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A CALL TO ACTION

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in New Jersey

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A CALL TO ACTION

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INTRODUCTION — THE PROBLEM IN BRIEF

For nine months The Citizens Committee for Higher Education in New Jersey, through certain of its members, has been reviewing previous studies, consulting with officials of other states, conducting surveys, and working cooperatively with the State Department of Education to develop this document for the citizens of the state.

Accepting Governor Hughes' challenge to "plan for the future," the Citizens Committee will present in this paper proposals which are *comprehensive and realistic*. They are based *not* on what has been feasible or has been the practice in the past, but on the *goals* which need to be attained in the future. As such, these proposals differ from those in previous studies, and even differ from analyses of the problem of higher education as presented by the State Department of Education, which recently announced that a major "anticipated" growth in educational facilities could be expected by 1968. The Committee takes a longer view than 1968 and even than 1970, both because the magnitude of the problem demands it and because the lag-time between appropriations and actual facilities requires the long look. The Committee also rejects the philosophy that moderate funds can cope with the problem and that the growth of public institutions can be cautious and gradual.

This Call to Action will attempt:

- (1) to present a concise, factual description of the present crisis in higher education in the state
- (2) to forecast the size of the problem as it will be in 1970 and 1975
- (3) to suggest a series of actions to be taken. The scope of these actions is so great that they can be accomplished in 1975 only if all work together cooperatively—the Governor, the Legislature, State Education officials, and the citizens.

New Jersey's Crisis in Higher Education

The word "crisis" is not too strong for the plight of public higher education in New Jersey. Both quantitatively and qualitatively the present system is inadequate for the tasks at hand.

To attempt to lay the blame for this situation at the feet of any individual, any group, any department is a futile exercise. In large part, the situation that confronts us today arises from the fact that in the past New Jersey was singularly fortunate in matters of higher education—and in the financing of higher education—and its citizens and their elected representatives liked it that way. Because of New Jersey's geographical rela-

tionship to other states, notably to New York and to Pennsylvania, it used to be possible for it to seize the apparent advantages of being a large-scale exporter of students. And, because for its size New Jersey is well-endowed with private institutions, in the past it could rely upon these to a degree not possible in most other states.

Fundamental changes on the national scene prevent New Jersey from continuing its preponderant dependence upon others. Other states, too, are under considerable strain to meet the demands being made upon their public educational systems, and many no longer offer their once cordial welcome to New Jersey students. Private institutions—while most of them can and will grow—cannot carry as large a proportion of the load as they have in the past.

The national system of higher education as a whole is caught in the strain of major, unavoidable pressures. These include the dynamic growth of our national population, changes in social patterns throughout the country that have been affecting and will continue to affect college attendance, and, not least, the unprecedented intellectual challenges of our time.

These challenges are part and parcel of the sort of complex, scientifically invigorated, technologically potent society we have evolved in this country over the past fifty years, poised, as this society now is, in a critical contest for world leadership. On every side, in virtually every kind of productive enterprise, the nation shows marked and steadily rising demands for highly skilled and highly educated manpower. And it shows, at the same time, marked and rising demands for the fruits of advanced research in many different fields of knowledge. To meet the challenge of providing talented manpower and new knowledge requires much more than routine forms of training such as might equip men to hold static and readily limitable jobs. Expanded opportunities at every level are demanded. The technical institute and the 2-year community college have key roles to play, as do professional schools and the post-graduate programs of the colleges and universities.

Applied to New Jersey all this means that steps must be taken to develop an adequate number of opportunities for study at every level. This is especially so because New Jersey is a heavily industrialized, technologically oriented state, highly dependent on trained and educated manpower. Therefore, it must ensure that the young person who seeks vocational training, or the one who wants to enter law or medicine, or

the potential research scientist is as well served by the public institutions of this state as is today the high school graduate who seeks training in a state college to be an elementary or secondary school teacher. And, the educational opportunities available must be of such excellence that the graduates of our public institutions will be prepared to compete effectively, and on even terms, with the products of the best institutions developed by the most advanced and enlightened of our sister states. It is clear, of course, that the rewards to the individual provided by such opportunities go far beyond the material. By enlarging awareness and sharpening sensitivities, education to the proper level of the individual's ability provides the gift of a life richer in matters of the mind and spirit than would otherwise be possible.

No time for further delays or holding actions remains to us. The time for action has come and failure now to provide a public system of higher education adequate to meet the needs of the young people of the state, and of the state itself, will only be counted a disaster in the years ahead.

The record makes it all too clear that the New Jersey citizen's past unwillingness to be taxed has played a principal role in bringing about our present, dangerously adverse situation, in which:

- there are only 30,000 places for New Jersey students in our own public colleges and the state university at a time when more than 60,000 are going out-of-state for an education.
- 4,000 well-qualified sons and daughters of tax payers are refused admission to Rutgers the State University.
- 6,000 are denied entrance to the six state colleges.
- five states, Pennsylvania, New York, Massachusetts, Ohio, and Virginia are asked to provide college facilities for 30,000 New Jersey residents—as many as the *total* now in all New Jersey public institutions.
- our state, which ranks *third from the top* in the nation in financial support of its elementary and secondary schools ranks *second from the bottom* in per capita support of its colleges and universities.

Combined with a rapidly growing college age population and their rising need for education beyond the high school, these facts point up several critical questions—namely,

- Why, in the 15-year period 1950 - 1965, when it was obvious that the post-war "baby boom" would bring large college demands in the early 1960's, did the State appropriate only \$150 million for all capital needs

while in the same years other states were spending *two to three* times that amount on a per capita basis in anticipation of the crisis?

- Why, as late as 1964, did the tax payers approve a bond issue of only \$40,000,000 instead of the \$134,000,000 requested by the State Department of Education?
- Why, as of December 1965, is there no "master plan" for higher education which adequately deals with the expected ten year *increase* of more than 100,000 New Jersey high school graduates who will seek college admission?

The Citizens Committee considers this evidence and these questions to be of grave concern to parents of future college students, to the students themselves, to the leaders of a highly industrialized state, and to the public officials whose ultimate responsibility it is to provide New Jersey with a dynamic and high quality system of higher education.

The time appears to be ripe for action. Certainly action is required, and it can be no longer by half-way measures. As public attention to the problem grows, public recognition must be gained for the need for action which is bold and far-reaching. The scale of today's deficiencies and the clearly predictable pace of the future combine to make this an inescapable conclusion.

The Citizens Committee

Composed of leaders in all major segments of the New Jersey community, the non-partisan Citizens Committee aims to arouse the public to the urgent problem of the state's inadequacy in the whole range of higher educational services, and to support measures which will ensure a sound, long-term solution.

The Committee functions under the chairmanship of Robert F. Goheen, President of Princeton University. Other officers are: First Vice Chairman—Elmer W. Engstrom, chairman, Executive Committee, Radio Corporation of America; Second Vice Chairman—James Hayward, President, Atlantic City Electric Company, Secretary—Henry Chauncey, President, Educational Testing Service, and Treasurer—C. Malcolm Davis, President, Fidelity Union Trust Company.

The Problem in Brief

The discussion which follows will amplify, at some length, the issues, the various solutions, and the financial costs. Briefly, the following box presents a summary of the salient facts which need to be kept in mind in thinking about the problems of New Jersey Higher Education.

TABLE 1
Salient Facts Relevant To
New Jersey Higher Education 1965 to 1975

	EST 1965	REASONABLE TARGET 1970	REASONABLE TARGET 1975
ENROLLMENTS			
Total New Jersey Students in College	112,500	158,000	221,500
New Jersey Students Going			
In-State	50,500	101,000	169,500
Out-State	62,000	57,000	52,000
In-State Undergraduate Enrollments (N. J. students only)			
Public	30,500	71,000	129,500
Private	20,000	30,000	40,000
Grad and Prof Enrollment (public)	2,700	5,000	8,500
COSTS			
Capital Funds Required (millions), cumulative totals, 1965 to designated year	\$150 ⁽¹⁾	\$315 ⁽²⁾	\$427 ⁽³⁾
Annual State Operating Funds (millions), exclusive of scholarships, bond interest and medical education	\$ 44	\$ 79	\$126

(1) Sum needed *now* to provide for 1970 enrollments

(2) \$150 million *plus* 3 units of \$55 million each

(3) \$150 million *plus* 5 units of \$55 to \$60 million each by 1972

Part I

BACKGROUND STUDIES OF THE PROBLEM

There is nothing novel about a paper on the needs of higher education in New Jersey. In fact, one might say in truth that in the past ten years the subject has been studied to death.

Since 1955 there have been six major studies, fact papers or analyses (aside from a special medical study) issued on the urgency of more adequate provision for public facilities at the college and university level within the state. In addition, the Strayer Report is being updated. Briefly these are.

1956 "New Jersey's Undergraduates 1954-1973"

Published by N. J. State Department of Education (also short version called "The Closing Door to College"), analyzed "baby boom" of Post-WWII, said growth to 1973 would be an increase from 48,600 to 155,000.

1957 "College Opportunity in New Jersey"

Continued the analysis of growth problem, and recommended capital appropriation. *Result:* the 1959 College Bond Issue of \$66.8 million.

1960 "Education Beyond High School: The 2-Year Community College"

State Department of Education advocated a broad expansion of Junior Colleges around the

state. *Result:* legislation permitting establishment of 2-year County Colleges *after July 1, 1963.*

1961 "Higher Education in N. J."

