12,219	21,858	47,737	28,931
Specialized .....	9,173	2,043	2,481	929	3,743	6,343	15,397	9,315
Sub-Total .....	57,122	15,819	8,086	1,696	16,863	31,860	82,071	49,375
<b>Totals .....</b>	<b>156,657</b>	<b>80,436</b>	<b>9,067</b>	<b>1,696</b>	<b>20,346</b>	<b>55,205</b>	<b>186,070</b>	<b>137,337</b>

\* Includes extension and organized occupational students.

Source:

Fall, 1970 Statistical Analysis of Enrollment, Program, and Finances for New York City Region, Higher Education Data System, New York State Education Department, October 29, 1971.

Full-Time and Part-Time Undergraduate Degree Credit Enrollment\* By Type of Institution and Class Level Table A-3  
Colleges and Universities in New York City, Academic Year 1970-71

	Freshman		Sophomore		Junior		Senior		Total	
	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time
<b>City University</b>										
Two-Year Colleges	20,731	22,904	8,677	3,551	-	-	-	-	29,408	26,455
Four-Year Colleges	24,677	19,272	12,893	3,159	15,290	5,613	10,359	3,589	63,219	31,633
Sub-Total .....	45,408	42,176	21,570	6,710	15,290	5,613	10,359	3,589	92,627	58,088
<b>State University</b>										
Community Colleges	1,024	2,731	961	491	-	-	-	-	1,985	3,222
Health Science Centers	-	-	-	-	139	-	61	-	200	-
Specialized Colleges	260	1	178	-	125	-	132	1	695	2
Sub-Total .....	1,284	2,732	1,139	491	264	-	193	1	2,880	3,224
<b>Private Institutions</b>										
Two-Year Colleges	28	-	31	4	-	-	-	-	59	4
Four-Year Colleges	5,181	3,972	3,866	816	3,835	688	3,566	865	16,448	6,341
Doctoral Institutions	7,778	2,895	7,831	846	7,288	867	6,183	1,146	29,080	5,754
Specialized Institutions	2,712	402	2,410	318	2,197	320	1,866	389	9,185	1,429
Sub-Total .....	15,699	7,269	14,138	1,984	13,320	1,875	11,615	2,400	54,772	13,528
Totals .....	62,391	52,177	36,847	9,185	28,874	7,488	22,167	5,990	150,279	74,840

\* Does not include extension and organized occupational students.

Source:

Fall, 1970 Statistical Analysis of Enrollment, Program, and Finances for New York City Region, Higher Education Data System, New York State Education Department, October 29, 1971.

Full-Time and Part-Time Undergraduate Degree Credit Enrollment\* By Type of Institution,  
Class and Sex, Colleges and Universities in New York City, Academic Year 1970-71

Table A-4

	Freshman		Sophomore		Junior		Senior		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
<b>City University</b>										
Two-Year Colleges	22,687	20,948	6,460	5,768	-	-	-	-	29,147	26,716
Four-Year Colleges	21,770	22,179	7,696	8,356	9,913	10,990	6,588	7,360	45,967	48,885
Sub-Total . . . . .	44,457	43,127	14,156	14,124	9,913	10,990	6,588	7,360	75,114	75,601
<b>State University</b>										
Community Colleges	1,213	2,542	294	1,158	-	-	-	-	1,507	3,700
Health Science Centers	-	-	-	-	35	104	20	41	55	145
Specialized Colleges	261	-	178	-	125	-	133	-	697	-
Sub-Total . . . . .	1,474	2,542	472	1,158	160	104	153	41	2,259	3,845
<b>Private Institutions</b>										
Two-Year Colleges	-	28	-	35	-	-	-	-	-	63
Four-Year Colleges	5,596	3,557	2,795	1,887	2,723	1,800	2,716	1,715	13,830	8,959
Doctoral Institutions	6,752	3,921	5,809	2,868	5,344	2,811	4,904	2,425	22,809	12,025
Specialized Institutions	2,199	915	1,979	749	1,827	690	1,672	583	7,677	2,937
Sub-Total . . . . .	14,547	8,421	10,583	5,539	9,894	5,301	9,292	4,723	44,316	23,984
<b>Totals . . . . .</b>	<b>60,748</b>	<b>54,090</b>	<b>25,211</b>	<b>20,821</b>	<b>19,967</b>	<b>16,395</b>	<b>16,033</b>	<b>12,124</b>	<b>121,689</b>	<b>103,430</b>

\* Does not include extension and organized occupational students.

Source:

Fall, 1970 Statistical Analysis of Enrollment, Program, and Finances for New York City Region, Higher Education Data System, New York State Education Department, October 29, 1971.

Comparative Summary of Enrollment and Net Assignable Square Feet (NASF)  
*Total Public\* - Private in New York City, Fall, 1970*

Table A-5

	Enrollment			Net Assignable Square Feet	
	Numbers	As % of State		Numbers in Millions	As % of State
Full-time Students .....	188,240	37.8	Instructional and Research Space ....	9.45	27.8
Part-time Students .....	157,575	50.8	Library and Study Space .....	2.28	35.0
Total Enrollment .....	345,815	42.8	Administrative and Supporting Space ..	8.23	33.0
			Residential Space .....	5.08	17.3
			Total Space .....	25.04	26.4
Full-time Equivalent <sup>1</sup> .....	240,765	40.1	Total Less Residential Space .....	19.96	30.5

\* Does not include Fashion Institute of Technology, Maritime College, and Downstate Medical Center.

$$\frac{\text{Net Assignable Square Feet (NASF)}}{\text{Full-time Equivalent Students (FTES)}} = \frac{19,960,000}{240,765} = 82.9 \text{ (NASF/FTES)}$$

$$^1 \text{ Full-time equivalent} = \frac{\text{Part-time} + \text{Full-time}}{3}$$

Source:

Draft of *Facilities Inventory Report, Part A, New York State Fall Semester 1970-71*, State Education Department, undated.

Comparative Summary of Enrollment and Net Assignable Square Feet (NASF)  
*Public\* Institutions in New York City, Fall, 1970*

Table A-6

	Enrollment			Net Assignable Square Feet	
	Numbers	As % of State		Numbers in Millions	As % of State
Full-time Students .....	100,318	20.2	Instructional and Research Space ....	3.21	9.5
Part-time Students .....	92,880	29.9	Library and Study Space .....	.54	8.3
Total Enrollment .....	193,198	23.9	Administrative and Supporting Space ..	2.45	9.8
			Residential Space .....	.07	.2
			Total Space .....	6.26	6.6
Full-time Equivalent <sup>1</sup> .....	131,278	21.8	Total Less Residential Space .....	6.19	9.5

\* Includes Fashion Institute of Technology, Maritime College, and Downstate Medical Center.

$$\frac{\text{Net Assignable Square Feet (NASF)}}{\text{Full-time Equivalent Students (FTES)}} = \frac{6,190,000}{131,278} = 47.2 \text{ (NASF/FTES)}$$

$$^1 \text{ Full-time equivalent} = \frac{\text{Part-time} + \text{Full-time}}{3}$$

Source:

Draft of *Facilities Inventory Report, Part A, New York State Fall Semester 1970-71*, State Education Department, undated.

Comparative Summary of Enrollment and Net Assignable Square Feet (NASF)  
Private Institutions in New York City, Fall, 1970

Table A-7

Enrollment			Net Assignable Square Feet		
	Numbers	As % of State		Numbers in Millions	As % of State
Full-time Students	87,922	17.7	Instructional and Research Space	6.26	18.4
Part-time Students	64,695	20.9	Library and Study Space	1.66	25.5
Total Enrollment	152,617	18.9	Administrative and Supporting Space	5.79	23.2
			Residential Space	5.00	17.0
			Total Space	18.71	19.7
Full-time Equivalent <sup>1</sup>	109,487	18.2	Total Less Residential Space	13.71	21.0

$$\frac{\text{Net Assignable Square Feet (NASF)}}{\text{Full-time Equivalent Students (FTES)}} = \frac{13,710,000}{109,487} = 125.4 \text{ (NASF/FTES)}$$

<sup>1</sup> Full-time equivalent =  $\frac{\text{Part-time} + \text{Full-time}}{3}$

Source:

Draft of Facilities Inventory Report, Part A, New York State Fall Semester 1970-71, State Education Department, undated.

Comparative Summary of Enrollment and Net Assignable Square Feet (NASF)  
Total Public-Private in New York State, Outside New York City, Fall, 1970

Table A-8

Enrollment			Net Assignable Square Feet		
	Numbers	As % of State		Numbers in Millions	As % of State
Full-time Students	309,372	62.2	Instructional and Research Space	21.22	62.5
Part-time Students	152,182	49.1	Library and Study Space	4.29	65.9
Total Enrollment	461,554	57.1	Administrative and Supporting Space	19.92	79.8
			Residential Space	23.06	78.6
			Total Space	68.49	72.3
Full-time Equivalent <sup>1</sup>	360,099	59.9	Total Less Residential Space	45.43	69.4

$$\frac{\text{Net Assignable Square Feet (NASF)}}{\text{Full-time Equivalent Students (FTES)}} = \frac{45,430,000}{360,099} = 126.2 \text{ (NASF/FTES)}$$

<sup>1</sup> Full-time equivalent =  $\frac{\text{Part-time} + \text{Full-time}}{3}$

Source:

Draft of Facilities Inventory Report, Part A, New York State Fall Semester 1970-1971, State Education Department, undated.

Comparative Summary of Enrollment and Net Assignable Square Feet (NASF)  
Public Institutions in New York State, Outside New York City, Fall, 1970

Table A-9

	Enrollment		Net Assignable Square Feet	
	Numbers	As % of State	Numbers in Millions	As % of State
Full-time Students .....	177,431	35.7	Instructional and Research Space.....	11.25 33.1
Part-time Students .....	87,775	28.3	Library and Study Space .....	1.76 27.0
Total Enrollment .....	265,206	32.8	Administrative and Supporting Space..	9.38 37.6
			Residential Space .....	8.88 30.3
			Total Space .....	31.27 33.0
Full-time Equivalent <sup>1</sup> .....	206,689	34.4	Total Less Residential Space .....	22.39 34.2

$$\frac{\text{Net Assignable Square Feet (NASF)}}{\text{Full-time Equivalent Students (FTES)}} = \frac{22,390,000}{206,689} = 108.4 \text{ (NASF/FTES)}$$

$$^1 \text{ Full-time equivalent} = \frac{\text{Part-time}}{3} + \text{Full-time}$$

Source:

Draft of *Facilities Inventory Report, Part A, New York State Fall Semester 1970-1971*, State Education Department, undated.

Comparative Summary of Enrollment and Net Assignable Square Feet (NASF)  
Private Institutions in New York State, Outside New York City, Fall, 1970

Table A-10

	Enrollment		Net Assignable Square Feet	
	Numbers	As % of State	Numbers in Millions	As % of State
Full-time Students .....	131,941	26.5	Instructional and Research Space.....	10.00 29.5
Part-time Students .....	64,407	20.8	Library and Study Space .....	2.53 38.9
Total Enrollment .....	196,348	24.3	Administrative and Supporting Space..	10.47 41.9
			Residential Space .....	14.18 48.3
			Total Space .....	37.18 39.2
Full-time Equivalent <sup>1</sup> .....	153,410	25.5	Total Less Residential Space .....	23.00 35.2

$$\frac{\text{Net Assignable Square Feet (NASF)}}{\text{Full-time Equivalent Students (FTES)}} = \frac{23,000,000}{153,410} = 149.7 \text{ (NASF/FTES)}$$

$$^1 \text{ Full-time equivalent} = \frac{\text{Part-time}}{3} + \text{Full-time}$$

Source:

Draft of *Facilities Inventory Report, Part A, New York State Fall Semester 1970-71*, State Education Department, undated.



## **Appendix B: Long Range Enrollment Report**

**"Long Range Estimate of Demand for Higher Education  
in the City of New York"**

February 25, 1972

## Long Range Estimate of Demand for Higher Education in the City of New York

### Background

On January 12, 1972, New York State Commissioner of Education Ewald Nyquist requested that the Regents Advisory Council for New York City undertake a study of certain aspects of enrollment in institutions of higher education in New York City. The immediate cause of this request was the Governor's concern about the impact of "open admissions" at the City University on enrollments at private institutions in the region. One of the specific requests of Commissioner Nyquist was that there be initiated a study of:

The enrollment needs at higher education institutions for residents of the City of New York as approved by the Regents in its statewide plan.

The other items on which study was requested were the impact of "open admissions" on enrollments in the private institutions, and an evaluation of space available for instruction in relation to the anticipated enrollment demand.

### The Problem

This report addresses itself to two major questions: (1) what enrollment can be anticipated in the colleges and universities, public and private, in New York City, and (2) how many of the potential postsecondary students will be drawn from New York City residents.

Among the factors affecting potential enrollments are:

The change in racial mix in New York City, resulting in a larger proportion of minority groups.

The smaller proportion of persons in the minority category being graduated from high school.

A slight decrease in the actual number of high school graduates in the public schools in New York City, although the graduates in relation to the total population has varied but has not shown a definite trend over the last eleven years since 1960.

A slightly smaller drawing power of some public and private institutions from non-New York City residents in recent years.

A slight decline in the actual number of full-time undergraduate students in the private colleges and universities in the past few years.

A stable population projection for the City as a whole, although an actual decline of 48,000 over the next 14 years to 1985 is projected. (From preliminary new long-range estimates of New York City's total population, currently available from the New York State Office of Planning Services, November, 1971. Projections of the mix by age level, which would relate more directly to postsecondary education enrollment, have not as yet been completed by OPS).

The possible effect of "open admissions" at the City University and in the community colleges under the New York City Board of Higher Education, *in terms of extend-*

*ing the enrollment of these students past a "normal" four or two years.*

These factors suggest that there may well be a limited pool of potential postsecondary students available to the colleges and universities, public and private, at the undergraduate level in New York City. Since this may be the case, an attempt has been made to determine the scale of the potential pool of students, stating clearly the assumptions on which the factors and calculations are based. The scale of the demand can then be used as part of a plan to establish an appropriate use of "resources" of the postsecondary institutions of the City, whether the resources are "student spaces available," and the extent of State and/or local government support of the institutions, public and private, or increased financial aid to potential students, so they may pursue the education they choose, where they choose.

### The Method

In attempting to measure a number of different factors that affect the potential enrollment in the City's colleges and universities, three steps have been taken. First, the private institutions have been requested to provide data on the geographic origin of their full-time undergraduate students for the past three years. These data were requested in a questionnaire sent directly to each school. An analysis of the responses has indicated that although there is a small decline in a number of institutions, many have remained stable with respect to their out-of-city drawing power for undergraduate students. A few institutions have had an increase in the proportion of their students coming from out-of-city in the period 1969 through 1971.

Secondly, representatives of New York City public and private secondary schools were requested to provide grade progression data for their students for the period 1965 to 1971. They were also asked to provide projections of students and graduates. The figures submitted indicate that the proportion of graduates in relation to the total number of students has declined steadily since 1965. No analysis has been made by the City public school personnel of the possible effect of the change in the diploma requirements which will go into effect with the June, 1973 graduating class, wherein there will be a single diploma rather than "academic", "commercial", etc., although it is possible that the number of students graduating under this new standard may increase again.

### The Model

In attempting to measure the potential student enrollment needs for postsecondary education for the residents of the City of New York certain assumptions were made. These were based upon published and unpublished documents of the State Education Department, the State University, and the United States Office of Education. These

assumptions were:

-- That the total number of high school graduates in New York City would be directly related to the total population of the City.

-- That the total population of New York City for the years to 1985 would approximate that stated in the preliminary projections of the New York State Office of Planning Services (November, 1971). (Projections by age groups are not yet available from OPS).

-- That the number of high school graduates as a proportion of the total population would increase slightly due to improved counseling and guidance services, instructional methods, and changes in curriculum.

-- That the number of high school graduates who seek postsecondary education out-of-state will be reduced to 10 per cent, whereas it has been running between 14 and 16 per cent in the past few years. The out-of-state figure is not assumed to be reduced further since experience has shown that the majority go out-of-state to public institutions. Also, the out-of-state figure for the City is closer to 10 per cent for the most recent year. Unless additional "spaces" in public institutions are provided, these students are still likely to seek out-of-state public institutions; thus, the 10 per cent out-of-state figure is considered realistic.

-- That the number of New York City residents who seek education out-of-city, but in New York State, will approximate the number of New York State, but non-City residents, seeking education in New York City. Experience has indicated that in the past these "in-migrants" at the undergraduate level have outnumbered those going out-of-city for education, but currently the number is close to being in balance.

-- That, this latter being the case, the number of persons seeking postsecondary education in New York City at the undergraduate level will be equivalent to the percentage of New York City residents who seek undergraduate education in New York State, currently approximately 70 per cent of the previous year's high school graduates.<sup>1</sup> This group will form the *traditional college students*.

- That some of the two-year school students will take three years to complete their two-year program;

- That some of the two-year school students will enter the upper division of the four-year colleges and universities;
- That some of the four-year college students will remain for a fifth year in completing their undergraduate education.

-- That in addition to a percentage of the high school graduates who in entering postsecondary education become "traditional college students," a number of persons equal to 10 per cent of the previous year's high school graduates will also seek postsecondary education. These students may or may not be graduates, or may be graduates of earlier years or in-migrants to the City.

- That most of these persons will seek their education in two-year schools;
- That this group will proceed through the two-year program, but that a sizeable number will remain a third year to complete their two-year program;
- Further, that of those students completing their program a small number will transfer to four-year schools and complete two additional years at the upper division level in those institutions.

### Graduate Students

The number of full-time graduate students, including first professional students, in the private institutions in New York City is a comparatively stable figure of approximately 25,000. If one assumes some improvement in space, support and program offerings, it appears reasonable to assume that this figure could increase by one per cent per year for the period 1972 -- 1985.

The number of full-time graduate students at the City University is a comparatively small figure, not only in absolute terms (3,540 in 1970), but in relation to the number of part-time graduate students, of whom there are 23,000. In November, 1971, the New York State Education Department projected a full-time graduate enrollment for the City University of 5,500 in 1975, and a further increase to 7,400 in 1980. Considering the demand, these figures are not unreasonable, if the support and facilities are made available. A slower increase, however, to 7,800 by 1985 is anticipated.

### Part-Time Continuing Education Programs

The part-time continuing education programs have been projected to maintain their current level at both the public and private institutions. This is based on the assumption that support for these programs will be continued at the same level.

<sup>1</sup> *Distribution of High School Graduates and College Going Rate, New York State Fall 1970*, New York State Education Department, Information Center on Education, p. 3.

## Assumptions, Progression Ratios, and Attrition Rates for Estimating Full-Time Undergraduate Students

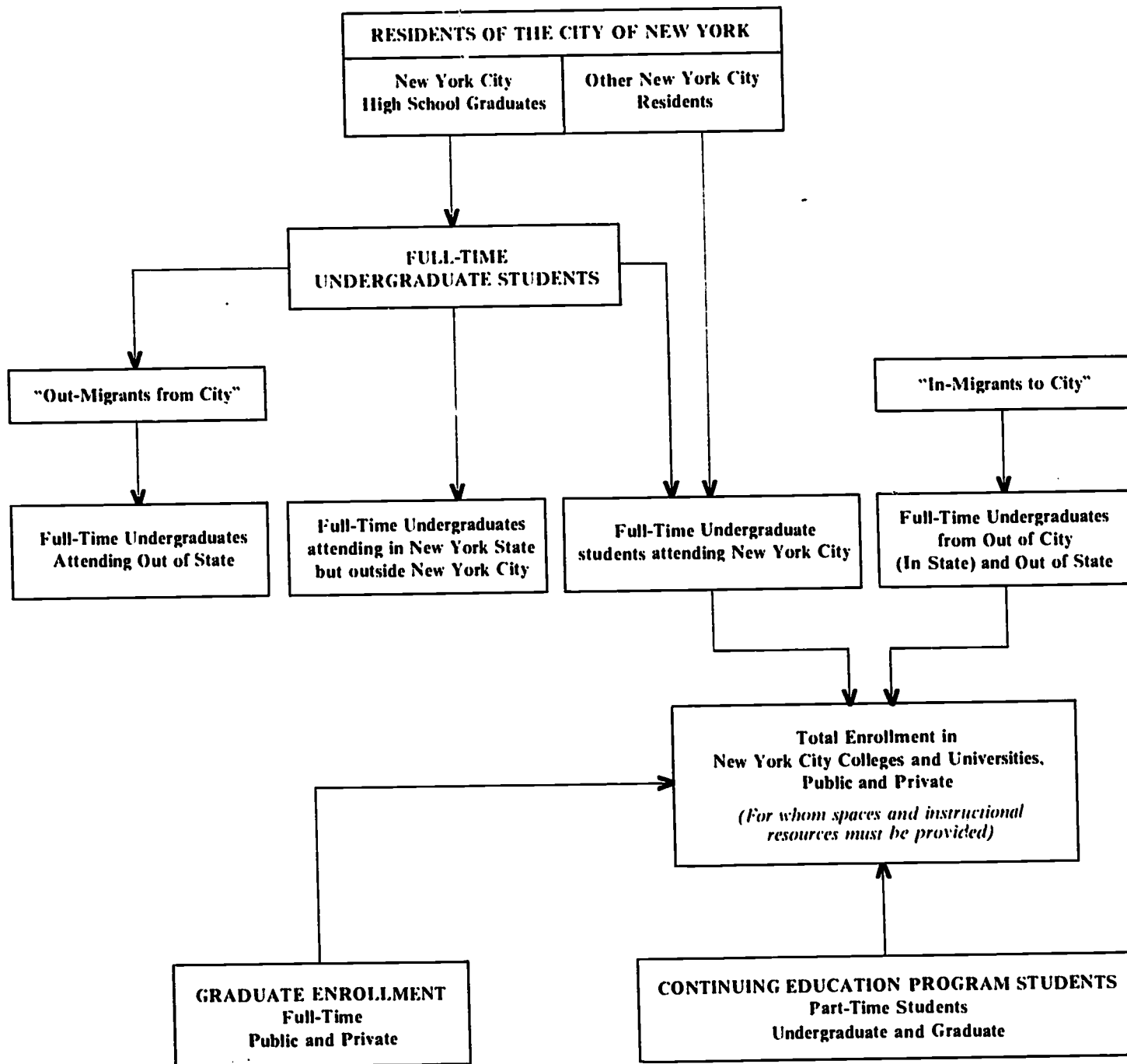
Actual, Given or Derived	Derived	Abbr.
$\frac{\text{Actual past high school graduates}}{\text{Past actual total population of New York City}}$	= High school graduates as % of total population -- 0.91% 1969-70 to 1.07% in 1985-86	(A)
High school graduates as % of total population -- (A) x future population projections	= Projected number of future high school graduates	(B)
Projected number of high school graduates in any one year (B)	x 10% = Number going out-of-state to postsecondary education	(C)
	x 70% = Number going to postsecondary education in New York City (traditional students)	(D)
A number equivalent to the number of high school graduates in any one year	x 10% = Number of additional persons seeking postsecondary education the following year (who may or may not be graduates, or may not have graduated the previous academic year)	(E)
The number of "traditional students" entering postsecondary education in New York City (D)	x 85% = Number of students entering four-year schools as freshmen the following year	(F)
	x 15% = Number of students entering two-year schools as freshmen the following year	(G)
Students in four-year schools (F)		
Freshmen	x 85% = Next year's sophomores	(H)
Sophomores	x 90% = Next year's juniors	(J)
Juniors	x 95% = Next year's seniors	(K)
Seniors	x 10% = Number of students remaining fifth year as undergraduates	(L)
Students in two-year schools (G)		
Freshmen	x 70% = Next year's "seniors"	(M)
"Seniors"	x 10% = Number of students remaining a third year completing a two-year program	(N)
Two-year college "seniors" (M)	x 50% = Number of students transferring at the upper division level to four-year colleges (Juniors)	(P)
Number of junior transfer students from two-year colleges (P)	x 90% = Number of senior students the following year from the junior transfer students from two-year schools	(Q)
Additional number of persons seeking postsecondary education in New York City (E) in any one year	x 10% = Additional number of freshmen in two-year schools	(R)
Additional number of freshmen (R)	x 67% = Next year's additional "seniors" at two-year schools	(S)
Additional number of "seniors" at two-year schools (S)	x 15% = Number who continue third year to complete two-year program	(T)
	x 10% = Number who transfer to four-year schools as juniors the next year	(U)
	x 10% = Number who continue at four-year schools as seniors the year after that	(V)

**Potential Pool of  
Full-Time Undergraduate Students  
New York City  
Institutions of Higher Education  
1975-76 to 1985-86**

**Proposed Projection**

1970 actual	161,517
1971 actual	174,517
1975-76	182,550
1976-77	185,087
1977-78	187,459
1978-79	189,714
1979-80	191,920
1980-81	193,778
1981-82	195,596
1982-83	197,274
1983-84	199,107
1984-85	200,832
1985-86	202,524

## Source of Students in New York City Institutions of Higher Education — Public and Private



## **Appendix C**

**“Regents Advisory Council Proposal for the Allocation of Students  
Among Public and Private Institutions  
in New York City”**



THE UNIVERSITY OF THE STATE OF NEW YORK  
THE STATE EDUCATION DEPARTMENT

NEW YORK CITY REGIONAL PLAN FOR HIGHER EDUCATION

PACE COLLEGE, 41 PARK ROW  
NEW YORK, NEW YORK 10038

REGENTS ADVISORY COUNCIL

EDWARD J. MORTOLA, CHAIRMAN  
SISTER MARY DAVID BARRY, S.C.  
SAMUEL BELKIN  
ERNEST L. BOYER  
ARLAND F. CHRIST-JANER  
JAMES A. COLSTON  
JOHN R. EVERETT  
JAMES M. HESTER  
HAROLD HOWE II  
SEYMOUR HYMAN  
ROBERT J. KIBBEE  
LEONARD LIEF  
WILLIAM J. MCGILL  
ROBERT E. MARSHAK  
BROTHER GREGORY NUGENT, F.S.C.  
HENRY SALTZMAN  
KURT SCHMELLER  
REV. MICHAEL P. WALSH, S.J.

