

A REPORT

prepared by

*the Governor's Committee  
on*

NEW JERSEY  
HIGHER EDUCATION

PREFACE

On June 17, 1963, the Governor of New Jersey, Richard J. Hughes, announced the appointment of a Committee composed of Dr. Carroll V. Newsom, Dr. James B. Fisk, Dr. James Hiller, Dr. Millicent C. McIntosh, and Dr. James A. Perkins. The instructions given to the members of this Committee are incorporated in the letter which follows

Dear Dr. Newsom

On the occasion of my First Annual Message to the New Jersey Legislature, I announced my intention to appoint a panel of impartial authorities to make a broad study of all our resources for higher education, both public and private, to evaluate their effectiveness in imparting quality education to an ever-increasing number of students.

For this purpose, I am establishing the Governor's Committee on New Jersey Higher Education, and I am most gratified that you have agreed to serve on this Committee, as Chairman, with Dr. James B. Fisk, Dr. James Hiller, Dr. Millicent C. McIntosh, and Dr. James A. Perkins.

The Committee should review the higher education facilities of the State of New Jersey with a view to making recommendations as to the overall policy and structure which the State should adopt to

- 1) Provide educational opportunities for the qualified youth seeking admittance to New Jersey's institutions of higher learning; and
- 2) Provide the programs and facilities to produce the trained personnel required for New Jersey's business, industrial, technological, scientific and cultural development, and for the public services demanded of a progressive, urban State.

This study should encompass all aspects of education beyond the high school and should include con-

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sideration of technical, professional and graduate education, research capabilities, the State's scholarship and student loan programs, means by which private higher education may be strengthened as well as the State's alignment of higher education responsibilities and its administrative machinery for implementing these responsibilities.

The Committee will not be expected to include within the scope of its study the sources of revenue to support New Jersey's higher education.

Upon completion of its study, the Committee is requested to submit its recommendations to the Governor, the State Board of Education and the Commissioner of Education.

Sincerely yours,

/s/ RICHARD J. HUGHES

GOVERNOR

Dr. Carroll V. Newsom  
Vice-Chairman of the Board  
Prentice-Hall, Inc.  
Englewood Cliffs, New Jersey

May 14, 1963

The report that follows was prepared by the Committee in the hope that it would provide useful evaluations and judgments of the kind that were requested. It is clear that the assignment given to the Committee could have been approached in many different ways. However, after due consideration, it was decided to concentrate on those problems that appeared to demand the most urgent attention. Thus, it will be noted that particular consideration was given to problems of organization of the State's system.

Some sections of the report will obviously provide the basis for considerable discussion, and even controversy. It is the belief of members of the Committee that such a result is desirable. Citizens of the state need to debate their educational problems. If the final outcome is an improved program for higher education in New Jersey, the Committee efforts will not have been in vain.

The Committee acknowledges the assistance provided it by Professor Ellis F. White of New York University, Director of the Project, and by Mr. John H. Herr, Assistant to the Director of the Project. The appreciation of the Committee is also extended to the many other persons who cooperated in a considerable variety of ways. Members of the State Department of Education were most helpful as were representatives of the various colleges and universities of the State, both public and private. Several national and state professional and civic organizations provided information and suggestions. The Committee expresses its gratitude to all of those who so graciously assisted it during its deliberations.

James B. Fisk  
James Hillier  
Millicent C. McIntosh  
Carroll V. Newsom, Chairman  
James A. Perkins

## HIGHER EDUCATION IN NEW JERSEY

The program in higher education now maintained by the State of New Jersey is gravely inadequate to meet the needs of its citizens and satisfy the demands of a rapidly growing industrial state. The state-supported institutions are badly undernourished, the variety of their educational curriculums is critically insufficient, there is too little opportunity for professional study, and provisions for specialization in advanced fields of knowledge are severely limited.

Public higher education in New Jersey, it seems clear to members of the Committee, is operating under an intolerable ceiling of service and effectiveness that is a consequence of the inadequate State funds available to support the State's educational endeavors. Thus great numbers of the college youth of the State are being denied their proper and necessary opportunities for an education because of a State fiscal program that does not produce sufficient revenues to meet essential needs.

In addition, the present organizational structure of education in the State, designed to serve the needs of a former day, is now outmoded in view of the rapidly growing complexity of demands being made upon the single board that is responsible for the overall policies for all public education in the State. New Jersey can well profit from the experiences of industry, as well as from other states that have recently reorganized their educational systems, in recognizing that there are times when greater decentralization of control is essential for effective results.

The need to rectify such situations is not new, but the necessity of finding solutions to the problems posed has now become urgent because of the evolving needs of a modern industrialized society and because of the fact that the state colleges and the university are overwhelmed by the vast number of qualified New Jersey students who are seeking admission.

The many fine private colleges within the boundaries of New Jersey supplement and extend the State system in notable respects, but even when their educational programs are taken into consideration, the total State picture in higher education still remains woefully deficient when measured against the needs.

New Jersey has depended too long on other states to carry many of its educational burdens. This dependency has never been right nor just, although in past decades institutions outside the State, not plagued with the present press of students, were content to enroll a large number of New Jersey youth. Now the dependency can no longer continue, for other states are beset by their own urgent educational problems that need to be resolved. In fact, some states have adopted a policy of barring non-resident students from public-supported institutions until equitable policies of reciprocity with other states can be developed.

It cannot be emphasized too strongly that citizens of New Jersey can no longer remain apathetic when considering the critical needs of the State's program in higher education. Unless immediate steps are taken to improve and extend the existing opportunities, the State is headed for serious trouble in many aspects of its social and economic life. New Jersey has already delayed much too long in coming to grips with its educational problems on the post-secondary level. Important decisions must be made now. Substantial effort and some sacrifice will be required during the next few years to develop a state-supported academic program that will provide qualified New Jersey young men and women their rightful opportunity for a college education, this is essential if the State is to have the kind of foundation in education that is necessary for its continued growth and progress.

### BACKGROUND INFORMATION ESSENTIAL TO THE COMMITTEE'S STUDY OF HIGHER EDUCATION IN NEW JERSEY

The Committee initiated its study by consulting a wide variety of sources — federal, state, private — for the purpose of securing basic information pertinent to an analysis of New Jersey's program in higher education. Interviews were conducted with representatives of public and private institutions of higher education in New Jersey and elsewhere, with officials of the New Jersey State Department of Education, with the New Jersey State Department of Labor and Industry, other State departments, Federal agencies — including the Department of Health, Education, and Welfare — and many industrial and educational organizations.

In addition to the series of interviews, the Committee examined previous studies on higher education, including The

Needs of New Jersey in Higher Education, published in 1962 and familiarly known as "The Strayer Report." The Committee found the latter Report to be particularly helpful. Attention was given to other special studies, and statistical reports bearing upon the interrelated subjects of education, industry, and manpower. The Committee was especially concerned with the collection of basic information that helped it to analyze the current structure and program of New Jersey's higher education in relation to educational trends and needs. Data were obtained on such pivotal matters as the administration of New Jersey's state-supported institutions, the curriculums, the budgets for the State University and Colleges, the faculty salary schedules and hiring practices, financial assistance to students, estimated enrollment statistics, plant facilities, and the manpower requirements of industry.

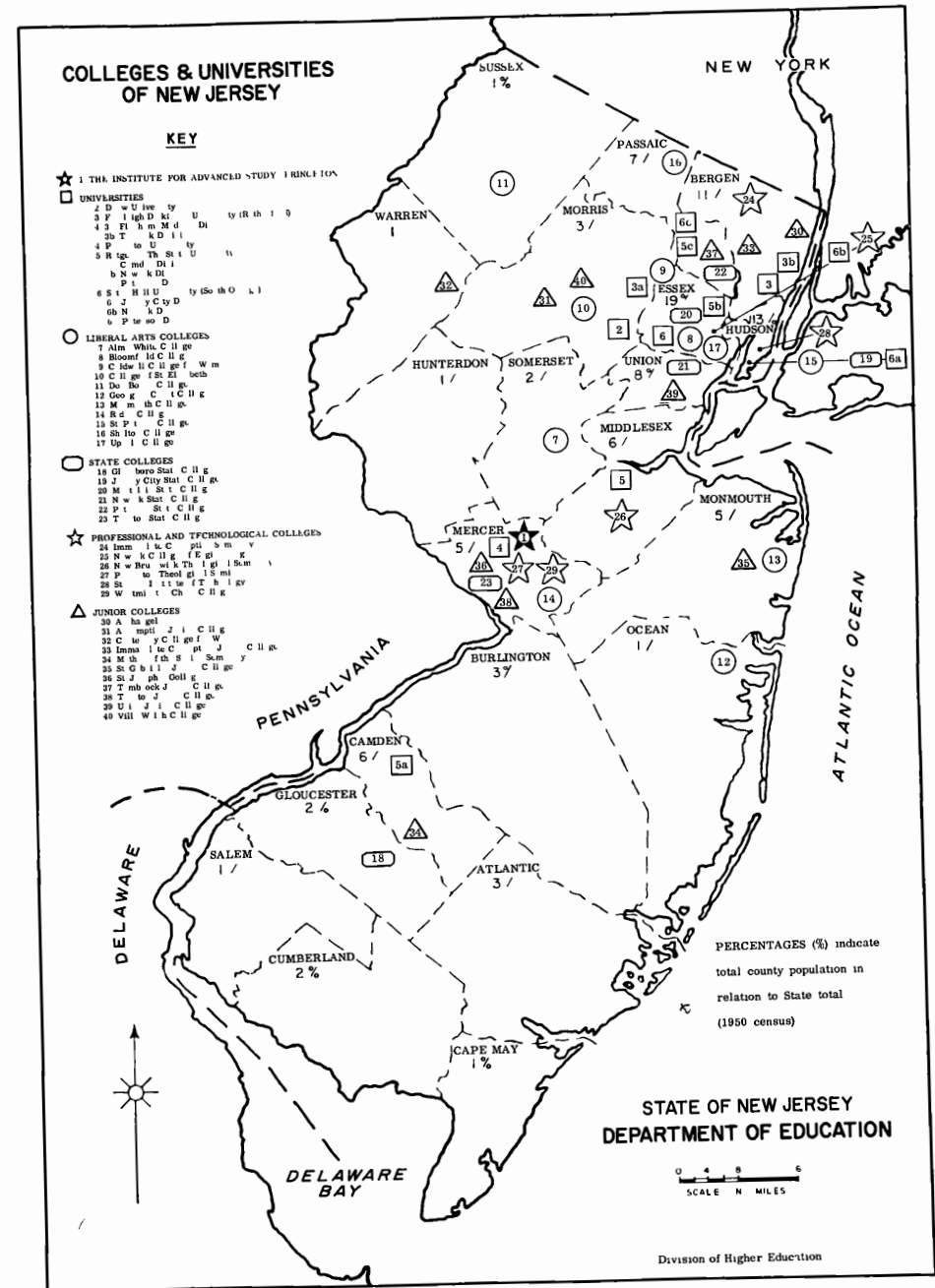
From such material, the Committee is presenting a small selection of pertinent data in the sections that follow. The specific purpose of the presentation is an attempt to delineate an overall picture of New Jersey's existing program in higher education.