League of Women Voters analyzed numbers of high school graduates, college-going percentages, economic needs of state, and recommended broad expansion of *public facilities in all parts of the state.*

1962 "The Strayer Report" ("The Needs of New Jersey in Higher Education 1962-1970")

The *best known* and *most frequently cited* of all reports, said "the undergraduate load in public institutions must *more than double* from 1960-1970," and in addition must make provision for 4,073 graduate and professional students. *Recommended* \$134,000,000 for capital construction. *Result:* November 3, 1964 election voted \$40,000,000—*leaving \$94 million still needed.*

1964 "The Newsom Report"

Issued by the Governor's Committee on N. J. Higher Education. Stated *Strayer estimates* were *conservative*. Recommended: large capital appropriations, major salary increases, more freedom and flexibility in the structure of New Jersey higher education.

1965 "Updated Strayer"

Now in preparation by the State Department of Education to bring 1961 figures up to 1965

As will be seen by the above summaries there has been a series of thoughtful reports issued in the past ten years, and some of these have resulted in capital appropriations, *though not of the magnitude required to deal adequately with the mounting problem*

In the past 15 years there have been only four bond issues, and ten small annual appropriations out of operational funds, as follows:

Summary of All State Capital Appropriations 1950-1965	
Bond Issues	
1952-53	\$ 17,205,000
1958-59	10,252,500
1959-60	69,929,564
1964-65	40,500,650
	<u>\$137,887,714</u>
10 miscellaneous appropriations	9,076,200
Total Capital Investment	<u>\$146,963,914</u>

Part II

THREE MAJOR FACTORS IN THE PROBLEM

Why, then, one might ask, in view of these numerous studies under a variety of auspices, has not a long-term master plan been recommended by the Governor, approved by the Legislature, and funds voted by the taxpayers? This is one aspect of the question with which the Citizens Committee has been grappling as it has been seeking a solution

At least three factors have contributed to the stalemate and the climate of inactivity related to New Jersey's single most important problem. These are

(1) Lack of Acceptance of the Accuracy of the Predictions

Forecasting trends, extrapolating from past and present statistics, and making assumptions about a number of variables is a complicated business. Predictions of exact numbers five or ten years hence can always be challenged. Education, however, is in no different position from other areas of our society which are called upon to plan ahead. It requires courage to make and stand by such predictions. However, without such forecasting little progress would ever be made in our economic or educational establishments. The Citizens Committee is aware of the complexity of the variables in forecasting to 1970 and 1975 and in its data extensions has considered carefully such questions as

- How many New Jersey students will actually graduate from high school in each of the ten years to 1975?
- What percentage of graduates will want to go on to some form of higher education?
- What numbers are now going to college out-of-state and for what reasons?
- If more college facilities were established in New Jersey, what would be the effect on the out-migration trend?

- Would expanded and additional facilities, particularly in local communities, attract additional students not now planning to go to college?
- How many more students will the private colleges be able to accommodate by 1975?
- How rapidly can the local county or junior colleges be established and how fast will their enrollments grow?
- What will be the graduate and professional requirements in the state?
- How will the expanded educational enterprise be staffed with competent and inspiring professors?
- What is an accurate unit cost per student for capital construction of new plant, for replacement of obsolete plant, and for expanding existing plant?
- How much will operating costs increase for the public facilities in an expanded Rutgers, six State Colleges, New Jersey College of Engineering, and in the new community colleges?
- Should new State Colleges be established to relieve some of the pressure on the existing six State Colleges?

Other questions, tangential to these, still further complicate the problems, and the function of the Citizens Committee has been to balance out the many factors, and to arrive at a *realistic* picture of the students involved, institutional growth required, and approximate cost estimates, all of which will be presented in this paper.

(2) An Escape from Responsibility—The Out-of-State Migration

Of the factors listed above the one of greatest importance in predicting the future public obligation is that of the greatly excessive and increasing number of New Jersey students taking

their college education in other states. To be sure, some of these students are going out-of-state for perfectly sound personal and educational reasons. The Committee fully supports the free choice of students to go wherever they wish. It is only when the proportion going out-of-state becomes very large that it is clearly symptomatic of deficient resources in higher education.

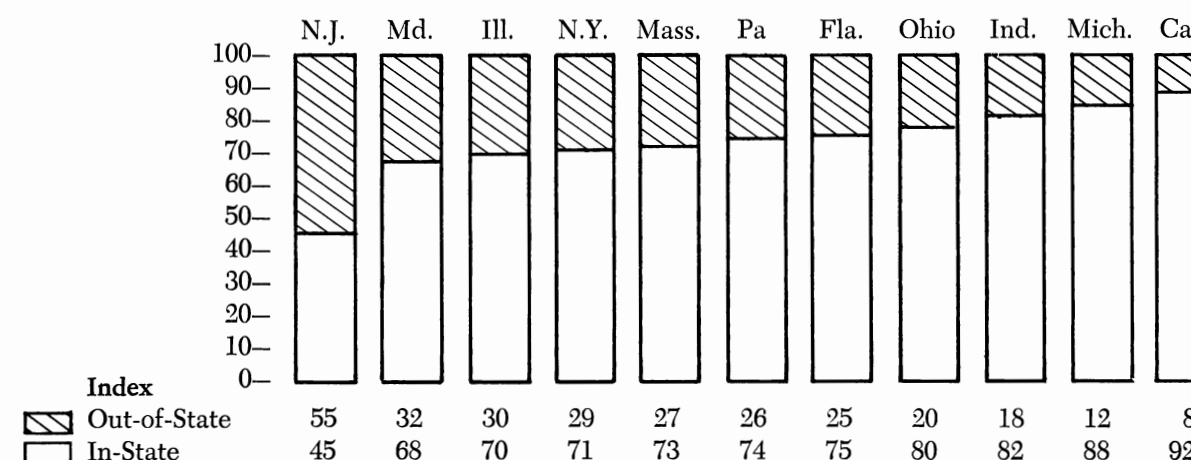
Because New Jersey suffers from a long history of inadequate public provision of college

opportunity, it has had to rely heavily on students being admitted to college out-of-state. In the fall of 1963, the last year for which nationwide figures were available, the U. S. Office of Education "migration study" showed that some 52,500 New Jersey students were out-of-state while only 44,600 were in-state.

The following table compares New Jersey with ten other populous industrial states to illustrate the degree of the deficit.

TABLE 2

Percentages of Students In-State and Out-State in 11 States in Fall, 1963



It should be noted that all of these states have vigorous plans for expansion, and are not counting on resting on their oars. Plans for four of these states—Ohio, Michigan, Illinois and New York—are shown in Part V of this report.

Another way of looking at the in-state and out-of-state problem is to compare the number going *out* with the number from other states coming *in* to New Jersey. For 1965 New Jersey out-of-state is 62,000 and in-flow is 12,000—a deficit of some 50,000 students.

New Jersey now ranks 49th among the states in the percentage of its residents who are educated within the state. Only Alaska, for obvious reasons, ranks lower.

The out-of-state problem raises *three questions*, each of which has been assessed by the Committee. (1) how many students are voluntarily going out-of-state as against those forced out by lack of places? (2) what are the financial implications for New Jersey students (and their families) of higher-cost, out-of-state enrollment? and (3) what is the potential loss to the educational and economic sectors of New Jersey life by such out-migration? As these are critical questions, several sections of the Appendix deal

further with them, especially Appendix A and Appendix B. A fourth factor—for how long, in view of enrollment pressures country-wide, can other states be expected to take large numbers of New Jersey students?—is extremely difficult to assess from any existing data. For purposes of planning, however, the assumption that New Jersey students *will* be able to find places out-of-state, is, at best, precarious.

(3) Appropriation of Public Funds

The final of the three factors contributing to a stalemate in action on a master plan for higher education in New Jersey has been the unreadiness of the citizenry to face the hard fact that substantial sums of money must be appropriated to finance the building and operation of a greatly enlarged public higher education system in the state.

It is common knowledge that, although it is one of the highest among the states in the nation in *per capita* income (ranking 7th), New Jersey ranks 48th in *per capita* expenditure for *higher education*.

There is a contradiction, however. The National Education Association reports that in expendi-

tures for *elementary* and *secondary* education New Jersey ranks in the *first five states* in the nation. Since this support is largely local, it is evident that citizens of New Jersey do believe in quality education, and that it is *only* in *higher education* that the State is woefully deficient.

As of November 1965, New Jersey and Nebraska were the *only two states in the nation* which had *neither an income nor a sales tax*. It does not, therefore, have the broad-based tax structure to support the operation of a strong system of public higher education or to amortize a bond issue of sufficient proportions to build the college facilities which are so badly needed.

It is primarily to overcome these three blocks to progress in higher education in the State that the Citizens Committee has been formed, to

draw together leaders of the industrial community with the civic, labor, fraternal, agricultural, and educational leaders of the State to present the facts of the case, and to urge the concerted support of all citizens in rectifying the educational imbalance which exists.

The institution of a broad-based tax is naturally unpopular, and with the State politically divided on this issue in the past, the result has been a postponement of the ultimate day of financial reckoning. The recent state election, however, has highlighted fiscal needs of New Jersey for major capital and operational appropriations, and higher education is the most urgent of these needs.

The time is now ripe for a frontal attack on the higher education front.

Part III

PRESENT AND FUTURE REQUIREMENTS FOR HIGHER EDUCATION

New Jersey has been well and repeatedly advised on the need for expansion of its system of public colleges and universities. The six studies in ten years have already been mentioned. Attention must be given to the warnings from other states that the continuing export of New Jersey students will not be welcomed as in the past.