January 20, 1972

WILLIAM S. FULLER, DIRECTOR  
212 285 3661

*Whereas the members of the New York City Regents Advisory Council support the following concepts:*

- 1. Every citizen of New York City who wishes the opportunity for participation in a program of postsecondary education should have such an opportunity;*
- 2. All higher education institutions -- both public and private -- should be considered as a single resource committed to the common goal of meeting the higher education needs of New York City;*
- 3. These total resources can and should be effectively and efficiently used to accomplish their stated program goals.*

*Now therefore be it resolved:*

- 1. That a cooperative program involving the City University and private institutions in New York City be established to enable students from low-income families in New York City to attend any of the participating institutions;*
- 2. That the level of support for each student will be an amount up to the level of funding per student at the City University;*
- 3. That the pool of eligible students created by this cooperative program will be restricted to those students whose family income is below an established level (to be determined at a later date) and who are graduates of a New York City high school;*
- 4. That participation in this program by the private institutions will be on a voluntary basis as will the participation by the students;*
- 5. That a student will be assigned to a public or private institution on the basis of his choices subject to the places available;*
- 6. That supervision of the program will rest in the hands of a lay board which represents the broad public interest.*

*Be it further resolved:*

*That the chairman of the Regents Advisory Council be charged to present this proposal for consideration by appropriate public officials.*

\* \* \* \* \*

*The plan outlined above is in general agreement with the statement of the private institutions of New York City on December 3, 1970 to the Wagner Commission (The Citizens Commission on the Future of the City University of New York).*

## **Appendix D: Task Force Reports**

Task Force I: *The Full Utilization of Resources*

Task Force II: *Libraries and Major Facilities*

Task Force III: *Professional Programs*

Task Force IV: *Graduate Programs*

Task Force V: *Cooperative Programs for the Disadvantaged*

*New York City Regional Plan for Higher Education*

**Report of the Task Force  
on  
Full Utilization of Resources**

**Prepared for the Regents Advisory Council, New York City  
Regional Plan for Higher Education**

MAY, 1972

# Regents Advisory Council

*New York City Regional Plan for Higher Education*

## I. Task Force on Full Utilization of Resources

*Chairman:*

Bro. James Kenny, S.J., Financial Vice President and Treasurer, Fordham University

Lester I. Brookner	Vice Chancellor for Administration	New York University
Edward A. Clark	Dean, College of Liberal Arts and Sciences	Long Island University
Sister Anne Courtney	Former Academic Dean	College of Mount Saint Vincent
Donal Farley	Deputy to the Dean for Campus Planning and Development	City University of New York City College
Morton F. Kaplon	Associate Provost	City College
Margaret Kelly	Executive Vice President and Vice President for Academic Planning	St. John's University
Gordon Klopf	Provost and Dean of the Faculties	Bank Street College of Education
George Knerr	Vice President for Planning	Pace College
Bro. A. Philip Nelan, F.S.C.	Coordinator of Special Resources	Manhattan College
George Raymond	Chairman, City and Regional Planning Department	Pratt Institute

### Subcommittee on Small and Specialized Institutions

George E. Difley	Director of Development	St. Joseph's College
Elaine Egues	Assistant to the Academic Dean	Marymount Manhattan College
Matthew Lenz, Jr.	Chairman, Property-Liability Insurance Division	College of Insurance
Sheldon Littwin	Associate Vice President for Administration	New York Institute of Technology
George A. Vaughn	Secretary-Treasurer	Academy of Aeronautics

## Introduction

The Regents of the University of the State of New York in their January 1972 *Statement of Policy and Proposed Action on Financing Higher Education Needs in the Decade Ahead* have committed the State to the goal of providing "...every high school graduate with access to its system of post-secondary education on terms he can afford and under conditions which provide him with a reasonable chance of success."

The January *Statement* states that: "The achievement of this goal requires that the number of first-time freshman places be increased from 141,000 in 1970 to 181,500 by 1980 and that full-time enrollments increase by about 5 percent a year during the next decade...the resources of public and private institutions are needed to meet this goal...educational institutions in geographical proximity to one another can mutually benefit from shared planning and even shared use of their physical and educational resources."

In support of this position, the Regents have proposed: "Regional boards of higher education appointed by the Regents, after consultation with representatives of... the City University, and the private institutions...the boards would have legal authority for review and recommendation to the Regents of all capital construction plans, major new program plans, and coordinated operating arrangements among institutions of higher education.

"Each board shall also formulate a plan to provide for joint or cooperative programs, services, and arrangements, which may include, but not be limited to, admissions, educational services, faculty and administrative staffs, use of the library, educational media, research, and laboratory facilities...through the boards, the Regents would review and approve all new facilities requiring public funding or funding through a State agency or authority. The Dormitory Authority or the State and the City University Construction Funds would not be able to approve proposals for facilities construction without prior Regents' approval...The Regents would not register degree offerings or major programs of study at any institution unless the program received prior planning approval."

In consideration of these proposals by the Regents, the Task Force on the Full Utilization of Resources through regional cooperation among institutions of higher education in New York City accepted responsibility to examine the extent to which such cooperation may be feasible under any one or more alternate plans in view of the present resources in both the public and the private sector. Because of the existence of other task forces, the Task Force on the Full Utilization of Resources limited its investigation and analysis to undergraduate educational programs, faculty and staff; undergraduate enrollment; and physical facilities, excluding libraries.

The Task Force found that institutional data were not

always compatible, and were in some cases, misleading. However, the data did provide useful parameters for discussion.

## Enrollment

1. According to projections prepared for the Task Force, the potential pool of full-time undergraduate students in New York City will increase from the 174,517 students as of the Fall, 1971 Term to 202,524 in the Fall, 1985. (Exhibit 1).

2. A study of admission and enrollment trends at the nonprofessional undergraduate institutions for one year before and two years after the implementation of open enrollment by City University showed that open admissions hurt those institutions which have low tuition as well as special programs for those students who became eligible for admission to the City University under the open admissions policy. It also showed that those private institutions whose admissions requirements were at least the same as the senior colleges prior to open enrollment did not enroll fewer freshmen from New York City but, in actual fact, because of the loss of out-of-state enrollment, enrolled more New York City students. It was further shown that the out-of-state freshman enrollments in private New York City institutions decreased by 22% in the past two years. Since 1970, new facilities were opened in private institutions which would have permitted additional freshman enrollments. The combination of open enrollments and loss of out-of-state freshmen has resulted in excess capacity in most private institutions.

## Facilities

According to a recent survey of present available space, the private institutions in New York City now have enough space to accommodate some 16,000 additional students.<sup>1</sup> The City University, however, is suffering from a serious space shortage. New space, rented and/or constructed, is needed immediately to rectify existing overcrowded conditions, which have worsened with the influx of "open enrollment" students. In addition, space is required to eliminate the disparity in the ratio of net assignable square feet per full-time equivalent students (NASF/FTES) between the State University of New York and the City University, 108 versus 47.

Statistics indicate that the City University and private institutions in New York City support a significant num-

<sup>1</sup>A Study of the Commission on Independent Colleges and Universities, *Results of Survey of Additional Full-Time Enrollment Accommodations Expected at Private Higher Education Institutions in New York State in Fall, 1972*, December 27, 1971.

ber of students in the State, 23.9% and 18.9% respectively, with less space than their counterparts in the rest of the State, 9.5% and 21% respectively. (See Exhibit 2).

### Impediments to Cooperative Activities

The Task Force found several reasons why some institutions were reluctant to readily espouse cooperative programs, especially between private and public institutions. These included:

1. The fear of losing institutional prestige.
2. The fear of losing institutional identity.
3. The loss of institutional self-determinism in program, student, and faculty areas.
4. The financial commitment without a concomitant commitment for continuous funding from governmental or other institutions.
5. The fear of adding additional impediments to the development of innovative programs.
6. The disparities in faculty salaries and benefits.
7. The disparities in tuition levels and admission standards.

### Cooperative Activities

Although there is little documented evidence of a significant number of cooperative programs, and in spite of the reservations harbored by some institutions, some informal and formal cooperative ventures do exist:

1. The admissions programs of the Council of Higher Educational Institutions in New York City as well as the centralized admissions program of the City University.
2. Administrative arrangements for sharing security forces, printing facilities, and combined purchasing of supplies and equipment within the units of the Brooklyn Institutional Council.
3. Shared departments between the College of Mount Saint Vincent and Manhattan College, and between Mannes College of Music and Marymount Manhattan College.
4. Limited cross-registration.
5. The rental of dormitory space to Fordham students by New York University.
6. Limited library exchange privileges.
7. The rental of academic space from private institutions by City University. In addition, a number of faculty members are engaged in informal research with colleagues in other institutions.

### Conclusions

The Task Force has reviewed the Regents Advisory Council proposal and endorses the principle of funding students who attend private institutions, through either direct subsidy to the student from the State or through the mechanism of voluntary transfer from the public to the private institutions.

The Task Force endorses the enrollment projections contained in Exhibit 1 of a growth in the pool of first-time undergraduates from 174,517 in Fall 1971 to 202,524 in Fall 1985. The Task Force also believes that as a planning guide the net assignable square feet per full-time equivalent student (NASF/FTES) ratio of 100 is an acceptable factor for the expansion of City University. (Exhibit 3).

The Task Force is aware of the problems inherent in the

relinquishing of authority and responsibility over programs, staff and students exercised by governing boards of institutions of higher education. We are confident, however, that acceptance of mutually agreed upon parameters for cooperative activities will not impinge upon the traditional goals and objectives of the participating institutions.

### Recommendation for Immediate Action

As its major recommendation, the Task Force endorses the *formulation of a Regional Board, as outlined in Position Paper No. 13 of the Board of Regents, to provide, among other things, the leadership in the development of plans for and the resolution of impediments to cooperative activities. Further, the Board must be prepared to provide equitable financing by whatever plan to assure the operation of balanced budgets in the private institutions.*

### Other Recommendations

The Task Force also proposes that the Regents Advisory Council recommend:

1. *The creation of a data bank for the collection and dissemination of comparable information necessary to the evaluation of the feasibility of cooperative ventures.*
2. *The extension of cross-registration opportunities.* This will extend the students' program options and more fully utilize the available faculty expertise in more meaningful ways.
3. *The fuller use of facilities through the development of a space available inventory.* This recommendation encourages the sharing of information about available space with other institutions for potential use.
4. *A moratorium not to exceed two years on the development of all new programs.* The private and public institutions in New York City should review and re-examine course offerings to determine opportunities for expansion and synthesis through the use of the programs and faculty of other institutions.
5. *The development of "Semester in New York" programs.* Cooperative relationships between and among institutions in New York City and out-of-state institutions should be encouraged.
6. *The encouragement of cooperative research projects among faculty from the institutions in New York City.* The successful experience of the Kansas City Regional Council for Higher Education might serve as a model.

The Task Force believes that cooperation in the sharing of resources will expand through the implementation of the foregoing recommendations if (1) participation is voluntary, (2) institutional self-identity and prestige are not threatened, and (3) institutions are convinced of the institutional and academic value of such cooperative endeavors. Furthermore, the Task Force believes that institutions in close geographical proximity with common and/or complementary programs should be especially encouraged to seek cooperative arrangements, since the likelihood of success is greater than among and between other institutions.

Because of the paucity of available data and the limitations of time for further study, the Task Force has had to make certain crucial decisions about some basic issues without giving those issues the scrutiny they warrant. In fact, it is probable that some tacit assumptions have

biased our conclusions. *The following considerations go beyond the charge given to this Task Force, but it was felt that they merited further careful examination and review:*

1. The validity of the concept of free tuition at selected or at all public institutions of higher learning.
2. The validity of the assumption that every private institution should survive.
3. The realism of attempting to solve on a grand scale the problems of higher education without any in-depth consideration of the high schools that are providing the input to the institutions of higher education.

4. The need for preserving traditional learning patterns as preparatory to entering certain professions.

5. An understanding of the educational needs of the New York City student of the 1970's and the 1980's and his requirements for non-traditional programs of study.

6. While centralization may result in extensive savings, efficient use of resources, etc., a careful study should be made of existing large centralized institutions and their degree of success in achieving such results. Whatever results may be achieved by regionalization, the Task Force agreed that it would not be the panacea for solving all the difficult problems of both public and private education.



Exhibit 1

**Potential Pool of  
Full-Time Undergraduate Students  
New York City  
Institutions of Higher Education  
1975-76 to 1985-86**

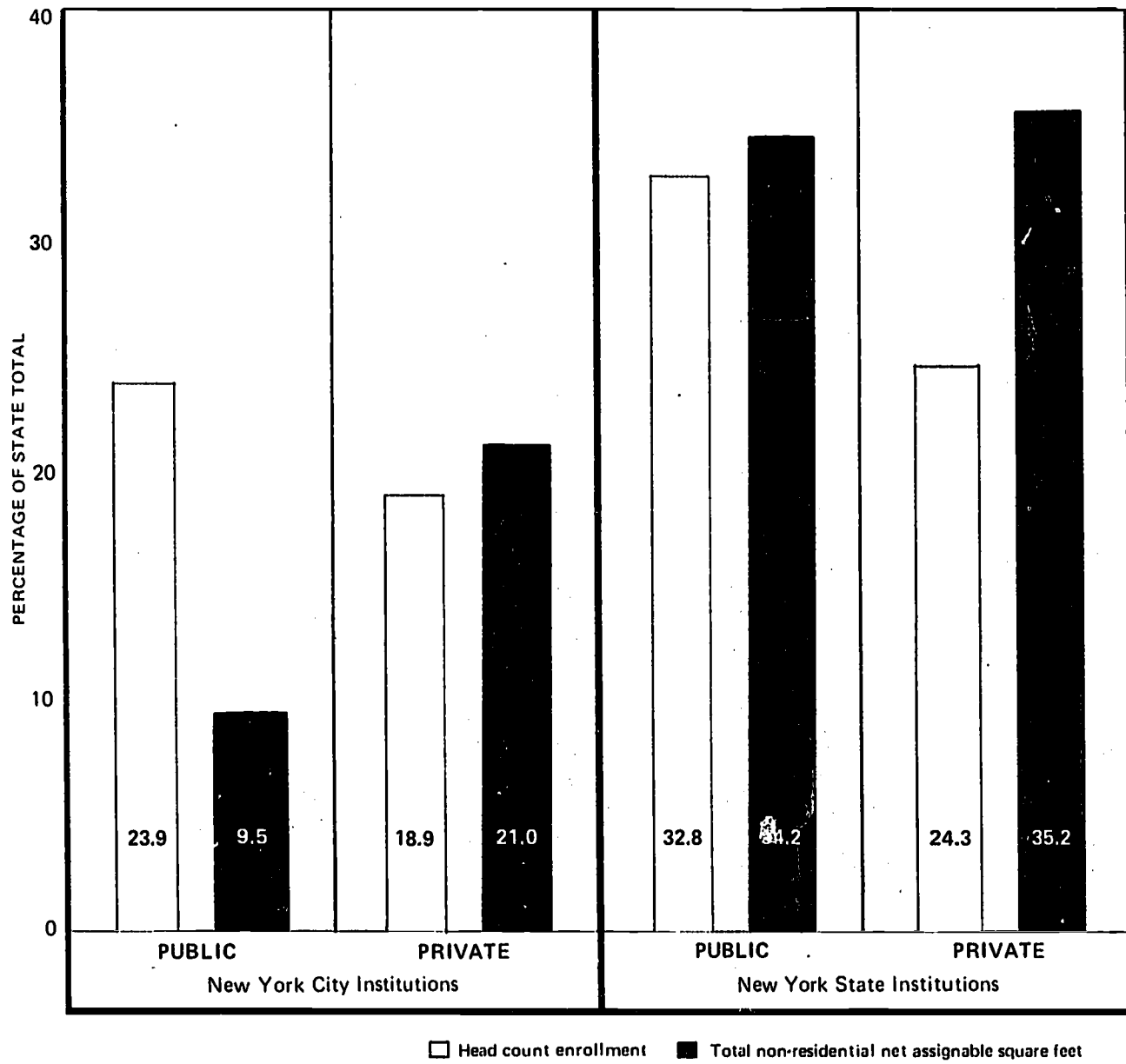
---

**Proposed Projection**

1970 actual	161,517
1971 actual	174,517
1975-76	182,550
1976-77	185,087
1977-78	187,459
1978-79	189,714
1979-80	191,920
1980-81	193,778
1981-82	195,596
1982-83	197,274
1983-84	199,107
1984-85	200,832
1985-86	202,524

Space/Enrollment Comparison  
 New York State Institutions of Higher Education, Fall 1970

Exhibit 2



SPACE AND COST ESTIMATES: NEW YORK CITY REGION – 1975-80

Exhibit 3

Basic Space Assumptions: Enrollment in the private institutions will be held at the 1970-71 level by the transfer of 4,000 full-time undergraduate equivalent students beginning in 1972-73, from the pool of available students. Public institutions would expand at a NASF/FTES ratio of 100.

(In Millions)		FTES-Public Only	NASF (In Millions) Projected Space	Fiscal Implications (In Millions)		
1980	7.2 completed 6.6 under construction or completed, 1975-80 <u>13.8</u>	173,000	17.3	<u>TOTAL 10.1</u>	<u>TOTAL \$1,270</u>	<u>TOTAL \$1,771.5</u>
1975	7.2 completed 1.5 rented <u>8.7</u>	153,000	15.3	3.5	435.0	696.0
	NASF in City University of New York-Fall, 1971, including rented space, and facilities under construction <sup>1</sup>	Projected enrollment of full-time equivalent students	Projected space required at 100 NASF/FTES	6.6	835.0	1,075.5
				New space required	In 1972 dollars <sup>2</sup>	In year dollars <sup>3</sup>

<sup>1</sup> Includes 2.2 million gross square feet under construction.

<sup>2</sup> The following formula was used to derive these costs:

a. NASF - Total Space Less Existing "Owned" Space = New NASF

b. New NASF x 1.666 = Total New GSF Required

c. Total New GSF x \$60.00 = Construction Costs

d. Total Construction Costs x .25 (Cost of design supervision, other professional costs, furniture, equipment, etc.) = 1970 Total Construction Costs.

<sup>3</sup> Although speculative at best, the following escalation factors have been used: 1975 - .30, and 1980 - .60.

*New York City Regional Plan for Higher Education*

**Task Force on Libraries  
and  
Major Facilities**

MARCH, 1972

53

57

## **Task Force on Libraries and Major Facilities**

### **Members**

Warren J. Haas (*Chairman*)  
Vice President for Information Services and  
University Librarian  
Columbia University

Robert F. Beach  
Librarian  
Union Theological Seminary

Henry Birnbaum  
Director of Libraries  
Pace College

Harvey Coopersmith  
Professor, Graduate School of Library and Information Science  
Pratt Institute

Anthony B. Giordano  
Dean of Graduate Studies  
Polytechnic Institute of Brooklyn

Eugene P. Kennedy  
Associate Dean of Libraries  
New York University

Kenneth M. King  
University Dean for Computer Systems  
City University of New York

Robert H. Muller  
Director of the Library  
Queens College

Sebastian Raciti  
Director, Office of Management and Budget Review  
Fordham University

Sheldon E. Soeol  
Secretary of the University and Chief Fiscal Officer  
Yeshiva University

### **Resource Persons**

Bernarr Cooper  
Chief, Bureau of Mass Communications  
State Education Department

James Henderson  
Chief of Research Libraries  
New York Public Library

E.J. Josey  
Chief, Bureau of Academic and Research Libraries  
State Education Department

Richard Logsdon  
Director  
METRO

### **Staff**

Ann Borsuk  
Columbia University Libraries

## **Task Force on Libraries and Major Facilities**

### **Summary of Proposals**

#### **For improved instructional support**

Because most cooperative library programs are a supplement to, not a substitute for, the libraries of each college, it is imperative that each college meet minimum standards established by the Regents and the Commissioner of Education. Any regional agency promoting or operating cooperative programs should make adherence to such standards a condition of institutional participation.

A system of intermediate libraries to support the course work of students at advanced levels should be established in New York City.

#### **For research**

A mechanism should be established to provide graduate students and faculty members access, on a full cost-recovery basis, to specific and distinctive portions of research collections in the libraries of higher educational institutions, the Research Libraries of the New York Public Library, and perhaps certain other specialized research libraries.

New York City and State should assume leadership in an effort to promote federal financial support for the development and conservation of research collections that are truly national assets.

#### **Instructional technology**

A New York City center for the production of audio/visual and video software, for the distribution of program materials, and for the cooperative development of systems to improve instructional capabilities in higher education should be established. As a first step, a series of exploratory conferences designed to address each of the primary topics should be held, involving the large number of skilled individuals now active in New York City colleges and universities.

#### **Computer Systems**

The problems related to the cost effective use of computers for research, instruction, data storage and transmission, and administrative data processing are complex. It seems probable that a mechanism for inter-institutional discussion should be provided to consider a wide range of options, including establishment of a jointly owned facility.

#### **Staff development**

An innovative continuing education program for academic librarians should be established.

## Contents

Introduction  
The Assignment in Perspective  
Areas for Action  
Proposals  
Bibliography



## Introduction

The Task Force on Libraries and Major Facilities was established in late November and assembled for the first time on December 21. During January and February, the group met frequently, initially to reach a common understanding of the scope of their assignment and subsequently to review the content of topical working papers prepared by members of the group and to consider specific proposals pertinent to one or another of the major areas for action.

Given the limits of time and the range of topics included in the charge to the Task Force, not all parts of the assignment were actually considered. The focus of the discussions was on libraries, with additional attention given some of the fundamental questions concerning computers, communications, and audio visual capabilities. Those "major facilities" not directly related to the processes of acquiring, storing, and using recorded information (nuclear reactors, for example) were not discussed at all. Even within the bounds of the information system concept, not all elements were given equal attention, a situation governed both by aspiration for realistic results and the constraints of time.

Further, the Committee chose not to spend time assembling large quantities of data as a prelude to its work. As the items listed in the attached bibliography suggest, many inventories of library and information resources in New York City already exist, many studies of the relationships among libraries and of the nature of use of libraries have been made, and many proposals to link library resource and service capabilities in the interests of both economy and performance have been advanced. Against this backdrop of facts and opinions, alternate kinds of action were considered, with the goal of finding those that offered substantial rather than superficial results. The members of the Committee hope that the suggestions incorporated in this report will reinforce the work of other Task Groups and will be of use to those developing a Regional Plan for Higher Education.

## I. The Assignment in Perspective

Recent years have brought sweeping changes in higher education, and nowhere are those changes more evident than in New York. Open admissions in the City University, remedial programs for disadvantaged students, new curricula and instructional techniques, and the concepts of "open classrooms" and "universities without walls" are all having a dramatic effect on both present operations and the future plans of the colleges and universities in New York City. These changes stem from increased pressure to provide equal educational opportunities for all of New York's student population, and, like all components of the educational system, libraries and other instructional and research facilities have been caught up in a wide range of efforts to respond to the demands being generated. But even as these new requirements are being superimposed on resources that have been in many cases barely adequate for long standing traditional needs, a major financial crisis has developed across the entire complex of higher education that presses every college and university to find new ways to realize maximum benefits from financial, personnel, and physical assets.

These three factors—new requirements superimposed on equally important continuing ones, a proper concern that information be available to all who need it, and desperate financial constraints—combine to create a challenge for higher education that can only be solved by a joint effort involving those responsible for making and carrying out higher educational policy and the citizens who directly and indirectly benefit from the opportunity to learn.

For libraries and the related facilities that are central to research and teaching, the nature of the response to this challenge is as complex as the challenge itself. In this area, especially, nothing is to be gained from oversimplification. For example, there are great variations in size, quality, and even the fundamental purposes of the libraries associated with New York City's academic institutions. The great majority are primarily collegiate libraries supporting wide-ranging programs of instruction. Even within this group, there are substantial differences in the instructional levels served. Other libraries are focused on specific subject areas, reflecting the programs of the institutions of which they are a part. Among these, there is an even wider range in terms of collection depth, extending from basic collections to those of distinctive research quality. Finally, there are a few large general collections with many areas of substantial depth capable of supporting the research activities of advanced students and scholars.

While the focus of the present study is on higher educational institutions, it is a fact that in the matter of libraries, the resources of colleges and universities cannot be isolated from those of the large public circulating libraries and research resources like the Reference Collections of the New York Public Library and certain of the private specialized research collections. Students use any library resources they can gain access to, and researchers go

where they can find the material they need. As an individual's information requirements become more detailed and comprehensive, the institutional or political boundaries defining the responsibilities of a library become less valid and more difficult to maintain, simply because recorded information must be seen in the end as an asset of all society.

Even given the complexity of pertinent elements identified thus far, it is apparent from the discussions of the Task Force that the solution of the library "problem" (and by extension the "problems" related to other facilities dedicated to information storage and use) can be solved by (1) the dedication of appropriate resources to the purpose, and (2) wise management of those resources to promote a proper mix of efficiently operated internal programs and purposeful types of collection action, all directed to the specific and quite different obligations of each institution.

There was no effort by the Task Force to establish what the term "appropriate resources" really means in terms of dollar investment for library and information services, but the fact is that below a certain level of support either an across-the-board erosion of performance or the total elimination of certain activities is inevitable. A resource of another kind, i.e., capable manpower, was considered and certain observations and recommendations are made later in this report.

Wise management of resources available to libraries is a topic getting much attention by national organizations and also within many individual libraries. Consideration of this topic was obviously beyond the scope of the Task Force, but it would observe that effective management is as central to the success or failure of cooperative activities as it is to individual operations.