### THE PRESENT SYSTEM OF HIGHER EDUCATION IN NEW JERSEY

The present state-supported system of higher education in New Jersey is comprised of one university, namely, Rutgers (The State University), and the following colleges Glassboro State College, Jersey City State College, Montclair State College, Newark State College, Paterson State College, Trenton State College, Newark College of Engineering, and Trenton Junior College (see page 4). The newly authorized two-year county community colleges will also become part of the system.

#### The State Board of Education

The State Board of Education has overall responsibility for elementary, secondary, and post-secondary education in the State. This body is composed of lay members appointed by the Governor. The legally mandated method of selection assures Statewide representation. The Board is served by its executive officer, the Commissioner of Education, who also heads the State Department of Education. The Commissioner is chosen by the Governor, customarily the person selected for the Commissionership has had a highly successful record



in the State as a superintendent of schools. The staff of the State Department of Education is composed of professional educators and other specialists. They maintain a program of activities that is concerned with the improvement of instruction in elementary and secondary education, and, in addition, they assist the State Board of Education with studies that have relevance to the field of higher education.

Some of the other responsibilities of the Commissioner and the State Department of Education, as they relate to higher education, are treated in the next sections.

### The State Colleges

The six State Colleges were once normal schools with two-year courses to prepare teachers. As such they were under the general control, as they are today, of the State Board of Education and the Commissioner of Education. Paralleling the development of normal schools in other states, they became four-year education colleges offering bachelor's degrees in education, and, at present they also have programs leading to the degree of Master of Education. Now the institutions are legally known as State Colleges.

In California, Illinois, Michigan, Ohio, Florida, and a number of other states the same process of evolution has taken place, but then the similarity to New Jersey ends. These other states encouraged their colleges to broaden their programs of study to include, in addition to teacher education, curriculums in liberal arts and various professional areas. Many of the former state colleges in other states have now grown to university stature, they have outstanding programs of graduate study and are making notable contributions to many aspects of American life. It would appear from studies made by the Committee that no state other than New Jersey has changed its teachers colleges into state colleges without making immediate plans to broaden the scope of the institutional programs. Among the states presently engaged in making the transition from teacher-training institutions to more broadly-conceived state colleges are Pennsylvania, Maryland, New York and Connecticut. In fact, the retention of teacher education as the sole objective of a state-supported institution is a dying tradition.

New Jersey is commonly regarded in educational circles as having been more successful than most states in maintaining a competent teaching staff in its public schools. Yet the

persistent and rightful endeavor of educational leaders in the State to continue to improve the present level of competence of the schools has, paradoxically, provided a serious restraint to the adoption of any plan to broaden the curricular offerings of the State Colleges, thus these institutions, ipso facto, continue to restrict themselves to the preparation of teachers. This restricting teacher-preparation policy is so rigid that a student, entering any State College in New Jersey, is required to commit himself, upon graduation, to teach in the State. This primary interest of the State Colleges in teacher preparation has an equally constricting influence on their own attitudes and policies, for they employ many individuals for their teaching and administrative staffs whose background and orientation are essentially in the area of teacher training.

The designation of a new president to head one of the State Colleges is made by the State Board of Education upon nomination by the Commissioner of Education. Nominations for faculty positions at a State College are made by the president of the College, the nominations must then be endorsed by the Commissioner before being submitted to the State Board of Education for approval. An appointment to the staff of any of the college business offices must be made by utilizing the procedures of Civil Service.

Salary schedules for the various academic ranks at the State Colleges are established by the State Board of Education, they are the same, in fact, as those that the Board maintains at Rutgers University and at the Newark College of Engineering. The salary to be awarded a new faculty member is fixed at the minimum figure specified for the academic rank in which he is to be placed. The president, therefore, is under severe handicap when negotiating with prospective faculty members. Exceptions to salary regulations, rarely made, must be endorsed by the State Board of Education and then passed upon favorably by a State Committee consisting of the State Treasurer, the President of the Civil Service Board, and the Budget Director. A State College president is not permitted to pay the expenses of a candidate invited to his campus for an interview. Moreover, because travel funds for this purpose are non-existent, the State Colleges find it difficult to carry out desirable recruiting procedures.

The budget for each of the State Colleges is prepared by its president and then transmitted to the Commissioner of

Education. The budget must be submitted in line-item form, that is, it must be broken down minutely into salary items, job by job, and into other proposed expenditures, category by category. After study by the State Board of Education, the budget, which must receive Board approval, is sent to the Budget Director of the State. The amounts requested for some of the items within the budget may be modified by the Budget Director before he gives his approval. Once the president of a State College is provided an approved budget, he must make expenditures strictly within the limitations of each category. Any requests to transfer funds from one budgetary item to another must receive the approval of the State Department of Education and the Budget Director.

At the State Colleges, according to a policy established by the State Department and State fiscal officers, an attempt is made to maintain the student-faculty ratio at sixteen to one. Moreover, each faculty member is assigned a work load built around a specification of fifteen hours of class teaching per week or its equivalent in other duties. Some of these other duties may be of a scholarly nature, but often they are not. For instance, the college presidents must often call upon members of the faculty for assistance in the administration of college affairs. Although the Colleges have grown rapidly, the number of administrative officers has remained constant.

The State Department of Education also exercises general supervision over the instructional programs of each College. All curriculums must be approved by the Department; approval of the Department must be obtained for changes in course content as well as for new courses.

In the fall of 1963, there were 14,088 full-time graduate and undergraduate students enrolled at the State Colleges. The enrollment figure for each individual institution was 2,478 at Glassboro State College, 2,187 at Jersey City State College, 2,803 at Montclair State College, 2,006 at Newark State College, 2,172 at Paterson State College, and 2,442 at Trenton State College. Of the total number of students, 99.8% were New Jersey residents.

The facilities in all the State Colleges are now extremely crowded. In fact, without the addition of essential classrooms and dormitories, an expansion of the present enrollment at the Colleges would seem to be virtually impossible. Fortunately, the campus of each institution is of considerable size so

that additional buildings can be erected without overcrowding.

### Rutgers, the State University

Rutgers began as a private university. In 1945, as a result of legislative action, the institution became the State University of New Jersey and a part of the State system of higher education. The principal campus of Rutgers is located at New Brunswick, this campus is augmented by a large branch at Newark and a small branch at Camden. Several off-campus centers operate at various locations throughout the State.

On the New Brunswick campus of Rutgers University are located the College of Arts and Sciences, the College of Engineering, the College of Agriculture, Douglass College for Women, the Graduate School of Education, the Graduate School of Library Service, the Graduate School of Social Work, and the Graduate School. The Rutgers School of Medicine is presently being organized and will be centered at New Brunswick.

Rutgers University at Newark is co-educational and is composed of the College of Arts and Sciences, the College of Pharmacy, the College of Nursing, the School of Business, and the School of Law.

The Camden Branch of Rutgers provides instruction in the liberal arts and sciences to both men and women at the undergraduate level. At Camden is also located a separate division of the Rutgers School of Law.

In the fall of 1963, the student body of all the schools and colleges of Rutgers University, graduate and undergraduate, numbered 12,835. Of these students, 88% were from New Jersey. The undergraduate enrollments at the three branches were 7,635 at New Brunswick; 2,531 at Newark, and 865 at Camden.

The controlling body of Rutgers University is known as the Board of Governors. It is composed of eleven members, six appointed by the Governor with the approval of the State Senate and five members named by the Board of Trustees of the University. The latter body is advisory to the Rutgers Board of Governors. The President of the University and the State Commissioner of Education are ex-officio members of the Board of Governors.

The Board of Governors provides overall policy direction to the University. In addition, it gives serious attention to basic problems of the institution, and recently has sponsored a major study pertaining to the future demands upon Rutgers as a consequence of the anticipated growth in the number of prospective students.

The President and his staff, with the approval of the Board of Governors, develop the annual budget. Some of the funds for the operation of the institution come from income from endowment and from student tuition. A State appropriation makes up the balance of the annual operating budget.

The Board of Governors approves a request for State funds in the form of a lump-sum budget (as contrasted to the minutely detailed line-item budgets required of the State Colleges) and then forwards the request to both the Governor and the State Board of Education. The details of the budget are examined by a member of the staff of the State Department of Education. The approval of the State Board of Education is sought, but such approval does not appear to be essential to the securing by legislative enactment of a state appropriation for institutional support. The Budget Director gives close attention to the details of the Rutgers budgetary request and then makes his recommendations to the Governor.

In recent years there has been some expansion of the physical facilities of Rutgers, this has been made possible, in a large measure, by the 1959 bond issue voted by the Electorate of the State. However, the physical needs of the institution are still very great. Laboratories are inadequate and the library collection is singularly deficient in many respects.

At Rutgers the ratio of students to faculty members is maintained at about twelve to one, a ratio agreed upon by University officials and State fiscal officers. Faculty work loads are built around a specification of twelve hours of class teaching per week or its equivalent in other kinds of academic work.