There has emerged a common and consistent conclusion from these studies: the state needs a much enlarged system of public two-year county colleges, a major expansion of Rutgers the State University, a doubling of the enrollment capacities of the six state colleges and their conversion to multi-purpose institutions, the establishment of new state colleges, a substantial increase in the graduate and professional offerings, and finally, provision for extensive research facilities to enrich the industrial and cultural life of the state.

There is every reason to believe that the number of New Jersey students enrolled in colleges and universities will show a dramatic increase over the next ten years. *First*, the number of high school graduates will show a steady and substantial increase. *Second*, the rising demand for higher education will result in an increasing percentage of high school graduates going on to college. *Third*, assuming that New Jersey institutions of higher education respond fully to the needs of the state, many students who now postpone or forego higher education will be able to enter college. The anticipated growth of the county colleges can be expected to add additional numbers who might not have gone to college at all.

For the Citizens Committee to present a pre-

cise detailed plan for needed expansion of New Jersey higher education facilities would be *impossible as well as inappropriate* in this discussion. This responsibility lies with the State Board of Education and the State Department of Education. Nevertheless, a clearer understanding of the tasks confronting New Jersey may be obtained by developing an *illustrative distribution* of New Jersey students.

A Hypothetical Distribution of Undergraduate Students

The total enrollments used in making these distributions are based on preliminary projections of full-time enrollments of New Jersey students made available to the Citizens Committee by the State Department of Education. In round numbers these enrollment figures are as follows:

Full-Time N. J. Students	
1965.....	112,500
1970.....	158,000
1975.....	221,500

If anyone doubts that enrollments could grow by these amounts in ten years, he need only observe that *in the ten-year period 1953-1963, the increase in New Jersey college full-time enrollments was 115%—from 25,900 to 55,700 students!* Other states have experienced similar increases and are projecting substantial future growth.

The following hypothetical distribution based on these enrollment figures has one virtue—it *reduces* the number of out-of-state students from 62,000 in 1965 to 52,000 in 1975, thus beginning a "rollback" of the total New Jersey students now out-of-state *at the rate of at least 1,000 per year*.

TABLE 3
Hypothetical Distribution of
Full-Time Undergraduate Students
by Public and Private Institutions
In-State and Out-of-State
(1965 to 1975)

	1965	1970	1975
<i>In-State Public</i> (New Jersey Students Only)			
4-year colleges and university ..	29,500	60,000	96,500
2-year colleges ..	1,000	11,000	33,000
<i>In-State Private</i> (New Jersey Students Only) ..	20,000	30,000	40,000
<i>Out-of-State</i> (New Jersey Students Only) ..	62,000	57,000	52,000
TOTAL New Jersey Students ..	112,500	158,000	221,500
Plus, Out-of-State Students in New Jersey			
4-year public institutions ..	1,500	3,000	5,000
GRAND TOTAL ..	114,000	161,000	226,500

(The figures in Table 3 are rounded to nearest 500)

In all these figures, it is assumed that out-of-state students will amount to about 5% of the total New Jersey enrollment in the *public 4-year colleges*. As shown in the above, for example, the 226,500 figure for 1975 includes some 5,000 students from other states. This figure is a bare minimum, for a substantially larger percentage of out-of-state students should be enrolled if the "mix" found desirable by first-rank institutions elsewhere is to be attained.

It will be noted that *private* colleges are projected to *double* their enrollments of New Jersey

students by 1975. This may be optimistic, but it is generous in order to allow for (1) the potential influence of federal legislation such as the Higher Education Facilities Act, (2) the establishment of a New Jersey Dormitory Authority, and (3) a broad scholarship incentive plan. Other states expect the private growth to be only about 50% of 1965.

A possible distribution of students (both New Jersey and out-of-state) within the *public* institutions of higher education in New Jersey might be as follows:

	1965	1970	1975
Rutgers, the State University ..	11,900	22,250	32,900
Six State Colleges ..	16,800	33,250	54,000
Two or More New State Colleges ..		3,000	8,000
Newark College of Engineering ..	2,400	4,500	6,600 ⁽¹⁾
Public Junior Colleges ..	1,000	11,000	33,000
TOTAL ..	32,000 ⁽²⁾	74,000	134,500

(1) This is a total estimate of engineering facilities required. Another engineering college may be required in the southern part of New Jersey perhaps as an extension of either Newark College of Engineering or Rutgers College of Engineering.

(2) Rounded to nearest 500

The Reasons for the Need for this Undergraduate Growth

In absolute numbers the growth picture presented above looks formidable. How feasible is this suggested expansion?

The foregoing analysis has shown in Table 3 that between 1965 and 1975 more than 100,000 new places are needed in public four-year colleges. The implications of this goal for enrollments in Rutgers, Newark College of Engineering, and the State Colleges are also summarized. The figures given represent *one* possible pattern of enrollments, developed to aid in determining what must be accomplished.

In developing an estimated size for *Rutgers*, it was assumed that Rutgers would grow in part as the result of the increasing number of New Jersey students qualified to pursue the programs they offer and as a result of efforts to reduce substantially the number of qualified students who must now be rejected for lack of space. The latter factor is particularly important, if the goal of bringing the out-of-state students back into New Jersey is to be achieved.

In addition, requests for transfer by qualified students from the County Colleges will place significant demands on *Rutgers*.

It was assumed the *Newark College of En-*

gineering would grow at about the same rate as Rutgers.

For the *State Colleges*, including possible new State Colleges, the estimated enrollment is based on the belief that by 1975 they can achieve the goal of becoming truly multi-purpose institutions without in any way impairing their essential work of preparing teachers for New Jersey schools. This change in the character of the State Colleges would in itself require a marked increase in size. Over and above this, there are also the needs of *transfer students* from the County Colleges, who are *prepared* and *qualified* for admission, who would have to be rejected for lack of space. It is recognized that careful planning would be required to develop the State Colleges into full-fledged multi-purpose institutions while preserving a sound balance of educational facilities, both public and private, throughout the state. The estimates are based on the belief that the State Colleges *can* play a major role in responding to the needs for higher education.

After allocating 33,000 students to County Colleges in calculating the estimated enrollments, the following procedure was used. The present enrollments were *increased by half* for Rutgers and Newark College of Engineering and *doubled* for the State Colleges. The total estimated enrollment for 1975 was then distributed proportionately to the resulting figures.

In calculating the 1970 figures, it was assured that the proportions of students in each of three basic categories would be half-way between the 1965 proportions and the 1975 proportions. The results are as shown in Table 3.

There are many State Universities in the country with enrollments larger than 30,000—a few larger than 50,000, and so the Rutgers estimate of 32,900 full-time undergraduates is well within bounds of feasibility. State Colleges enrolling an average of 9,000 are also quite common in many other states. In New York City for example, the four city colleges are expected to average 12,000 each by 1970.

As the establishment of *new* State Colleges and a great expansion of *two-year colleges* are important elements in the growth pattern, some special comment is in order on these two subjects.

The Establishment of New State Colleges

To confine the total college offerings of New Jersey to the present 6 State Colleges is to limit drastically the number of students who can expect to have a four-year liberal arts education.

Even with the large expansion of the present Colleges, and their conversion to multi-purpose institutions over the next five years, some 8 to 10,000 additional places will be needed.

The Citizens Committee hopes that *at least*

one new State College will be established in the period 1965-1970 and that a *second* will be in operation by 1975.

One of the major services of the new colleges would be to provide the final two years of education for the large numbers who will be completing their first two years in local County Colleges, and who will wish to go on for a bachelor's degree. The experience in states such as California is that as many as 50% continue their junior college education to the B.A.

The Role of the 2-Year County College

As one looks at the total college-going problem over the next ten years from the viewpoint of New Jersey high school graduates who want to go to college within the state, it is obvious that the junior or community college will be the answer for a great many of them. The sheer magnitude of the problem of a need for over 100 thousand more places in New Jersey institutions of higher education will require the rapid establishment of at least 10 to 15 community colleges, which by 1975 will be able to accommodate 30 to 40 thousand students.

It is imperative that these county colleges offer both two-year programs of *liberal arts* and *technical* courses leading to immediate employment and that the tuition for students attending be kept to a *minimum*.

The growth of the community college has been a national phenomenon. In 1963 some 800,000 were enrolled the nation over; by the fall of 1965 there were about 1,100,000. The growth to 1970 is estimated to be 1,750,000 and by 1975 enrollments will be at more than 2,000,000. A November 1963 article in the *Junior College Journal* by Dr. Sidney Tickson, an authority on higher education planning, takes an even longer view, and predicts that by 1985 there will be no fewer than 1,000 junior colleges enrolling 4 to 5 million students. In other words, in twenty years there would be as many students in junior colleges as are this year in all colleges and universities in the United States.

That this may actually be realized is borne out by some tentative plans for *community college* growth in other states. California plans to grow from 175,600 to 344,500 in a 14-year period, New York has projected a five year increase from 44,200 to 89,000.

Except for the fact that there has been only one public junior college in the State of New Jersey, and as such it is not a familiar pattern of higher education here, there is no reason why a very rapid expansion cannot take place within the state. Plans have been drawn and approved for the immediate establishment of twelve new county colleges in Atlantic, Cape May, Cumberland, Essex, Mercer, Middlesex, Ocean, Morris,

Camden, Somerset, Burlington, and Bergen counties. A conservative estimate of an initial enrollment of 11,400 has been planned, with a possible maximum of over 40,000, according to a recent progress report which is Appendix C. Six more locations throughout the state have been discussed, and new colleges provisionally planned. Three counties (Hudson, Sussex, and Warren) report "no official action taken."