The central topic of the Task Force was that of "collective action" as a means to supplement the efforts and the capabilities of each institution. After substantial discussion, the members concluded that there are certain activities that might be undertaken, each for a specific purpose. The suggestions made here are advanced in the context of a history of both major successes and major failures. Libraries, computer centers, and other academic service facilities already are effectively involved in many kinds of collective action. Bibliographic information is shared nationally through the Library of Congress; collecting obligations are assumed on a planned basis under programs such as document depository systems, the Farmington Plan, the PL480 program, and the National Program for Acquisitions and Cataloging; national supplementary libraries such as the Center for Research Libraries have been developed; and local mechanisms as the Medical Library Center and METRO have been created to expedite inter-institutional programs.

On the negative side, there have been a number of proposals advanced over the years concerning New York City's academic libraries that have never gone beyond the

discussion stage. Some of these were probably simply poor proposals and deserved to die. Others were incompatible with the real factors of educational unevenness among the colleges and universities of the city, the complexities inherent in variations in institutional style, the forms of institutional support, and perhaps most important the lack of an acceptable mechanism for collective action.

Further, there is often a fundamental conflict in purpose among those promoting cooperation. To some, it is a means to reduce, or at least stabilize, expenditures in individual institutions. To others, cooperation expands capabilities in a cost-effective way. To the Task Force, the proper goal is optimal performance, given an appropriate level of financial resources.

A final and central concern is the difficulty of establishing within each institution, among faculty and students especially, an understanding of the dimensions of the fiscal crisis and the implications of steps to deal with it, both immediately and in the long term. The habits of students and faculty and their expectations for resources and services within their own institutions will have to be modified if constraints on collection growth are to be effectual in some libraries, if access to selected resources is to be extended to individuals from other institutions, and if special aspects of "custom-made" records and services are going to be sacrificed in favor of mass-produced and, hence, uniform products.

## II. Areas for Action

### Libraries and Instructional Support

The library of an academic institution is an integral part of that institution. Each school has its own unique programs and goals; its library must reflect these in order to properly fulfill its education role. Therefore, it is a prerequisite to any program of inter-institutional cooperation that each participating college and university fully assume the responsibility of properly supporting its own instructional program. This involves commitments of funds, staff, and materials; no institution involved in shared planning can expect any other institution to relieve it of these commitments. To verify that an institution is indeed fulfilling its obligation to maintain library resources and services at an appropriate level, standards of financial support for libraries should be established and institutional performance measured.

Once granted sufficient funds in accordance with these standards, it is the responsibility of the library's administration to see that priorities in its purchasing program are established which will support the instructional program and, when appropriate, provide the necessary materials to enable students to learn research techniques. The first priority is the acquisition of a reference collection that fully reflects and supports the subject content of the courses offered by the institution. The second priority is to make available a balanced collection of the books, periodical files, microfilms and audio-visual materials required by the instructional program. The third priority is to selectively provide material beyond the stated needs of individual courses, so that the student who is interested in going beyond the course work may find at least some of the material he wants in his own institution's library.

To ensure that institutions are living up to their obligations, statewide standards for academic libraries should be established and mechanisms for measurement of library performance should be developed in accordance with these standards. The influence of the monitoring process would help individual libraries measure up to their primary missions. By this method, for example, the library of a liberal arts college would be protected from a variety of pressures to develop and maintain a "research" collection in one or another subject field at the expense of more fundamental responsibilities.

But no library, whether it be one sharply focused on limited instructional needs or one containing wide ranging research collections, is self-sufficient. The process of instruction has no distinct boundaries limiting absolutely the resources required, nor does research preclude a need for certain basic and fundamental materials. The evidence of past studies and the discussions of the Task Force suggest that there is an important place for cooperative action to reinforce and extend the instructional support capacities of individual libraries, especially in the area of collections and services that bridge the gap between collegiate libraries and the truly distinctive research collections.

### Research Support

The academic research library differs from the college library in both purpose and content. The primary purpose of the college library is to provide the student with the basic sources of existing knowledge associated with subjects included in the college curriculum. The collection, therefore, may be highly selective, including the principal works of the major authorities in a field and files of the best known journals. The collection could focus on recent materials, not needing large numbers of long backruns of periodical titles.

The purpose of the research library, in contrast, is to provide the sources of information needed for the systematic and complete investigation of a subject with a view to creating new knowledge or bodies of information. The research library ideally will consist of a comprehensive collection of materials in the fields in which the library attempts to specialize. This collection would not only contain all of the printed materials such as books, pamphlets, journals, and periodicals on a subject, but also as much documentary material as possible regardless of form. Manuscripts, archives, prints, photographs, motion pictures, and recordings would all be included. The comprehensive collection should have no limitations with respect to time or language.

The research library differs from the college library also in its organization and in its personnel and plant requirements. Because of the breadth, depth, and complexity of its collections, the research library is likely to be highly departmentalized along subject lines. Less subject specialization is necessary in the college library. Similarly, the professional personnel of the college library can be fully effective as broad subject specialists, whereas the staff of the research library must be highly specialized and capable of considerable sophistication in collection development, cataloging and interpretation of the collection to the users. The size of the college library is subject to control through the periodical retirement of obsolescent materials and multiple copies. In the research collection there is no obsolescence, multiple copies are rare, and exponential growth is characteristic. Large amounts of space are needed and there are special space and equipment requirements essential to the security, maintenance, preservation, and effective utilization of the collection.

Given characteristics such as these, it is evident that research collections and the staff required to organize materials and assist users are not created overnight. It is equally evident that an investment of the kind required dictates that ways be found to help develop collections that complement rather than duplicate each other, to extend access by appropriate means to advanced students and scholars, to conserve and protect distinctive resources, and to record and locate materials in a way that reaches the widest audience of interested persons. Research collections of distinction are among our most important assets.

Collective action should promote wise use and avoid misuse and it should enhance future development.

### **Educational Technology**

Much has been written in recent years about libraries of the future, emphasizing the impact of technology upon them, and the effect it may have on the basic role and function of a library. Although some disappointment exists over results of efforts to use new technologies, it is not unreasonable to predict that technology will affect libraries in many ways, and the very concept of what a library is will certainly change in the future. The newer technologies offer the long range prospect that the library will become an even more active participant in the total educational process.

New capabilities made possible by technology underscore the need to rethink the role of the library in teaching and learning. As noted by Bowen and Douglass in their *Efficiency in Liberal Education*, "Even a cursory examination of most of the recent innovative efforts in higher education reveals that the normal leader-type institutions are not the ones pushing highly experimental or innovative efforts. In most cases, the institutions engaging in these activities are relatively small, and in some cases unknown or new institutions." As a consequence, the impact even of the successful experiments has been nowhere near as great as if the same experiments had been instituted and pushed by leader institutions.

A number of demonstrations at some major universities of how the newer technologies can be worked into the higher education scene are needed in support of the thesis that the college and university library should have a major and active role in the education process.

### **Cooperative Computer Arrangements**

Cooperative computer arrangements are becoming increasingly common and may in the future become necessary because of significant institutional savings in hardware and staff costs and software acquisition and development. As an extreme illustration, a computer leasing for \$200,000 a month has about the same power as 20 computers, each leasing for \$40,000 a month. Monthly staff costs on each of the 20 installations to provide a complete range of services would cost about \$50,000 while staff costs at the single large facility would be about \$150,000 a month. A single large facility could save more than \$1,000,000 a month, even with communication costs included. Savings on software acquisition and development depend upon the degree of standardization achievable in administrative computing areas, but are potentially very large. As fourth generation computer equipment is developed and its potentials for providing instruction and research support to an academic institution are realized, more and more colleges and universities will want to take advantage of its capabilities. The expense of the equipment might well be prohibitive to many institutions faced with budget constraints; a large shared computer facility is a logical alternative.

In order to succeed, cooperative arrangements must permit shared control of the policies governing the central facility, since no institution would be willing to participate in a scheme so potentially important if it believed that it

would have no share in the decision-making process. Services of a central facility might be differentially priced, with rules established to insure an equitable distribution of services. Priority service at busy times of the day might command a premium price, with off-hours use at a significantly lower rate than normal service on prime shifts.

In the terms of the earlier example, an institution spending \$90,000 a month for staff and hardware could acquire comparable service for \$30,000 a month at a large regional machine. The institution could get about five times the computer power for \$90,000 at the regional facility as it could get on a local machine.

The entire thrust of computer technology is toward distributing computer power via terminals to users in their own offices or laboratories. Meeting the increased cost of rapidly expanding uses at a university is increasingly difficult and the economies of shared efforts will become increasingly attractive.

### **Education for Librarianship**

The quality of library service provided for the academic community in New York City will be largely dependent upon the attitudes and capabilities of the professional librarians who serve that community. Collections will be maximally developed and utilized only when the professional staff has a thorough understanding of the goals and processes of higher education in all of their ramifications, is knowledgeable of the print and nonprint materials needed to support the educational objectives of his institution, and is willing and able to create the kind of library environment which will extend and complement the teaching process.

But such capabilities are neither easy to come by nor self-sustaining. Programs of professional education for librarianship have come under criticism for low admission standards, lack of relationship between curricula and the actual needs of libraries, and failure to expose the student to new technological developments of importance to librarianship. Library school curricula are now coming under review. Basic changes in the philosophy and goals of education for librarianship may be the only means to correct the situations discussed above.

Some of these weaknesses can be remedied through the efforts of librarians themselves; other corrections will require the deep involvement and support of faculties and policy-making groups throughout the higher education establishment. In the latter category, one critical problem is the failure of many institutions to make librarians full partners in the educational enterprise.

Among the actions which academic libraries can take to improve the ability of librarians to provide high quality service are more systematic and careful recruitment of the professional staff to insure that professional appointees possess necessary qualifications, analysis of professional positions to insure that duties are actually at a professional level, the creation and use of position titles at an intermediate level between the professional librarian and the general clerical staff, creation of a mechanism for liaison with local and regional library schools for the purpose of increasing the probabilities of matching the competencies of graduates with the needs of area colleges and universities, and development of in-service and continuing education programs.



### III. Proposals

#### Libraries and Instructional Support

1. In terms of supporting instruction, it is imperative that the fiscal and staff resources available to libraries be effectively used for the resources and services essential to the success of the instructional programs and specifically required by students, and that those resources not be inadvertently diverted to less necessary library purposes. The Regents and the Commissioner of Education should develop and promote adherence to standards for academic libraries. Mechanisms should be developed on a regional basis to measure library performance against these standards and in the context of institutional objectives, simply because effective cooperative programs can be developed only against a backdrop of reasonable performance by each individual institution.

2. The concept of a system of intermediate libraries for New York City, as suggested more than a decade ago, continues to seem an appropriate way to enable many individual collegiate libraries to set an upper limit on their own development and still provide the full range of accessible resources for upper level undergraduates and the instructional needs of graduate students. Such libraries, of perhaps 200,000-300,000 volumes chosen to complement basic undergraduate collections, would serve as a bridge between the typical collegiate library and the truly comprehensive research collection. These units would contain strong collections of documents, microforms, bibliographic publications, runs of major journals, etc. The sheer number of students in New York coupled with their mobility makes this approach possible, and the developing concepts of instruction outside the classroom and perhaps with no formal university affiliation provides further support. The Mid-Manhattan Library of the New York Public Library provides an example. Additional units might be created by expanding the resources, space, and service obligations of a few carefully selected libraries in the City University and perhaps by building one or two supplementary units in an area convenient to several existing institutions.

#### Research Libraries

1. Mechanisms must be initiated to support and put to effective use existing distinctive research collections. It is, therefore, proposed that access to specific and distinctive portions of research collections in the libraries of higher educational institutions and perhaps in other specialized research libraries in New York City might be extended to graduate students and faculty members on a controlled basis. Participating institutions would specify which collections are to be made available on a full cost-recovery basis, and some sort of library or higher education agency would assume responsibility for providing access informa-

tion, implementing policy, providing identification cards, and establishing the required fiscal and operating controls. The same agency would promote support on a general program basis for the New York Public Research Libraries. Funds to reimburse libraries for services rendered would be provided by institutions whose members are benefited, from state appropriations for the purpose, or from federal or foundation sources.

2. By and large, the evolution of a program for coordinated research resource development among academic and other research libraries must follow on the coordination of academic research activity. In other words, most library decisions in this area must follow academic decisions, not precede them. Further, true research collections are national assets, and in the end, a national program for development and conservation of resources seems essential. Available funds for research support should be directed to developing existing strengths and extending access to them.

#### Instructional Technology

1. Technical aids to instruction are assuming an important place in the educational process. Growing numbers of people from various disciplines are coming into the field of software development and production. To insure that the academic libraries of New York City can take the fullest advantage of the experience and expertise of these people, it is suggested that an agency be established to create a facility, with the necessary equipment and staff, for the production of audio-visual software. Such a facility would be available to faculty members of all New York City higher educational institutions, and as such would expedite access to technical aids to instruction. The creation of a production facility would open the way to development of a collection of software, films, and specialized teaching modules accessible to all colleges and universities. The concentration of resources would encourage adoption of standards for audio and video software and equipment and would open an opportunity for the enrichment of the programs of all participants.

2. There are substantial capabilities for educational communication as exemplified by the CUMBIN system of the City University, specific operations within certain of the City University campuses and the several educational television stations in the metropolitan area. What seems to be lacking is a natural and regular means of keeping each other informed of plans and a method of sharing personnel and program resources. The Task Force did not have time to explore the topic in any depth. It has been suggested that a meeting of those concerned with communications within the City University itself be convened, possibly supplemented by the managers of educational TV stations, to explore opportunities for future coordination.

## **Computer Systems**

*1. It is proposed that the prospect of a jointly owned computer facility for research (as distinct from administration purposes) be investigated. Institutions vary greatly in the kind and amount of their computer needs. The establishment of a jointly owned facility would enable individual institutions to maintain their own computer facilities if their needs would be best served in this way. However, the range of present and potential uses of fourth generation computer equipment for research and instructional support and data storage and retrieval and the great expense of individually developing and maintaining a computer facility underscore the benefits in increased productivity and financial savings of sharing a computer system.*

## **Staff Development**

*1. The performance of librarians governs the quality of library service. The technical capabilities of librarians, their capacity for academic involvement, and their man-*

*agerial skills are all important. Because many of the processes related to information processing and distribution are in a period of dramatic change, it is essential that both newcomers and established professionals have the opportunity to maintain and develop further existing skills. An innovative and comprehensive continuing education program should be developed and made accessible to all academic librarians in New York City colleges and universities.*

## **Organization for Action**

*1. Library program coordination must be considered an element of total higher education planning rather than an activity in isolation. Meaningful progress towards the suggestions incorporated above might best come through some formal association of colleges and universities concerned with a wide range of cooperative ventures. Some sort of higher education agency would be free to contract with existing libraries or with organizations such as METRO to carry out specific projects.*



## IV. Bibliography

### New York Metropolitan Area Interlibrary Cooperation

#### 1. Directories of Metropolitan Area Libraries

American library directory, 27th edition, 1970-71. (DO27.073 Am3551 RESERVE)

Ash, Lee. New York's other libraries. *Library journal* 91:3101-7 June 15, 1966.

\_\_\_\_\_. Rev. and adapted version, entitled: Busman's holiday: selection of New York special libraries. *Special libraries* 58:348-53 May 1967.

Ash, Lee. Subject collections. Third edition. New York, Bowker, 1967. (Z 688 .A1. AB 1967 RESERVE)

Columbia University. School of Library Service. Libraries in New York City. [New York, 1971.] (Z 732 .75 C6 RESERVE)

Council of Higher Educational Institutions in New York City. A directory of resources of cooperating libraries in Metropolitan New York: academic, special, and public libraries: . . . Third edition. New York, 1965. (DO27.07471 C8311)

Directory of libraries of Westchester County. New York, 1967, 1968. (Z 732 .N7 W4)

Frederick, Sister M. Catherine. Some outstanding metropolitan libraries. *Catholic library world* 31:337-46 March 1960.

Medical Library Association. New York Regional Group. Guide to medical libraries of New York City. New York, 1957. (DO26.61 M465)

New York (State). State Library. Division of Library Development. Directory of reference and research library resources systems in New York State. Third edition, 1969. (Z 732 .N7 D5)

New York Metropolitan Reference and Research Library Agency, Inc. Directory of members, 1970/71. (Z 732 .N75 M4 no. 4, etc.)

Special Libraries Association. New York Chapter. Special libraries directory of greater New York. 11th edition, 1967. (LS026 Sp321 RESERVE)

#### 2. Readings

Academic libraries of Brooklyn. *Medical library association bulletin* 56:189 April 1968.

Connor, J. L. Planning for cooperative reference and research library service in New York State. *New York library association bulletin*. 11:5-9 January 1963.

Council of Higher Educational Institutions in New York City. Cooperative library service for higher education, a library research program report. New York, 1960. (DO21.64 C83)

Estes, Riee. A study of seven academic libraries in Brooklyn and their cooperative potential. New York, Council of Higher Educational Institutions in New York City, 1963. (DO27.7 E85)

Haas, Warren James. A study of use of metropolitan New York libraries by higher education students. New York, Council of Higher Educational Institutions in New York City, 1960. (DO21.3 H112)

Josey, E. J. Summary of the reference and research library resources systems' progress reports, July 1 through September 30, 1970. *Bookmark* 30:178-83 February 1971.

Library cooperation in metropolitan New York: report of a meeting of New York City librarians, February 24, 1948. [1948] (DO21.64 L616)

Library cooperation in New York. Jan. 1960. [May 1964 is latest issue] (DO21.64 L617)

Library information resources and needs. Subject of a study in New York City. *Library journal* 88:4178-9 November 1, 1963.

Logsdon, Richard. Toward new frontiers in library cooperation. *Bookmark* 24:129 January 1965.

Logsdon, Richard. The vast resources of New York City and the developments which will occur in the next decade: an address. [New York, 1965] (DO27.0747 1.829)

Meyerhoff, E. Cooperative control of library resources: report of the New York area project. *Medical library association bulletin* 47:375-80 October 1959.

Nelson Associates, Inc. Basic problems and possibilities for a reference and research library resources system in Nassau and Suffolk counties, New York: highlights of a study. *New York library association bulletin* 13:57-60 July 1965.

Nelson Associates. Prospects for library cooperation in New York City: planning for more effective utilization of reference and research resources. New York, 1963. (DO27.07471 N33)

New York area library information resources studied. *Bookmark* 23:48-9 November 1963.

New York city library study initiated. *Publishers' weekly* 184:29-30 October 21, 1963.

New York Metropolitan Reference and Research Library Agency. *Bookmark* 26:77-8 December 1966.

Paulson, P. J. Networks, automation and technical services: experience and experiments in New York State. *Library resources and technical services* 13:516-19 Fall 1969. (RESERVE)

Pohlman, L. D. Special libraries and METRO. *Bookmark* 28:183-4 March 1969.

Prospects for library cooperation in New York City: planning for more effective utilization of reference and research resources. *New York library association bulletin* 12:1-5 January 1964.

Report on New York library resources. *Special libraries*. 55:106-7 February 1964.

Skipper, J. E. Library cooperation in metropolitan New York. (In Rutgers University. Graduate School of Library Service. *Studies in library administrative problems*. New Brunswick, Rutgers University Press, 1960. p. 77-94) (D025.1 R93)

Survey of reference resources recommends New York City library authority. *Library journal* 89:823-4 February 15, 1964.

★ ★ ★

**Report of the Task Force  
on Professional Programs  
of the  
Regents Advisory Council  
for the  
New York City Region**

JUNE 2, 1972

**Contents**

---

Report of the Task Force

Appendix I, Report by Dean Brenner, City College

Appendix II, Findings, by Curtis O. Baker

Appendix III, Polytechnic Institute of Brooklyn Plan

Appendix IV, Assembly Bill 12353-A, May 3, 1972

---

## Task Force on Professional Programs

*Chairman:* W. Lewis Hyde, Special Assistant to the President, New York University

Name	Title	Institution
Joseph B. Aidala	Chairman, Department of Electrical Technology	Queensborough Community College
Egon Brenner	Dean of Engineering	City College
Bro. Conrad T. Burris, F.S.C.	Dean, School of Engineering	Manhattan College
James J. Conti	Provost	Polytechnic Institute of Brooklyn
Daniel J. Duffy	Vice President for Academic Affairs	State University of New York Maritime College
Wesley J. Hennessy	Dean, School of Engineering	Columbia University
Richard North	Chairman, Engineering Division	Pratt Institute
William Vopat	Dean, School of Engineering and Science	Cooper Union

### Resource Persons:

STATE EDUCATION DEPARTMENT

Lawrence J. Hollander, Secretary, Board of Examiners in Engineering

REGENT'S ADVISORY COUNCIL

Curtis O. Baker, Director of Institutional Research, New York University

## Report of the Task Force on Professional Programs

The charge to the Task Force on Professional Programs was delimited to the study of engineering education and research in New York City. The Polytechnic Institute of Brooklyn had had a subsidy from the State for four years and seemed unlikely to survive without its renewal. Further, the Task Force was told that New York University, which had been able to accept moderate losses in engineering in the past, had recently suffered severe losses in engineering, while the rest of the University found itself in serious financial difficulty.

As the registration figures came in for the fall term, 1971, and later for the spring of 1972, it became clear that the situation at both the Polytechnic Institute of Brooklyn and New York University was getting worse. Applications for next year indicated that further loss of income was certain. The closing of one or both schools was a real threat all winter long.

Furthermore, enrollments this year and applications for next year are down in the other engineering institutions in New York City, although the problems differ in detail and urgency.

Table I below, compiled by the State Education Department in December, 1971, suggests the extent of the financial problem, although the definitions used in the table are not consistent from one institution to another.

Several alternatives presented themselves.

One possibility would have been to identify the problems

as temporary and seek temporary solutions. For instance, the State might have given a subsidy to New York University and continued the subsidy at the Polytechnic Institute of Brooklyn until these situations improved, perhaps extending the subsidy as necessary to other institutions.

This alternative posed two basic problems. First, it would have been a difficult program to administer with equity. Second, it was at least doubtful that the situation is temporary. Even if enrollments rise again in engineering elsewhere, the drift out of New York City will probably continue. The New York City share of United States engineering degrees has declined steadily in the 1960's, although the total number has been rising slowly.

The Bureau of Labor Statistics has stated that there would be no surplus of engineers in the next decade, and does not anticipate the reduction in supply now evident. Unemployment among engineers is still lower than among workers generally, and most recent graduates are getting jobs, many of them very good jobs. In addition, young people are finding that an engineering degree is a good path into graduate business schools, law, or medicine. We believe, therefore, that freshman enrollments will soon stop falling and will rise somewhat, though not back to 1967-70 levels.

Even if there is an unexpected upturn in engineering enrollment, its influence will not be felt for four or five years, because the sudden recent loss in enrollment and the

### Financial Situation

Private Engineering Institutions,<sup>1</sup> New York City - 1970-71  
(Figures in Thousands)

Table I

Institution (1)	Revenues (2)	Direct Expenditures (3)	Contribution Margin (4)	Indirect Cost (5)	Total Cost (6)	Deficit (7)
Cooper Union .....	2,141	1,404	737	1,003	2,407	(266)
Manhattan .....	2,124	1,079	1,045	1,171	2,250	(126)
New York University.....	5,247	5,359	-112	1,716	7,075	(1,828)
Polytechnic Institute of Brooklyn .....	NA	NA	NA	NA	18,450	(3,050) <sup>2</sup>
Pratt .....	1,929	1,407	522	805	2,212	(283)
<b>TOTAL</b>	<b>11,441</b>	<b>9,249</b>	<b>2,192</b>	<b>4,695</b>	<b>32,394</b>	<b>(5,553)*</b>

<sup>1</sup> In addition the City College upper class and graduate enrollment of 1,311 FTE students requires a contribution of approximately \$2000 per student of public money, a total of \$2,622,000.

<sup>2</sup> Before application of State grant of \$3 million.

\* Columbia University figures for 1970-71 not available, but estimate based on 1969-70 information indicates a deficit of about \$2,600,000.

severe decline in applications for next year will hold down total enrollments for a long time.

Dean Hennessy of Columbia University has suggested that part of the engineering problem in New York City could be overcome by a vigorous joint recruiting campaign, and we plan to take steps in this direction. However, as a good deal of recruiting activity is already going on, it seems unlikely that such a campaign will substantially change the situation.

A second alternative was the consolidation of two or more existing schools. This is not a new idea. More than a year ago, Dean Karl Willenbrock of Buffalo recommended a consolidated engineering center to the State University as a solution to the Polytechnic Institute of Brooklyn problem, but the recommendation was not accepted and his report was never made public. Other recommendations supporting consolidation go as far back as 1966.

This alternative also poses several problems. To achieve a net savings, the two (or more) institutions cannot merely be combined. Some faculty, some staff, and some of the administration will have to be laid off. Even if this were done, substantial public money would be required to sustain the schools while they are being closed down, and to acquire buildings and equipment to support the new institution while it gathers students and seeks sponsors for research. Finally, when a new equilibrium is established, more money might be needed to provide annual operating subsidies.

The deliberations of the Task Force were further complicated by the understanding that the State Task Force on the Financing of Higher Education in New York (Hurd Committee) was going to make a recommendation about engineering on February 1, 1972.

Another force was at work that could not be ignored by the Task Force. A legislative "plan" had been prepared by the State University in December, 1970 that suggested that the problem of the Polytechnic Institute of Brooklyn could be resolved and the State subsidy terminated if "certain expensive graduate and research programs" were transferred completely to the State University College of Engineering at Stony Brook. The \$3 million appropriated to the Polytechnic Institute of Brooklyn this year was earmarked for "detailed planning and implementation" of that plan, and could not be paid to the Polytechnic Institute of Brooklyn unless they took steps to carry out the plan.