Faculty salary scales, following a policy of the State Board of Education, are maintained on a par with those of the six State Colleges. In other words, no distinction in salary is made in the State system between faculty members whose chief assignment is to teach undergraduates and those whose chief assignment is to supervise graduate students. Furthermore,

because of the salary regulations, University and College presidents in the State system are restricted in the opportunities they have to reward those who have attained distinction for their creative endeavors or for their inspirational teaching. When it was found at Rutgers that existing salary levels would not attract professors of sufficient competence in certain academic areas, a few exceptions to the standard salary schedule were permitted. This has been true in the case of some special positions in the Law School, in the School of Engineering, and in the Medical School now being organized.

Rutgers University now features graduate programs, leading to a doctorate, in thirty-three academic areas. In 1963, the number and type of doctoral degrees conferred were as follows:

Agricultural Biochemistry	4	Horticulture	2
Agricultural Microbiology	2	Library Service	6
Bacteriology	5	Mathematics	4
Botany	3	Microbiology	4
Ceramics	3	Nutrition	0
Chemistry	9	Pharmaceutical Science	3
Dairy	6	Physics	5
Economics	0	Physiology and Biochemistry	3
Education	16	Plant Pathology	0
Electrical Engineering	0	Plant Physiology	2
English	1	Political Science	2
Entomology	7	Poultry Service	2
Farm Crops	1	Poultry Science	2
Food Science	5	Psychology	3
Geology	0	Soils	1
German	1	Zoology	7
History	4		

#### Newark College of Engineering

The Newark College of Engineering is located in downtown Newark. It is largely an undergraduate school of engineering, tracing its history to the New Technical School authorized by the State Legislature in 1881.

The academic programs at the College include curriculums leading to the degree of Bachelor of Science in chemical, civil, electrical, industrial, and mechanical engineering. The degree of Master of Science is also offered in the same

five fields of specialization. Doctoral degrees may be earned at Newark College of Engineering in chemical and electrical engineering.

The governing body of the Newark College of Engineering is its Board of Trustees. The eight members of this Board are appointed by the Governor. In addition, the Governor and the Mayor of Newark serve in ex-officio capacities.

The full-time undergraduate enrollment at the College in the fall of 1963 numbered 2,297. Over a thousand graduate students, nearly all of whom are part-time, plus an additional thousand part-time undergraduates, make up the balance of the student body.

Funds made available by the State in 1959 for the expansion of facilities at State-supported institutions of higher education are making it possible for the Newark College of Engineering to expand its facilities to serve immediate needs. The additional facilities financed by these funds will be completed in 1965. At that time, the campus of the institution will occupy an area of twenty acres.

The president of Newark College of Engineering, working with the Board of Trustees, develops the budget. Part of the institution's income is derived from tuition and grants, and the City of Newark provides an additional amount, the rest of the College's operating budget is provided by the State. The amount obtained from the State (awarded as a lump sum) is determined as the result of negotiation between officers of the College and members of the staff of the State Department of Education. The Newark College of Engineering then enters into a contract with the State Department of Education to provide educational programs for the State at the budgetary figure finally approved.

Salary schedules for the faculty and the other employees, as already indicated, are maintained by the State Department of Education on a par with those of the six State Colleges and Rutgers University. The student-faculty ratio accepted for the Newark College of Engineering by the State Department of Education and the State fiscal officers is ten to one. The normal work load for a faculty member is based upon a specification of twelve credit hours per week or its equivalent in other work for the College. But because a single credit hour

in an engineering school may involve several additional hours of contact with students in the laboratory or in small group discussions, the common interpretation of the work load requirement may mean, in the case of some faculty members, a substantially larger number of hours per week than superficial analysis would reveal.

### The Two-Year County Community Colleges

Long before the current interest in community colleges, Trenton Junior College was providing an educational service similar to that which is planned for the community colleges now being created in several counties in New Jersey. Trenton Junior College has consistently provided two kinds of programs. Specifically, some of the students enroll in two-year transfer curriculums and, upon graduation are assisted in finding four-year colleges where they may complete their study leading to a baccalaureate degree. Other students enroll in two-year technical programs, graduates of these programs are assisted in securing specialized positions, usually in business and industry. The financial support for Trenton Junior College comes from student tuition, from the City of Trenton, and from a lump-sum appropriation provided by the State. The amount of the State appropriation is based upon a contract that the institution develops with the State Board of Education. This amount varies from year to year.

In 1962, the Legislature adopted a law that would permit a county or counties to establish two-year community colleges. This action was viewed as the start of a significant movement in the State, for each community college was to have three major purposes (1) provide the possibility for some students to take the first two years of a regular college program in institutions that were close to their homes, (2) provide post-secondary training for large numbers of students who desire to prepare for occupations that require two years of specialized post-secondary education, and (3) provide informal continuing education to meet a variety of community needs.

The state community college plan, as created by the New Jersey legislature, provides for

1. A method by which a Board of County Freeholders, interested in establishing a community college, could study the needs of its county and then petition the State Board of

Education for permission to establish and operate the institution that was proposed.

2. A procedure by which the State Board of Education may develop rules and regulations for the establishment and operation of the county colleges and, after making independent studies of the needs of each county which has petitioned for a community college, approve or disapprove its request.

3. Authorization for a Board of Freeholders, upon the approval of its petition by the State Board of Education, to establish a college.

4. A procedure whereby the State would pay half the cost of buildings and equipment and provide for each institution an annual operating budget computed by multiplying the number of students in the institution by either \$200 or one-third of the annual cost of educating each student, whichever is the smaller figure. However, a reading of the law reveals that the initial outlay of State funds as well as the subsequent State funds to pay operating costs are not guaranteed.

Each county college is to be governed by its own Board of Trustees, which will consist of nine members. Eight of the members are to be appointed by the Board of Freeholders of the county, and the ninth member is to be the County Superintendent of Schools.

The annual budget for each county college is to be prepared by its president and Board of Trustees. They will then provide the Board of Freeholders with detailed budgetary information that will include the amount of anticipated income from State aid and the amount expected from tuition. The Board of Freeholders, according to the plan, will then appropriate the additional funds required to operate the college.

At present, many of the State's twenty-one counties are giving attention to the process of organizing community colleges. It appears probable, in fact, that the doors of one or more of these colleges will open in September, 1965. A consultant from the State Department of Education has provided assistance in the organization of the county colleges. However, the major responsibility for taking the initiative in planning each county college rests with the Board of Freeholders of the particular county.

The present-day importance of the community colleges to the total educational program of the nation is revealed by a recent report issued by the American Association of Junior Colleges.<sup>1</sup> This report reveals the following:

- (a) In 1930, graduates of high schools qualified for 90% of the jobs.
- (b) By 1970, high school graduates will qualify for only 32% of the positions available.
- (c) At least two years of college will be necessary to prepare prospective employees for 50% of the jobs available.<sup>2</sup>

- (d) The following are typical earnings, at the going rates, for the mid-sixties<sup>3</sup>

For a male high school graduate, with some experience in semiskilled work	\$210 per month
For a male two-year college graduate, a semiprofessional technician, <sup>4</sup> after five years' experience	\$650 per month
For a senior engineering technician, ten years' experience	\$800 per month

<sup>1</sup>Harris, Norman C., Technical Education in the Junior College (Washington, D.C.: The American Association of Junior Colleges, 1964), 102 pp.

<sup>2</sup>Ibid., p. 27.

<sup>3</sup>Ibid., p. 28.

<sup>4</sup>Technicians with two years of college background are employed in the following industrial or technical fields: Mechanical Technology (air conditioning, refrigeration, airframe, automotive, diesel, engineering, hydraulics, machine drafting, missile, precision instruments, tool and die), Electrical/Electronic (aviation electronics, communications, computer, electrical power, electronic drafting, industrial electronics, microwave, missile electronics, radar, radio and television, sound systems, transmitter), Civil Technology (architectural drafting, building construction, concrete, estimating, map drafting, sanitation, specification writing, structural testing, surveying), Engineering Laboratory Technologies (ceramics, chemical, instrumentation, metallurgical, optical, plastics, research). This listing does not include the semi-professional positions in business for which two years of post-secondary education is desirable.

TABLE 1 -

## ESTIMATED ENROLLMENTS AS REPORTED BY THE NEW JERSEY PRIVATE INSTITUTIONS OF HIGHER EDUCATION FOR 1965 and 1970\*

	Undergraduate		Graduate and Professional	
	1961	1965	1961	1970
<b>UNIVERSITIES</b>				
Drew	655	1,205	338	688
Fairleigh Dickinson	4,761	4,999	180	189
Princeton	3,063	3,207	897	1,100
Seton Hall	3,272	5,100	608	758
<b>LIBERAL ARTS COLLEGES</b>				
Alma White	7			
Bloomfield	548	1,048	5	105
Caldwell	620	670		
Don Bosco	75	215		
Georgian Court	361	561		
Monmouth	1,701	3,283		
Rider	2,457	3,000	1	51
St. Elizabeth	568	768		
St. Peter's	1,420	1,695		
Shelton	158	658		
Upsala	1,411	1,500		
<b>PROFESSIONAL AND TECHNICAL COLLEGES</b>				
Immaculate Conception Seminary	115		176	176
New Brunswick Theological Seminary			61	90
Princeton Theological Seminary			441	500
Stevens Institute of Technology	1,087	1,087	42	42
Westminster Choir College	217	267	18	28
<b>JUNIOR COLLEGES</b>				
Assumption	35	35		
Centenary	570	600		
Immaculate Conception	57	70		
St. Gabriel's	69	75		
St. Joseph's	25	45		
Tombrock	13	13		
Umon	540	840		
Villa Walsh	22	23		
<b>TOTAL</b>	<b>23,827</b>	<b>30,964</b>	<b>2,767</b>	<b>3,717</b>
				<b>4,526</b>

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\*Strayer, George D., and Charles R. Kelley. The Needs of New Jersey in Higher Education (N.J. Trenton, the New Jersey State Board of Education, 1962), p. 46

Private Colleges and Universities in New Jersey

There are thirty private colleges and universities in New Jersey. Table Number 1, taken from the Strayer Report, lists twenty-eight of the private institutions along with an anticipated projection of their enrollments. The two institutions not listed are junior colleges which have come into existence since the Strayer Report was prepared. The location of each institution is indicated on the map on page 4.