The "market" for such colleges is strong. Not only would many students now going out-of-state be eager to attend in their local communities, but many others not planning to attend college at all because of the high cost would be candidates for the home-based institutions.

It only needs to be added that the success of a vastly expanded community college movement in New Jersey will depend directly on the blending of four essential elements—a faculty of high quality, a student body of able and interested undergraduates, a physical facility able to provide good education, and a curriculum which is relevant to our times, and which permits continuation of higher education for the talented.

Under these conditions, the enrollment of 30,000 to 40,000 students in junior colleges in New Jersey is not only feasible and justified, but is also imperative in terms of the overall solution to the state deficit in facilities.

Graduate and Professional Education

The need of New Jersey for increased opportunities in higher education is nowhere more critical than in professional and graduate education. This report suggests an increase from 2,700 to 8,500 daytime students in public institutions by 1975, principally at Rutgers and NCE, but also including master's degree programs at the present and new State Colleges, especially to help meet the faculty needs of the new County Colleges and the expanding State Colleges.

It is well known that a complex and highly industrialized society such as New Jersey's is peculiarly dependent upon the idea-generating Ph.D. for growth and vitality. Jesse E. Hobson, past president of the Armour Research Foundation and the Stanford Research Institute has said, "One Ph.D. will generate employment for 10 engineers. Ten engineers will generate employment for 150 technicians and skilled workers."

New Jersey is an importer of men and women with advanced degrees. The shortage is so acute that some industrial firms in the state have been discussing a proposal that they pool their talent and establish a new graduate school in the sciences and engineering. This move, if it occurs, will be helpful. But it will in no way relieve the pressure upon the public responsibility, the need is too great.

Table 4 presents the approximate distributions of graduate and professional enrollments.

TABLE 4
Hypothetical Distribution of
Daytime Graduate and Professional Students
in Public Institutions in New Jersey
(1965 to 1975)

	1965	1970	1975
Rutgers	2,700	4,700	7,700
Newark College of Engineering .. .	n a.	100	400
State Colleges .. .	5	200	400
TOTAL .. .	2,700+	5,000	8,500

Growth of graduate and professional schools has certain limitations even if very large funds are available. Many of the factors which make undergraduate expansion difficult become acute at the graduate and professional level. Recruiting of staff, development of programs of financial support of students, particularly graduate students, and acquisition of complex research facilities are among the critical factors which require time, as well as effort and funds, to accomplish. Nevertheless, in view of the great need for expansion it is believed that Rutgers *can* expand from 2,700 day students in 1965 to 4,700 in 1970, as they now expect to do, according to a survey recently made by Robert Heller Associates. During the period 1970 to 1975, if adequate funds were made available, a growth at a 50% larger rate would be a reasonable goal to shoot for. If this goal were achieved, there would be 7,700 daytime graduate and professional students at Rutgers by 1975.

Even more difficult than expanding a moderately large ongoing program of graduate and professional work is the initiation and early development of such a program. Accordingly, it seems desirable to make a conservative estimate of the growth of full-time graduate work at NCE and the State Colleges. A possible goal might be 300 by 1970 and 800 by 1975. Although no attempt has been made to estimate the growth of graduate and professional study in *private* universities in the state, it is evident that this growth, however large, is not likely to close the gap between the needs of the state and its resources for such study.

It should be noted that these figures have *not* included *medical* students, which is a separate and complex problem.

The Recruitment of College Faculty

How can a state double or triple the size of its public institutions and still maintain quality education?

One answer to this question came from a state official in Illinois who said "That's the least of our worries. If the legislature will just give us the money, we'll find the teachers." He went on to point out that Illinois had, in the ten years 1955 to 1965, doubled its college enrollments and, in his opinion, had not cut the quality of instruction. The same doubling also occurred in New Jersey between 1953 and 1963, and standards were maintained.

Discussions with officials in three other states indicate that while the problem of faculty recruitment is difficult, it is not insolvable. Among the sources of new college faculty which have been mentioned are the following:

(1) *High school teachers*—New York State reports that it expects over 30% of its new faculty to come from the ranks of secondary schools. These are men and women with master's degrees who wish to associate themselves with colleges and universities, in many cases intending to secure a Ph.D. While it is not desirable to "raid" the lower schools of their best talent, the supply of good teachers at that level is said, in many states, to be reasonably adequate.

(2) *Part-time teachers*—Ohio is conducting an active search for special skills among government employees, industrial researchers, social welfare workers, and other talented individuals who may wish a part-time affiliation with a university. Often these are men and women with Ph.D.s who have the qualities of good teachers and who can arrange to leave their banks, clinics, corporations, insurance companies or public jobs for specified lecture duties at nearby institutions.

(3) *Women teachers*—Another midwest state believes that one of the most promising untapped sources for higher education is women, who have either been passed over as not being of collegiate calibre or who have been teachers at the high school level, have raised their families, and who could, with special training,

be able instructors at the university level.

(4) *Graduate students*—The pool of graduate students is, of course, an obvious source and one which is heavily drawn on—some educators (and students) feel to far too great an extent. It is, however, a major reliance of most institutions—even those of the highest quality.

(5) *Technology*—Many colleges and universities are experimenting heavily with instructional methods other than live teachers. Educational television, lecture-by-wire, computer instruction, language laboratories and other techniques have reached the operational stage in many parts of the country. One institution—Florida Atlantic University near Fort Lauderdale—is organized almost completely around technological devices.

(6) *Trimester and Four-Quarter*—Every year more and more institutions adopt year-round organization of the curriculum, thus increasing their capacities by a third or more. Doubling of capacity has for years been the pattern of the Antioch Plan (among others), where the work-study program has 800 students on-campus while 800 are off-campus on cooperative work assignments. These measures while increasing space for students do not save on either staffing or operating costs, since the same per diem costs apply whether the institution is in session nine months or twelve months. Also public institutions in New Jersey already have nearly full-capacity summer programs.

Obviously, there is no single solution to the problems of staffing. The Citizens Committee recommends that a special Task Force should be appointed in New Jersey to develop a "master plan" for faculty recruitment for the state.

It should also become a major objective of the present and future State Colleges to prepare professors for the new two-year County Colleges, in addition to preparing elementary and secondary school teachers.

Part IV

A LOOK AT THE BILL: SOME ESTIMATES OF COST

It may be assumed that 1965 enrollments are using plant facilities to capacity, so that additional facilities are required for virtually all of the projected increases. Even if some unused capacity exists, or if some facilities could be used more intensively, it may still be assumed in view of the present stringency (e.g. qualified students being rejected at Rutgers and the state colleges) that at least an equal amount of facilities are being *overused* to the detriment of the students, faculty, facilities, and instruction.

The calculation of the cost of providing facili-

ties for the expansion indicated is not simple. Much will depend on the proportions of commuting and residential students, on the relative proportions of undergraduate and graduate students, on the type of site and construction, and on other variables. However, it is possible to take advantage of *averaging* to estimate costs, capital and operating, for academic facilities needed for the additional students anticipated in New Jersey Public Colleges and the State University. These estimated costs are based partly on the experience of the New Jersey State Department of

Education in spending the \$40 million Bond Issue and partly on the experience of other

states, notably New York, Ohio, and Illinois.

TABLE 5
Estimated Costs
for Academic Facilities and Annual Operating Expenses
for Additional Students in
New Jersey Public Colleges and University
(1965 to 1975)

	1965 to 1970		1965 to 1975	
	NEW STUDENTS	CAPITAL COSTS	NEW STUDENTS	CAPITAL COSTS
	(MILLIONS)		(MILLIONS)	
<i>Full-Time Undergraduates</i>				
4-year colleges and university	32,000	\$150.0	70,500	\$342.5
2-year colleges	10,000	10.0	32,000	32.0
<i>Graduate and Professional</i> ⁽¹⁾				
Rutgers, NCE, State Colleges	2,300	36.8	5,800	92.8
TOTAL		196.8		467.3
Less: \$40 million bond issue		40.0		40.0
Amount of New Funds Needed		\$156.8		\$427.3

II. Additional Annual Operating Costs

	1970		1975	
	NEW STUDENTS	OPERATING COSTS	NEW STUDENTS	OPERATING COSTS
	(MILLIONS)		(MILLIONS)	
<i>Full-Time Undergraduates</i>				
4-year colleges and university	32,000	\$25.6	70,500	\$56.4
2-year colleges	10,000	4.0	32,000	12.8
<i>Graduate and Professional</i> ⁽¹⁾				
Rutgers, NCE, State Colleges	2,300	5.1	5,800	12.8
TOTAL INCREASE ⁽²⁾		\$34.7		\$82.0

(1) Medical school costs have not been included, as the situation is too unclear and complex for the Citizens Committee to deal with. This will, however, be a major item of expense.

(2) These increased costs make the operating budgets \$44 million in 1965, \$79 million in 1970, and \$126 million in 1975, as shown in Table I.

These cost projections are based on the hypothetical distribution of students presented in Part III, and are as follows:

Institution	—Increases—	
	1965 to 1970	1965 to 1975
	1970	1975
4-Year Public	32,000	70,500
2-Year Public	10,000	32,000
Graduate and Professional	2,300	5,800
TOTAL	44,300	108,300

It will be noted that the *new funds needed immediately to produce academic facilities by 1970* (because of 3 to 4 year lag) are \$156.8 million, which may be compared with the \$94 million recommended by the *Strayer Report* but not yet provided since only \$40 million was ap-

proved by the taxpayers in 1964.