A "Memorandum of Understanding" was signed in early December between the State University and the Polytechnic Institute of Brooklyn aimed at achieving this goal. This plan was not discussed with the Task Force nor shown to it. However, it was clear that if it had fully met the original concept, it would have very substantially enhanced and consolidated the engineering program at Stony Brook and weakened engineering education in New York City. Furthermore, by tying up some of the resources of the State University, it would have severely limited the ability of the State University to play any substantial role within the City.

Foreseeing these possibilities, members of the State Education Department, in consultation with the Board of Regents, prepared an alternative consolidation model for New York City. At their January meeting, the Regents voted to endorse "in principle" the establishment of a consolidated engineering center in New York City.

This recommendation was forwarded to the Hurd Committee and shared with this Task Force. In mid-February, the Hurd Committee delivered its report. A consolidated

engineering center was suggested, but not in recommendation form, as the Committee ultimately decided to list "options" on all the problems it had faced and make no recommendations at all.

Governor Rockefeller, commenting on the Hurd Committee report, gave special mention to a consolidated engineering center at New York University, mentioning the State University as the sponsor, but there was little publicly visible follow-up.

In February, the Polytechnic Institute of Brooklyn distributed a paper proposing that New York University close its School of Engineering, and that students and faculty be absorbed into the Polytechnic Institute of Brooklyn. (See Appendix III). A consolidated institution would thereby result that would be fiscally self-sustaining without special State aid by 1977. No estimate was given of the transition costs. This Task Force, and the Regents Advisory Council, responded to this paper cautiously, avoiding a direct "approval" because of obvious uncertainties, but indicating an interest in "further study."

The Legislature, responding to the needs of New York University and the Polytechnic Institute of Brooklyn, acted on March 30 to appropriate \$2.7 million to the Polytechnic Institute for 1972-73 State support, and subsequently, in May, passed a bill providing for:

1. Sale of the Heights campus of New York University to the City University for the Bronx Community College;
2. The consolidation of the New York University School of Engineering into the Polytechnic Institute of Brooklyn; and
3. The requirement that both institutions develop plans for fiscal stability and independence by fall, 1972.

This bill was signed into law by the Governor. (See Appendix IV).

### **Recommendations of the Task Force on Professional Programs**

The members of the Task Force on Professional Programs agree that they have benefited from their deliberations, and would like to respond formally to the plan for the new Polytechnic Institute of Brooklyn. At a meeting on May 31, it was decided to keep the Task Force in operation during the fall, 1972.

Certain recommendations have survived this difficult period:

*1. We prefer that diversity of opportunity and location be preserved and believe that a State program of categorical aid to engineering as suggested by the Board of Regents in their December Legislative Action Report would serve that end. That program calls for \$500 for each full-time equivalent undergraduate and \$1000 for each full-time equivalent graduate student.*

*We suggest, however, that the award for undergraduates be increased to \$1000 and continued to the junior and senior years, as it is difficult to tell who is and who isn't an engineer the first two years. Further, we believe that any subsidy reflecting the higher unit cost of engineering education be extended to public as well as private institutions.*

*2. If such a program (about \$10 million per year) is not feasible state-wide, we recommend its adoption within New York City.*

*3. We support the establishment of a talk-back television network in New York City for engineering education and would welcome a chance to develop a plan for such a system.*

APPENDIX I

**A Report on  
Engineering Education in New York City  
Problems and Alternative Solutions**

by  
Egon Brenner, Dean, School of Engineering  
The City College of CUNY

JANUARY 26, 1972

# Engineering Education in New York City

## Problems and Alternative Solutions

### I. Introduction

There are eight schools offering engineering education in New York City. Six of these are under private control, namely Columbia University, Cooper Union, Manhattan College, New York University, Polytechnic Institute of Brooklyn and Pratt Institute, and two are public institutions, namely City College and the SUNY-Maritime College. All of these offer Bachelor's degree programs, all but SUNY-Maritime offer the Master's programs and five (Columbia, City, Cooper Union, NYU and PIB) offer doctoral programs. SUNY-Maritime offers the specialized type of program its name indicates; this program is not offered by any other institutions so that the engineering school of The City College of CUNY is the only publicly supported comprehensive engineering school in the city. (It is noted that there are only two other publicly supported engineering schools in the state, namely SUNY-Buffalo and SUNY-Stony Brook).

### II. Estimate of Demand for Engineering Education in New York City

The U. S. Bureau of Labor Statistics estimates that the annual employment openings for engineering bachelors graduated from United States institutions will average, through 1980, no less than 45,000. In view of the fact that the number of Bachelor's degrees in engineering was 42,966 in the academic year 1969-70, this number projects only a very modest average growth. This implies that the current decline in freshman enrollment may well be averaged out by growth in the second half of the 1970-80 decade. As far as New York City is concerned, its eight engineering schools produced 4.43% of all U.S. engineering bachelors in 1965-66 but only 3.90% in 1969-70. Moreover, it has been forecast that the population in New York City will not increase and that New York City is becoming increasingly unattractive to out-of-town undergraduate students (see the paper "Space Utilization and Student Allocation" by W.S. Fuller, Director, NYC Regional Plan for Higher Education). Accordingly, it can be assumed that *the number of engineering Bachelor's degrees produced annually in New York City through 1980 will not exceed 3.9% of 45,000, that is 1755* (the 1969-70 figure was 1673). The author of this paper believes that this figure is in fact maximum and its achievement depends in part on factors influencing the attractiveness of New York City for undergraduates (both those who come from the city's high schools and those who come from out-of-town), in part on general economic conditions and employment opportunities and in part on the availability of programs. Some of these factors are discussed further below.

The situation regarding Master's degrees is less clear. In 1969-70 there were 15,548 engineering Master's degrees

awarded in the U.S. New York City's share was 6.9% or 1075 (in 1965-66, New York City's share was 7.74% of 13,677 degrees). To estimate the average number of Master's degrees in the U.S. through 1980 is difficult because of conflicting factors. On the one hand the increasingly complex nature of technology leads many leaders of the profession and of engineering education to predict that the Master's degree will become the first professional degree in engineering (e.g. the "Goals of Engineering Education Report," Engineering Education, January 1968, and the 1971 action of the Engineer's Council for Professional Development regarding accreditation at the "advanced," i.e. Master's, level) while on the other hand the increasing costs of education and loss of income through longer programs exert counter-pressures. The author believes that the compromise which may result is continuing popularity of part-time Master's programs with national growth which can currently be estimated at about 4.5% annually. This would result in roughly 20,000 Master's degrees for 1975-76

Engineering Enrollments\*  
Colleges and Universities in New York City  
Fall, 1971

Table 1

Institution	Upperclassmen	Graduate FTE	Total
City College .....	1277	254	1531
Cooper Union .....	221	41	262
Manhattan .....	499	44	543
New York University ..	468	785	1253
Polytechnic Institute of Brooklyn .....	846	829	1675
Pratt .....	376	112	488
Totals .....	3687	2065	5752

\* Columbia University and Maritime College enrollments not available.

Source:  
New York State Education Department, 1971.



in the U.S. If the New York City share is maintained at the 1969-70 rate of 6.9%, this would correspond to 1380 Master's degrees annually in New York City, a large fraction of which would be earned by part-time students.

In the case of doctoral degrees the situation is even more complex because the growth rate in recent years has been high but may have been over-stimulated by great emphasis on space, defense and other government supported technology. It is also noted that the number of engineering Ph.D.'s produced in the U.S. increased from 2,303 in 1965-66 to 3,620 in 1969-70 while in that time the fraction produced in New York City decreased from 4.7% (109 degrees) to 4.12% (149 degrees). The author believes that doctoral degree output will increase at a slow rate for the next few years and then level off in 1980. Based on this, it will be assumed that the average annual engineering Ph.D.'s produced nationally will be about 3,900 and that about 160 Ph.D. degrees annually will be produced in New York City.

### III. Enrollment Projections

Table I states the current (Fall 1971) FTE upperclass undergraduate engineering enrollment as 3687 in New York City, exclusive of Columbia and SUNY-Maritime. Assuming that 40% of upperclassmen graduate (i.e., some may use 2½ years for the "two" upper years and there is attrition) each year, these institutions would produce  $0.4 \times 3687 = 1475$  bachelors per year at the current level. Assuming that Columbia University is producing at the annual rate of 150 Bachelor's degrees and SUNY-Maritime at the rate of about 50 (as they did in 1969-70), current enrollments are producing bachelors at the rate of about 1700 per year, which is compared with the figure deduced in II above, namely a projected rate of 1755 average annual bachelors in New York City. Even assuming that the current downward trend in engineering freshman enrollment is followed, in a few years, by an upward trend so that the 1755 figure will have been achieved on the average by 1980, the above analysis indicates that in any event *substantial undergraduate upper class (junior and senior) enrollment increases in engineering above the Fall 1971 level are unlikely.*

Unfortunately, Table I does not separate Master's and doctoral enrollment. Such separation is of great importance in engineering because the Master's degree is the educational objective of the majority of graduate students. In order to make estimates, it is noted that the six institutions in Table I produced 115 Ph.D. degrees in 1969-70. Assuming that current enrollment will produce 125 degrees, it could be estimated that four times that number are doctoral students so that  $2065 - 500 = 1565$  FTE students are Master's candidates. If 75% of these graduate in one year then current enrollments can be expected to produce 1179 Master's degrees. Columbia University, in 1969-70, graduated 184 Master's; assuming its rate to be constant, current enrollments can be expected to produce 1353 Master's degrees annually in New York City. In II, above, the number 1380 is projected for 1975-76. Accordingly, it is concluded that *graduate enrollments for the Master's degree in New York City are not likely to increase substantially above the Fall 1971 level.*

Assuming the current enrollments will produce about 125 Ph.D.'s from the six institutions in Table I and assuming Columbia University will produce about 35 annual-

ly, current enrollments would produce about 160 Ph.D.'s per year in New York City. Again, it is concluded that *substantial increases in enrollment for the Ph.D. above the Fall 1971 level in New York City are unlikely.*

*From the above discussion it is concluded that, based on national trends, substantial increases in engineering enrollments in New York City above the Fall 1971 level are not likely to occur within the next decade.*

### IV. Critical Problems — Costs

It is generally agreed that the critical factor which motivated special consideration of engineering education in New York City at this time is the problem of costs. What is less clear is the extent to which the financial distress of engineering schools or of institutions with engineering schools can be attributed to the financial problems of higher education generally and the extent to which there are special costs attributable to the engineering disciplines.

The general inflationary cost-income squeeze, that is the generally rapid increase in all salaries coupled with cost increases for plant operation and support services are common to all aspects of an institution. In addition, institutions had to incur certain new expenses in an inflationary period. These include costs of computation services, the growth of campus security establishments, increased costs in conducting staff relations and additional student services. Of these new costs, that related to computation services can probably be attributed in greater part to engineering and science education than to some other disciplines, but not exclusively so, since institutional administration and management also makes extensive use of data processing facilities.

Consideration of special factors causing current financial distress specifically related to engineering education must, in this paper, be somewhat speculative since detailed financial information and/or methods of cost accounting are not available to the author. It is likely that the principal factor is overexpansion, involving both physical plant and faculty as a result of the expectation of continuing growth of enrollments and of federal research funding. When neither enrollments nor special research funding increased but instead dropped, the institutions did not, or could not, respond by management of resources to relate expenditures to enrollments.

Speculating on cost of physical plant it is noted that the two institutions with the largest deficits per student are engineering and science centers which are geographically and administratively free-standing. It appears that when facilities become underpopulated, the plant overhead costs per student escalate. It is reasonable to suggest that a campus which provides only a limited number of specialized programs is more sensitive to changing student interests than one with more diverse offerings because, in the latter case, dropping enrollments in one area can be balanced by increasing enrollments in other areas and, hence, common services (e.g., library, plant maintenance and others) can be maintained at a lower per student cost. Further, the course work of the freshman and sophomore years in engineering curricula consists largely of liberal arts and science courses; hence, if engineering enrollments drop, the relevant faculty and space can be assigned to teaching other students so that full classes can be maintained.

At the upper division (junior and senior years) of engi-

neering curricula, it is clear that sufficient enrollment must be maintained so as to sustain economically both the necessary laboratories and the specializations. Once a laboratory is equipped and maintained, it can, up to the space limit, accommodate incremental enrollment with only small incremental cost. In establishing reasonable cost criteria for upper division engineering courses, it must be remembered that laboratory courses require more faculty time per student credit hour than other courses, both because of the credit values and because of the need for small groups. The latter is dictated not only by capital costs but also by considerations of physical safety and effectiveness of instruction.

Frederick E. Terman has written extensively and authoritatively on the cost of engineering education (e.g. "Economic Factors Relating to Engineering Programs," *Engineering Education*, February 1969, pp. 510-514). The author, on the basis of Terman's analysis, contends that graduate work in engineering need not be much more expensive than upper division undergraduate work if the enrollments are sufficient. While large Ph.D. programs without correspondingly large special (i.e., federal government or industrially sponsored) research funding can cause large costs, it must be emphasized that in the New York City area (as is typical of urban areas), the bulk of the graduate students are part-time Master's candidates, who generally take course work and do not engage in on-campus research. If class sizes are sufficiently large, overall costs for such students are no higher than for undergraduates; in fact certain costs (e.g. student union, counselling, computer) tend to be lower.

Based on the above discussion, it can be concluded that, to the extent that engineering schools have greater financial problems than other institutions of higher education, these problems can be attributed to excess capacity, that is underenrollment in relation to faculty size and physical plant and to insufficient special research funding.

## V. A Listing of Alternatives

In the sections below the following alternative plans for engineering education are considered:

- A. Maintenance of Present System
- B. Mergers
- C. Cooperative Program Segments

## VI. Alternative A — Maintenance of Present System

In the present system of engineering education in New York City there is excess capacity. This gives to the student the opportunity for choice from among the existing institutions. A high school senior, confronted by diverse institutions offering largely indistinguishable (to him) academic programs, chooses on the basis of complex factors such as commuting convenience, parental preference, school size preference, "counseling," and availability of non-engineering programs. A part-time Master's student most likely chooses on the basis of commuting convenience and program availability. Full-time graduate students are likely to be more influenced by judgments on program quality, research opportunities, and the availability of student support in the form of fellowships and part-time on-campus employment.

At present, one privately controlled engineering school has received extraordinary support from the state, through annual \$3 million grants; the others receive only the same state support for engineering as they do for other students ("Bundy" aid, student financial aid in form of state scholarships and scholar incentives, capital construction loans). It is the author's understanding that these special annual \$3 million grants are intended to be temporary and are intended to enable the institution to reduce excess capacity in an orderly fashion.

The model of providing special state grants for a few years to enable existing institutions to overcome temporary difficulties, that is, provide the grants until managerial techniques, staff reductions and other economies can result in balanced budgets would be attractive were it not for the fact that engineering enrollments are still declining. Decreasing freshman classes will have their impact on engineering departments two or three years later. Even if freshman enrollments were to increase in September 1973, it would not be until 1976 that this increase would be fully effective in the upper division. Further, the large part-time graduate enrollments in New York City are closely tied to engineering employment opportunities and may therefore show no early increase. As a result, given the present situation, very energetic management will have to be effective to keep deficits from increasing and drastic means may be needed to reduce them.

It is appropriate here to mention the plan of The Regents of the State of New York for categorical aid to engineering schools (see "Major Recommendations of The Regents for Legislative Action 1972," pp. 60-61). The Regents propose that, presumably in place of grants, private engineering institutions receive annually \$500 per full-time undergraduate student and \$1,000 for each full-time equivalent graduate student. It must be pointed out that the special support proposed includes freshmen and sophomores; this inclusion does not appear to be justifiable. As detailed above, such students are largely indistinguishable from liberal arts and science students. On the other hand, the cost of upper division undergraduates and that of graduate students is (or should be) virtually identical. If, therefore, the state decides to subsidize privately controlled engineering schools it would be more reasonable to support them on the basis of upper division-graduate enrollment. It would also be reasonable to suppose that such support would be temporary and subject to incentives to reduce costs and controls to prevent diversion of engineering funds to non-engineering purposes. At the same time, it should be expected that the public funding for publicly supported engineering schools requires differentials above other units of a university.

A basic difficulty of the "per capita" subsidy is the currently declining enrollment. If excess capacity, i.e., underenrollment, is the root cause of current problems then the "per capita" subsidy would decrease as the need for it increases.

It appears to the author of this paper that public support for privately controlled institutions is justified only when the public interest requires continuation of the service. Accordingly, in the case of engineering schools in New York City subsidy schemes are justified only to the extent that they maintain *needed* capacity. The author believes this needed capacity to be defined by the enrollment projections, above.

## VII. Alternative B — Mergers

A variety of mergers of engineering schools in New York City has been proposed: Formation of a new upper division and graduate engineering college through merger of some or all privately controlled institutions or through merger of public and privately controlled institutions, or the formation of a graduate center.

Before considering any particular merger model, some aspects of the concept of merging two or more schools into a new institution are considered as follows:

(a) **Quality.** While the quality of the new institution may combine the best features of its components, it will also combine the worst features. The quality of the new institution will depend on the academic plan for merger and on the flexibility with which this plan can be carried out. It appears certain that no quality improvement can occur through a simple additive procedure, except in the very long term.

(b) **Personnel.** In planning a merger, it must be assumed that virtually all of the professional staff and faculty of the merging institutions will wish to retain their jobs, seniority and other benefits as well as salary increments to the level of the highest scale of the participants in the merger. In view of current unemployment levels the same is to be expected of support personnel. Since each participating institution is likely to feel a special responsibility towards its personnel, it is difficult to see how economies will be achieved.

(c) **Students.** The student body of an institution must not be considered as transferable *in toto*. If two institutions merge the initial combined enrollment will be smaller than the sum of the individual enrollments. This would be caused by such factors as geography or inertia (the student may wish to transfer out of engineering rather than change institutions).

(d) **Program Size.** If the merging institutions have similar large programs, the combined institution may have an excessively large combined program whose administration and management can increase costs and can become academically inflexible. On the other hand, the merger of marginally viable programs or of programs which are too small may, because of loss of students and retention of tenured faculty, create even more excess capacity.

(e) **Alumni.** The alumni of merging institutions are likely to oppose the merger.

Engineering education is in a changing situation. Schools are in fact engaged in the self-examination suggested by The Regents in the document cited above, that is, they are determining the extent to which their focus should be oriented to serving students who can apply engineering to the solution of urban and societal problems. The mechanical problems of consummating a merger are likely to lead to additive and not innovative programs. The foregoing discussion is intended to emphasize the differences between building a new institution by merger and building it *ab initio*. The former has all the complexities of the latter and, in addition, has constraints on the available building blocks.

With reference to New York City, another factor must be considered, namely, that any plan which eliminates or weakens publicly supported engineering education in the city is contrary to the needs of the city and state. The City College provides high quality engineering education with an extraordinarily low level of public funding. The availability of these professional programs affords the people of

the city opportunities for economic advancement. Curtailing such opportunities is not in the public interest.

## VIII. The MEC Model

One of the suggested approaches to engineering education has been the proposal for an additive merger of the engineering schools, five privately controlled institutions (Cooper Union, Manhattan, N.Y.U., P.I.B. and Pratt) and one public institution (City College), into a Metropolitan Engineering Center (MEC).

The academic program envisioned in that proposal is the collection of all programs of the participants in the proposed merger. (Why mining engineering and general engineering are included is not clear). The question of the sciences in the new institution is unclear: they are apparently excluded but bio-engineering, applied mathematics and other programs involving science faculty are included. Despite the fact that there is currently much interest in interdisciplinary work involving engineering and the social sciences in urban and environmental studies, the proposal does not provide for this. These defects of the academic plan are certainly not intentional, rather, they are most likely based on the additive nature of the plan and the recognition that early faculty retirements or terminations are difficult to implement and/or fund.

The suggested location of the proposed MEC, at an apparent acquisition cost of \$42.4 million to \$78 million for physical plant is not explained in the proposal: one concludes that its choice was dictated by its availability. An additional real estate transaction envisions public funding to create a \$30 million endowment for the new MEC. Hence, the total capital investment envisioned is as much as \$108 million. While the author of this proposal has little experience with real estate, this amount appears to be a very large sum considering the number of students who would be served. This fact alone dictates much more detailed study of the academic planning and the acceptability of the proposed institution to the prospective students.

It is only partially true that, as stated in the proposal, the transfer of engineering students off the City College campus will make room on that campus for other students. While some general classroom and office space would become available for reassignment, the specialized engineering laboratory space (Steinman Hall) would become available only after an extended period of time and the expenditure of additional large sums for renovation.

In connection with the proposed financing of MEC, it is pointed out that the plan assumes that all students, including CUNY students would pay a \$2400 annual tuition and *in addition* the city and state would support the center with a \$3.6 million annual subsidy. This elimination of publicly supported engineering education is unrealistic. If the MEC budget model is corrected for this error then, despite the unrealistically large enrollment projections, the new institution would be planned with much larger public funds than the projected \$3.6 million annual subsidy in the proposal.

## IX. The Privately Controlled MEC

The author understands that a voluntary merger of two or more privately controlled engineering schools has been suggested. Since many combinations are, in principle, possible it is not appropriate to comment on the idea ex-

cept to point out that the incentive for such actions would most likely have to be some special funding.

## X. A Graduate Center

Graduate study in engineering, particularly at the Master's level, has strongly favorable interaction with industry and therefore the maintenance of graduate programs, in a convenient location for commuting students, is a legitimate concern of the public. In proposing a graduate center at a single location, geography is a problem. In addition, the following factors must be considered:

(a) The graduate enrollment will dictate the number of faculty the center can support. This will reduce diversity of offerings below what could be supported if all or most faculty taught both graduates and undergraduates. Joint appointments between institutions are very difficult to implement.

(b) The upper division undergraduate programs at the individual colleges could not interact with the graduate programs unless complex administrative arrangements for joint appointments are made. Undergraduate programs would be adversely affected and excellent faculty would be difficult to recruit and retain for these programs.

(c) The absence of undergraduates in the center would drastically reduce the on-campus employment opportunities for full-time graduate students in teaching and related activities.

## XI. Alternative C — Cooperative Program Segments

Another alternative for cooperative use of regional resources in engineering education which has been suggested contains less drastic features than the mergers but has the potential of effecting savings in operating expenses while maintaining or improving quality and diversity. The proposal, in essence, consists of extensive use of cross-registration between cooperating institutions with the use of closed circuit educational television.

The success of the proposal is based on the assumption that the cooperating institutions are engaged and will continue to engage in cost reduction. This process would be aided through the following steps:

(a) The State Education Department rules requiring a year's work in residence before a degree can be awarded should be changed for engineering Master's degrees to allow for more transfer credits for cross-registration.

(b) Cooperating institutions would be equipped with closed circuit, talk-back television learning centers similar to CUNY's CUMBIN system. A maximum initial investment of about \$500,000 can probably link all engineering schools.

(c) Both TV and in person cross-registration would

be encouraged to avoid the need for having small classes taught by high-priced faculty. This would also assure the ready availability of special courses to students in a school which has chosen not to support that specialty. If successful, this plan would develop a pattern of cooperation where institutions would rely on each other to cover the necessary spectrum of engineering course work. While particularly useful for Master's level classroom instruction the same method is applicable to senior level engineering electives.

(d) Attempts are to be made to encourage cross-registration in those undergraduate laboratory courses where elimination of the course from a campus results in economies. This may apply to senior elective laboratory courses. Since such procedures involve movement of students between campuses, extensive cross-registration in laboratories can be expected only after very difficult scheduling and other problems are solved.

It must be recognized that cooperative efforts can be effective only if the institutions *and* their faculties derive real benefit from them. Many obstacles can be immediately foreseen:

(a) Tuition differentials.

(b) Bias against TV instruction by faculty and students despite the fact that this method has a proven record for effectiveness in Florida, Texas and California.

(c) The natural feeling of a faculty that its courses suit its students better than courses taught at another institution, the desire of each faculty member to teach his special field frequently and of the department to offer diverse courses, both made possible by the institution's inability to resist pressure to give small classes.

Other cooperative efforts could include a cooperative admissions program which could also draw the attention of prospective students to the complete range of educational opportunities in the City of New York.

The proposed plan is outlined above only very sketchily. Its detailed implementation would be difficult and would have to include incentives and controls. Mechanisms which provide for equitable participation by cooperating institutions would have to be devised and linked to the incentives and controls to foster the growth of in person and, particularly, TV cross-registration. In view of present circumstances, subsidies will also be required. It is suggested that such subsidies use the CUNY per student instructional funding as a yardstick.

Successful implementation could lead to more effective utilization of the regional resources, the accelerated development of new courses and programs at low cost since only a few students per participating campus would be needed to fill a class. The potential exists for creation of a *de facto* metropolitan engineering effort through educational TV learning centers (which could eventually include locations not on any campus but "in plant" for employed engineers) and not through geographical consolidation.

APPENDIX II

**Summary of Findings**

Prepared by Curtis O. Baker  
Staff member, Regents Advisory Council and  
Director of Institutional Research, New York University

MARCH 24, 1972



## Summary of Findings

Engineering schools in New York City have had to face declining enrollments over the past few years. This has been true of both public and private institutions. From a total of 11,303 FTE students in 1967, enrollments have declined to 9,613 FTE students in 1971. Much of this decline has occurred in the past year and its full impact has yet to be felt. Furthermore, recent information from admissions officers at engineering schools in the city and throughout the country indicate that most have fewer applications for 1972 than for 1971, including all of the private colleges represented on the task force.

Between 1959-60 and 1969-70 the number of engineering degrees granted by institutions in New York City rose from 2,329 to 3,009, an increase of 29%. This varied from a decline of 2% at the bachelor's level to an increase of 108% at the master's level and 266% at the doctoral level. Even while the absolute number of degrees produced in New York City was increasing, the percentage that these were of the United States total was declining. Bachelors degrees granted by institutions in New York City declined from 4.6% in 1959-60 to 3.8% in 1969-70 of all bachelors degrees in engineering granted in the United States. Masters degrees in engineering granted in New York City declined from 7.7% to 7.4% of the United States total during the same period. The decline in doctoral degrees was from 5.6% to 4.4% of the national total.