According to the Strayer Report, private institutions in the State anticipated that their total increase in full-time students from 1965 to 1970 would be 6,416. Many of these students, obviously, will be residents of other states. The total increase in student enrollment to be expected in New Jersey between 1965 and 1970—an increase which all New Jersey institutions will be called upon to absorb—was estimated by Strayer to be 25,457. Thus, even if the private colleges and universities could live up to their expectations, they would accommodate only about 25% of the anticipated increase.

The only funds which the private institutions receive from the State are those which they collect toward the tuition of the New Jersey state scholarship students whom they enroll.

Financial Assistance to Students

A scholarship plan exists for the benefit of outstanding New Jersey students who attend either public or private colleges or universities. The number of students who receive the scholarships in any given year is limited to five percent of the total number of high school graduates for the previous year. These scholarships are awarded on the basis of a combination of factors which include scholastic achievement and the size of family income. For the school year 1963-64, the number of scholarships was 3,236. There are 3,290 scholarships available for 1964-65. Of the total number of awards, 35% can be given for study outside New Jersey. The maximum amount of the annual scholarship grant made to an individual student is either \$400 or the tuition charged by the institution attended by the student, whichever is the smaller.

To take steps to supplement the state scholarship program, the State Legislature in 1959 established the New

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Jersey Higher Education Assistance Authority. This body has developed a cooperative plan with a number of banks in New Jersey whereby it becomes possible for a qualified student to borrow money to pay part of the cost of attending college in or out of the State. The maximum amount of the loan that may be made per year to each student applicant is regulated by the following scale:

For the Freshman year . . . . .	\$ 750.00
For the Sophomore year . . . . .	\$ 1,000.00
For the Junior year . . . . .	\$ 1,000.00
For the Senior year . . . . .	\$ 1,500.00
For each year of graduate study. . . . .	\$ 1,500.00

The total amount of the loans made to any student may not exceed \$7,500.00.

Some New Jersey students also receive loans and scholarships from foundations and corporations and through programs sponsored by the Federal Government.

STATISTICAL INFORMATION WHICH  
THE COMMITTEE CONSIDERED TO BE  
PARTICULARLY RELEVANT TO ITS STUDY

From a study of the Strayer Report and other data, various statistical patterns and projections become apparent. These patterns or trends must be considered in any planning that is concerned with the future of higher education in New Jersey. Specifically

1. The number of secondary graduates in New Jersey who will seek higher education will rise sharply in the years ahead.

The actual number of New Jersey secondary school graduates for the years 1961 and 1963 are presented below, along with projections from the Strayer Report for the years 1965 and 1970.

<u>1961</u>	<u>1963</u>	<u>1965</u>	<u>1970</u>
66,109	65,796	84,988	89,844

The consequences of these figures become even more alarming when it is realized that the percentage of high-school

graduates who will continue their education will undoubtedly rise during this same period. Recent evidence supports this statement. For instance, in 1961, 35% or 24,130 of the 66,109 high-school graduates entered college. Two years later, 29,179 or 44% of the 65,796 high-school graduates continued in institutions of higher learning. The Strayer Report suggested that the percentage of high-school graduates entering college would gradually rise until the figure would reach 44% in 1970. That this figure was actually reached as early as 1963 suggests the very conservative nature of the Strayer prediction.

If the unlikely assumption is made that there will be no increase beyond the 44%, and if this particular percentage figure is applied to the 1965 estimate of secondary-school graduates, it follows that 37,395 of the 84,988 high-school graduates of that year will be seeking higher education. In summary, the pertinent statistical picture is given below.

	<u>1961*</u>	<u>1963*</u>	<u>1965</u>	<u>1970</u>
Secondary School Graduates	66,109	65,796	84,988	89,844
Assumed Percentage of these Graduates Entering Colleges	36%	44%	44%	44%
Number Seeking Admission to College	24,130	29,179	37,395	39,530

\*Actual Figures

2. An increasing proportion of this same number will seek admission to public colleges and universities.

The Strayer Report predicts that the private colleges and universities in New Jersey will increase their enrollments from 16,527 to 34,133 in 1970. It was estimated that publicly supported institutions must plan to enroll 51,220 New Jersey students in 1970. This means, according to the Strayer Report, that 60% of the New Jersey students attending college in the State in 1970 would be registered in publicly supported institutions and the remaining 50% in private institutions.

Sidney G. Tickton, an acknowledged authority on population trends in higher education, has predicted that the percen-

tage of youth who will attend publicly supported colleges will increase at a greater rate than was anticipated as recently as two years ago. If this prediction holds true, the percentage of New Jersey students to be enrolled in New Jersey publicly supported institutions (60% in 1970), as Strayer anticipated, may be extremely conservative. The Tickton point of view was given substantiation for New Jersey by a recent survey and analysis made for Rutgers University, this project revealed that the capability of private institutions to expand in the present decade, measured upon a percentage basis, should be revised downward from the best estimates made by those institutions in 1961-62.

3. In spite of the fact that the numbers of prospective students who will seek entry into state-supported institutions must inevitably increase at an alarming rate, the present State plans to take care of these students appear to ignore the magnitude of the problem that must be faced.

To give substance to the Committee's expression of concern, as just stated, it may be pointed out that in only one of its colleges can Rutgers University admit more Freshmen for the school year 1964-65 than it accepted for the year 1963-64. The one college is Douglass College in New Brunswick, which can increase its enrollment in 1964-65 over what it was in 1963-64 by 103 students. On page 20 is a table which reveals the increase in the number of students to be admitted as Freshmen in September, 1964, at each of the six State Colleges. The total number of additional students to be admitted in all public institutions, it will be noted, is a mere 566, or an increase of 2% over total enrollment in the fall of 1963. Thus attention must be called to the fact that unless additional facilities and staff are made available for the State institutions, they will be unable to make essential increases in the size of their Freshmen class for the fall of 1965, the very year when the most dramatic upturn of the century will take place in the number of students wanting to go to college.

The State cannot rely on the county community colleges to take up the slack, for, even though the counties move rapidly to create a bona-fide State system of community colleges, it will be at least a decade before these colleges can have any appreciable statistical effect upon the student-population problem that has been discussed. Moreover, citizens of the State must understand that the creation of the community colleges

TABLE 2

DATA CONCERNING ADMISSIONS  
NEW JERSEY STATE COLLEGES

College	Number of Applicants Examined September, 1963	Number of Freshmen Admitted September, 1963	Number of Applicants Examined September, 1964	Anticipated Number of Freshmen to be Admitted September, 1964
Glassboro	1633	841	2599	1070
Jersey City	1569	633	2361	550
Montclair	3195	1017	4573	965
Newark	1997	508	2714	775
Paterson	1704	610	2555	625
Trenton	2396	788	3482	978
TOTAL	12,494	4,397	18,284	4,963

State of New Jersey  
Department of Education

will tend to increase the percentage of high-school graduates going to college.

4. The per capita expenditure for higher education made by the State of New Jersey is extremely low as compared to the per capita expenditures made by most of the other states, while New Jersey's per capita income is among the highest in the United States.

The per capita expenditure for higher education by the State of New Jersey is such that New Jersey ranks 47th among all the states in that regard. The actual New Jersey per capita expenditure is \$6.20. This very low figure takes on even greater significance when it is compared with the fact that Mississippi, for example, ranks 43rd nationally with an expenditure of \$7.74, New York ranks 36th with an expenditure of \$9.82, West Virginia 27th with \$12.54; Louisiana 14th with \$16.51, and Oregon 1st with \$22.55. Alongside such data should be placed the interesting fact that only four states have higher per capita incomes than New Jersey!

5. New Jersey is more dependent on other states to educate its own youth than any of the other states.

Table 3 on page 22 provides data on the migration in the fall of 1963 of students taking work to be credited toward a bachelor's or higher degree. A figure in the Table preceded by a plus sign (+) indicates how many more students a particular state, i.e., the institutions in that state, accept from other states than it sends out of state. Conversely, a number preceded by a minus sign (-) shows how many more students a state sends to out-of-state institutions than it accepts from outside the state.

New Jersey, it will be noted, depends strongly on other states to handle a large fraction of its responsibility in the field of higher education. Great numbers of New Jersey students must go out of the state to obtain the kind of post-secondary education that they believe to be essential.

These facts are all the more critical when it is realized, as already indicated, that several public institutions of higher education outside the State have recently put into effect plans that will decrease the number of New Jersey undergraduates they will admit. In general, state institutions are now making

TABLE 3

Net migration of students taking work creditable toward a bachelor's degree or a higher degree Fall 1963\*

Massachusetts	+25,662	Washington	+1,908
Indiana	+20,361	Mississippi	+1,464
North Carolina	+14,587	Pennsylvania	+1,102
Utah	+12,034	Georgia	+1,000
California	+12,031	New Mexico	+ 613
Tennessee	+10,935	Maine	+ 377
Missouri	+10,365	South Dakota	+ 309
Colorado	+8,580		
Michigan	+8,232	Alabama	- 722
Ohio	+8,219	Wyoming	- 827
Iowa	+6,608	North Dakota	-1,012
Wisconsin	+6,281	Arkansas	-1,187
Texas	+5,541	Alaska	-1,414
Vermont	+4,859	Montana	-1,446
Kentucky	+4,700	Delaware	-1,540
Arizona	+3,963	Nevada	-1,559
Nebraska	+3,812	Idaho	-2,742
Oklahoma	+3,668	Hawaii	-3,050
Oregon	+3,247	Florida	-8,612
New Hampshire	+3,135	Maryland	-9,617
Kansas	+3,039	Vermont	-10,200
West Virginia	+2,997	Connecticut	-13,018
Louisiana	+2,934	Illinois	-20,796
Minnesota	+2,511	New York	-36,232
Rhode Island	+2,427	<u>NEW JERSEY</u>	<u>-56,507</u>
South Carolina	+2,194		

\*Survey of Residence and Migration of College Students, Fall 1963 by the Office of Education, Department of Health, Education, and Welfare, Washington, D. C.

plans either to admit fewer students from other states or to raise substantially the tuition rates for out-of-state students.