So that all new college facilities under discussion will be in operation by 1975, *additional capital totalling \$270.5 million* should be appropriated by the Legislature in the five year period 1967-1972, at the rate of *approximately \$50 to \$60 million per annum*.

Capital costs for 4-year colleges are based on \$40 million for 10,000 places provided by the bond issue and \$5,000 for each additional place needed. For 2-year colleges, \$1,000 was estimated as the state's one-third share in the capital cost for each new place.

In estimating costs for *graduate and professional education*, it was estimated that the capital cost would be \$16,000 per student, and that the annual operating cost would be \$2,200 per student. Both figures are *exclusive* of medical edu-

cation, for which costs are very much higher. The figures for costs were derived by Robert Heller Associates from analysis of costs at various universities throughout the country similar to Rutgers. They assume a balanced growth of graduate and professional programs maintaining the existing pattern across fields.

Additional *annual operating costs* for 4-year colleges were based on \$800 per year per place for 4-year college students, and \$400 per year per place for the state's share of operating expenses for 2-year college students. This figure assumes that the state's share is increased from the *present* \$200 to \$400.

For comparison purposes, the 1965 State Fiscal contribution to the Operating Budgets of New Jersey Higher Education Institutions was \$44,293,021, distributed as follows:

TABLE 6

N. J. State Department of Education
Fiscal Contributions to
N. J. Public Higher Education Institutions
1965 Budget*

	1965 Adjusted Approp
Glassboro State College	\$ 3,587,286
Jersey City State College	2,500,065
Jersey City Lab School (A. Harry Moore)	230,000
Newark State College	3,102,755
Paterson State College	2,765,083
Montclair State College	3,858,776
Trenton State College	4,066,305
Rutgers University	21,678,238
Newark College of Engineering and Newark Technical School ..	2,327,713
Trenton Junior College ..	176,800
TOTAL—State Higher Institutions	\$44,293,021

OTHER

N. J. College of Medicine and Dentistry	4,300,000
Scholarships and Loans	4,833,638
Interest on Bonds	2,189,500
GRAND TOTAL	\$55,616,159

*Source: Budget Message of Richard J. Hughes,
Governor of New Jersey, February 1, 1965,
pp 304-305

Additional Costs

As indicated, there are *other costs* which must

Part V

HIGHER EDUCATION PATTERNS IN OTHER STATES

Across the nation the problem of planning for expanded college facilities faces educators and legislators in every state. The pressures everywhere stem from the same elements: larger num-

be planned for in addition to the above which will only meet the needs related to expansion of new enrollment in undergraduate and graduate programs. Among these are:

- (1) a broadening of the whole scholarship and program of the state, including a program of "incentive" scholarships for N. J. students to attend private institutions within the state
- (2) realignment and upgrading of professional salaries in the colleges, to make New Jersey competitive for able faculty
- (3) the replacement of obsolete and rehabilitation of sub-standard plant facilities, already referred to
- (4) additional costs associated with the conversion of the six state colleges to multi-purpose institutions
- (5) the adjustment of capital and operating estimates from 1965 dollars to 1970 and 1975 dollars (allowance for inflation)
- (6) larger appropriations for the operation of the State Department of Education to equip it to deal effectively with increasingly complex problems of higher education
- (7) possible adjustments upward in all estimates should the present forecasts prove to be conservative, as the problem is reviewed every two years
- (8) costs related to expansion of medical training and research facilities in the state.

It has been stated that the competency of the Citizens Committee does not extend to precise projections of the costs associated with expanding higher education. It should also be stated that the Citizens Committee does not expect to recommend *how* the funds are to be secured. This again is a problem for public officials responsible for managing the affairs of the state. It is obvious, however, that the funds required will come from a variety of sources. Federal grants to higher educational institutions in the various states could provide as much as one-third of the total costs, probably with larger sums in 1974-75 than in 1967-68. County taxation will relieve the state of full responsibility for large numbers of junior college students.

That New Jersey is not alone in this problem is discussed in the next Part which describes how other states are facing and financing higher education growth.

bers in the age-group, fewer dropouts from high school, more graduates desiring college, greater interest of women in higher education, and the upgrading of educational requirements by in-

dustry and society at large.

Predictions for five years ahead are often reached in three years, according to national experts such as Seymour Harris and Sidney Tickton. Enrollment estimates thought to be liberal even in the short-term turn out to be conservative when reviewed at two-year intervals.

The following table illustrates the heavy demands which will be made on those responsible

for master planning of higher education in four other populous and industrial states as compared with New Jersey. It should be noted that three of these four states have had an on-going tradition of strong support for public education. The fourth (New York) has extensive private education. Thus, to a great extent, they are not faced with the "make-up" situation existing in New Jersey. Even so, their problems are enormous.

TABLE 7
Full-Time College Enrollments in
Four States Compared to New Jersey
(years 1965 and 1975)

	OHIO	MICHIGAN	ILLINOIS	N. Y.	N. J.
(in thousands of students)					
<i>1965 College Enrollments</i>					
Public	111	143	126	93	32
Private	68	36	121	163	31
TOTAL	179	179	247	256	63
<i>1975 College Enrollments</i>					
Public	255	189	245	235	134
Private	114	46	192	230	62
TOTAL	369	235	437	465	196 ⁽¹⁾
State Population (millions)	10.1	8.1	10.5	17.9	6.6

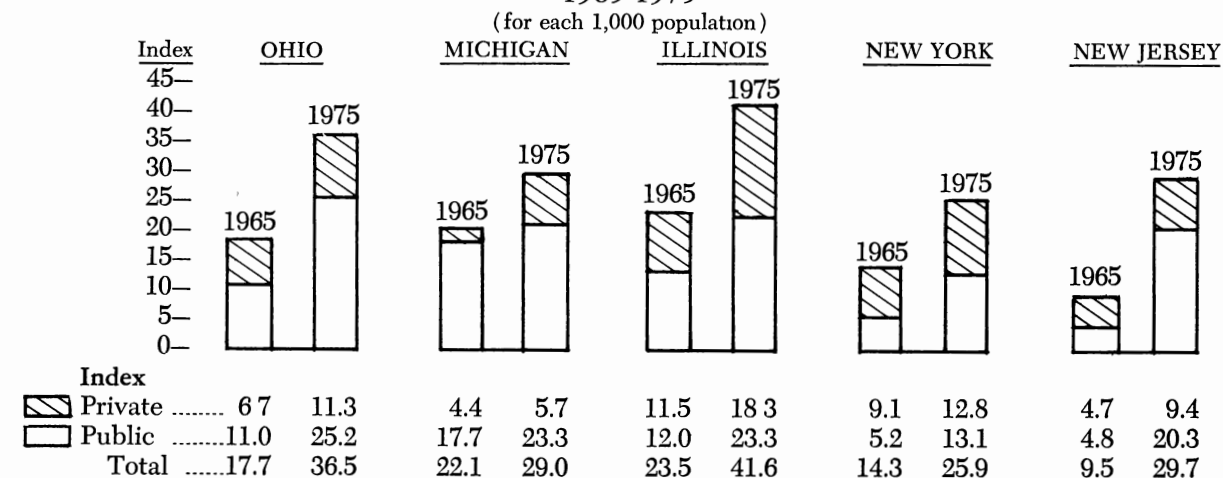
(1) The 1975 N. J. enrollments are those recommended by the Citizens Committee.

(The enrollment figures given are *net full-time undergraduates* for all five states. The "master plan" studies for Ohio, Michigan, and Illinois give "head-count" totals, including *part-time* students, which in Table 7 have been eliminated by the percentages supplied by authorities in each state. New Jersey figures include out-of-state enrollees in New Jersey colleges—approximately 5% in public four-year institutions and 35% in private. Other states also include out-

of-staters in their institutions.)

Since all of these four states are larger in total population than New Jersey, some kind of equating is necessary to bring their enrollment figures into relative position with those in New Jersey. The following chart illustrates how, for each 1,000 of 1965 population, each of the states plans to provide public and private higher education for its citizens.

TABLE 8
Planned College Expansion
Four States Compared With New Jersey
1965-1975



The low position of New Jersey in 1965, in both public and private college facilities is clearly brought out by this table. The 1975 projections, however, are based on the assumption that this state will make a major effort, which will bring New Jersey above New York levels and put it in much better relative position to all the states.

Capital Expenditures in Four States

To New Jersey residents who in the fifteen year period 1950-1965 spent only \$147 million for total capital needs of higher education, the thought of planning expenditures in the \$400 million range may seem exorbitant. For whatever consolation it may bring, and misery is said to love company, the sums proposed for New Jersey are not overly large in comparison to other states.

Ohio is planning to spend about \$850 million, Michigan \$700 million, Illinois \$600 million, and New York \$1.6 billion for capital facilities for public colleges and universities in the next ten years, and these states do not have to "catch up" to the extent which New Jersey does.

The following table shows that if New Jersey were to spend at the same rate as the average of these four states, in relation to size of population, the *per capita* expenditure would be about \$80. Thus, for the 6.6 million population in this state, New Jersey should and could plan for a ten year capital goal of \$528,000,000. This figure underscores the conservative nature of the Committee's \$427,000,000 projection.