If the present situation is not a short term phenomenon, there exists an over-capacity for engineering education within New York City which would suggest the necessity for reducing the facilities and the number of faculty devoted to engineering. Two problems are present.

1. Engineering laboratory space may be of no use to other fields without expensive renovation.
2. In engineering programs in New York City a higher

percentage of faculty are tenured than in liberal arts programs.

A recent study done by the Office of Institutional Research at Pace College shows an average of 53% of the full time faculty on tenure at a group of private institutions in the Metropolitan area. In the engineering colleges in New York City, the comparable figure varies from 56% to 75% with an average of 68%. Among just the private engineering colleges the percentage of full time faculty on tenure varies from 56% to 72%, with an average of 67%.

The programs of the eight schools in New York City cover a wide range. Four fields (chemical, civil, electrical, and mechanical) account for 72% of the full time faculty and 72% of all engineering degrees granted. Every engineering school represented, except SUNY - Maritime, has departments in chemical, electrical, and mechanical. The two institutions experiencing the greatest difficulties are also the two institutions with the greatest variety of programs. New York University has programs in Aeronautical and Astronautical, Industrial, Metallurgy, Nuclear, Meteorology and Oceanography. The Polytechnic Institute of Brooklyn also has programs in Aeronautical and Astronautical, Industrial, Metallurgy, Operations Research, and Transportation Planning.

While the statistics quoted above are not encouraging, the general employment outlook for engineers is. In the 1970-71 edition of the *Occupational Outlook Handbook*, the Bureau of Labor Statistics stated: "Employment opportunities for engineers are expected to be very good through the 1970's." Even discounting the optimism of this projection by projecting lower levels of defense expenditures, the Bureau projected losses through transfer, retirement and death as creating more than 35,000 job openings annually.

Enrollment at Schools of Engineering  
in New York City, 1967 - 1971,  
by Institution and Level of Students

Table 1

Institution	Level	1967 FTE Students	1971 FTE Students	Percentage Change
City College	Undergr.	2,473	2,263	- 8%
	Masters	154	153	0
	Doctoral	65	75	+16
		2,692	2,491	- 7%
Columbia University	Undergr.	683	567	-17%
	Masters	311	223	-28
	Doctoral	263	202	-23
		1,257	992	-21%
Cooper Union	Undergr.	385	384	0%
	Masters	46	82	+78
	Doctoral	9	14	+56
		440	480	+ 9%
Manhattan	Undergr.	1,164	941	-19%
	Masters	13	19	+46
		1,177	960	-18%
Maritime	Undergr.	302	233	-23%
New York University	Undergr.	1,332	1,015	-24%
	Masters	706	537	-24
	Doctoral	382	355	- 7
		2,420	1,907	-21%
Polytechnic of Brooklyn	Undergr.	1,480	1,367	- 8%
	Masters	709	504	-29
	Doctoral	300	168	-44
		2,489	2,039	-18%
Pratt	Undergr.	475	479	+ 1%
	Masters	51	32	-37
		526	511	- 3%
All Schools	Undergr.	8,294	7,249	-13%
	Masters	1,990	1,550	-22
	Doctoral	1,019	814	-20
		11,303	9,613	-15%

Notes to Table 1

*Columbia University*

Masters level includes Special students

Doctoral level includes Professional students

FTE = full time headcount + 1/3 part time

*Cooper Union*

*Manhattan* ) All students are full time

*Maritime* )

*New York University and City College*

FTE = full time headcount + credits taken by part time students/12

*Polytechnic of Brooklyn*

Masters level includes Engineer

FTE = full time headcount + 1/3 part time

*Pratt Institute*

FTE = full time headcount + 1/3 part time

Bachelor's Degrees in Engineering Awarded by  
New York City Institutions, 1959-60 to 1970-71

Table 2 - Part A

Institution	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
City University.....	528	512	475	486	465	529	451	413	401	484	436	375
Columbia.....	106	90	107	111	133	111	116	112	143	150	150	171
Cooper Union.....	112	93	125	102	106	99	131	110	119	115	93	92
Manhattan.....	195	180	202	219	214	259	249	290	256	216	268	230
Maritime.....	50	50	35	45	63	35	57	54	51	46	56	37
New York University,	271	287	233	257	238	221	201	219	237	300	289	329
Polytechnic of												
Brooklyn.....	387	377	357	357	361	301	315	313	345	298	303	299
Pratt Institute.....	83	46	95	83	80	91	68	59	67	87	96	77
TOTALS.....	1,732	1,635	1,629	1,660	1,660	1,646	1,588	1,570	1,619	1,696	1,691	1,610
U.S. TOTAL.....	37,808	35,860	34,735	33,458	35,226	36,691	35,815	36,186	37,030	41,553	44,772	N.A.
N.Y.C. Total as %												
of U.S. Total...	4.6	4.6	4.7	5.0	4.7	4.5	4.4	4.4	4.4	4.1	3.8	-

Sources:

1959-60 through 1967-68 / Frederick F. Terman, *Engineering Education in New York*

1968-69 and 1969-70 / National Center for Educational Statistics, *Earned Degrees Conferred*

1970-71 / Reports of the individual institutions

Master's Degrees in Engineering Awarded by  
New York City Institutions, 1959-60 to 1970-71

Table 2 - Part B

Institution	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
City University.....	45	70	80	87	94	97	100	92	84	107	107	108
Columbia.....	204	199	157	208	256	214	261	210	238	195	229	247
Cooper Union.....	-	-	-	-	-	-	-	9	10	8	10	12
Manhattan.....	-	-	-	7	12	8	12	13	23	23	25	19
New York University,	174	202	215	221	260	311	404	354	392	390	390	459
Polytechnic of												
Brooklyn.....	124	134	144	182	197	208	251	275	306	260	378	324
Pratt Institute.....	6	3	8	11	5	5	2	3	20	20	10	20
TOTALS.....	553	608	604	716	824	843	1,030	956	1,073	1,003	1,149	1,189
U.S. TOTAL.....	7,159	8,177	8,909	9,635	10,827	12,056	13,677	13,887	15,152	15,243	15,597	N.A.
N.Y.C. Total as %												
of U.S. Total...	7.7	7.4	6.8	7.4	7.6	7.0	7.5	6.9	7.1	6.6	7.4	--

Sources:

1959-60 through 1967-68 / Frederick F. Terman, *Engineering Education in New York*

1968-69 and 1969-70 / National Center for Educational Statistics, *Earned Degrees Conferred*

1970-71 / Reports of the individual institutions



Doctoral Degrees in Engineering Awarded by  
New York City Institutions, 1959-60 to 1970-71

Table 2 - Part C

Institution	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
City University.....	-	-	-	-	-	-	-	2	10	14	12	6
Columbia.....	22	31	29	26	38	32	35	43	40	41	45	41
Cooper Union.....	-	-	-	-	-	-	-	-	-	2	3	2
New York University, Polytechnic of	8	16	11	14	18	29	39	37	43	54	39	71
Brooklyn.....	14	14	27	29	27	26	30	35	34	58	62	52
TOTALS.....	44	61	67	69	83	87	104	117	127	169	161	172
U.S.TOTAL.....	786	943	1,207	1,378	1,693	2,124	2,303	2,614	2,946	3,377	3,681	N.A.
N.Y.C. Total as % of U.S. Total ...	5.6	6.5	5.6	5.0	4.9	4.1	4.5	4.5	4.3	5.0	4.4	-

Sources:

1959-60 through 1967-68 / Frederick E. Terman, *Engineering Education in New York*

1968-69 and 1969-70 / National Center for Educational Statistics, *Earned Degrees Conferred*

1970-71 / Reports of the individual institutions

Summary of Engineering Degrees Granted in New York City by Department, 1970-71

Table 3

Department	Bachelors		Masters		Doctors		All	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Chemical.....	179	11%	75	6%	18	10%	272	9%
Civil.....	237	15	164	14	19	11	420	14
Electrical.....	593	37	412	35	51	30	1,056	36
Mechanical.....	257	16	110	9	13	8	380	13
Sub-total.....	1,266	79%	761	64%	101	59%	2,128	72%
Other Depts.....	394	21	428	36	71	41	843	28
Total.....	1,660	100%	1,189	100%	172	100%	2,971	100%

Full Time Faculty and Tenured Faculty in Engineering Schools in New York City, Fall 1971

Table 4

Institution	Department	Total Full Time Faculty	Tenured Faculty	Percent Tenured
City College	Chemical	12	10	83%
	Civil	27	20	74
	Electrical	29	22	76
	Mechanical	20	15	75
	Sub-total	88	67	76%
Columbia University	Chemical	10	7	70%
	Civil	22	16	73
	Electrical	23	18	78
	Mechanical	14	10	71
	Other	31	21	68
Sub-total	100	72	72%	
Cooper Union	Chemical	9	6	67%
	Civil	7	3	43
	Electrical	7	6	86
	Mechanical	8	7	88
	Sub-total	31	22	71%
Manhattan	Chemical	8	4	50%
	Civil	12	7	58
	Electrical	11	8	73
	Mechanical	8	3	38
	Sub-total	39	22	56%
Maritime	Naval Arch. & Mar.	12	9	75%
New York University	Chemical	9	6	67%
	Civil	13	11	85
	Electrical	22	14	64
	Mechanical	12	8	67
	Other	47	35	74
Sub-total	103	74	72%	
Polytechnic Institute of Brooklyn	Chemical	11	7	64%
	Civil	9	6	67
	Electrical	39	26	67
	Mechanical	16	11	69
	Other	57	43	75
Sub-total	132	93	70%	
Pratt Institute	Chemical	4	3	75%
	Electrical	8	6	75
	Mechanical	7	4	57
	Industrial	3	2	67
	Sub-total	22	15	68%

---

---

Summary of Full Time Faculty in Engineering Schools  
in New York City, Fall 1971, by Department

Table 5

Department	Total Full Time Faculty	Percentage of Total
Chemical Engineering	63	12%
Civil Engineering	90	17
Electrical Engineering	142	27
Mechanical Engineering	85	16
Sub-total, Four Departments	380	72%
Other Fields	150	28
Total, All Departments	530	100%

---

---

APPENDIX III

**Proposal for  
a Consolidated Engineering Center  
in Downtown Brooklyn**

Polytechnic Institute of Brooklyn

MARCH 24, 1972

## *Polytechnic Institute of Brooklyn*

# **A Consolidated Engineering Center in Downtown Brooklyn**

### **The Problem**

New York City has a strong investment in engineering education, and the city and its people have a continuing need for the benefits and services deriving from this investment. Since engineering education is expensive and enrollments have declined, all seven engineering schools in New York City are experiencing financial difficulties.

### **An Approach**

It is generally agreed that the merging of some of the existing engineering schools will lead to efficiency of operation and makes fiscal sense. The concept of a consolidated engineering center has been endorsed by the Regents and has been offered as an option by the Hurd Task Force on the Financing of Higher Education.

### **Proposed Solution**

Initially, it is proposed that Polytechnic Institute of Brooklyn be merged with the NYU School of Engineering to form a Consolidated Engineering Center. The combined institution is to be located in downtown Brooklyn on the present PIB campus which would be available at no cost for this purpose. The NYU campus in the Bronx could be purchased for use by the City University.

### **Advantages and Desirable Features**

1. **Academic Soundness.** The plan would result in a school of science and engineering of moderate size and high quality, efficiently integrating on one campus those lower- and upper-division undergraduate curricula, graduate programs, and their supporting disciplines for which there is current demand and anticipated need.

2. **Convenience.** Since most of the students to be served would commute, it must be possible to reach the proposed campus conveniently by public transportation from all parts of the city. The PIB campus is centrally located at a transportation hub of the city.

3. **Economy.** There would be no need for the State to purchase a campus for the proposed engineering center because the campus of PIB would be available at no cost for this purpose.

4. **Conservation of Resources.** The engineering center would be placed on a campus of a size suited to its foreseeable needs. The NYU uptown campus, too large for this purpose, would be available to serve a rapidly expanding institution like CUNY.

5. **Benefits to Academic Institutions.** It is estimated that combining the two engineering schools on the PIB campus would save about \$3.5 million per year in operating expenses. The strengths and resources of the NYU engi-

neering school would be preserved, while NYU would be relieved of a substantial part of its deficit. NYU would also gain the proceeds from the sale of its campus. CUNY, which now spends about \$10 million a year for rented space, would gain badly needed space immediately.

6. **Benefits to New York City.** Brooklyn would gain, as part of its Civic Center, an enlarged, strengthened institution contributing to its educational, cultural and economic life. The plan would place on the NYU campus in the Bronx one of the flourishing, rapidly growing units of the City University. The metropolitan area would acquire an invigorated and efficient educational center for technology and science.

7. **Advancement of Regionalism.** The plan would serve as a concrete example of interuniversity cooperation and would set the stage for additional interactions that could result in reducing the cost of higher education in science and engineering in the metropolitan area.

8. **Improvement of Quality.** The concentration of academic assets arising from the merger of the two institutions offers not only increased efficiency, but also the nucleus for the development of an engineering school of the very finest quality.

### **Financing**

At the outset, the additional public cost for operating the consolidated center would be largely independent of whether it were a public or private institution, provided that current tuition rates were retained. If the plan can be put in effect in time for the 1972-73 academic year, then in addition to a modest amount for moving some laboratory facilities, it is estimated that about \$2.5 million will be needed during the first year, with decreasing amounts in succeeding years as enrollment approaches the desired level of 4,800 to 5,000.

### **I. Introduction**

Engineering education in the United States is in financial trouble. This results from a combination of rapidly increasing costs, decreasing enrollment, and decreasing federal support for graduate training. In New York City, the problems are aggravated by the existence of seven engineering schools with a total enrollment equivalent to fewer than 9,500 full-time students. By the standards suggested by Terman in his study of engineering education in New York, this suffices for no more than two engineering schools if they are to operate efficiently.

It is therefore natural to consider consolidating engineering schools. This idea has been endorsed by the Regents and has been suggested in a number of options by the Hurd Task Force on the Financing of Higher Education. It is also in consonance with the desire for inter-

university cooperation which is inherent in the Regents' endorsement of the principle of regionalism.

In the present proposal, a plan is offered which involves initially the Polytechnic Institute of Brooklyn and the School of Engineering of New York University. Both of these schools are recognized for the high quality of their programs and faculties, and both have incurred large operating deficits for the past few years. The suggested plan is designed to reduce costs by eliminating duplication of resources, while preserving academic quality. Because the strengths of the two institutions complement each other in large measure, their combination can serve as the nucleus of an engineering school of highest quality.

The proposed plan calls for purchase of New York University's campus in the Bronx for use by the City University. The NYU College of Engineering and the Polytechnic Institute of Brooklyn are to be merged into a single Consolidated Engineering Center using the present PIB campus in Brooklyn's Civic Center.

## II. Model

The salient characteristics of the proposed Consolidated Engineering Center are clear. It is to be a technologically-oriented urban institution, offering degree programs at the undergraduate and graduate levels, possessing a strong research capability, and interacting meaningfully with the community. Though its dominant educational thrust is to be engineering, to be effective its academic environment must include the sciences, social sciences and humanities. Engineering is firmly based on science and cannot be isolated therefrom if it is to thrive. In addition, in an age when the application of technology to the needs of modern society is increasingly and justifiably emphasized, it is necessary to strengthen the bridge between engineering and such disciplines as economics, psychology, sociology and political science.

(1) **Academic Profile.** The undergraduate curricula of the CEC should include both the lower-division and upper-division levels. To deprive the institution of lower-division enrollment would be academically and financially unsound. There are distinct pedagogical advantages to a full undergraduate curriculum in one institution and it is well known that engineering education is less expensive at the lower levels. On the other hand, the programs should be such as to enhance student mobility among curricula within the lower division and also to facilitate the assimilation of transfer students into the upper division. The proposed CEC will have all these features.

The graduate division of the CEC will offer programs leading to the M.S., Engineer and Ph.D. degrees. It is expected that research will be a strong component of the institution, with substantial involvement by graduate students and faculty. Furthermore, ties to industry should be substantial.

In establishing the CEC, little difficulty in achieving program articulation between PIB and NYU is expected since the similarities of the respective institutions are significant. In effecting the merger, however, careful attention will have to be paid to the reduction of excessive overlap and a proliferation of programs. The consolidation will make possible the strengthening of capability in the classical disciplines of chemical engineering, civil engineering, electrical engineering, and mechanical engineering, while providing the flexibility to stress programs of current and

anticipated importance, such as bioengineering, computer science, transportation planning, systems engineering, meteorology, oceanography, and nuclear engineering. At the same time, the CEC will have essential strength in the sciences as well as supporting capability in the social sciences and humanities.

(2) **Students.** Projecting into the near future, it is expected that most of the students enrolled in the CEC will be full-time undergraduate engineering students commuting from home. Evening undergraduate enrollment will continue, although it will have decreasing significance in comparison with part-time graduate enrollment, which will be relatively large, especially at the Master's level. Full-time graduate enrollment is not expected to experience significant growth, since interest in and need for the doctorate in engineering is stabilizing.

### Estimated CEC Enrollment for 1977\*

	Undergraduate	Graduate	Total
Engineering .....	2200	1400	3600
Arts and Science .....	800	400	1200
	3000	1800	4800

\*Full-time equivalent students.

It can be seen that this enrollment represents a reasonable size for a technological institution, although modest by comparison with more comprehensive universities. The engineering enrollment is estimated to be about 40% of the total in New York City.

(3) **Faculty.** The faculty requirements for the CEC, calculated on the basis of the above enrollment and the associated curricula, consist of the following:

### Projected CEC Faculty for 1977

Engineering .....	189
Arts and Sciences .....	191
	380

These figures were obtained by using student to faculty ratios of 15 to 1 and 10 to 1 at the undergraduate and graduate levels, respectively.

Clearly this faculty profile portrays an institution with a distinct science and engineering orientation. A comparison of the required number of engineering faculty with the current combined total of that at PIB and the School of Engineering of NYU leads to the conclusion that a contraction is warranted. However, an annual attrition of only 5% would accommodate this by 1976 and, in fact, provide for the acquisition of new talent by then. This means that the contraction can be accommodated by natural attrition with no forced terminations.

(4) **Financing.** For 1970-71, the last year for which complete figures are available, PIB and the School of Engineering of NYU incurred a combined deficit of \$4.6 million, with that at PIB underwritten by a state appropriation of \$3 million. An analysis of the two operations suggests that a combined institution on the PIB campus would have saved about \$3.5 million (see Table 1). This is a persuasive argument for further consideration of such a merger.

While operation as a public institution would assure the Consolidated Engineering Center of greatest stability and develop its resources most fully for the benefit of its students and the community, our analysis indicates that the center could be viable as an essentially private institution. This can be seen from Table 2, which presents an

ANALYSIS OF FINANCIAL STATISTICS 1970-71  
 Polytechnic Institute of Brooklyn & New York University School of Engineering  
 (\$000)

Table I

	Polytechnic Institute of Brooklyn	New York University	PIB + NYU	Combined Institution
<b>REVENUE:</b>				
Tuition & Fees _____	\$ 6,628	\$ 4,222	\$10,850	\$10,850
Cooperative Research _____	3,081	4,438	7,519	7,519
Specialized Educ. Activities _____	2,917	140	3,057	3,057
Bundy, N.Y.S. & Other _____	745	335	1,080	1,080
Endowment _____	344	90	434	344
Unrestricted Gifts _____	261	300	561	261
Auxiliary Enterprises _____	354	200	554	554
Student Aid _____	1,086	87	1,173	1,173
<b>Total Revenue _____</b>	<b>15,416</b>	<b>9,812</b>	<b>25,228</b>	<b>24,838</b>
<b>EXPENDITURES:</b>				
Instruction & Dept'l. Research _____	6,825	2,741	9,566	9,566
Cooperative Research _____	2,089	3,360	5,449	4,529
Admin., Academic & General _____	1,040	532	1,572	1,142
Library _____	458	469	927	757
Specialized Educ. Activities _____	2,466	723	3,189	3,189
Staff Benefits _____	1,010	*	1,010	1,010
General Expense _____	648	391	1,039	799
Operation of Physical Plant _____	1,210	2,021	3,231	3,111
Public Relations & Development _____	216	123	339	314
Alumni _____	112	*	112	112
Computer _____	535	*	535	535
Student Services _____	461	488	949	659
Interdepartmental Credits _____	(626)	N.A.	(626)	(626)
Auxiliary Enterprises _____	357	200	557	557
Student Aid _____	1,400	364	1,764	1,764
Appropriations & Transfers _____	250	N.A.	250	250
<b>Total Expenditures _____</b>	<b>18,451</b>	<b>11,412</b>	<b>29,863</b>	<b>25,818</b>
Expenditures in Excess of Revenue _____	\$ 3,035	\$ 1,600	\$ 4,635	\$ 980
New York State Appropriation _____	(3,000)	N.A.	(3,000)	(3,000)
Deficit After State Appropriation _____	\$ 35	\$ 1,600	\$ 1,635	\$ 2,020
Surplus After State Appropriation _____				\$ 2,020

\* Included in other expenditures

estimate of the projected financial condition of a private CEC in 1977. These figures are based on the foregoing projections of enrollment and faculty size and assume an average annual tuition of \$2,900.

Assuming that tuition rates and faculty salaries for the CEC were retained at approximately current levels, initially the additional public cost of operation would be largely independent of whether it was a public or private institu-

tion. Capital costs would include only a modest amount for moving some laboratory facilities and minimal alterations to the present buildings. In addition, during the first year, it is estimated that expenses would exceed income by about \$2.5 million. Thereafter, efficiency would increase with increased enrollment, and income could be expected to catch up with expenses as enrollment approached the 4,800-5,000 level.

---



---

**CONSOLIDATED ENGINEERING CENTER** **Table 2**  
**Projected for 1977**

Assumptions

Enrollment _____	4800
Tuition _____	\$2900
Faculty _____	390
Student/faculty _____	12.6

Revenue (\$000)

Tuition _____	\$14,000
Research and Grants (includes Spec. Ed. Act) _____	12,500
Other income (Bondy, gifts, endowment, student aid) _____	3,500
	<u>\$30,000</u>

Expenditures

Instruction and Departmental _____	\$11,000
Research and Grants _____	9,200
Administration and General _____	3,400
Library _____	900
Operation of Plant _____	1,700
Other (computer, student services & aid, development) _____	3,800
	<u>\$30,000</u>

---



---



APPENDIX IV

**Assembly Bill 12353-A, May 3, 1972**

# STATE OF NEW YORK

12353—A

## IN ASSEMBLY

May 3, 1972

---

Introduced by COMMITTEE ON RULES read once and referred to the Committee on Rules - Rules committee discharged, bill amended, ordered reprinted as amended and re-committed to the Committee on Rules

### AN ACT

in relation to the acquisition by the city university construction fund of the heights campus of New York university for the use of the Bronx community college, authorizing an appropriation to facilitate such acquisition and providing for the merger of the appropriate programs and faculty of the New York university school of engineering and science into the polytechnic institute of Brooklyn

*The People of the State of New York, represented in Senate and Assembly, do enact as follows:*

- 1 Section one. Legislative findings. The legislature finds and
- 2 declares that the continued viability of the state's system of higher
- 3 education is threatened by the fiscal crisis facing New York uni-
- 4 versity, the largest private institution of higher education in the
- 5 state. Emergency action is clearly needed to preserve this out-

1 standing institution and to permit it to continue to serve the educa-  
2 tional needs of the people of the state. To provide such emergency  
3 action, the legislature has determined that the city university con-  
4 struction fund should acquire and develop the Bronx campus of New  
5 York university solely for the Bronx community college, and that  
6 appropriate programs and faculty of the New York university school  
of engineering and science should be merged into the polytechnic  
8 institute of Brooklyn.

9 § 2. The city university construction fund is hereby authorized to  
10 enter into a contract or contracts with New York university and the  
11 dormitory authority to acquire the real property owned by New York  
12 university and the dormitory authority located in the county of the  
13 Bronx, city and state of New York, and known as the New York uni-  
14 versity heights campus and all buildings, structures and improve-  
15 ments thereon including fixtures, equipment and other personal  
16 property which are related to the continued use of the facility for edu-  
17 cational purposes, for the sole use by the Bronx community college.  
18 The provisions of this act shall apply to any such contract,  
19 notwithstanding and in addition to the provisions of any other law.

20 § 3. Such contract or contracts to acquire such property shall be  
21 on such terms and conditions as shall be approved by the dormitory  
22 authority, and the trustees of the city university construction fund  
23 including but not limited to the following:

24 a. The acquisition of the property provided for in section two of  
25 this act shall be for a consideration to be determined as follows:

26 1. Within one month of the effective date of this act New York uni-  
27 versity and the city university construction fund shall jointly select

1 and separately retain two independent appraisers from among the  
2 active members of the American institute of real estate appraisers to  
3 appraise the value of the entire New York university heights campus  
4 as a campus to be acquired pursuant to section two of this act.

5 2. The guidelines for such appraisals of real property shall be those  
6 currently in use by the state department of transportation; and per-  
7 sonal property shall be appraised by deducting reasonable deprecia-  
8 tion from the replacement cost of such personal property.

9 3. If the higher of the two appraisals exceeds the lower by less than  
10 fifteen percent, the purchase price shall be the simple average of the  
11 two appraisals, subject to the approval of the state budget director.

12 4. If the higher of the two appraisals exceeds the lower appraisal by  
13 more than fifteen percent, or if the average purchase price as calcu-  
14 lated above has not received the approval of the state budget director,  
15 the purchase price shall be negotiated by New York university and  
16 the city university construction fund subject to the approval of the  
17 state budget director.

18 5. If such negotiations fail or if the negotiated price is disapproved  
19 by the state budget director, he shall retain a review appraiser whose  
20 decision, subject to the approval of the budget director, shall be the  
21 basis for a voluntary settlement.