6. In addition to the critical problem of mere numbers, New Jersey has an urgent and equally serious problem in the fact that the State is not making available the kinds of education necessary to satisfy the needs of many students and also provide the essential manpower requirements for the State to maintain its position in the national economy.

It is estimated that during the present decade the need in New Jersey for people with professional and technical training is almost twice the national average. In line with this statement, the New Jersey Department of Labor and Industry reports, "Occupationally, the largest rate of growth in New Jersey between 1960 and 1970 will be in the professional field, with particular emphasis on engineers, scientists, technicians, accountants, teachers and nurses."<sup>5</sup> The graph on page 24 indicates the relative change in employment by occupational groups for the period, 1960-1970.

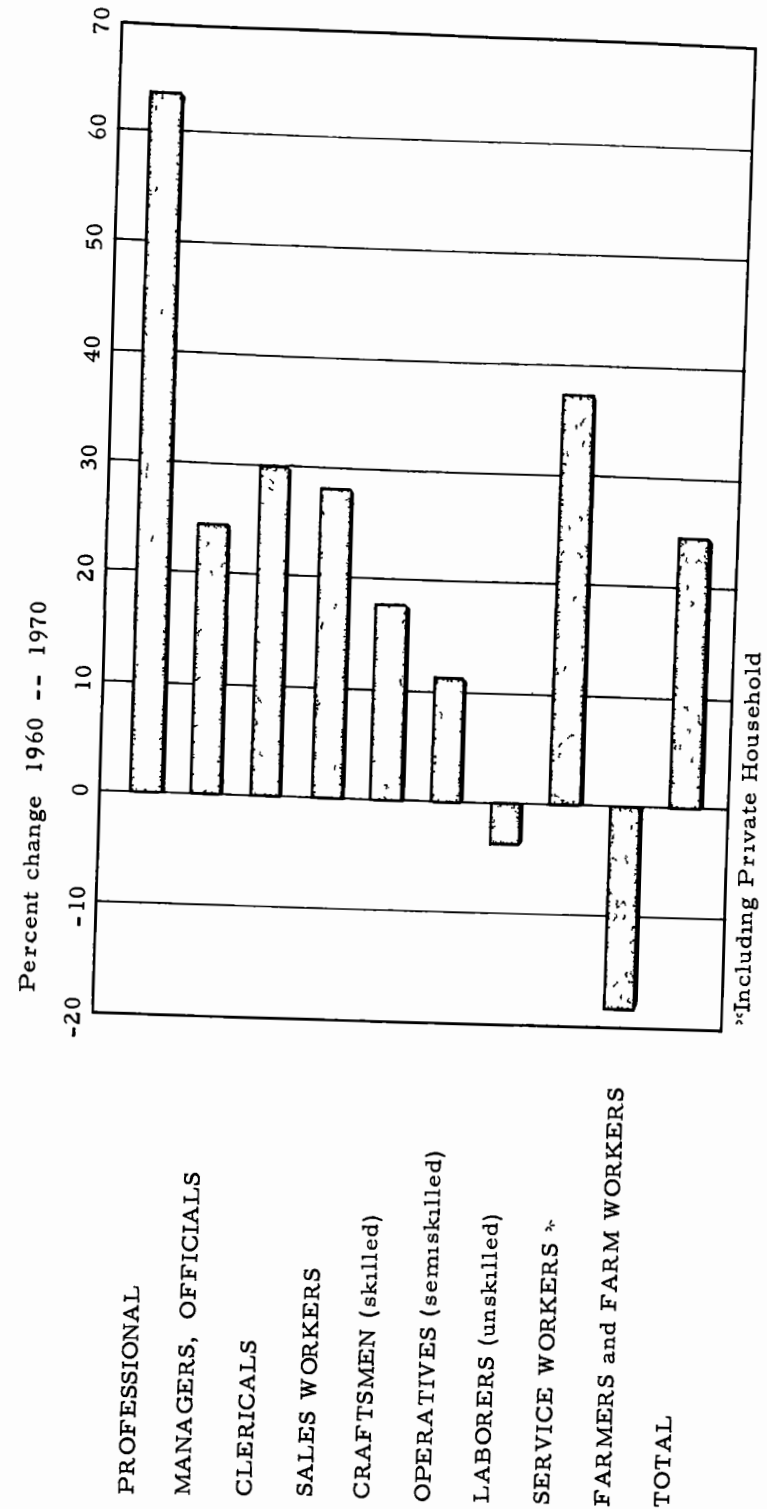
A study conducted by the New Jersey Section of the American Chemical Society reveals that each year New Jersey industry requires 200 additional Ph.D.'s in chemistry. Rutgers University, the only State-supported institution that provides this kind of specialization, has produced an average of only twelve Ph.D.'s in Chemistry each year for the past five years. The Committee has discovered, through interviews with industrialists and through a scrutiny of statistics, that this one illustration of deficiency in the State's educational system is typical of an existing situation in many professional and technical areas that is too serious to ignore.

L. V. Berkner, former Director of the program of the International Geophysical Year, has recently analyzed the shortage of Ph.D.'s that handicaps industrial development in many sections of the country. He writes.

Indeed, in the future we may have to count a hundred or more unemployed for each Ph.D. we fail to educate...Those communities that can produce and re-

<sup>5</sup>New Jersey Manpower Projections 1960-1970, Research Series No. 4 (Trenton, N. J. · Department of Labor and Industry, State of New Jersey, 1961), p. 16.

EMPLOYMENT BY OCCUPATIONAL GROUP



tain men of advanced education will have the most intimate access to and control of the new technology from which the industry and wealth of the future will flow. They will have the power to create opportunity for full employment at all levels.<sup>6</sup>

Berkner also reports that "our objective should be about a hundred doctorates annually per million population."<sup>7</sup> On such a basis, New Jersey should be producing approximately 640 Ph.D.'s annually. In June, 1964, less than half that number of Ph.D.'s were conferred in New Jersey.

The Committee's investigations reveal that New Jersey industry has a rapidly growing demand for well-educated men and women in virtually every branch of science and technology. In addition, industry finds it quite impossible to meet its demands for competent mathematicians. Equally serious is the critical need for technicians to provide supporting services to the research and development personnel who form the core of industrial enterprise. No satisfactory estimates would seem to be available for the number of professional and sub-professional persons who will need to be educated by the State in the future, but it is noteworthy that the New Jersey State Department of Labor and Industry has made some estimates of future needs for sub-professional personnel in certain localized areas. For instance, the Department has reported the following:

1. Between 1962 and 1967, the need for technicians to assist professionals will lead all occupational groups in its rate in the Vineland-Bridgeton area.<sup>8</sup>
2. By 1966 this same group will expand at a rate faster than any other group in the Perth Amboy-New Brunswick Labor Market Area.<sup>9</sup>

<sup>6</sup>L. V. Berkner, "The Technological Revolution of Today - Its Impact on Society," The Journal of the Franklin Institute, Vol. 275 (No. 4), April, 1963, p. 276.

<sup>7</sup>Ibid., p. 282.

<sup>8</sup>Occupational Training Needs Survey, Research Series No. 12 (Trenton, N.J. State of New Jersey, Department of Labor and Industry, Division of Employment Security, 1963), p. 3.

<sup>9</sup>Occupational Training Needs Survey, Research Series No. 9 (Trenton, N.J. State of New Jersey, Department of Labor and Industry, Division of Employment Security, 1963), p. 1.

3. While demands for professional workers in the Lakewood-Toms River Area will double between 1964 and 1967, the need for semiprofessional technicians will be greater in proportion to their number than in any other occupational group.<sup>10</sup>

4. In 1962, in the Paterson area, nearly one-third of the additional workers needed were technicians or aides to professional workers.<sup>11</sup>

5. In the Jersey City area, the expansion and replacement demand for draftsmen, laboratory assistants and other technicians will offer over 900 opportunities by 1966.<sup>12</sup>

The kinds of preparation needed by persons in these positions can be provided in the proposed community colleges. Up to the present time, New Jersey has done virtually nothing to provide educational opportunities for young men and women interested in this kind of employment.<sup>13</sup> Trained technicians, in fact, must now be recruited outside the State.

New Jersey business, too, is already experiencing the consequences of a growing shortage of professional manpower, there is need, for example, of men well-educated in modern concepts of management and especially in the new science of computer utilization. In the health professions, there is a shortage of nurses, laboratory assistants, and other trained personnel, and in many other professions and occupations

<sup>10</sup>Occupational Training Needs Survey, Research Series No. 11 (Trenton, N.J. State of New Jersey, Department of Labor and Industry, Division of Employment Security, 1963), p. 4.

<sup>11</sup>Skill Survey, Paterson Labor Market Area, 1965 Projection, Research Series No. 6 (Trenton, N. J. State Department of Labor and Industry, 1962), p. 6.

<sup>12</sup>Occupational Training Needs Survey, Research Series No. 7 (Trenton, N.J. State of New Jersey, Department of Labor and Industry, Division of Employment Security, 1962), p. 2.

<sup>13</sup>Venn, Grant, Man, Education, and Work. Postsecondary Vocational and Technical Education (Washington, D.C. The American Council on Education, 1964), pp. 89-92.

there is a similar shortage of men and women who are educated and trained beyond the high-school level.<sup>14</sup>

But, have these vast needs of critical importance changed the basic design of the New Jersey program in higher education? Very little! Approximately half of all the students enrolled in state-supported institutions in the fall of 1963 were registered in programs leading to teaching and other professional careers in education. The importance of educating a sufficient number of young men and women to maintain the quality of the teaching profession cannot and should not be minimized. At the same time, the fact must be recognized by citizens of New Jersey that the opportunities available in New Jersey state institutions for students to study liberal arts and prepare for professions and occupations other than teaching are restricted to a fortunate few out of all those who are seeking such opportunities. Moreover, the opportunities for advanced study, so important in these times, are similarly limited.