TABLE 9
Capital Expenditures by States in
Proportion to Population
1965-1975

POPULATION	CAPITAL EXPEND (MILLIONS \$)	PER CAPITA EXPEND
Ohio10.1	850	\$85.
Michigan 8.1	700	88.
Illinois10.5	600	60.
New York17.9	1,600	88.
New Jersey 6.6	528 ⁽¹⁾	\$80.

(4-state avg.)

(1) If New Jersey's *per capita* expenditure were \$80

Part VI

SUMMARY AND RECOMMENDATIONS

The 22 recommendations that appear below highlight the goals of higher education that New Jersey should strive to attain. The Committee wishes to emphasize that this summary is no substitute for a master plan for public higher education in New Jersey, and that the numerical data presented are not offered as precise, firm figures, but rather represent a careful assessment of the dimensions and scope of the problem. While it is believed that these numerical projections are the best estimates available, they should be further refined by State authorities during the course of developing a master plan.

The 22 recommendations are:

Administration

- (1) *The State's procedures for the planning, oversight, and administration of higher education should be strengthened, expanded, and given more freedom and flexibility. This will entail certain changes in the structure of the organization of higher education in New Jersey and, pursuant to the request of Governor Hughes, the Citizens Committee intends to study these issues further and make recommendations in the near future.*
- (2) *A special faculty salary review board should be appointed by the Governor to make a*

study of the present salary scales, and report its recommendations for new and more adequate scales within six months of the time of appointment.

- (3) *A special task force on faculty recruitment should be appointed to report on all available methods and plans for staffing a greatly enlarged higher education establishment. This task force should be provided with funds to hire an executive director and for travel to other states to discuss the matter with state officials, and possibly to assist in the recruitment of faculty.*
- (4) *A separate and detailed study should be made of the whole range of graduate and professional offerings and needs of the State in public institutions, not only as it applies to Rutgers, but also to Newark College of Engineering, and to the master's degree level at the state colleges. The study should include the need for fellowships and other forms of assistance to graduate students in both public and private institutions.*
- (5) *A resources center for community colleges should be set up to aid in planning, act as a clearinghouse of information, and provide continuing field services.*

- (6) *A New Jersey dormitory and building authority, patterned on dormitory authorities of other states, is recommended for legislative approval at the next session.*
- (7) *In the establishment of new college facilities and in the expansion of those in existence, consideration should be given to the process of cooperative education where the student alternates between the campus and employment.*

Enrollments

The Committee's best estimates indicate that:

- (8) *Public institutions must plan to increase total enrollments from 32,000 in 1965 to at least 134,500 in 1975, including at least 5% from out-of-state, such plans to respect fully the role of private institutions—and to coordinate actively with them.*
- (9) *Private institutions should strive to increase total enrollments from 31,000 in 1965 to at least 62,000 in 1975 to allow New Jersey student places to grow from 20,000 to 40,000.*
- (10) *The present six state colleges should expand and convert to multi-purpose institutions offering a wide variety of curricula as well as teacher education. Enrollments should go from 17,000 to 54,000 in 1975. Active planning should go forward for the establishment of new state colleges, en-*

rolling no less than 8,000 by 1975.

- (11) *Rutgers, the State University, should plan an undergraduate expansion from the present 11,900 to 32,900 in 1975 and a graduate and professional growth from 2,700 to at least 7,700.*
- (12) *Newark College of Engineering should be funded adequately for a gradual ten year growth from 2,400 full time undergraduates in 1965 to some 6,600 in 1975, and for at least 400 full time graduate students in 1975. Another engineering college may need to be established.*
- (13) *The projected state-wide network of community colleges must be carried forward to bring no less than 7 into full operation by 1970 and no less than 17 by 1975, with total enrollments by 1975 of 30-40,000 students.*
- (14) *A basic goal should be to make available within the State opportunities for post high school education to those qualified students who cannot afford or do not wish to go outside the State for higher education. A start toward this objective, beginning in 1966, should be to reduce the 62,000 students going out of state by at least 1,000 each year.*

The figures in recommendations (8) to (14) are summarized as follows:

Hypothetical Distribution of Full-Time Undergraduate Students by Public and Private Institutions In-State and Out-of-State (1965 to 1975)

	1965	1970	1975
In-State Public (New Jersey Students Only)			
4-year colleges and university	29,500	60,000	96,500
2-year colleges	1,000	11,000	33,000
In-State Private (New Jersey Students Only)	20,000	30,000	40,000
Out-of-State (New Jersey Students Only)	62,000	57,000	52,000
TOTAL New Jersey Students	112,500	158,000	221,500
Plus: Out-of-State Students in New Jersey			
4-year public institutions	1,500	3,000	5,000
GRAND TOTAL	114,000	161,000	226,500

Financing

- (15) *The Citizens Committee recommends, for consideration by public authorities, an immediate capital outlay for higher education of \$150 million, and subsequent appropriations in 1967, 1968, 1969, 1970, and 1971 of from \$55 to 60 million per annum, for a total \$427 million capital expenditure by 1975. These estimates should be adjusted upward or downward on the basis*

of new information. (This recommendation makes no provision for medical education which will require a large additional amount.)

- (16) *The State must plan for an increase in State operating appropriations from \$44 million in 1965 to \$79 million by 1970 and to \$126 million by 1975, exclusive of scholarships, medical education, and interest on bonds.*

- (17) The sum of approximately \$500,000 should be approved promptly to establish and finance planning for higher education, including a study for a master plan for the State, and to permit the engaging of architects for site planning, preliminary sketches, and other such functions
- (18) To assist the operating expenses of the new community colleges, the present state statutory formula of up to \$200 per pupil should be revised, to provide one-half the cost up to a maximum contribution of \$400 per pupil, the county and tuition charges bearing the other half
- (19) A new college incentive scholarship program providing incentive grants of up to \$600 per student in private institutions within New Jersey should be established,

- with appropriation for 1,500 such four year scholarships in the first year and increased numbers in subsequent years.
- (20) The State must support a broad program of medical education with full facilities and faculty for first-rate education and research in the medical sciences
- (21) The State Department of Education should issue to the public periodically special reports on the kinds, conditions, and amounts of funds available from the federal government for higher education purposes
- (22) The Citizens Committee points to and endorses the urgent need for a broad base tax to help meet the needs, objectives, and requirements specified above for New Jersey higher education.

APPENDIX

SUPPORTING PAPERS ON THE 1975 REQUIREMENTS

Part III presented data developed for the Citizens Committee by Educational Testing Service, which for some months has had a cooperative working arrangement with the State Department of Education and with Robert Heller Associates. The interpretation and assumptions, however, are those of the Citizens Committee and not of the State Department or Heller Associates, which have provided information, but have not attempted in any way to influence the Committee in its presentation or interpretation of the facts as it sees them.

As has been pointed out in the beginning of Part II the complexity of the factors which must be balanced in making accurate predictions is sizable.

This Appendix will, therefore, discuss some of the assumptions underlying the forecasts, the major points being:

- The Out-of-State Problem
- Studies of Rutgers and State Colleges Rejections
- Progress Report on County Colleges
- A Competitive Salary Structure
- An Opportunity Scholarship Program
- The Establishment of a Dormitory Authority
- New Jersey's Inadequacies in Medical Education
- Statistical Considerations in the Enrollment Data
- A Partial Bibliography of Reference Sources

Appendix A

THE OUT-OF-STATE PROBLEM

The problem of New Jersey students going out-of-state to college has been discussed earlier in this paper. It has been noted that in 1963 about 52,500* were enrolled out-of-state and of these 28,800 (more than half) were in college in four states as follows.

	PA	N Y	MASS	OHIO
N. J. students in	13,100	8,900	3,800	3,000
About 85% of these 28,800 New Jersey students in these four states were in private institutions, as shown by this breakdown (to the nearest hundred)—				
	PA	N Y	MASS	OHIO
Public Institutions	1,200	400	100	1,100
Private Institutions	11,900	8,500	3,700	1,900

One reaction to these data would be—"What does it matter, as long as they get in college somewhere?"

The Citizens Committee does not share this reaction, and stands on the position that the long-range goal of New Jersey higher education should be to provide in any year the same number of places for college-going students within the state of New Jersey as the total number of New Jersey students going to college in that year. This, of course, means a balanced equation in which ultimately New Jersey (and all other states as well) would provide its fair share of college places in the nation. Thus, if this were to be achieved in 1975, there would be some 220,000 college places in public and private in-

stitutions in New Jersey. Obviously a great many New Jersey students will want to go out-state to college, but there should be an equal number of places in New Jersey for students from Pennsylvania, New York, Ohio, and other states to come here to study.

The Citizens Committee recognizes that the "roll-back" of New Jersey students (i.e. correcting the deficit) is a problem requiring many years to accomplish. To achieve balance may take as long as 15 to 20 years—but it is the goal.

The Committee does, however, state its present position to be that immediate steps be taken to increase college facilities in New Jersey so that the number of students going out-of-state will be frozen at its 1965 level. In other words, the State of New Jersey would absorb the total increase in enrollment of New Jersey students from 1965 on. In addition to absorbing the increase the state must begin to redress the imbalance by planning a reduction of 1,000 per year in the number going out-of-state.

*The figures in this appendix comparing New Jersey with other states are from the U S Office of Education "Residence and Migration Study of College Students," Fall, 1963

There are clear reasons, other than New Jersey's standing vis-a-vis other states, for taking this position.

(1) *Manpower loss*—students spending their four undergraduate years in other parts of the country frequently do not return to work in New Jersey. This is even more evident at the graduate level where attractive positions are offered elsewhere to master's and doctoral degree holders.