22 6. If the above procedures fail to produce a settlement, the state  
23 budget director shall refer the matter to the state commissioner of  
24 transportation for non-binding arbitration.

25 b. The contract for purchase shall provide that title to such prop-  
26 erty shall vest in the city of New York acting by and through the city

1 university construction fund and possession of such property shall be  
2 transferred to the city university construction fund no later than  
3 September first, nineteen hundred seventy-three and that the full  
4 purchase price shall be due and payable not more than five years from  
5 the date of execution of such contract;

6 c. Notwithstanding any general or special law to the contrary,  
7 nothing shall preclude the acquisition of title to such property  
8 subject to easements, restrictions and covenants of record which will  
9 not interfere with the use of the property as an educational facility.  
10 § 4. The sum of not to exceed thirteen million dollars (\$13,000,000)  
11 or so much thereof as shall be sufficient to facilitate the purposes  
12 authorized in section two of this act is hereby appropriated in the first  
13 instance from the capital construction fund which sum shall be avail-  
14 able for the year beginning on the first day of April, nineteen hundred  
15 seventy-two, and is authorized to be paid as hereinafter provided to  
16 the city university construction fund, and as an advance for a down  
17 payment to facilitate the acquisition of the property described in sec-  
18 tion two of this act including costs and expense incidental thereto.  
19 Notwithstanding the provisions of any general or special law, no part  
20 of the appropriation contained in this section shall be available for  
21 expenditure until a certificate of approval of availability shall have  
22 been issued by the director of the budget, and a copy of such certificate  
23 of approval filed with the state comptroller, the chairman of the senate  
24 finance committee and the chairman of the assembly ways and means  
25 committee. Such certificate may be amended from time to time by the  
26 director of the budget and a copy of each such amendment shall be

1 filed with the state comptroller, the chairman of the senate finance  
2 committee and the chairman of the assembly ways and means com-  
3 mittee.

4 The director of the budget shall not issue any certificate of approval  
5 of availability until the city university construction fund has entered  
6 into a written agreement with the director of the budget providing  
7 that such city university construction fund shall reimburse the state  
8 of New York in full for any moneys advanced by the state from this  
9 appropriation at such times and in such manner as shall be deter-  
10 mined by the director of the budget.

11 The state comptroller is hereby authorized to receive from the city  
12 university construction fund amounts of moneys reimbursable to the  
13 state of New York as authorized and required by this section and to  
14 deposit such moneys to the credit of the capital construction fund as  
15 created by section ninety-three of the state finance law.

16 The moneys appropriated by this section, when made available  
17 pursuant to a certificate of approval of availability issued by the  
18 director of the budget, shall be paid from the capital construction  
19 fund on the audit and warrant of the state comptroller on vouchers  
20 approved by the chairman of the city university construction fund  
21 and the state director of the budget.

22 If any payments made pursuant to this section are not repaid by  
23 January first, nineteen hundred seventy-three, the state comptroller  
24 is authorized to deduct from any unrestricted state aid payments oth-  
25 erwise payable to New York city the amount of moneys remaining  
26 unpaid.

1 § 5. In recognition of the importance of New York university's  
2 school of engineering and science as a part of New York state's system  
3 of higher education, New York university and polytechnic institute  
4 of Brooklyn shall immediately undertake negotiations and shall not  
5 later than July first, nineteen hundred seventy-three, merge the  
6 appropriate educational and research programs and such faculty of  
7 New York university's school of engineering and science as may be  
8 necessary into the polytechnic institute of Brooklyn.

9 § 6. Not later than October first, nineteen hundred seventy-two,  
10 New York university shall adopt and submit to the regents of the  
11 state of New York a financial plan which meets with the approval of  
12 the regents and the governor for the five-year period beginning with  
13 the nineteen hundred seventy-two/seventy-three academic year  
14 showing how by retrenchment and stringent financial control and by  
15 increasing revenues from expanded enrollment and other means it  
16 will be able to balance its budget by the academic year nineteen hun-  
17 dred seventy-four/seventy-five, without special extraordinary state  
18 subsidies.

19 § 7. Not later than October first, nineteen hundred seventy-two  
20 polytechnic institute of Brooklyn shall adopt and submit to the  
21 regents of the state of New York a financial plan which meets with the  
22 approval of the regents and the governor for the five-year period  
23 beginning with the nineteen hundred seventy-two/seventy-three aca-  
24 demic year showing how by stringent financial control and by  
25 increasing revenues from expanded enrollment and other means it  
26 will be able to balance its budget by the academic year nineteen hun-

A12353A

7

1 dred seventy-five seventy-six, without special extraordinary state  
2 subsidy.

3 § 8. If any section, clause or provision of this act shall be uncon-  
4 stitutional or be ineffective in whole or in part, to the extent that it is  
5 not unconstitutional or ineffective, it shall be valid or effective and no  
6 other section, clause or provision shall on account thereof be deemed  
7 invalid or ineffective.

8 § 9. This act shall take effect immediately.



**Report of the  
Task Force on Graduate Programs:  
Doctoral Programs in the Arts and Sciences**

**Prepared for the Regents Advisory Council, New York City  
Regional Plan for Higher Education**

MARCH 1, 1972

105

**100**

## Members of the Task Force on Graduate Programs

*Chairman:* Thomas P. Robinson, Dean of the Graduate School, Pace College

<b>Name</b>	<b>Title</b>	<b>Institution</b>
Rev. Richard J. Devine, C.M.	Dean, St. John's College	St. John's University
Rev. James C. Finlay, S.J.	Dean, Graduate School of Arts and Science	Fordham University
George K. Fraenkel	Dean, Graduate School of Arts and Science	Columbia University
Joseph J. Greenbaum	Dean of the Graduate Faculty	New School for Social Research
Arthur B. Komar	Dean of the Graduate School of Science	Yeshiva University
Harold M. Proshansky	Dean, University Graduate Division	City University of New York Graduate Center
Benjamin Rivlin	Department of Political Science	Brooklyn College
George W. Stone, Jr.	Dean of Libraries	New York University

### **Resource Persons: State Education Department**

Edward F. Carr, Director, Division of Higher Education

Vernon Ozarow, Office of Science and Technology

## Contents

---

- I. Introduction
- II. Basic Assumptions
- III. Findings
- IV. Recommendations

## I. Introduction

The members of the Task Force appreciate the concern for doctoral education manifested by the Regents Advisory Council. Doctoral education in the arts and sciences represents a most significant responsibility of our universities. It involves the development of new knowledge, the training of the next generation of teachers, scholars, and research workers, and the maintenance of standards of academic excellence that are vital for vigorous liberal education at the undergraduate level as well as for the intellectual life of the nation.

Doctoral education is expensive in its demands on talent, time, and financial resources. Ideally, training at the doctoral level is accomplished through a close working relationship between mature scholars and a limited number of disciples. Seminars and research groups are the modality, not lectures.

Since doctoral education is so important and since it does place strong demands upon human as well as financial resources, careful planning at the institutional and regional level is an obvious requisite.

From its discussions the Task Force became convinced that it would be a mistake to define this "doctoral region" narrowly. Graduate schools, particularly those with distinguished doctoral programs, draw professors and students from the nation and indeed the world as well as from the City and State of New York. In discussing or planning doctoral programs in New York City it is wise to take into consideration to the greatest extent possible what is being done in the State University of New York and in the public and private institutions of the whole Northeast as well as in the great university centers across the country. The Task Force would have profited had a representative from SUNY at Stony Brook been present.

The Task Force endorses this broader definition of the boundaries of regionalism and hopes that planning for the future of doctoral programs within the State will take place within such a context. At the same time the members acknowledge that the meetings have sensitized them to the problems and potentialities of the "doctoral region" narrowly defined. They are already actively addressing these and have no intention of waiting until some ideal planning structure is developed.

The following report is responsive to a charge by the Regents Advisory Council to discuss doctoral programs in New York City and was developed during ten weekly meetings which were characterized by independence of thought and expression. Because of the constraints of time and the consequent lack of useful and accurate information from the State Education Department as well as the incompatibility of institutional data, the Task Force limited itself to (1) an examination of doctoral programs in the arts and sciences, (2) an examination of alternative methods of sharing resources, (3) a suggested mechanism for encouraging and supporting regional cooperation, (4) identification of constraints to the implementation of such cooperation, and (5) suggested areas for additional research.

## II. Assumptions

Enrollment in doctoral programs will not increase and may well decline for the next few years. Change in this assumption may result if a complex set of factors shifts, for example if a shift in national priorities occurs.

As a world center of cultural, intellectual, economic, political, and social activities and as headquarters of the United Nations, New York City offers a unique opportunity for social, humanistic, and international area studies, specifically at the doctoral level. Nowhere else in the country is there such a concentration of diverse national groups. Nowhere else, perhaps, are there so many distinguished cultural facilities such as library collections, museums, musical and theatrical companies, and ancient artifacts. The sheer magnitude and range of New York's social problems make it a gigantic laboratory for the practical and theoretical aspects of the social sciences. If high caliber doctoral education is to be available anywhere in this State, it should be available in New York City.

To guarantee that the quality of the programs be of the first order, judgments will have to be made regarding the programs currently offered in our various institutions or those that might be projected. Not every program deserves to survive. Not every subspecialty requires development. Each institution bears the responsibility to exercise constant scrutiny over the efforts of its various departments, and upon advice from appropriate outside consultants, asking whether weak programs should be eliminated, consolidated, or strengthened and whether cooperative arrangements with neighboring institutions should be made.

Fundamental to these assumptions is the realization that doctoral education and research require significant institutional commitments of staff, funds, and facilities. Norms that might be appropriate in judging the cost effectiveness of undergraduate and certain types of professional education would be inappropriate if applied to a system of education where classes are, by their very nature, small, where they are taught by the most prestigious faculty members, and where the most expensive research facilities or library collections must be used. The effectiveness of graduate education, particularly at the doctoral level, is felt at every level of education and benefits people far removed from the laboratory or seminar room. Every new or added cost argues for a careful evaluation, but the costs of doctoral programs should not be viewed in isolation or on the sole basis of cost accounting.

## III. Findings

The Task Force representatives prepared an inventory of the number and kinds of programs, the number and level of students, and the faculty serving such programs. The information, although not entirely compatible and comparable, acted as a catalyst to discussion, helping to identify and highlight important problems of doctoral education in New York City. The representatives find that:

1. A number of strong and flourishing doctoral programs in the same disciplines are now being offered at several institutions within fields as heavily enrolled as are English, History, and Political Science. Yet even within these programs evidence indicates that certain field specialities are not adequately supported by student demand and faculty availability. The sub-field specialities offer possible opportunities for cooperation. In a pilot study which might develop a model for future efforts, the chairmen of the Departments of Anthropology at New York University, Columbia, New School, City University of New York, and Fordham were asked to meet to analyze the status of the field of Anthropology in New York City, to determine the possible value of cooperative ventures, and to determine

problems inherent in cooperation.

2. A significant number of informal cooperative arrangements now operate. They are difficult to quantify but include doctoral research projects, shared faculty, faculty collaboration on an individual basis, individual cross-registrations, and extension of library privileges to doctoral students and faculty.

3. A number of formal cooperative arrangements which include programs and the use of major institutional facilities also operate now. These include:

**Programs:**

- A joint MA program in classics - New York University and City University;
- A program in psychology, Inter University Program in Perception - Columbia, New York University and the New School;
- A religion program - Fordham University and Union Theological Seminary; Columbia and Union Theological;
- A summer program in eastern languages and literature - Columbia, New York University, Princeton, University of Pennsylvania, and Yale.

**Major Institutional Facilities:**

- Columbia University Library;
- Lamont-Doherty Geological Observatory;
- American Museum of Natural History;
- Metropolitan Museum of Art;
- New York Public Library;
- Brookhaven National Laboratory;
- New York Ocean Science Laboratory;
- New York Botanical Garden.

4. Graduate programs in New York City to a degree unmatched elsewhere in the State offer opportunities on a part-time basis to all, including women and members of minority groups.

5. Over the long term significant savings may result as universities cooperate in their planning, avoiding duplication in staff and facilities as well as competition for graduate students.

Cooperative efforts, however, involving several universities are not likely to result in significant savings at the outset. Slight reduction in costs per student plus an improved utilization of expensive facilities may be expected in the short term.

6. Research, study, and library space in New York City is inadequate to meet the needs even of the current number of students and faculty and the diversity of program offerings. Although New York City contains two of the largest libraries in the world, the New York Public Library and the Columbia University Library, it has limited space to support the more than 75,000 students and faculty involved here in graduate education and research. Because of significant budgetary cuts, the New York Public Library's support is now limited and may be further curtailed. The generosity of Columbia University in making its library available to faculty and students of other institutions may also be curtailed as the needs of its own programs place increasingly heavy burdens on space and collections.

7. The major limiting factors affecting full scale program cooperation include:

- Differences in faculty scales and benefits;
- Differences in tuition charges;
- Differences in admission standards for students;

- Absence of continued financing of cooperative endeavors.

8. The major limiting factors affecting the ability of New York City to realize its full potential in doctoral instruction include the following:

- a. With regard to attracting a higher percentage of highly qualified students -
  - Scarcity of assistantships and fellowships, especially for non-science majors;
  - Relatively low stipend and scholarship funds;
  - Low quality and expensive housing.
- b. With regard to attracting and retaining high quality faculty -
  - Inadequate salaries for many of the private universities;
  - Limited and frequently poor quality research and office space;
  - Increase in faculty workload;
  - Low quality and expensive housing;
  - The uneven quality of New York City's public elementary and secondary schools.

## IV. Recommendations

### Recommendation 1:

*A Regional Council of Graduate Deans should be formed and should be given the responsibility to develop general policies and specific means by which human, fiscal, and physical resources of the doctoral programs can be most effectively and efficiently utilized. The Council should represent the Deans of all New York City public and private institutions and the Deans of public and private institutions in the greater Metropolitan area. The Council, with appropriate funding and staff support, would:*

- Encourage department chairmen at public and private institutions to meet on a planned schedule to explore and formulate plans for cooperative programs, and report same to the Council;
- Extend cross-registration procedures;
- Investigate the possibilities of cooperative programs among the Board of Education and the Board of Higher Education and colleges and universities to provide controlled teaching experiences for graduate students;
- Consult on faculty appointments;
- Provide guidelines for the development of future doctoral programs and for a continuing self-evaluative mechanism for established programs;
- Develop a data bank of information about enrollment in doctoral programs, special graduate facilities, and library resources;
- Explore further the possibility of a metropolitan center for graduate studies which could finance and support programs and establish institutes in several areas;
- Consider the possibilities of a variety of mechanisms to promote optimum utilization of resources, which include:
  - The designation and funding of central facilities for expensive laboratory and research equipment and special limited resources, e.g., national or regional laboratories, special library, and museum collections;
  - The institutional sharing of the costs of selected faculty members who would be available to schools other than the one of primary appointment.

**Recommendation 2:**

*A program to provide sustained and massive support for library facilities and resources at selected centers throughout the City should be established immediately.*

**Recommendation 3:**

*A statewide stipend level for non-service graduate student fellowships, adjusted for geographical location according to commonly accepted economic indicators, plus a cost-of-education allowance to the university of the student's choice should be established. (A needs-test should be used).*

**Recommendation 4:**

*To minimize unnecessary, destructive, and expensive competition for limited faculty and students and to encourage thereby improved utilization of resources the Regents should extend the boundaries of regional coordination and consultation for graduate education to include all public and private institutions in New York State. The State should also recognize the necessity to support financially the sorts of cooperation set forth in this report.*

**Task Force on  
Cooperative Programs for the Disadvantaged**

**A Report Prepared For  
The Regents Advisory Council  
New York City Regional Plan for Higher Education**

MARCH 3, 1972

113

106

## **Task Force on Cooperative Programs for the Disadvantaged**

*Chairman:* Alan Fiellin, Associate Dean, College of Liberal Arts and Science, City College

<b>Name</b>	<b>Title</b>	<b>Institution</b>
Audrey C. Cohen	President	College for Human Services
Henry Cohen	Director, Center for New York City Affairs	New School for Social Research
Richard F. Doyle	Dean of Continuing Education	St. Francis College
Daniel Gerzog	Department of English	Pratt Institute
Arnold L. Goren	Assistant Chancellor	New York University
Milton Martin	Chairman, Department of Academic Skills and Director of SEEK	Hunter College
Frank Negrón	Director, Affirmative Action Program	City University of New York
Henry F. Rossi	Dean of Admissions and Registrar	St. John's University
George Shea	Dean, Liberal Arts College, Lincoln Center	Fordham University
Aaron Warner	Dean, General Studies	Columbia University

### **Resource Persons:**

#### **State Education Department**

Donald M. Winkelman, Director of Special Programs for the Disadvantaged

#### **Regents Advisory Council**

Ronald Lee Gaudreau, Consultant



## Task Force on Cooperative Programs for the Disadvantaged

### Introduction

There are already a large number of programs in public and private institutions of higher education directed at disadvantaged students. These range from the simplest forms of scholarship assistance to programs involving a wide range of supportive services. There is evidence indicating that with sufficient support educational opportunity programs can be successful. However, inadequate funding of programs for remedial work and other supportive activities (such as counseling and tutoring) are more the rule than the exception. Furthermore, our knowledge of program effectiveness is spotty; research, evaluation and systems for the dissemination of techniques and practices have been given insufficient attention (at both the college and legislative levels) which is reflected in insufficient funding. So there is much to be done and it requires the best talent of all the universities in the city if we are to succeed in meeting our responsibilities to the disadvantaged.

Before proceeding to the body of the report, a word needs to be said about the hard-pressed secondary schools. If the high schools could be made more effective in preparing their students for college, then obviously the remedial burdens thrust on the colleges would not be so great. We would still have to cope with accommodating large numbers of students, but this would not be so difficult as having to absorb large numbers of poorly prepared students. While we cannot avoid the task now confronting us, we do not believe the high schools should be allowed to continue at their present level of effectiveness. Somehow they must be supported in their efforts to produce graduates among the disadvantaged who are prepared to go on with their education. The colleges will be seriously hurt if they must shoulder this burden alone.

### Focus on the Disadvantaged

The term *disadvantaged* as we use it covers two groups: (a) the economically disadvantaged, and (b) the educationally and economically disadvantaged. We assume that those who are educationally but not economically disadvantaged can manage without public resources. In using the phrase disadvantaged throughout this report we do not intend to signify only blacks and Puerto Ricans. Experience indicates the category of disadvantaged is of much broader scope. We include in our definition all those disadvantaged regardless of race and ethnic origin.

The economically disadvantaged basically require financial support. The educationally and economically disadvantaged require both financial support and a wide range of educational and other support programs to assist them in and through college.

It is to be noted that substantial numbers of disadvantaged students — students with low incomes and poor academic preparation — have already been enrolled in public and private institutions of higher learning in New York City. 1155 HEOP students entered private institu-

tions as freshmen this past Fall. 3100 SEEK and College Discovery freshmen entered CUNY. In addition, an estimated 8500 freshmen in CUNY have high school averages below 80 (a substantial number well below 80) and come from families earning \$7500 per year or less.

But the need outdistances the achievement. The State Education Department estimates that next Fall there will be approximately 28,000 New York City high school graduates eligible for various opportunity programs such as HEOP and SEEK. A study of 1970 New York City public and private high school graduates reveals that "if it is arbitrarily assumed that regular admission to a private institution without the need for scholarship aid is restricted to students with high school averages of 80% or higher, and incomes of over \$12,500 a year, then only 8,438 of New York City's high school graduates, or 14.3% of those indicating their income level, would be qualified."<sup>1</sup>

One indication of the need for the cooperation of private institutions in the education of the disadvantaged student is the space crisis in the CUNY system. Since the adoption of the Open Admissions Policy in the Fall 1970, the size of the freshman class of CUNY increased from 19,559 in Fall 1969 to 34,592 in Fall 1970 and to 37,757 in Fall 1971. There is every indication that freshman enrollment will remain at least at the present level in the coming years thus continuing to increase the total undergraduate enrollment by significant amounts in each of the next two or three years.

Despite extensive rentals, the net assignable square feet per full-time equivalent students in the City University is 47.2, still significantly below that of SUNY and private institutions in New York City, which are 108.4 and 125 respectively.<sup>2</sup> On the other hand, data collected in a statewide survey of private colleges and universities indicate that, provided sufficient funding and appropriate program distribution, an additional 5,000 freshmen, 3,800 sophomores, and 7,250 upperclassmen could be accommodated in these institutions.<sup>3</sup>

<sup>1</sup>Robert Birnbaum and Joseph Goldman, *The Graduate: A Follow-up of New York City High School Graduates of 1970*, page 65.

<sup>2</sup>*Space and Enrollment Projections: Comparisons and Projections*. A report prepared for the Regents Advisory Council by Ronald Lee Gaudreau, March 1, 1972.

<sup>3</sup>*Results of a Survey of Additional Full-time Enrollment Expected at Private Higher Education Institutions in New York State, Fall 1972*. Prepared by the Commission on Independent Colleges and Universities of the State of New York, December, 1971.

### Recommendations

The recommendations which follow propose a variety of new responses for deepening the involvement of institutions of higher education in the task of educating the disadvantaged, and developing cooperative arrangements and coordinative devices with respect to both public and private

efforts. Money spent today on constructive educational effort will contribute to the welfare of the city and the productivity of its citizens. There is no question that intensifying programs for the disadvantaged will cost money; hopefully the proposals which follow will make such new money as is made available go further.

1. *There should be created a Coordinated Admissions Program which would enable disadvantaged students who are graduates of a New York City high school to seek admission into public and private institutions in New York City. Institutions would voluntarily participate depending on their capacity to absorb students.* Students would be assigned to universities on the basis of their choice, subject to available places, and with regard to the range of academic preparedness of the students so assigned. A system of state and/or city reimbursement on a per student basis must be developed to enable the private institutions to participate in this program. An equitable mix of students from various levels of preparedness is highly desirable. It might make sense to mandate a specific percentage of educationally disadvantaged students under any voluntary program. Any formula developed should include provision for special reimbursement where remediation is required. Provision for reimbursement should also be provided for part-time students.

2. In addition to the institutional payments recommended in 1, *a financial package should be developed for each disadvantaged student enrolled on a full-time or part-time basis which takes into account his total need.* In accordance with general financial aid principles, it is expected that students will assume responsibility for some measure of the cost of postsecondary education. Indeed, it is recommended that each student be provided with a work situation which, whenever possible, relates to his academic/vocational interests. The amount of time spent on the job, and, consequently, the measure of responsibility for contributing to the cost of his education, should increase as the student progresses toward his degree.

At the same time, it is essential that every college and university utilize to the fullest all available Federal and State resources. These include:

A. Federal Funds

1. Educational Opportunity Grants
2. College work-study program
3. National Defense Student Loans
4. Trio Programs — Special Services, Talent Search, Upward Bound

It is recognized that allocations in these areas continue to be far below the needs. Indeed, Equal Opportunity Grant awards to the private sector for 1971-72 were only 77% of what they were two years earlier. Unless additional sums are available from the Federal government, it is going to be extremely difficult to enroll significant additional numbers of students.

B. State Funds

1. Scholar Incentive
2. Higher Education Assistance Corporation Loan Program

The Scholar Incentive law as presently written is a contradiction to the thrust for equality of educational opportunity. Although it is recognized that disadvantaged students may require an additional semester or two to complete their degrees, Scholar Incentive benefits are available only for the usual eight semesters which leaves some students without the necessary resources during the final stages of

their undergraduate work. The Task Force recommends an appropriate amendment to the legislation to correct this inequity. A re-examination of Higher Education Assistance Corporation policy is in order so that disadvantaged students can more readily obtain guaranteed loans.

Institutions must bear part of the responsibility for seeing that students receive counseling so that they avail themselves of Federal and State financial assistance.

The Task Force looks toward other programs of cooperative assistance which include:

- A. Cooperative education curricula which combine educational and work programs in business, government, agencies, etc.
- B. Internships
- C. Student assistantships

3. *Institutions should review their course and program offerings in the light of student needs and consider a variety of ways of broadening educational opportunities.*

A liberal arts education continues to be important in preparing young people for fruitful and productive lives, and the access of disadvantaged students to this education must be broadened. At the same time the Task Force urges cognizance of new directions in postsecondary education. Some approaches are being developed by wholly new institutions. Moreover, there are a number of paths that existing colleges and universities must explore. These include:

- A. Expanded programs which combine study with appropriate work including mini-career programs that expose students to the subject matter and work experience associated with legal, medical, and other professional careers.
- B. Programs of various durations for life-long training and retraining, such as (1) terminal certificate programs in specific occupational areas, including short courses; (2) expanded course offerings in continuing education, especially those which provide remedial work for mid-career and the older students; and (3) shorter baccalaureate programs where appropriate.

4. *Counseling and guidance programs need to be significantly strengthened at all levels of the school and college systems.* To accomplish this the Task Force recommends that:

- A. In-service training be strengthened to enable counselors to work better with disadvantaged students.
- B. The colleges of education should be encouraged and aided in their efforts to strengthen programs in counseling and guidance.
- C. In consideration of the Coordinated Admissions Program proposed above, cooperative arrangements should be developed among the universities and the Board of Education to enable high school counselors to play a more effective role in the 11th and 12th grades.

5. *Cooperative remediation programs should be extended with the involvement of the high schools during the summers following school graduation and prior to college entry.* While remediation and other supportive service programs will have to be developed by the universities, the need to strengthen remediation and college preparation at the high school level should not be ignored.