#### RECOMMENDATIONS OF THE COMMITTEE

The progress of our civilization is such that higher education, in some form, soon must be a part of the preparation for life of most American citizens. In fact, because of the highly specialized nature of the positions that men and women must occupy and because of the very complexity of our society, individuals will spend more and more time in obtaining the kind of education that they regard as essential. This trend toward more and better education has the strong backing of the federal government, for the leadership of the nation understands that many of the ailments that beset our

<sup>14</sup>Better job preparation through more and better schooling is becoming a necessity in today's society. Grant Venn in his recently published Man, Education, and Work predicts that

In the years immediately ahead at least a quarter of the nation's youth will be needed in occupations for which a baccalaureate (or higher) degree is necessary and proper preparation. During this same period at least half of the nation's youth must seek employment in occupations for which one to three years of education and training beyond high school are necessary and proper.

Op. cit., p. 145.

society can only be solved by making available the proper kinds of educational opportunities. The trend is also receiving strong support from the leaders of business and industry, for they know that the progress of their enterprise, and perhaps their survival, requires men and women of great competence and imagination. These comments have special relevance to the State of New Jersey since it is a state with a large population that depends strongly upon an industrialized economy.

So the New Jersey State program in higher education, much more in the future than in the past, will require continual attention and review to ascertain that it is really serving the needs of the State's citizens and also providing in an effective and efficient manner the proper educational foundation for the State's continuing growth and prosperity. Consequently, it seems clear to the members of the Committee that there is a serious need for the creation of an agency that will carry out essential studies upon which it is possible to develop a satisfactory State program in higher education. This same agency should become the responsible body in the State to advise the governor and legislature upon organizational problems in the field of higher education and upon desirable kinds of coordination to achieve economy as well as efficient results.

#### A Council for Higher Education

Such considerations have led the Committee to propose, as its initial recommendation, that appropriate steps be taken to create a permanent advisory and recommendatory council, to be known as the New Jersey Council for Higher Education.

The duties of the proposed Council should include but not necessarily be limited to the following:

1. The Council for Higher Education should give special and continuing attention to the needs of the State for specialized personnel along with the ability of the State's system of higher education to provide such personnel.

2. The Council for Higher Education should serve as the Governor's advisory body on higher education. It should, upon his request, provide him advice on issues that may arise in connection with the allocation of state funds to state institutions for their capital and operating expenses. The Council for

Higher Education should carry out such other assignments as the Governor finds essential in order that he may have necessary information that will make possible the maintenance of an effective system of higher education that will meet the needs of the State.

3. The Council for Higher Education should be a continuing source of information and advice to the citizens of New Jersey and their elected officials. As a means toward this end, the Council should make biennial reports to the public on the status and needs of higher education in the State.

4. The Council for Higher Education, through its staff, should provide those private colleges and universities lacking regional or professional accrediting status an advisory service that will enable them to prepare for accreditation. While providing such assistance, the Council for Higher Education should serve as a liaison agency with appropriate accrediting agencies. This recommendation refers only to institutions of collegiate grade, not to all private post-secondary institutions.

5. The Council for Higher Education should provide assistance and advise to the Governor in the interpretation and implementation of Federal legislation that has relevance to New Jersey colleges and universities. In general, it is anticipated that the Council for Higher Education would keep abreast of Federal legislation that has significance to the New Jersey program in higher education.

6. The Council for Higher Education should undertake studies from time to time that would provide significant information upon such subjects as the creation of new-type institutions, the teaching and research functions of state colleges, and universities, the economic status and the general welfare of faculties in the state colleges and university, and the economic problems of college students in the State.

7. The Council for Higher Education should develop, as soon as possible, an up-to-date estimate of funds needed for physical expansion at State institutions. The Committee believes that the Strayer estimate of \$134,322,269 for the presently needed physical expansion is too low.

The membership of the Council for Higher Education should consist of seven lay persons, one new member should be appointed each year by the Governor for a term of seven years. It is hoped that the seven members of the Council for Higher Education would be individuals of independent judgment but would have some experience in the affairs of higher education.

The Council for Higher Education should select and have the services of an executive officer of great competence in the field of higher education. The executive should also have the assistance of a small professional staff in order that the Council for Higher Education may be able to carry out its functions.

It is to be expected that the supervision and control of some state projects in the field of higher education may be handled best by special, temporary commissions appointed for the purpose by the Governor of the State. In the selection of the membership of such commissions and in the evaluation of their findings, the Governor may find the services of the Council for Higher Education to be invaluable.

Altogether, the Council for Higher Education should provide an answer to the present need for a permanent group, unburdened by other responsibilities, to give continuous and penetrating attention to New Jersey's problems in higher education. It should serve to keep the system in proper focus. It should be valuable in keeping New Jersey abreast of social and economic demands.

The proposed Council for Higher Education, although it may differ in certain respects from somewhat similar agencies recently developed in several other states, has been conceived in line with present trends. As Lyman A. Glenny has pointed out, all the state coordinating bodies with a concern for higher education that have been established in the country since 1950 have had higher education as their sole interest, and almost all have been of the "multi-board coordinating type", which provides for coordination by a central body that allows existing boards or newly established boards to operate institutions "individually or grouped into sub-systems".<sup>15</sup>

<sup>15</sup>Glenny, Lyman A., Autonomy of Public Colleges the Challenge of Coordination (New York McGraw-Hill Book Company, 1959) p. 264.

Attention may also be called to the fact that the detailed recommendations being made in regard to the Council for Higher Education, as further considered in the organizational chart on page 41 as well as in much of the discussion that follows, reveals the Committee's belief that in New Jersey it would be preferable to have the various "sub-systems" or groupings of higher educational institutions in the State, as later described, operated by their respective boards of trustees, accountable primarily to the Governor and the legislature. The Council for Higher Education, it will be recalled, is an advisory body. To the extent that this point of view is legally permissible, it becomes an essential part of the Committee's recommendation.

The Committee recognizes that the provisions of the State Constitution which require all governmental functions to be assigned with a principal department may not permit such an arrangement. Members of the Committee do not consider themselves competent to make such a determination and have not attempted to do so. If, however, it is necessary to allocate the institutions of higher education within a principal department, it is suggested that a new Department of Higher Education be created and that the proposal for the Council for Higher Education be modified to meet the requirement of a departmental operation. If a new department is, in fact, required, the Committee would recommend that the actual administrative controls and regulation of the individual institutions and the groupings of institutions located therein be held to an absolute minimum.

#### Rutgers University

As already implied, New Jersey must take urgent steps to plan for a substantial increase in the facilities and opportunities that are made available for undergraduate instruction. The Committee believes, however, that Rutgers University should not attempt responsibility for too large a fraction of the anticipated need. The future burden of undergraduate instruction can and should be resolved in other ways. Furthermore, it appears to the Committee that the proper mission of Rutgers University is essentially in another direction. Thus, it is recommended that the major part of the expansion of Rutgers University should be of a vertical nature rather than horizontal. That is, the University should envisage a considerable expansion of its graduate and professional programs

and leave to other institutions much of the responsibility for taking care of the large increase in numbers of undergraduate students.

The State of New Jersey, with its vast business and industrial complex along with its immense supporting population, is rapidly approaching a point of crisis unless its educational establishment can begin to produce many more specialists than are now being produced in the biological and physical sciences. The following statement by L. V. Berkner has particular relevance for New Jersey

...the ideas underlying the technology of today are abstruse and highly mathematical in nature. So to comprehend these ideas, and to manipulate the technology borne of them intelligently, we require men of very advanced education in substantial numbers. This does not mean a mere four-year college education, for the ideas involved are at the very boundaries of knowledge. The education required is really advanced. Command of the new technology and of the science from which it is derived requires postgraduate education to the doctor's degree and beyond — not less than eight years beyond the high school.<sup>16</sup>

The State's need for well-educated people in most of the professions and in the social sciences is virtually as severe as in the physical and biological sciences. Moreover, it would be a tragic mistake to ignore the limited opportunities that now exist in the State to engage in advanced study in the humanities and related disciplines.

The educational resources needed for advanced study and research are usually quite different from those that are required for undergraduate instruction. The libraries along with the laboratories and equipment for advanced study must be up-to-date and permit effective utilization. The research scholar who guides the instruction of advanced students must possess special abilities and kinds of experience that may or may not be found in the person who is essentially concerned with undergraduate teaching. In fact, the professor whose chief duties are in the graduate school of a university ordinarily works intensively with a small group of advanced students.

<sup>16</sup>Berkner, op. cit., p. 276.

So, if the premise of the Committee with respect to the future of Rutgers University is acceptable, and the alternatives would seem to involve grave hazards, it is recommended that:

1. The enlargement and improvement of the physical resources at Rutgers University should be given primary consideration. It is urged that special attention be given to the library and its contents along with the laboratories and other facilities and equipment that will provide the institution the possibility of expanding and improving the quality of its graduate program.

The Strayer Report suggested that \$65,619,840 is needed by Rutgers University for increased facilities to take care of the institution's growing enrollment for the period 1964-1970. It is the judgment of the present Committee that this estimate is much too low.

2. Rutgers University should be provided the means to make it possible for the institution to seek additional scholars of professional accomplishment who can initiate new graduate curriculums and programs of special studies and also enhance the quality of some of the programs now in existence. More outstanding scholars are needed to attract significant support from government, private foundations, and industry for major programs of research and also provide an inducement for a larger number of advanced students of unusual competence to want to study at Rutgers.

3. The salary schedule at Rutgers University, especially for members of the graduate faculty, must be made competitive with the salary scales that are common at other great universities. A new salary scale should be developed by the President and the institution's Board of Governors with the concurrence of the State Budget Director and the Governor.