(2) *Expense*—a private college education in other states can cost as much as \$3,000 per year for tuition, room, board, travel and incidentals. While many parents can afford this, many cannot. The responses to the Rutgers Survey indicate violent objections on the part of many families to the lack of public college facilities within New Jersey.

(3) *Quality education*—there is reason to believe that many students, in accepting second or third choices after rejection by New Jersey institutions are settling for lower level instruction in colleges of poorer quality than the state could provide for them if sufficient funds were made available.

The Citizens Committee is well aware that many students want to go to college a good distance from home and that other states will welcome New Jersey and other students in order to have a good "mix" in the student body to overcome local provincialism.

The Committee feels, however, that such past acceptance cannot and should not be relied upon for future solution of New Jersey's problems in higher education.

The following tables show:

(1) where the major number of New Jersey students were registered out-of-state in the fall of 1963

(2) the patterns of in-state, out-state balance in 16 most populous states, also for 1963, the most recent year of accurate statistical estimates

MAJOR CONCENTRATIONS* OF NEW JERSEY COLLEGE STUDENTS ENROLLING OUT-OF-STATE

Fall 1963

Source U S Office of Education,
"Residence and Migration of College Students"

STATE	MEN	WOMEN	TOTAL
California	328	159	487
Colorado	277	130	407
Connecticut	897	559	1,456
Delaware	321	306	627
District of Columbia	680	819	1,499
Florida	732	273	1,005
Illinois	605	430	1,035
Indiana	789	304	1,093
Iowa	476	181	657
Kentucky	530	200	730
Maryland	757	667	1,424
Massachusetts	1,908	1,864	3,772
Michigan	676	483	1,159
Missouri	423	178	601
New Hampshire	425	180	605
New York	5,149	3,758	8,907
North Carolina	1,008	467	1,475
Ohio	1,734	1,309	3,043
Pennsylvania	8,286	4,819	13,105
Rhode Island	540	194	734
South Carolina	430	110	540
Tennessee	452	241	693
Vermont	459	422	881
Virginia	784	702	1,486
West Virginia	550	314	864
Wisconsin	225	178	403
All others	3,085	731	3,816
Out-of-State			
Grand Total	32,526	19,978	52,504

*More than 400 Students

COLLEGE OUT-OF-STATE ENROLLMENTS

A Sample of 16 Populous States, Fall 1963

Source U. S. Office of Education, Fall 1963, "Residence and Migration of College Students"

State	(Figures to Nearest Thousand)		(Nearest Percent)		State	(Figures to Nearest Thousand)		(Nearest Percent)	
	Number Going In-State	Number Going Out-State	Total Attending College	Percent Going Out-State		Number Going In-State	Number Going Out-State	Total Attending College	Percent Going Out-State
New Jersey	44	53	97	55	Georgia	34	9	43	21
Maryland	30	14	44	32	Ohio	103	26	129	20
Illinois	109	46	155	30	Indiana	50	11	61	18
New York	180	73	253	29	Kansas	36	7	43	16
Massachusetts ..	60	22	82	27	Minnesota	55	9	64	14
Pennsylvania	106	38	144	26	Washington	48	7	55	13
Florida	55	18	73	25	Michigan	100	13	113	12
					North Carolina ..	50	7	57	12
					California	256	25	281	8

NEW JERSEY IN 1975*

*Even if the total plans outlined in this paper were attained, New Jersey in 1975 would still have 52,000 out-of-state or 23% of 221,500 students in college that year.

Appendix B

STUDIES OF RUTGERS AND STATE COLLEGES REJECTIONS

The following summaries are based on preliminary reports of two studies concerned with the subsequent educational careers of New Jersey students rejected by Rutgers and by the six State Colleges. Newark College of Engineering and Trenton Junior College are not included.

1. The Rutgers Study

In 1965, Rutgers divided its rejections into two groups—*qualified* applicants rejected for lack of space and *unqualified* applicants. The Citizens Committee asked Rutgers to make a special study of its qualified rejects. The study was limited to New Jersey students, of whom there were 4,036. Eighty-one percent (3,253) of these students returned usable questionnaires.

Of the 3,253 students who replied, 2,949

(90.1%) reported that they definitely planned to attend a college or university as full-time students in the fall of 1965. An additional 122 (3.8%) planned to attend college part-time, leaving only 182 (5.6%) who had no definite plans for college as of early September, when the survey was made. Even in the group of 182 students without college plans for 1965, all but 101 expected to attend college full-time in the future. The findings with respect to college plans seem reasonable when it is considered that the study was limited to *qualified* applicants.

Where the full-time students actually went to college is important to know. The students were classified according to the location and control of the institution they chose to attend, with the following results:

	MEN		WOMEN		TOTAL	
	NUMBER	%	NUMBER	%	NUMBER	%
New Jersey public	277	12	161	23	438	15
New Jersey private	742	33	166	23	908	31
Out-of-state public	284	13	82	11	366	12
Out-of-state private	925	42	307	43	1232	42
Total	2228	100%	716	100%	2944	100%

Data on the tuition and required fees were available for most of the institutions attended by these students. Average tuition and fees for students attending the different types of institutions were as follows:

\$1,227 for out-of-state private
(based on 1,039 students)
\$1,024 for New Jersey private
(based on 827 students)
\$659 for out-of-state public
(based on 336 students)

At New Jersey public institutions, tuition and fees are approximately \$250 in the six State colleges, \$431 at Newark College of Engineering and range from \$437 to \$506 in the various branches of Rutgers. Clearly, students going to private New Jersey colleges or to out-of-state institutions were paying substantially higher tuition and fees than they would have paid at Rutgers. Indeed, 65% (890 out of 1375) of those going out-of-state paid tuition and fees of \$1,000 or more. It is unlikely that this result would be greatly changed if allowance were made for various scholarships awarded to these students.

A question on *Junior Colleges* was asked—"If a county junior college offering the first two years of college and located in your county had been admitting students for September 1965 at the time you were exploring possibilities for education beyond high school, do you think you would have seriously considered attending such a college?"

In reply 873 (or 36%) of the men and 297 (or 37%) of the women said they *definitely* or *probably* would attend.

How many of these qualified rejects would have attended Rutgers if they had been accepted? After careful consideration, it was decided that many students would find it difficult to say in early September what decision they would have made if they had been offered admission by Rutgers rather than rejected. Accordingly, the questionnaire did not ask students whether they would have attended Rutgers if they had been accepted. It seems entirely safe to conclude, however, that they would have *at least as likely* to choose Rutgers as did the accepted candidates. Undoubtedly, the accepted candidates had in general more attractive alternates in choosing a college than did the qualified rejects. Since about 50% of the accepted candidates enrolled, it is clear that at least 2,000 (and possibly many more) of the 4,000 qualified rejects would have enrolled. These results indicate that Rutgers could increase its freshman class well beyond the present size of about 3,500 without accepting unqualified students.

2. The Six State Colleges Study

The State Department of Education studied 23,470 applications for 1965 admission to the state colleges. It was found that these represented 13,431 individuals, after discounting multiple applications. Of the 13,431 applicants, 165 made incomplete applications not considered, 877 were placed on the waiting list, 6,023 were invited to matriculate, and 6,366 were rejected.

At the time the preliminary report on the six state colleges was made, the State Department of Education with the assistance of high school

principals had been able to determine the plans for 1965 of all but 923 of 6,084 applicants who were denied admission to state colleges. Of the 5,160 living students (one was deceased) for whom data were available.

- 115 had enrolled at the State University
- 886 had enrolled in a private New Jersey college
- 1,905 had enrolled in a college outside New Jersey
- 300 had enrolled in an evening or extension division of a college
- 421 had enrolled in a technical or professional school
- 478 had enrolled in a 2-year college
- 1,055 were not in college (of these, 931 were employed, 71 were in military service, and the remainder included post-graduate high school students, housewives, and students who failed to graduate or were ill.)

Of the 5,150 students, almost four-fifths were continuing their higher education. It is worthy of note that the number going out-of-state to college was *more than twice* the number enrolling in New Jersey *private* colleges.

In another phase of the study, it was found that of the 6,023 invited, 1,326 declined the invitation to attend. Of these, 343 planned to attend Rutgers, 276 were planning to attend a New Jersey private college, and 567 were attending private colleges out-of-state. The remaining 140 included 31 attending a professional or technical institution, 28 who accepted employment, 51 who did enroll for personal reasons, 10 who enrolled in junior colleges, 7 in military service, 12 who were uncertain of their plans, and one deceased.

These results make it clear that the great majority of the rejected students have the initiative, ability and resources to continue their higher education. Perhaps a finding of equal significance is that the *State Colleges found it necessary to reject more applicants than they accepted*.

3. Mercer County College Interest Survey

One additional study may be reported as it bears on the establishment of County Colleges. On March 23, 1964 members of the senior class of Trenton Central High School filled out a questionnaire known as the Mercer County College Interest Survey. Of the 355 *students* who indicated interest in a college education, 204 or 58% said "Yes" to this question. "If you cannot afford the cost of attending college away from home, would the establishment of a County College in Mercer County now make it possible?" Twenty-three answered "No" and 128 gave no answer.

Appendix C

PROGRESS REPORT ON COUNTY COLLEGES

On November 10, 1965, the Director of Community College Education of the State Department of Education issued a public report on the status, as of that date, of the planning county by county for the establishment of County Colleges. As the information may be of interest to citizens in the various local communities, the report is reproduced here in its entirety.