6. *The problems of the older disadvantaged student require special consideration.* The recommendations with regard to special remediation and programs for the dis-

advantaged students, are essential to the development of the full potential of all such students. However, the problems of the older disadvantaged student require special consideration because (1) he does not come directly from high school, or may not have completed high school; (2) he may find it more difficult to adjust to the rhythm of college work; (3) he may have financial commitments, often greater than those of younger students; and (4) he may require a more flexible academic program specifically adapted to the needs of part-time education, permitting him to combine work and study. Recognizing these problems, the Task Force has recommended the following:

- A. Appropriate testing materials should be developed to facilitate an evaluation of the older student's ability to do college level work and for placement.
  - B. The college program should provide sufficient remedial work to enable the older student, who has not completed high school, to satisfy college entrance requirements at the same time he obtains college credit toward his degree.
  - C. Educational institutions should be encouraged to modify existing academic programs, where necessary, to permit older students to register as part-time students in regular day session programs, as well as in night classes or extension programs. This will provide a greater degree of flexibility to those students who interrupt their studies to work, and return either on a full- or part-time basis.
  - D. Older students should be given financial aid commensurate with their needs, which may be greater than other students.
  - E. The Regents should support legislation increasing financial aid to part-time students.
7. *A regional board of overseers under the aegis of the Regents should be established to implement the recommendations proposed in this report.* Its responsibilities would include:
- A. Data collection and evaluation
    - 1. Develop a uniform reporting format including measures of educational output, and cost effectiveness.
    - 2. Conduct periodic surveys of regional progress in the education of disadvantaged students.
    - 3. Promote institutional and subregional evaluation of the efficacy of particular programs.
    - 4. Establish a central data bank of information about programs, curricula, successful instructional methods, etc.
    - 5. Conduct such research projects as are best

suited to a centralized approach, and serve as a clearinghouse for research.

- B. Program development
  - 1. Promote and finance curricular innovation and the development of new instructional materials.
  - 2. Provide professional consultation to programs.
  - 3. Promote programs for mid-career and older students.
  - 4. Promote the development of more valid and refined placement and diagnostic instruments in the verbal and mathematical skills areas.
- C. Administration of admissions and allocation of resources
  - 1. Provide a coordinated admissions system.
  - 2. Explore ways to ease student cross-registration and transfer.
  - 3. Oversee the distribution of funds for support of special programs for disadvantaged students within the New York City Region.
  - 4. Assist in the development and coordination of subregional consortia. (See #8 following).
- D. Some of the above functions might be aided by the creation of a center for the study of educational opportunity programs.
  - 8. *Subregional consortia should be developed and include public and private colleges and universities within geographical proximity, and also include high schools and other appropriate educational agencies such as Talent Search, Upward Bound, Street Academies, Community Centers, and centers for continuing education.* Each subregional consortium would consider the establishment of:
    - A. Cooperative recruitment, pre-college counseling and remediation centers.
    - B. Cooperative summer remediation programs.
    - C. Cooperative programs in functional academic areas.
    - D. Cross-registration opportunities for disadvantaged students.
    - E. Cooperative in-service teacher, tutor, and counselor training sessions and special seminars on selected topics (for example, the uses of educational technology).
    - F. Basic and applied learning research programs (at a center on one campus or distributed to several campuses).

In proposing subregional consortia the Task Force was nevertheless aware that disadvantaged students, more than others, need to establish close relationships with institutions, programs, fellow students and faculty.

## Appendix E

Roster of Institutions of Higher Education in New York City  
Academic Year 1971-72

## Institutions of Higher Education in New York City Academic Year 1971-72

---

Academy of Aeronautics  
LaGuardia Station  
Flushing, New York 11371

Bank Street College of Education  
610 West 112th Street  
New York, New York 10025

Brooklyn Law School  
250 Joralemon Street  
Brooklyn, New York 11201

Cathedral College of the Immaculate Conception  
7200 Douglaston Parkway  
Douglaston, New York 11362

City University of New York  
535 East 80th Street  
New York, New York 10021

Bernard M. Baruch College  
17 Lexington Avenue  
New York, New York 10010

Borough of Manhattan Community College  
134 West 51st Street  
New York, New York 10020

Bronx Community College  
120 East 184th Street  
Bronx, New York 10468

Brooklyn College  
Bedford Avenue and Avenue H  
Brooklyn, New York 11210

City College  
Convent Avenue and 138th Street  
New York, New York 10031

Graduate Division  
City University of New York  
33 West 42nd Street  
New York, New York 10036

Eugenio Maria de Hostos Community College  
260 East 161st Street  
Bronx, New York 10451

Hunter College  
695 Park Avenue  
New York, New York 10021

John Jay College of Criminal Justice  
315 Park Avenue South  
New York, New York 10010

Kingsborough Community College  
Oriental Boulevard  
Brooklyn, New York 11235

Fiorello H. LaGuardia Community College  
31-10 Thomson Avenue  
Long Island City, New York 11101

Herbert H. Lehman College  
Bedford Park Boulevard West  
Bronx, New York 10468

Medgar Evers College  
1127 Carroll Street  
Brooklyn, New York 11225

Mount Sinai School of Medicine  
5th Avenue at 100th Street  
New York, New York 10029

New York City Community College  
300 Jay Street  
Brooklyn, New York 11201

Queens College  
65-30 Kissena Boulevard  
Flushing, New York 11367

Queensborough Community College  
Springfield Boulevard and 56th Avenue  
Bayside, New York 11364

Richmond College  
130 Stuyvesant Place  
Staten Island, New York 10301

Staten Island Community College  
715 Ocean Terrace  
Staten Island, New York 10301

York College  
150-14 Jamaica Avenue  
Jamaica, New York 11432

College for Human Services  
201 Varick Street  
New York, New York 10014

College of Insurance  
150 William Street  
New York, New York 10038

College of Mount Saint Vincent  
Mount Saint Vincent-on-Hudson  
Riverdale, New York 10471

Columbia University  
New York, New York 10027

Barnard College  
Columbia University  
606 West 120th Street  
New York, New York 10027

College of Pharmaceutical Sciences  
Columbia University  
115 West 68th Street  
New York, New York 10023

Teachers College  
Columbia University  
525 West 120th Street  
New York, New York 10027

The Cooper Union for the Advancement  
of Science and Art  
Cooper Square  
New York, New York 10003

Finch College  
52 East 78th Street  
New York, New York 10021

Fordham University  
Rosehill Campus  
411 East Fordham Road  
Bronx, New York 10458

General Theological Seminary of the  
Protestant Episcopal Church  
Chelsea Square  
175 Ninth Avenue  
New York, New York 10011

Hebrew Union College  
Jewish Institute of Religion  
40 West 68th Street  
New York, New York 10023

The Jewish Theological Seminary of America  
3080 Broadway  
New York, New York 10027

Institute for Advanced Studies  
in the Humanities  
Broadway and 122nd Street  
New York, New York 10027

The Juilliard School  
Lincoln Center Plaza  
New York, New York 10023

Long Island University  
Greenvale, New York 11548

Long Island University  
Brooklyn Center  
Zeckendorf Campus  
Brooklyn, New York 11201

Long Island University  
Brooklyn College of Pharmacy  
600 Lafayette Avenue  
Brooklyn, New York 11216

Manhattan College  
Manhattan College Parkway  
Bronx, New York 10471

Manhattan School of Music  
120 Claremont Avenue  
New York, New York 10027

The Mannes College of Music  
157 East 74th Street  
New York, New York 10021

Marymount Manhattan College  
221 East 71st Street  
New York, New York 10021

Mills College of Education  
66 Fifth Avenue  
New York, New York 10011

New School for Social Research  
66 West 12th Street  
New York, New York 10011

New York College of Podiatric Medicine  
53-55 East 124th Street  
New York, New York 10035

New York Institute of Technology  
Metropolitan Center  
135-45 West 70th Street  
New York, New York 10023

New York Law School  
57 Worth Street  
New York, New York 10013

New York Medical College  
Fifth Avenue and 106th Street  
New York, New York 10029

New York Theological Seminary  
235 East 49th Street  
New York, New York 10017

New York University  
100 Washington Square East  
New York, New York 10003

Pace College  
Main Campus  
One Pace College Plaza  
New York, New York 10038

Parsons School of Design  
410 East 54th Street  
New York, New York 10022



Passionist Monastic Seminary  
86-45 178th Street  
Jamaica, New York 11432

Polytechnic Institute of Brooklyn  
333 Jay Street  
Brooklyn, New York 11205

Pratt Institute  
215 Ryerson Street  
Brooklyn, New York 11205

Rabbi Isaac Elehanan Theological Seminary  
Amsterdam Avenue at 186th Street  
New York, New York 10033

The Rockefeller University  
66th Street and York Avenue  
New York, New York 10021

St. Francis College  
180 Remsen Street  
Brooklyn, New York 11201

St. John's University  
Grand Central and Utopia Parkways  
Jamaica, New York 11432

St. John's University  
College of Pharmacy  
Grand Central and Utopia Parkways  
Jamaica, New York 11432

St. John's University  
Staten Island Campus  
300 Howard Avenue  
Staten Island, New York 10301

St. Joseph's College  
245 Clinton Avenue  
Brooklyn, New York 11205

State University of New York

College of Optometry  
State University of New York  
122 East 25th Street  
New York, New York 10010

Downstate Medical Center  
State University of New York  
450 Clarkson Avenue  
Brooklyn, New York 11203

Fashion Institute of Technology  
227 West 27th Street  
New York, New York 10001

Maritime College  
State University of New York  
Fort Schuyler  
Bronx, New York 10465

Touro College  
30 West 44th Street  
New York, New York 10036

Union Theological Seminary  
3041 Broadway  
New York, New York 10027

Wagner College  
Grymes Hill  
631 Howard Avenue  
Staten Island, New York 10301

Woodstock College  
475 Riverside Drive  
New York, New York 10027

Yeshiva University  
500 West 185th Street  
New York, New York 10033

## **Bibliography and References**

---

Part I — *Books, Periodicals and Other Publications*

II — *Supplementary Sources of Data*



## Bibliography and References

### Part I — Books, Periodicals and Other Publications

#### Budgets

*Executive Budget, State of New York, For Fiscal Year April 1, 1972 to March 31, 1973.* Governor Nelson A. Rockefeller, Albany, N. Y.

*Executive Budget, State of New York, For Fiscal Year April 1, 1971 to March 31, 1972.* Governor Nelson A. Rockefeller, Albany, N. Y.

*Executive Budget, State of New York, For Fiscal Year April 1, 1970 to March 31, 1971.* Governor Nelson A. Rockefeller, Albany, N. Y.

#### Community Relationships

*Campus-Community Relationships: An Annotated Bibliography,* Fink, I. and Cooke, J. Society for College and University Planning, c/o Columbia University, New York, N. Y., 1971.

#### Degrees

*Associate Degrees and Other Formal Awards Below the Baccalaureate, 1969-70,* Hooper, M. E. U. S. Department of Health, Education and Welfare, Office of Education, National Center for Educational Statistics. U. S. Government Printing Office, Washington, D. C., 1971.

*Associate Degrees and Other Formal Awards Below the Baccalaureate, 1968-69,* Hooper, M. E. U. S. Department of Health, Education and Welfare, Office of Education, National Center for Educational Statistics. U. S. Government Printing Office, Washington, D. C., June, 1969.

*College and University Degrees Conferred. Institutional Data by Level of Degree and Summary Data by Major Field: 1965-66, 1966-67, 1967-68, 1968-69.* Information Center on Education, State Education Department, Albany, N. Y.

*Degrees Awarded by City University of New York 1970-71,* Report No. D/70/71. Office of Data Collection and Evaluation, Department of Budget and Planning, City University, New York, N. Y., October, 1971.

*Earned Degrees Conferred, 1969-70 Institutional Data,* Hooper, M. E., National Center for Educational Statistics, H. E. W. Publication O. E. 72-2. U. S. Government Printing Office, Washington, D. C., 1970.

*Earned Degrees Conferred: 1969-70 Summary Data,* Hooper, M. E., National Center for Educational Statistics, DHEW Publication No. (OE) 72-65. U. S. Government Printing Office, Washington, D. C., 1972.

*Earned Degrees Conferred: 1968-69 Part B Institutional Data,* Hooper, M. E. and Chandler, M. O. National Center for Educational Statistics. Publication O. E. — 54013-69 Part B. U. S. Government Printing Office, Washington, D. C., 1971.

*Earned Degrees Conferred: 1967-68 Part B Institutional Data,* Hooper, M. E. and Chandler, M. O., National Center for Educational Statistics, Publication OE-54013-68-B. U. S. Government Printing Office, Washington, D. C., June, 1969.

*Earned Degrees Conferred: Part B — Institutional Data,* Chandler, M. O., National Center for Educational Statistics, Publication OE 54013-67-B. U. S. Government Printing Office, Washington, D. C., 1968.

*Earned Degrees Conferred 1965-66,* Chandler, M. O. and Rice, M. C., National Center for Educational Statistics, Publication OE-54013-66. U. S. Government Printing Office, Washington, D. C., 1967.

*Earned Degrees Conferred 1964-65*, Mason, P. I., and Rice, M. C., National Center for Educational Statistics, Publication OE-54013-65, U. S. Government Printing Office, Washington, D. C., 1967.

*Earned Degrees Conferred 1963-64*, Wright, P., National Center for Educational Statistics, Publication OE-54013-64 Misc. No. 54, U. S. Government Printing Office, Washington, D. C., 1966.

*Master's Degrees in the State of New York, 1969-70*, State Education Department, Albany, N. Y., March, 1972.

### **Directories**

*Directory of Member Institutions: Council of Higher Educational Institutions in New York City*, New York, N. Y., 1969.

*Education Directory*—Higher Education 1971-72, U. S. Department of Health, Education and Welfare, Office of Education, National Center for Educational Statistics, Washington, D. C.

*Education Directory*—Higher Education 1970-71, U. S. Department of Health, Education and Welfare, Office of Education, National Center for Educational Statistics, Washington, D. C.

*Going to College in New York State*, A student guide to college and university programs 2-year, 4-year and graduate, Division of Higher Education, State Education Department, Albany, N. Y., 1965.

*Organization and Institutions of the University of the State of New York, 1967-68, 1968-69*, Handbook 24-C: Higher Institutions, Business, and Occupational Schools, State Education Department, Albany, N. Y., 1969.

### **Disadvantaged Students**

*A Decade of Change in Free-Access Higher Education*, Ferrin, R. I., College Entrance Examination Board, New York, N. Y., 1971.

*Expanding Opportunity for Higher Education: A report of the Conference on Problems of Identification and Admission to College of Culturally Disadvantaged Youth*, Division of Higher Education, State Education Department, Albany, N. Y., May, 1965.

*Expansion of Equal Educational Opportunities, The*, An Evaluation Study of the New York State Higher Education Opportunity Programs, Final Report, Part Two, for the N. Y. State Education Department, Human Affairs Research Center, New York, N. Y., June, 1970.

*Expansion of Equal Educational Opportunities, The*, An Evaluation Study of the New York State Higher Education Opportunity Programs, Final Report, Part B, for the N. Y. State Education Department, Human Affairs Research Center, New York, N. Y., June, 1970.

*Free-Access Higher Education*, Willingham, W. W., College Entrance Examination Board, New York, N. Y., 1970.

*Higher Education and the Disadvantaged*, Meeting the Postsecondary Educational Program and Faculty Needs of the Urban Disadvantaged in Des Moines, Iowa: Alternative Proposals, Davis, H. S., Higher Education Facilities Commission of the State of Iowa, Des Moines, Iowa, 1971.

*Higher Education Opportunity Program: Interim Report 1970-71*, Division of Higher Education, State Education Department, Albany, N. Y., January, 1971.

### **Engineering Education**

*Annotated Bibliography on Engineering Education*, Thomson, D. R., Bureau of Research in Higher and Professional Education, State Education Department, Albany, N. Y., August, 1971.

*Annotated Bibliography on Engineering Manpower (Recent Selected References)*, Thomson, D. R., Bureau of Research in Higher and Professional Education, State Education Department, Albany, N. Y., August, 1971.

*Engineering Education in New York*, Terman, F. E. and Reeling, G. E., State Education Department, Albany, N. Y., March, 1969.

## Enrollments and Feeder Sources

- Application and Enrollment Patterns of Transfer Students, Fall 1970.* Report No. 15. Office of Institutional Research, State University of New York, Albany, N. Y., March, 1971.
- College and University Enrollment in New York State, Fall 1966 through Fall 1968.* Institutional data by level of enrollment, summary data by type of institution and level of enrollment (three documents). Information Center on Education, State Education Department, Albany, N. Y.
- College and University Enrollment in New York State, Fall 1969, Preliminary Survey.* Information Center on Education, State Education Department, Albany, N. Y.
- College and University Enrollment in New York State, Fall 1970.* Information Center on Education, State Education Department, Albany, N. Y., 1972.
- College Going Rate of New York State High School Graduates 1968-69.* Information Center on Education, State Education Department, Albany, N. Y.
- College Going Rate of New York State High School Graduates 1967-68.* Information Center on Education, State Education Department, Albany, N. Y.
- Demographic Projections for New York State Counties.* Office of Planning Coordination, Executive Department, Albany, N. Y., July, 1966.
- Demographic Study — Summary Report, New England Board of Higher Education.* Report prepared by E. S. Lee and J. M. Rhee, Population Research Institute, University of Massachusetts, July, 1969.
- Distribution of High School Graduates and College Going Rate New York State Fall 1970.* Information Center on Education, State Education Department, Albany, N. Y.
- Distribution of High School Graduates and College Going Rate New York State Fall 1969.* Information Center on Education, State Education Department, Albany, N. Y.
- Enrollment by Academic Program, Fall 1968.* A Report of the Academic Program Information System, Office of Institutional Research, State University of New York, Albany, N. Y., May, 1969.
- Enrollments — Headcount and Full-time Equivalent Workload Statistics of Credit Course Students at SUNY for 1968-69.* Report No. 7, Office of Institutional Research, State University of New York, Albany, N. Y., January, 1970.
- Enrollment Projections, 1968-80, New York State Higher Education.* Office of Planning in Higher Education, State Education Department, Albany, N. Y.
- Enrollment Projections for Schools in New York State, 1970-71 to 1989-90.* Includes elementary and secondary school enrollment projections. Information Center on Education, State Education Department, Albany, N. Y.
- Facts about New England Colleges, Universities and Institutes 1971-72.* New England Board of Higher Education, Wellesley, Mass., 1972.
- Fall Enrollment in Higher Education 1969 Supplementary Information Institutional Data,* Wade, G. H., National Center for Educational Statistics, Publication OE-54051, U. S. Government Printing Office, Washington, D. C., 1971.
- Fall Enrollment in Higher Education 1969 Supplementary Information Summary Data,* Wade, G. H., National Center for Educational Statistics, DHEW Publication No. (OE) 72-6, U. S. Government Printing Office, Washington, D. C., 1970.
- Fall Term 1968 Freshman Migration Study Report,* Engebretson, R., Chairman, National Association of Executive Directors of Higher Education Facilities Commissions, August, 1969.
- Geographic Origins of First Time Students, Fall 1969.* Report No. 13, Office of Institutional Research, State University of New York, Albany, N. Y.
- Geographic Origins of Students, Fall 1970.* Report No. 21, Office of Institutional Research, State University of New York, Albany, N. Y.

- Geographic Origins of Students, Fall 1969.* Report No. 12. Office of Institutional Research, State University of New York, Albany, N. Y.
- Geographic Origins of Students, Fall 1968.* Report No. 5. Office of Institutional Research, State University of New York, Albany, N. Y.
- Graduates, The: A follow-up Study of New York City High School Graduates of 1970.* Birnbaum, R. and Goldman, J. Center for Social Research and Office for Research in Higher Education, The City University of New York, New York, N. Y., May, 1971.
- Higher Education Planning Statistics 1969, Volume 1A. Degree Credit Enrollment: Undergraduate, First Professional, Graduate, and First-Time Freshman Data.* Office of Planning in Higher Education, State Education Department, Albany, N. Y., January, 1970.
- 1968 — 1969 Headcount Enrollment and Full-Time Equivalent Workload Statistics of Credit Course Students.* Report No. 7. Office of Institutional Research, State University of New York, Albany, N. Y., January, 1970.
- Migration of U. S. College Students with Emphasis on New York State, Fall 1968.* Report No. 27. Office of Institutional Research, State University of New York, Albany, N. Y., February, 1972.
- Public High School Graduates of New York City Schools: Distribution of graduates by school and type of diploma, 1964 through 1971.* New York City Board of Education, Brooklyn, N. Y.
- Public Vocational High School Graduates of New York City: Placement and Employment of the Vocational High School Graduating Classes of 1965 through 1970.* High School Division, New York City Board of Education, Brooklyn, N. Y.
- Racial/Ethnic Distribution of Public School Students and Staff in New York State, 1970-71.* Information Center on Education, State Education Department, Albany, N. Y.
- Report on Place of Residence of Student Enrollment, Fall 1970.* Department of Budget and Planning, Office of Data Collection and Evaluation, City University of New York, New York, N. Y., March, 1971.
- Residence and Migration of College Students, Basic State-to-State Matrix Tables, Fall 1968.* Wade, G. H. National Center for Educational Statistics, U. S. Government Printing Office, Washington, D. C., May, 1970.
- Results of Survey of Additional Full-Time Enrollment Accommodations Expected at Private Higher Education Institutions in New York State in Fall, 1972.* Kirkpatrick, J. I. Commission on Independent Colleges and Universities, New York, N. Y., December, 1971.
- Student Flow Models: A Review and Conceptualization.* Lovell, C. C. Preliminary Field Review Edition, Technical Report 25. National Center for Management Systems at WICHE, Boulder, Colorado, August, 1971.
- Students Enrolled for Advanced Degrees, Fall 1970 Institutional Data.* Hooper, M. E. National Center for Educational Statistics, DHEW Publication No. (OE) 72-31. U. S. Government Printing Office, Washington, D. C., 1971.
- Students Enrolled for Advanced Degrees, Fall 1970 Summary Data.* Hooper, M. E. National Center for Educational Statistics, DHEW Publication No. (OE) 72-64. U. S. Government Printing Office, Washington, D. C., 1971.
- Students Enrolled for Advanced Degrees, Fall 1969 Summary Data.* Hooper, M. E. and Chandler, M. O. National Center for Educational Statistics, Publication OE-54019-69 Part A. U. S. Government Printing Office, Washington, D. C., 1970.
- Summer 1971 Credit Course Enrollment with 1968-1971 Trends.* Report No. 20. Office of Institutional Research, State University of New York, Albany, N. Y.

#### **External Degrees and Independent Study**

- Explorations in Non-Traditional Study.* Gould, S. B. and Cross, K. P., Editors. Jossey -- Bass Inc., San Francisco, Calif., 1972.

*New York College Proficiency Examination Program. The.* Division of Independent Study, State Education Department, Albany, N. Y., Revised 1971.

### **Facilities**

- Campus and Facilities Planning in Higher Education: The Process and the Personnel. An Annotated Bibliography.* Office of Higher Education Planning, Albany, N. Y., May, 1968.
- City University Construction Fund, Annual Report, Fiscal Year 1971.* New York, N. Y., June, 1971.
- City University of New York Construction Program Status Report, January 1971.* Office of the Dean for Campus Planning and Development, City University, New York, N. Y., February, 1971.
- Estimate of Construction Needs of Higher Education by 1980.* Holden, R. R. Office of Education, U. S. Department of Health, Education and Welfare, Washington, D. C., August, 1971.
- From the Ground Up.* Donatelli, B. and Binning, D. A Construction Manual for Institutions of Higher Learning Prepared for the New Hampshire Higher Education Facilities Commission. Decision Research, Inc., Manchester, New Hampshire, December, 1971.
- Guidelines for Planning in Colleges and Universities, Vol. 3 — Physical Plant Planning Land Use and Traffic,* Pinnell, C. and Wacholder, M. Texas A&M University, College Town, Texas, July, 1968.
- Guidelines for Planning in Colleges and Universities, Vol. 4 — Physical Plant Planning Facilities Studies,* Pinnell, C. and Wacholder, M. Texas A&M University, College Town, Texas, July, 1968.
- Guidelines for Planning in Colleges and Universities, Vol. 5 — Physical Plant Planning Utilities Studies,* Pinnell, C. and Wacholder, M. Texas A&M University, College Town, Texas, May, 1968.
- Higher Education Facilities Inventory and Classification Manual,* Romney, L. C. National Center for Higher Education Management Systems at WICHE, Western Interstate Commission for Higher Education, Boulder, Colorado, January, 1972.
- Higher Education Facilities Planning and Management Manuals,* Dahnke, H. L. et al. Prepared in cooperation with the American Association of Collegiate Registrars and Admissions Officers. Planning and Management Systems Division, Western Interstate Commission for Higher Education, Boulder, Colorado, May, 1971.
- Higher Education Planning Statistics: Vol. VI Physical Facilities Inventory.* Summary data by type of institution within the State, 1967 and 1969 compared. Office of Higher Education Planning, State Education Department, Albany, N. Y., 1969.
- 1970-71 Annual Report, Dormitory Authority of the State of New York,* Elsmere, N. Y., 1971.
- Inventory and Utilization Study for Public Higher Education, Fall 1969,* Report 71-2, California Coordinating Council for Higher Education, Sacramento, Calif., January, 1971.
- Physical Facilities for the Senior and Community Colleges of the City University of New York, Fall 1971,* Dean for Campus Planning and Development, City University, New York, N. Y., September, 1971.
- Physical Facilities Projection for the City University of New York 1972-1980.* Office of Campus Planning and Development, The City University, New York, N. Y., December, 1971.
- Planning — Inventory — Utilization, a 27 State Survey.* Planning standards, inventory, and utilization data for higher education facilities in 27 states. Office of Planning in Higher Education, State Education Department, Albany, N. Y., February, 1970.
- Report to the Board of Higher Education on Physical Facilities for the Senior and Community Colleges of the City University of New York, Fall 1971.* Office of the Dean for Campus Planning and Development, The City University, New York, N. Y., September, 1971.

### **Faculty**

*College and University Staff: 1965-66, 1967-68.* Summary data by type of institution within the State. Bureau of Statistical Services, State Education Department, Albany, N. Y.