4. In the future, the President and Board of Governors of Rutgers University should submit the institution's proposed annual budget only to the Governor.

5. Rutgers University should be provided every possible assistance in order that the institution may move ahead much more rapidly in the creation of a new State Medical Center.

This Center should include a medical school, with opportunities for post-graduate study; a school of dentistry, a school of nursing, and a school of public health. The Center must be so located and so conceived that it may draw upon the resources of the graduate schools of Rutgers University and thereby utilize the assistance of outstanding scholars who work in such disciplines as the biological sciences and chemistry, this kind of relationship with a university is a prerequisite for the successful operation of a modern medical center. The need for persons well-educated in the various medical and health disciplines is growing at an alarming rate, and New Jersey can no longer ignore the demands being properly made on it to provide at least a substantial share of the State's needs. In fact, New Jersey must be prepared to support more than one medical school.

As the population of the State grows, especially in certain geographic areas, some new four-year institutions may be needed. When the need for a new four-year institution becomes apparent, it is suggested that the college be created as a branch of an existing institution. At an appropriate time, then, the school could be "spun off" as an autonomous institution. In line with this suggestion, it appears that the Newark Division of Rutgers University should become an autonomous institution within five years. The future status of the Camden Division of Rutgers University needs study beyond that which the present Committee was able to give to the subject.

#### The State Colleges

The continuing need for elementary and secondary teachers in New Jersey requires that the State Colleges maintain their present programs in teacher education. But the further expansion of these institutions, which is strongly recommended, should be based on the assumption that the institutions will broaden the base of their course offerings to provide curriculums usually included under the heading, "liberal arts." Some of these institutions should also make plans to offer courses in business and certain other fields of study that are of importance to the State and its citizens. If Rutgers University is requested to limit its undergraduate expansion, the State Colleges must be expected to increase their enrollments by 10 to 15% per year over the next five years. Such an increase, in fact, is imperative.

The broadening of the base of the curricular offerings of the State Colleges, it should be noted, strengthens rather than weakens the traditional teacher-training function of these institutions. First, it is now generally acknowledged by educators that preparation for teaching is best conducted in an academic atmosphere which is strongly imbued with the liberal arts. This is especially true in this day of "the new mathematics", "the new science", "the new social studies", and so on. Second, institutions which have broadened the base of their academic programs from single-purpose curriculums that are concerned with the education of teachers have found that such an action does not diminish the number of students within the institution who prepare to teach. Such institutions, in fact, find that many students who enter college with the intention of specializing in fields other than teacher education ultimately transfer to teacher preparation programs. Thus, in actuality, colleges that have broadened their curricular offerings have seen their student enrollments in teacher education grow rather than diminish.

Because of the special problems that will now be faced by the State Colleges as they move into new kinds of responsibility, and because of the growing importance of the role of the State Colleges in the State's educational program, the Committee recommends that:

1. A State College Board of Trustees be established to govern the system of State Colleges, and that an executive and small staff be selected by this Board to assist it in the performance of its duties. The State College Board of Trustees would consist of seven lay members appointed by the Governor for overlapping terms of seven years.

This recommendation is in line with the trends resulting from analyses that have been made in other states. Specifically, it has been discovered that state boards of education and commissioners of education have been forced to carry, especially in recent years, extremely heavy responsibilities with respect to the public schools. To add to this burden the responsibility of the overall administration and coordination of the state program in higher education has proved to be too heavy. In other words, to expect a single board and its executive officer to provide effective and efficient management of the total state educational enterprise from kindergarten through graduate school is, indeed, unrealistic. Thus other states that

have recently reviewed their state operations, in order to give proper and necessary direction to their educational programs, have established specific governing boards to govern segments of the complex network of institutions devoted to post-secondary education.<sup>17</sup>

The Committee feels, therefore, that the time has come for New Jersey to establish a State College Board of Trustees whose primary concern would be guiding the network of State Colleges.

Because teacher education will continue for many years to be an important aspect of the program of the State Colleges, it is further recommended that the State Commissioner of Education be an ex-officio member of the State College Board of Trustees so that desirable liaison may be maintained between the departments of education of the State Colleges and the elementary and secondary schools of the State. In addition, it is proposed that the State Board of Education, as the official State agency for the certification of teachers, be designated as the state approving agency for all teacher-education programs maintained by the state colleges as well as by all other colleges and universities in the State.

2. Adjustments be made in State procedure so that the president of each State College would submit his annual budgetary request to the new State College Board of Trustees. After suitable review and the possible making of adjustments in consultation with the institutional president, the State College Board of Trustees would submit the budget, along with the other State College budgets, to the Governor in lump-sum form for review and action. Possible adjustments made by state fiscal officers in the total amount of the State College budgets would be referred back to the State College Board of Trustees for its consideration in making appropriate changes in the individual budgets of the State Colleges.

3. A new salary schedule for the State College system be developed by the State College Board of Trustees and the presidents of these Colleges in concurrency with the Budget Director and the Governor. This schedule should be competitive with the better institutions of liberal arts, and it should be so conceived that the president can negotiate advantageously

<sup>17</sup>Glenny, Lyman A., *ibid.*, p. 264.

with prospective faculty members and also provide proper remuneration to outstanding talent on his own staff.

4. Although it is realized that there will be some variation in the amount of time required for each State College to extend the base of its curriculum offerings, each college should be expected to initiate curricular programs in addition to those in teacher education within a period of five years. The commitment to teach in New Jersey as a part of the admission requirement for students entering the State Colleges should be dropped immediately.

5. Measures to be taken immediately to make possible the expansion of the facilities and staff that are essential to the extension of the program offerings and the admission of larger numbers of fulltime students at each State College. The Strayer estimate of needed State appropriations for capital expenditures for the State Colleges to provide for increased enrollments between 1964 and 1970 is \$51,033,240. The Committee believes that this estimate is too conservative.

6. Authority be delegated to the president of each State College to carry out his proper administrative responsibilities within a framework of a broad set of policies established by the State College Board of Trustees; this would include the administration of the institution's budget within a broad delegation of authority. Moreover, the right should be granted each president to appoint his administrative staff within a framework of policies to be developed by the State College Board of Trustees and the State Civil Service.

#### Newark College of Engineering

In the case of the Newark College of Engineering, the Committee recommends:

1. Although further expansion of the undergraduate program is desirable and should be encouraged, major effort should be directed to an expansion of the institution's graduate programs. This will require a complete review of available equipment and facilities. The Strayer Report recommended an appropriation of \$17,669,189 for capital outlay at Newark College of Engineering between 1964 and 1970. This figure would now appear to be too low.

2. A salary scale should be established by the College President and his Board of Trustees in concurrence with the State Budget Director and the Governor that would make this institution competitive with other outstanding engineering institutions when recruiting teaching and research personnel.

3. The annual budget for the Newark College of Engineering should be submitted by its President and Board of Trustees directly to the Governor for appropriate review and action.

#### The County Community Colleges

There appears to be widespread interest on the part of citizens of several counties of the State in the development of two-year community colleges. The Committee applauds such interest, for the soundness and desirability of the community college movement are obvious. The proposed two-year colleges, with their terminal curriculums, their transfer programs, and their programs of continuing education for adults can do much for the people of the areas they serve. Moreover, a well-conceived system of community colleges can make a major contribution toward the maintenance of the economic welfare of the State.

The Committee believes that those concerned with the creation and development of county colleges can learn much from other states, for instance, history reveals a tendency for new community colleges to overemphasize transfer programs, whereas so-called terminal programs may actually be more important in terms of student needs and in meeting the requirements of the community and the state. It is the judgment of the Committee, after studying much information that has come to its attention, that counties in New Jersey will need guidance beyond that which they are now receiving in analyzing the problems they must face in developing appropriate kinds of institutions. Among such problems, after the initial planning and negotiations for the institution have been completed, are the selection of a competent administrative and teaching staff and the design of curriculums that will serve the needs of the students and those of the community. Once these county colleges are under way, their administrators should be involved in a continuing exchange of information that is related to the analysis of common problems. So, the Committee recommends that a Council of County College Trustees be established. The members of this body would be

the chairmen of the boards of trustees of the several county colleges. In addition, the president of each county college would serve as an ex-officio member of the Council of County College Trustees, but without voting power.

The Council of County College Trustees, it must be emphasized, is not designed to interfere with the autonomy of county colleges at the local level. It is anticipated, however, that the proposed organization would serve as a vehicle to collect and forward to the Governor the individual college requests for State support, even though this support may be based upon precise formulas. Essentially, the Council of County College Trustees would provide a specific medium on a statewide basis for the discussion of common community college problems and for the analysis of strengths and weaknesses in the overall community college program.

The Council of County College Trustees should be established immediately to include the chairmen of the existing College Boards of Trustees. At an early date, the Council should appoint an able executive secretary, a person who is experienced in the problems of community colleges, to head a small staff to conduct the business of the Council and to provide consultant services to existing colleges and to county groups that are in the process of organizing county colleges. The need for such services is immediate.

The Committee urges that county college authorities and State agencies devote special attention to the problems associated with the organization of terminal programs. These programs should be designed to meet the occupational and professional needs of the particular community or communities served by a specific county college.

Much of the budget planning that has been carried out in connection with the community colleges in New Jersey has been based on an assumption that the actual cost per year of a student's education is about \$600. Common experience in this part of the United States reveals that such a figure is inadequate, the actual cost is closer to \$1,000.

The Committee recommends, therefore, that the present State statutory formula be revised so that each county college be guaranteed an amount of State operating support that will not be less than one-third of the real cost of conducting the program.

It is clear to the members of the Committee, in view of the proposed State organization and the history of the State's relationship with Trenton Junior College, that this particular institution should be included within the county college framework as just described. The Committee understands that a decision for its inclusion must involve action on the part of the present institutional Board of Trustees, officials of the city of Trenton, and the officials of Mercer County.