*Degree Status — Institution of Highest Degree: Profile of City University Full-Time Teaching Faculty, Fall 1970.* Vice-Chancellor for Budget and Planning, Office of Data Collection and Evaluation, The City University of New York, New York, N. Y., November, 1971.

*Employee Characteristics and Salary Statistics Fall 1970.* Report Number 23. Office of Institutional Research, State University of New York, Albany, N. Y., January, 1972.

*Higher Education Planning Statistics 1969.* Volume III. Faculty Rank, Highest Degree, Earned, and Mean Salary Data. State Education Department, Albany, N. Y., January, 1970.

*Regents Academic Chair Program, The.* Bureau of Research in Higher and Professional Education, State Education Department, Albany, N. Y., Autumn, 1971.

### **Finances and Costs**

*Alternative Methods of State Support for Independent Higher Education in California,* Levin, H. M. and Osman, J. W. Phase III of a Study of State Aid to Private Higher Education. Coordinating Council for Higher Education, Sacramento, Calif., February, 1970.

*Assessing Financial Needs of Higher Education and the Fiscal Capacity of Resources,* Boldovici, J. A. and Hanson, V. L. Report submitted to National Center for Educational Statistics, American Institutes for Research, Pittsburgh, Pa., October, 1969.

*Capital Costs of a University,* Winslow, F. D. Paper P-9, Research Program in University Administration, Office of Vice-President for Planning and Analysis, University of California, Berkeley, Calif., January, 1971.

*College and University Income and Expenditures, 1965-66, 1966-67, 1967-68, 1968-69.* Summary data by type of institution within the State. Information Center on Education, State Education Department, Albany, N. Y.

*Cost of College, The.* Columbia Research Associates, Cambridge, Mass., October, 1971.

*Cost of Higher Education, The.* College Management, Vol. 7, No. 1, January, 1972.

*Designation of Formulas.* Policy Paper 9, Coordinating Board, Texas College and University System, Austin, Texas, February, 1970.

*Financial Crisis in Higher Education, The: Past, Present and Future,* Byrnes, J. C. and Tussing, A. D. Prepared for U. S. Office of Education by Educational Policy Research Center, Syracuse, N. Y., September, 1971.

*Financial Problems of Private Colleges and Universities of New York State: An Interim Report.* State Education Department, Albany, N. Y., April, 1971.

*Financial Statistics of Institutions of Higher Education: Current Funds, Revenues and Expenditures 1968-69,* Mertins, P. F. and Brandt, N. J., National Center for Educational Statistics, Publication OE-52010-69. U. S. Government Printing Office, 1970.

*Financing Higher Education.* Newsletter No. 24, Southern Regional Education Board, Atlanta, Georgia, 1971.

*Financing Higher Education.* A report of Task Force III to Connecticut Commission for Higher Education, Hartford, Conn., December, 1970.

*Financing Higher Education Needs in the Decade Ahead.* Position Paper 13. A Statement of Policy and Proposed Action by the Regents of the University of the State of New York. State Education Department, Albany, N. Y., January, 1972.

*Higher Cost Programs in California Public Higher Education.* Coordinating Council for Higher Education, Sacramento, Calif., March, 1971.

*Higher Education Planning Statistics, 1969,* Vol. V, Operational Finances. Summary data by type of institution within the State for 1967 and 1968. Office of Planning in Higher Education, State Education Department, Albany, N. Y., 1969.

*New Approaches to Student Financial Aid.* Cartter, A. M. College Entrance Examination Board, New York, N. Y., 1971.

- New York State's Higher Education Systems: Progress and Problems.* Background studies for development of new methods of financing. State Education Department, Albany, N. Y., January, 1972.
- Redder and Much Redder: A Follow-up Study to "The Red and the Black."* Jellema, W. W. A supplementary report on the financial status of private colleges and universities. Association of American Colleges, Washington, D. C., 1971.
- Report of the State Task Force on the Financing of Higher Education in New York State.* Hurd, T. N., Chairman. Albany, N. Y., February, 1972.
- Student Grants for College Study in New York State 1969-70.* A report by the Board of Regents to the Governor and the Legislature. State Education Department, Albany, N. Y., January, 1971.
- Tuition and Fees — Undergraduate.* Charges at member institutions 1968-69 through 1971-72, and room and board charges 1970-71 and 1971-72. Commission on Independent Colleges and Universities. New York, N. Y., April, 1971.

### General

- Accountability in Higher Education: A Consideration of Some of the Problems of Assessing College Impacts.* Hartnett, R. T. College Entrance Examination Board, New York, N. Y., 1971.
- Announcement of the A. C. T. Research Activities for Colleges and Universities.* The American College Testing Program, ACT Research Services, Iowa City, Iowa, 1971.
- Institutional Research and Institutional Policy Formulation.* Clifford, C. T., Ed. 11th Annual Forum of the Association for Institutional Research, 1971. Office of Institutional Research, Claremont University Center, Claremont, Calif., 1971.
- Public Challenge and the Campus Response, The.* Altman, R. A. and Byerly, C. M., Editors. Center for Research and Development in Higher Education, Berkeley, California, and Western Interstate Commission for Higher Education, Boulder, Colorado, September, 1971.
- School Profiles, 1970-71.* Day Academic and Vocational High Schools of New York City. Office of Planning — Programming — Budgeting. New York City Board of Education, Brooklyn, N. Y.

### Governance

- Annotated Bibliography on the Statewide Governing or Coordinating Board.* Office of Planning in Higher Education, State Education Department, Albany, N. Y., January, 1971.
- Anonymous Leaders of Higher Education, The.* Glenny, I. A. Center for Research and Development in Higher Education, University of California, Berkeley, Calif., 1971.
- Conflict and Coordination in Higher Education.* Paltridge, J. G. Center for Research and Development in Higher Education, University of California, Berkeley, Calif., 1968.
- Institutional Priorities and Management Objectives.* Jellema, W. W., Editor. Liberal Education, I.VII:2. Association of American Colleges, Washington, D. C., May, 1971.
- Private Higher Education — Leadership or Liquidation, Vol. II.* American Association of Presidents of Independent Colleges and Universities, c/o J. T. McCarty, Rockford College, Rockford, Illinois, 1971.
- Redistribution of Power in Higher Education.* McConnell, T. R. Center for Research and Development in Higher Education, University of California, Berkeley, Calif., 1971.
- Statewide Coordination of Higher Education.* Berdahl, R. O. American Council on Education, Washington, D. C., 1971.

### Graduate Education

- Chemistry and Physics Doctorate Production in New York State.* Ozarow, V. Office of Science and Technology, State Education Department, Albany, N. Y., December, 1968.

*Doctoral Education in New York State: Current Status and Projected Needs*. Reeling, G. E. State Education Department, Albany, N. Y., December, 1970.

*Doctoral Education in New York State: Current Status and Projected Needs*, Appendix to above. Reeling, G. E. State Education Department, Albany, N. Y., December, 1970.

*Graduate Education in New York City: A Directory of Degree Programs*. Council of Higher Educational Institutions in New York City, New York, N. Y., 1970.

*Graduate Education in Religion: A Critical Appraisal*. Welch, C. A report of a study sponsored by the American Council of Learned Societies. University of Montana Press, Missoula, Montana, 1971.

*Guidelines for Increasing Efficiency in Graduate Education*. Council Report 71-4. California Coordinating Council for Higher Education, Sacramento, Calif., March, 1971.

*Mobility of Ph.D's. Before and After the Doctorate with Associated Economic and Educational Characteristics of States*. Career Patterns Report No. 3. Office of Scientific Personnel, National Academy of Sciences, Washington, D. C., 1971.

*Student in Graduate School*. The. Harvey, J. Prepared by the ERIC Clearinghouse on Higher Education. American Association for Higher Education, Washington, D. C., January, 1972.

*What Basic Issues Face Graduate Education in the Next Five Years?* Four Speeches delivered at an Invitational Symposium, arranged by the Division of Higher Education, preceding the Regents Convocation on October 26, 1962. Office of the Assistant Commissioner for Higher Education, State Education Department, Albany, N. Y., January, 1963.

### **Independent Colleges**

*An Assessment and Projection of the Resources and Needs of Independent Higher Education in Connecticut*, Volume 1. Report by Arthur D. Little, Inc. to the Commission for Higher Education, Hartford, Conn., March, 1971.

*Guidelines for the Preparation of Private College and University Master Plans*. Office of Planning for Higher Education, State Education Department, Albany, N. Y., 1972.

*New York State and Private Higher Education: Report of the Select Committee on the Future of Private and Independent Higher Education in New York State/1968*. New York, N. Y.

*1970 Progress Report to the Board of Regents of the State of New York for the Commission on Independent Colleges and Universities*. New York, N. Y., 1970.

*Toward an Effective Utilization of Independent Colleges and Universities by the State of Ohio*. Prepared by a panel appointed by the Academy for Educational Development, Inc. The Association of Independent Colleges and Universities of Ohio, Columbus, Ohio, January, 1971.

### **Legislation**

*Major Recommendations of the Regents for Legislative Action 1972*. State Education Department, Albany, N. Y., December, 1971.

### **Libraries**

*Directory of College and University Libraries in New York State*. 1970 Fifth Edition. Division of Library Development, State Education Department, Albany, N. Y.

*Directory of College and University Libraries in New York State*. 1969 Fourth Edition. Division of Library Development, State Education Department, Albany, N. Y.

*Higher Education Planning Statistics 1969*, Volume IV. Library Collections, Staff and Expenditures. Office of Planning in Higher Education, State Education Department, Albany, N. Y., January, 1970.

*Profiles of the Reference and Research Library Resources Systems in New York State*. Reprinted from "The Bookmark," 1969-70. Division of Library Development, State Education Department, Albany, N. Y., 1970.



*The 3 R's: Reference and Research Library Resources.* Division of Library Development, State Education Department, Albany, N. Y., June, 1969.

*Reference and Research Resources.* Division of Library Development, State Education Department, Albany, N. Y., June, 1969.

*User Survey of the New York Public Library Research Libraries.* Nelson Associates, Inc. New York, N. Y., January, 1969.

### **Plans and Proposals**

*Conceptual Model for Educational Information Services in the State of New York.* Prepared by the Staffs of College Entrance Examination Board and Educational Testing Service, December, 1970.

*Coordinating Higher Education for the 70's.* Glenny, L. A. et al. Multi-campus and Statewide Guidelines for Practice. Center for Research and Development in Higher Education, University of California, Berkeley, Calif., 1971.

*Crisis in Higher Education in New York State: A Plan of Action.* Big Six Proposal. Commission on Independent Colleges and Universities, New York, N. Y., December, 1971.

*Education Beyond High School: The Regents Statewide Plan for the Development of Higher Education, 1972.* State Education Department, Albany, N. Y., Preliminary Draft II, February, 1972.

*Education Beyond High School: The Regents Planning Bulletin Concerning the Regents Statewide Plan for the Development of Higher Education, 1972 of the Regents of the University of the State of New York.* State Education Department, Albany, N. Y., April, 1971.

*Guidelines for the Preparation of Private College and University Master Plans, 1972:* To supplement Education Beyond High School, the Regents Planning Bulletin (see above). Office of Planning in Higher Education, State Education Department, Albany, N. Y., 1971.

*1969 Progress Report of the Board of Regents on the Regents Statewide Plan for the Expansion and Development of Higher Education, 1968.* State Education Department, Albany, N. Y., November, 1969.

*Regents Statewide Plan for the Expansion and Development of Higher Education 1968.* State Education Department, Albany, N. Y., March, 1969.

*1967 Progress Report of the Board of Regents on the Regents Statewide Plan for the Expansion and Development of Higher Education, 1964.* State Education Department, Albany, N. Y., December, 1967.

*1966 Progress Report of the Board of Regents on the Regents Statewide Plan for the Expansion and Development of Higher Education, 1964.* State Education Department, Albany, N. Y., November, 1966.

*Regents Statewide Plan for the Expansion and Development of Higher Education, 1964.* State Education Department, Albany, N. Y., April, 1965.

*Guidelines for Planning in Colleges and Universities, Vol. 1 — Planning System.* Pinnell, C. and Wacholder, M. Texas A&M University, College Town, Texas, January, 1968.

*Guidelines for Planning in Colleges and Universities, Vol. 2 — Management and Financial Planning.* Pinnell, C. and Wacholder, M. Texas A&M University, College Town, Texas, July, 1968.

*Higher Education for the Future: Reform or More of the Same?* Proceedings of the SREB Legislative Work Conference. Southern Regional Education Board, Atlanta, Georgia, July, 1971.

*Master Plan for Higher Education in Illinois — Phase III, an Integrated State System.* Board of Higher Education, Springfield, Illinois, May, 1971.

*Planning Guidelines for the 1972 Master Plan (for the City University of New York).* University Planning Committee, City University of New York, New York, N. Y., June, 1971.

*Master Plan for Higher Education in Pennsylvania.* State Board of Education, Harrisburg, Pa., May, 1971.

*Plan of Action for Financing Higher Education in the State of New York*, Commission on Independent Colleges and Universities, State of New York, New York, N. Y., December, 1971.

*Report of the Committee on Master Planning for Higher Education in New York State*, Hurd, T. N., Chairman, Albany, N. Y., January, 1971.

*Statewide Planning for Post-Secondary Education: Issues and Design*, Glenny and Weathersby, Editors, National Center for Higher Education Management Systems at WICHE, Boulder, Colorado, September, 1971.

*Urban Universities: Rhetoric, Reality, and Conflict — Organization for Social and Technical Innovation*, Bureau of Higher Education, Office of Education, Publication OE-50062, U. S. Government Printing Office, Washington, D. C., 1970.

### Reports

*Capitol and the Campus, The: State Responsibility for Post-Secondary Education*, Carnegie Commission on Higher Education, McGraw-Hill Book Co., April, 1971.

*Cluster and Upper Division Colleges: New Organizational Forms in Higher Education*, Issues in Higher Education, Number 2/1971, Southern Regional Education Board, Atlanta, Georgia.

*Four Task Forces Report to the Connecticut Commission for Higher Education*, A summary of their recommendations: Action for the Seventies, Connecticut Commission for Higher Education, Hartford, Conn., December, 1970.

*Function, Scope, and Structure of Higher Education in Connecticut*, A report of Task Force II to Connecticut Commission for Higher Education, Hartford, Conn., December, 1970.

*1969-70 Annual Educational Summary*, Statistical and financial summary of education in New York State, Information Center on Education, State Education Department, Albany, N. Y., June, 1970.

*Needs: Socio-Economic, Manpower, Regional*, A report of Task Force I to Connecticut Commission for Higher Education, Hartford, Conn., December, 1970.

*Qualitative and Quantitative Performance and Achievement in Higher Education*, A report of Task Force IV to Connecticut Commission for Higher Education, Hartford, Conn., January, 1971.

*Redesign: Annual Report 1970-71*, State Education Department, Albany, N. Y.

*Report of the Citizens' Commission on the Future of the City University of New York*, Wagner, R. F., Chairman, New York, N. Y., March, 1972.

*Report of the Commission on Undergraduate Education*, Oliva, L. J., Chairman, New York University, New York, N. Y., 1971.

*Report on the Seventh Annual Conference on Higher Education General Information Survey (HEGIS)*, National Center for Educational Statistics, U. S. Office of Education, Washington, D. C., June, 1971.

*Urban Community College 1969, The*, Reed, B. A study of 25 urban community college systems, Caudill Rowlett Scott, Houston, Texas, 1970.

### Sharing Resources

*Feasibility Study for a Higher Education Compact in New York City*, Acres, H. et al. Higher Education Compact, New York, N. Y., 1971.

*Higher Education Center: The potential for sharing facilities among institutions of higher education in Connecticut*, Caudill Rowlett Scott, Houston, Texas, June, 1968.

*Interinstitutional Cooperative Arrangements in Higher Education in New York State*, Identifies arrangements by region in the State. Prepared by the College Center of the Finger Lakes for Higher Education Management Services, State Education Department, Albany, N. Y., January, 1970.

*Inventory of Selected Interinstitutional Cooperative Arrangements as of January, 1971: Report No. 19.* Office of Institutional Research, State University of New York, Albany, N. Y.

*Patterns for Voluntary Cooperation. Self-Study Report.* College Center of the Finger Lakes, Corning, New York, 1971.

*Regional Action.* Vol. 23, No. 1. Southern Regional Education Board, Atlanta, Georgia, January, 1972.

### **Space Utilization**

*Campus Size: A Selective Review,* Reichard, D. J. Southern Regional Education Board, Atlanta, Georgia, 1971.

*Comparison of Space Yielded by Major University Projection Techniques.* New York State Space Factors Committee, Albany, N. Y., January, 1971.

*Comparison of the Projected Capital Construction Needs of New York State Public and Private Institutions of Higher Education.* Division of Higher Education Facilities Planning, State Education Department, Albany, N. Y., March, 1971.

*Comprehensive Study of Space Planning Standards.* Preliminary Report to Participating Institutions. State of Illinois Board of Higher Education, Springfield, Illinois, December, 1971.

*Highlights of New York State Higher Education: Facilities Comprehensive Planning Program.* Summary report of the 1967 New York State Higher Education Facilities Inventory data. Office of Planning in Higher Education, State Education Department, Albany, N. Y.

*Space Inventory Report 1.* New York State Higher Education Facilities Comprehensive Planning Survey Fall 1967. Office of Planning in Higher Education, State Education Department, Albany, N. Y.

*Space Inventory Report 2.* New York State Higher Education Facilities Comprehensive Planning Survey Fall 1967. Office of Planning in Higher Education, State Education Department, Albany, N. Y.

*Space Projection Criteria for Capital and Long Range Facilities Planning Purposes.* Office of Vice-Chancellor for Campus Development, State University of New York, Albany, N. Y., 1970.

*University Space Planning.* Bareither, H. D. and Schillinger, J. I. Translating the Educational Program of a University into Physical Facility Requirements. University of Illinois Press, Chicago, Illinois, 1968.

### **Technology**

*Cable Television Information.* Division of Educational Communications, State Education Department, Albany, N. Y., 1971.

*CUMBIN: City University Mutual Benefit Instructional Network.* Freund, S. and Mailman, J. C. The City University, New York, N. Y., March, 1972.

*Interinstitutional Educational Television.* Office of Planning in Higher Education, State Education Department, Albany, N. Y., October, 1970.

*ITFS Instructional Television Fixed Service. (2500 Megahertz). What It Is... How To Plan.* Cooper, B., et al. Division of Educational Technology, National Education Association, Washington, D. C., 1967.

*On the Cable: The Television of Abundance.* Report of The Sloan Commission on Cable Communications. McGraw-Hill Book Co., New York, N. Y., 1971.

## Bibliography and References

---

### Part II — *Supplementary Sources of Data*

*Basic Institutional Data 1970-71*, as reported by the individual public and private institutions of higher education in New York City in their Federal "Higher Education General Information Survey Forms." Includes tables prepared by Regents Advisory Council, New York City, on:

- Headcount, Full-Time Equivalent Enrollments, Total Student Credit Hours, and Total Assignable Space. October, 1971. 13 pp., unpublished.
- Net Assignable Space for Classroom Facilities and for Laboratory Facilities. November, 1971. 6 pp., unpublished.

*Enrollment Report — Spring 1972, The City University of New York*, Department of Budget and Planning, Office of Data Collection and Evaluation, April, 1972. Similar report also available for Fall Semester, 1971 and for other previous dates.

*Fall, 1970 Statistical Analysis of Enrollment, Program, and Finances for New York City Region*, Higher Education Data System, New York State Education Department, October 29, 1971. 180 pp., unpublished.

*Plan for New York City 1969: A Proposal*, Vol. 1, Critical Issues, New York City Planning Commission.

## Regents Advisory Council Task Forces

### I. Full Utilization of Resources

**Chairman:** Brother James M. Kenny, S.J., *Financial Vice President and Treasurer, Fordham University*  
Lester I. Brookner, *Vice Chancellor for Administration, New York University*  
Edward A. Clark, *Dean of College of Liberal Arts and Sciences, Long Island University*  
Sister Anne Courtney, *Former Academic Dean, College of Mount Saint Vincent*  
George E. Diffley, *Director of Development, St. Joseph's College*  
Elaine Egues, *Assistant to the Academic Dean, Marymount Manhattan College*  
Donal Farley, *Deputy to the Dean for Campus Planning and Development, City University of New York*  
Morton F. Kaplon, *Associate Provost, City College*  
Margaret Kelly, *Executive Vice President, Vice President for Academic Planning, St. John's University*  
Gordon Klopf, *Provost and Dean of Faculties, Bank Street College of Education*  
George Knerr, *Vice President for Planning, Pace College*  
Matthew Lenz, Jr., *Chairman, Property-Liability Insurance Division, College of Insurance*  
Sheldon Littwin, *Associate Vice President for Administration, New York Institute of Technology*  
Brother A. Philip Nelan, F.S.C., *Coordinator of Special Resources, Manhattan College*  
George Raymond, *Chairman, City and Regional Planning Department, Pratt Institute*  
George A. Vaughn, *Secretary-Treasurer, Academy of Aeronautics*

#### Resource Persons

Norman Mercer, *Coordinator for State Aid to Non-Public Colleges, State Education Department*  
William Smith, *Director, Higher Education Planning, State Education Department*

### II. Libraries and Major Facilities

**Chairman:** Warren J. Haas, *Vice President for Information Services and University Librarian, Columbia University*  
Robert F. Beach, *Librarian, Union Theological Seminary*  
Henry Birnbaum, *Director of Libraries, Pace College*  
Harvey Coopersmith, *Graduate School of Library and Information Science, Pratt Institute*  
Anthony B. Giordano, *Dean of Graduate Studies, Polytechnic Institute of Brooklyn*  
Eugene P. Kennedy, *Associate Dean of Libraries, New York University*  
Kenneth M. King, *University Dean for Computer Systems, City University of New York*  
Robert H. Muller, *Director of the Library, Queens College*  
Sebastian Raciti, *Director, Office of Management and Budget Review, Fordham University*  
Sheldon E. Socol, *Secretary of the University and Chief Fiscal Officer, Yeshiva University*

#### Resource Persons

Bernarr Cooper, *Chief, Bureau of Mass Communications, State Education Department*  
James W. Henderson, *Chief of the Research Libraries, New York Public Library*  
E. J. Josey, *Chief, Bureau of Academic and Research Libraries, State Education Department*  
Richard Logsdon, *Executive Director, METRO*

### III. Professional Programs

**Chairman:** W. Lewis Hyde, *Special Assistant to the President, New York University*

Joseph B. Aidala, *Chairman, Department of Electrical Technology, Queensborough Community College*

Egon Brenner, *Dean of Engineering, City College*

Brother Conrad T. Burris, F.S.C., *Dean, School of Engineering, Manhattan College*

James J. Conti, *Provost, Polytechnic Institute of Brooklyn*

Daniel J. Duffy, *Vice President for Academic Affairs, State University of New York Maritime College*

Wesley J. Hennessy, *Dean, School of Engineering, Columbia University*

Richard North, *Chairman, Engineering Division, Pratt Institute*

William Vopat, *Dean, School of Engineering and Science, Cooper Union*

#### Resource Persons

Lawrence E. Gray, *Division of Higher Education, State Education Department*

Lawrence J. Hollander, *Secretary, Board of Examiners in Engineering, State Education Department*

### IV. Graduate Programs

**Chairman:** Thomas P. Robinson, *Dean of the Graduate School, Pace College*

Rev. Richard J. Devine, C.M., *Dean, St. John's College, St. John's University*

Rev. James C. Finlay, S.J., *Dean, Graduate School of Arts and Science, Fordham University*

George K. Fraenkel, *Dean, Graduate School of Arts and Science, Columbia University*

Joseph J. Greenbaum, *Dean of the Graduate Faculty, New School for Social Research*

Arthur B. Komar, *Dean of the Graduate School of Science, Yeshiva University*

Harold M. Proshansky, *Dean, University Graduate Division, City University of New York Graduate Center*

Benjamin Rivlin, *Department of Political Science, Brooklyn College*

George W. Stone, Jr., *Dean of the Libraries, New York University*

#### Resource Persons

Edward F. Carr, *Director, Division of Higher Education, State Education Department*

Vernon Ozarow, *Office of Science and Technology, State Education Department*

### V. Cooperative Programs for the Disadvantaged

**Chairman:** Alan Fiellin, *Associate Dean, College of Liberal Arts and Science, City College*

Audrey C. Cohen, *President, College for Human Services*

Henry Cohen, *Director, Center for New York City Affairs, New School for Social Research*

Richard F. Doyle, *Dean of Continuing Education, St. Francis College*

Daniel Gerzog, *Department of English, Pratt Institute*

Arnold L. Goren, *Assistant Chancellor, New York University*

Milton Martin, *Director of SEEK, Associate Professor and Chairman, Department of Academic Skills, Hunter College*

Frank Negron, *Director, Affirmative Action Program, City University of New York*

Henry F. Rossi, *Dean of Admissions and Registrar, St. John's University*

George Shea, *Dean, Liberal Arts College, Lincoln Center, Fordham University*

Aaron Warner, *Dean, General Studies, Columbia University*

#### Resource Person

Donald M. Winkelman, *Director of Special Programs for the Disadvantaged, State Education Department*

## Regents Advisory Council Staff

---

William S. Fuller, Director  
*New York State Education Department*

Curtis O. Baker  
*Director of Institutional Research, New York University*

Ronald Lee Gaudreau  
*Consultant*

Joseph Gruber  
*Assistant to the President, Pace College*

Mary Frances Hoban  
*Research Assistant, New York University*

Lynda B. Lann  
*Secretarial Staff, Pace College*

Judyth L. Schaubhut  
*Staff Assistant*

Theodora M. Thayer  
*Consultant*

Robert F. Vizza  
*Dean, School of Business, Manhattan College*

Nancy D. Williams  
*Secretary*