#### Graphic Summary of the Organizational Structure of Higher Education in New Jersey

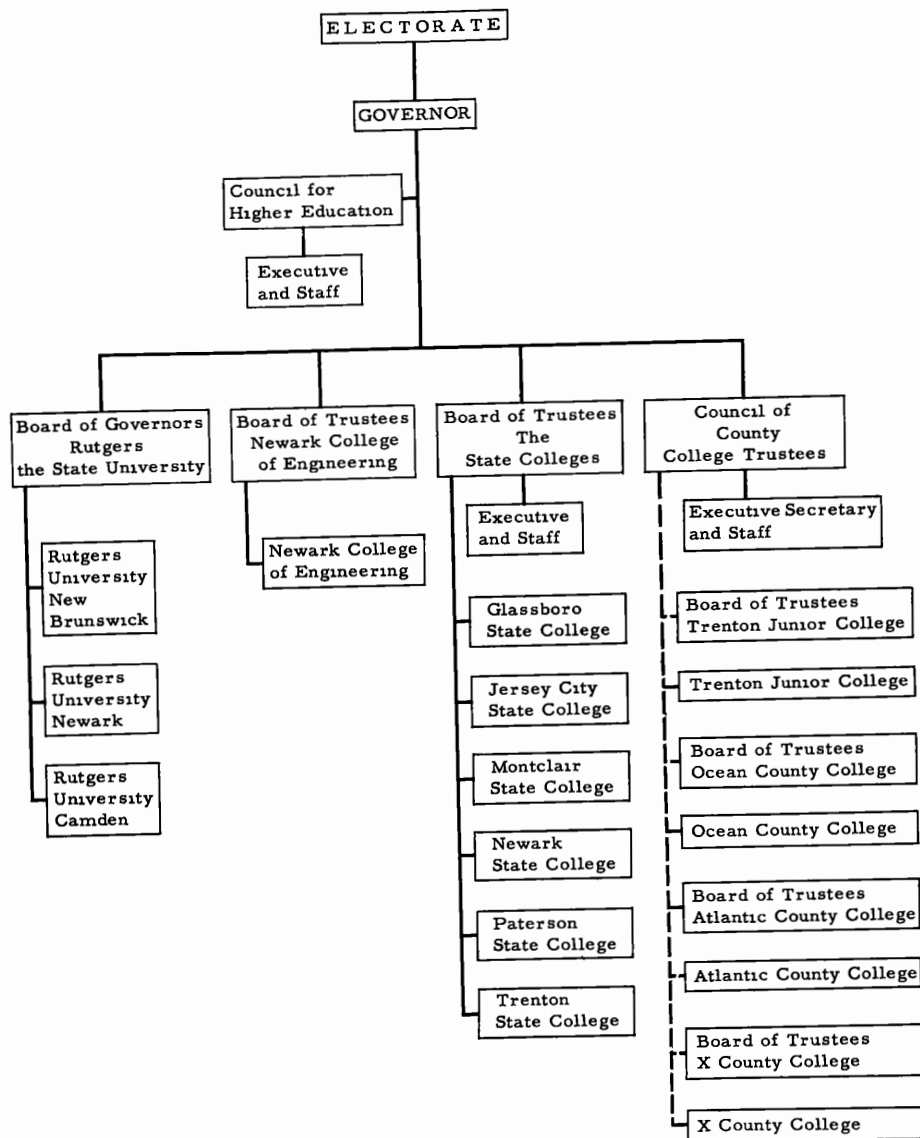
An organizational chart is shown on page 41 that provides in summary form the proposed plan of the New Jersey State system of higher education that has been presented. A complete understanding of the chart, however, demands a careful reading of the discussion presented in the preceding pages.

The Committee has proceeded on the assumption that the changes it recommends can be accomplished despite the possible existence of statutes that might provide obstacles. It is acknowledged that some of the proposals being made may require new legislation and some of the recommendations may impinge on the autonomy or rights of areas other than education within the State governmental structure. Such possible difficulties could not be anticipated by the Committee. Consequently, the Committee recognizes the necessity of having state legal authorities provide consistency to the Committee's recommendations, especially as they relate to other aspects of the total state program.

#### Student Aid

The Committee is impressed with the State's efforts to provide financial assistance to students. However, it seems clear that further extensions of these efforts are needed. Otherwise, large numbers of qualified youth will be denied the opportunity to attend college.

For the past few years, the number of scholarships awarded by the State has been equal in number to 5% of the graduates of high schools in the preceding year. These scholarships are awarded on the basis of ability and need, the maximum amount of each scholarship is \$400.00. The Committee recommends that the State scholarship program



be extended at the present time by increasing the 5% in the above-mentioned formula to 8%.

The Committee also urges that every effort be made to extend the existing system by which students can obtain loans from banks at low interest. It is suggested that banks, schools and other appropriate agencies be encouraged to create a publicity effort to make known the availability of this service to students and parents in the State.

Furthermore, because students lack an adequate opportunity in the New Jersey State-supported institutions to register for courses in the liberal arts, or for programs of graduate and professional study—hence making it necessary for large numbers of New Jersey students to pay the tuition charges of private institutions—the Committee recommends that each New Jersey student, graduate or undergraduate, who is attending a private college or university in the State on a full time basis, be awarded \$200 per year toward tuition. This amount should not be taken into consideration when figuring the amount of State scholarship assistance that may be awarded to a student, the amount, in fact, should represent an addition to any State scholarship that a student might normally receive.

Although the Committee believes in the importance of scholarship programs, it is aware of the fact that large numbers of students prefer to go as far through college as they can by "paying their own way." This attitude is in keeping with the American tradition and should be encouraged. As a supplementary fact, every institution has a considerable need for a great variety of part-time services which students can provide. Consequently, the Committee recommends that \$1,000,000 be appropriated annually by the State to subsidize student workers at the colleges and universities, public and private, in New Jersey. The amount distributed to a particular institution to fund the student project in that institution would be equal to the same fraction of one million dollars as the institution's number of fulltime New Jersey students is to the total number of fulltime New Jersey students attending all State institutions. The actual awarding of funds to individual student workers would be administered by institutional student counselors, they should operate within a broad framework of policy enunciated by the proposed Council for Higher Education. In the distribution of the funds, student counselors should

give attention to a student's needs, the student's desire to work as a means toward obtaining an education, the student's apparent potential for success in later life, and other pertinent factors. This particular program of student aid should assist many deserving students, not normally eligible for scholarships, to obtain a college education.

#### Miscellaneous Recommendations

The Committee during its deliberations gave consideration to several subjects related to its investigations that appeared to merit attention. The Committee believes that some of these subjects deserve further study and might very well receive special attention from the proposed Council for Higher Education.

1. The Committee recommends that a study be made of the New York State Dormitory Authority and the possibility of creating a somewhat similar agency in New Jersey. The New York State Dormitory Authority has made it possible for public and private colleges and universities to obtain loans at low interest rates for the construction of new buildings. The Authority—a carefully conceived agency—is now responsible for a vast renovation of the higher education establishment in New York State.

2. The Committee recommends exploring the possibility of creating in New Jersey a new type of graduate and post-graduate Institute of Applied Science. Such an institute would supplement rather than replace any unit in the State system.

New Jersey is fortunate indeed in having within its boundaries some of the truly outstanding scientific scholars in the world, they are members of the staffs of the remarkable collection of industrial research laboratories that exist in the State. Consequently, there appears to be merit in the suggestion made several times to the Committee that an advanced teaching and research institute could be created in New Jersey that would draw upon the talents of many of these scholars. It is evident that a small resident staff would be essential to provide the core of the Institute's program. The proposed institution, if properly conceived, might well become in the future, as is true at the present time of the Institute for Advanced Study at Princeton, a focal point for State leadership in advanced scientific and technological study and research.

The Institute might offer courses leading to the Ph.D. and also offer opportunities for post-doctoral study. The Committee, during its deliberations, received from an influential segment of New Jersey industry an indication of strong support for the Institute concept.

3. The Committee is keenly aware that there are a large number of students in the State who are unable to qualify either for loans or for scholarships. Many of these young men and women, unfortunately, come from families where the benefits of a higher education have received limited consideration. Yet, many of these young people possess the capabilities to become outstanding citizens. Thus the Committee urges that serious consideration be given to the possibility of incorporating the so-called work-study idea into selected terminal programs at the county colleges. The work-study plan, as the term implies, alternates a period of study at the institution and a period of employment in an appropriate business or industry. This plan, followed for many years in such outstanding institutions as Antioch College, the University of Cincinnati, and Northeastern University, requires the active assistance and support of a large number of industries. This cooperation becomes possible when business leaders understand the merits of this plan which enables students to earn while they study. The work-study program, it may also be added, has won wide recognition as a superior form of educational endeavor.

The Committee has initiated a separate study, to appear later as a supplementary report, that will consider the significance of the work-study plan as applied to terminal courses in two-year community colleges.

4. There is a pronounced movement in many states of the nation toward making it possible for able high-school graduates to study at home and then stand for examination to obtain a limited amount of college credit. Thus a large number of superior students are now entering some of the country's leading colleges and universities with advanced standing, as a result, they can graduate in a shorter period of time than would otherwise be possible. The same kind of home-study program can also enable adults to continue their educational efforts, possibly leading to college degrees.

The Committee recommends that careful consideration be given to the creation of a state-supervised home-study program

that would serve such purposes as outlined above. The ideal home-study program might capitalize — at some future date, if not now — on the potentials inherent in educational television. Certainly the overall advantages of a well-conceived home-study program are indisputable. Many educational leaders believe that a systematic home-study program, designed essentially to provide advanced standing at college or university, may prove to be one of the most important innovations in today's changing academic pattern. Thus the idea deserves the immediate and serious consideration of New Jersey academic authorities.

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The members of the Committee present this report to the Governor and the Citizens of New Jersey with due humility, for during the past year the Committee has become increasingly aware of the magnitude of the task assigned to them. It is their sincere belief, however, that their recommendations suggest the first and essential steps for New Jersey to take if there is to be success in realizing a much improved program of service to the youth of the State. To assist in bringing this about has been the goal of the Committee and it must likewise be a major objective of the State, nothing could be more important at the present time.