It is interesting to note that the estimated *initial enrollment* capacity for the first 12 counties is approximately 11,400 students, and the *maximum capacity* for the 12 is about 44,000 students, which, if achieved, would amply care for the 33,000 students projected in this report for county colleges.

OCEAN COUNTY

State Board of Education Approved College	September, 1963
County Appointed Board of Trustees	March 4, 1964
Official Name of College	Ocean County College
President of College	Dr. Andrew S. Moreland
Temporary Address of Administration	504 Main Street, Toms River
Location and Size of Campus Site	Hooper Ave., Dover Twp., 276a.
Possible Student Enrollment (1965)	1,500 full-time students
Planned Initial Building Capacity	900 full-time students
Estimated Cost of Plant & Furnishings	\$2,832,300 (College's Proposal)
Federal Aid Recommended by State Comm.	\$1,200,000 (1966)

ATLANTIC COUNTY

State Board of Education Approved College	December, 1963
County Appointed Board of Trustees	April 8, 1964
Official Name of College	Atlantic Community College
President of College	Dr. Walton A. Brown
Temporary Address of Administration	Surrogate Bldg., Mays Landing
Location and Size of Campus Site	U.S. 322, Hamilton Twp., 501a.
Possible Student Enrollment (1965)	1,700 full-time students
Planned Initial Building Capacity	800 full-time students
Estimated Cost of Plant & Furnishings	\$2,964,060 (College's Proposal)
Federal Aid Recommended by State Comm.	\$1,185,624 (1966)

CAPE MAY COUNTY

State Board of Education Approved College	February, 1964
Possible Student Enrollment (1965)	628 full-time students
Planned Initial Building Capacity	500 full-time students
Estimated Cost of Plant & Furnishings	\$1,977,936 (State's Estimate)

CUMBERLAND COUNTY

State Board of Education Approved College	November, 1963
County Appointed Board of Trustees	January 5, 1965
Official Name of College	Cumberland County College
President of College	Dr. William Sample
Temporary Address of Administration	County Court House, Bridgeton
Location and Size of Campus Site	NJ 47, Vineland-Millville, 78a.
Possible Student Enrollment (1965)	1,300 full-time students
Planned Initial Building Capacity	500 full-time students
Estimated Cost of Plant & Furnishings	\$2,740,627 (College's Proposal)
Federal Aid Recommended by State Comm.	\$441,623* (1966)

*Request for additional \$654,628 held for consideration in future years

MIDDLESEX COUNTY

State Board of Education Approved College	May, 1964
County Appointed Board of Trustees	November 17, 1964
Official Name of College	Middlesex County College
President of College	Dr. Frank Chambers
Address of Administration	Edison
Location and Size of Campus Site	NJ 514 (Raritan Arsenal), 165a.
Possible Student Enrollment (1965)	6,073 full-time students
Planned Initial Building Capacity	1,000 full-time students
Estimated Cost of Plant & Furnishings	\$3,126,000 (College's Proposal)
Federal Aid Recommended by State Comm.	\$1,330,510 (1965)

ESSEX COUNTY

State Board of Education Approved College	February, 1965
Possible Student Enrollment (1965)	10,000 full-time students
Planned Initial Building Capacity	700 full-time students
Estimated Cost of Plant & Furnishings	\$4,073,125 (State's Estimate)

MERCER COUNTY

State Board of Education Approved College	May, 1965
Possible Student Enrollment (1965)	3,000 full-time students
Planned Initial Building Capacity	1,500 full-time students
Estimated Cost of Plant & Furnishings	\$6,982,500 (State's Estimate)

MORRIS COUNTY

State Board of Education Approved College	September, 1965
Possible Student Enrollment (1965)	3,000 full-time students
Planned Initial Building Capacity	1,000 full-time students
Estimated Cost of Plant & Furnishings	\$5,320,000 (State's Estimate)

CAMDEN COUNTY

State Board of Education Approved College	September, 1965
Possible Student Enrollment (1965)	4,600 full-time students
Planned Initial Building Capacity	1,000 full-time students
Estimated Cost of Plant & Furnishings	\$4,655,000 (State's Estimate)

SOMERSET COUNTY

State Board of Education Approved College	October, 1965
Possible Student Enrollment (1967)	1,700 full-time students
Planned Initial Building Capacity	500 full-time students
Estimated Cost of Plant & Furnishings	\$2,327,500 (State's Estimate)

BURLINGTON COUNTY

State Board of Education Approved College	October, 1965
Possible Student Enrollment (1966)	2,800 full-time students
Planned Initial Building Capacity	1,000 full-time students
Estimated Cost of Plant & Furnishings	\$4,189,500 (State's Estimate)

BERGEN COUNTY

State Board of Education Approved College	October, 1965
Possible Student Enrollment (1966)	7,800 full-time students
Planned Initial Building Capacity	2,000 full-time students
Estimated Cost of Plant & Furnishings	\$10,706,500 (State's Estimate)

UNION COUNTY

Petitioned State Board of Education for permission to establish and operate a County College, September 8, 1965.

HUNTERDON COUNTY

Requested State Board of Education for an independent feasibility study. Unofficial study in progress.

GLOUCESTER, MONMOUTH, PASSAIC, & SALEM COUNTIES

In the process of appraising the need for a County College, or involved in the course of procedure to appoint a local study committee for this purpose.

HUDSON, SUSSEX, & WARREN COUNTIES

No official action on the establishment of a County College.

Appendix D

A COMPETITIVE SALARY STRUCTURE

The quality of higher education in the State is essentially dependent on the quality of the faculty and especially on the relative standing in their fields of the leading full professors in the doctorate degree granting institutions. They greatly influence the development and recruitment of the lower ranks in the faculty and are of especial importance in attracting graduate students of high scholastic potential. The expansion of higher education throughout the country, as well as the greater demands of industry for highly specialized knowledge, has made the demand for faculty members of the associate professor and full professor grades highly competitive at present and it is expected to be more acute in the future.

New Jersey's doctorate degree granting institutions are in an unfavorable position in this nationwide competition because the regular salary range for full professors is clearly below the top levels of the major public universities in the

country, not to mention the leading private universities. The average salaries and fringe benefits for professors at Rutgers in 1965-66 was graded "C" in the national scale of the American Association of University Professors rating. Exceptions for a greatly advanced top scale have been authorized for distinguished professors who are specially recommended to the Board of Governors. Although this is of great importance in being able to deal with the problem of compensation in special competitive circumstances, it is not of wide enough applicability to establish a competitive *average* compensation for full professors.

Although special emphasis is placed on the professor's scale in doctorate degree granting institutions, the salary ranges in all public institutions should be re-examined and adjusted to a completely competitive level with private institutions as well as public institutions elsewhere.

Appendix E

AN OPPORTUNITY SCHOLARSHIP PROGRAM

Last year a proposal for Educational Incentive Grants failed to pass the Legislature. If students who are otherwise fully qualified, except financially, are to attend a private college or university of their choice within the State of New Jersey, additional scholarship aid is required in order to meet the rising charges for tuition. A maximum of \$600 per student could be combined with other scholarships or assistance of any kind to be awarded on the basis of need plus academic potential. This would be confined to students enrolled in non-tax supported institutions in New Jersey and be administered by the State Scholarship Commission.

It is recommended that the Legislature authorize College Opportunity Scholarships up to \$600 per student in non-tax supported colleges and universities of the State, making available a total of 1,500 such scholarships in the first year and in subsequent years for a total of 6,000.

In addition to these opportunity scholarships it can be expected, during the next ten years, that there will be an increasing number of Federal grants, loans, and other stipends available to New Jersey students, and the state program could fluctuate in relation both to the need and to the funds available from all sources.

Appendix F

THE ESTABLISHMENT OF A DORMITORY AUTHORITY

In 1944 a Dormitory Authority of the State of New York was established for the purpose of 100% financing of the cost of dormitories and dining hall facilities for the State University of New York. This relieved the taxpayers of appropriations or carrying charges for bonded indebtedness of substantial sums required for these purposes. The Authority was later authorized to provide similar financing for private higher education institutions which wished to participate. Also, such 100% financing was extended in the private field to other types of buildings required for students' use, such as libraries, classrooms, and laboratories. This permitted private institutions to expand their facilities without the delay and necessity of raising capital funds from donations or diverting funds available to unproductive fixed assets. This Authority has become a vital part of New York State's effort to meet sharply increased enrollments for higher education forecast by 1970. As of June 30, 1964 the program included over \$400 million of completed buildings and those in design or under construction.

The requirements for dormitories and dining facilities in New Jersey's public institutions for higher learning could be similarly financed and thus relieve the burden from the taxpayers. To the extent that private institutions can expand their capacity and thus relieve to a greater extent the load on public facilities, the state would also be benefited.

A Dormitory Authority of the State of New Jersey could function in the same general pat-

tern as the Authority in New York. The first step is for the college to advise the Authority on the type of building required and discuss the preliminary plans. With the approval of the college the Authority then engages architects and constructs the buildings with its own funds on land which the college has deeded to the Authority. The college then leases the building from the Authority and is entirely responsible for its operation. Payments by the college under the lease provide for amortization for as long as a 40 year term, interest, administration expense, and maintenance of a repair reserve equal to 5% of the construction cost. Such payments in the case of public institutions where the construction is confined to dormitories and dining facilities, are covered entirely by fees from students for room and board. The Authority issues its bonds for the total costs, which are tax exempt, but are an obligation only of the Authority and not of the state. At the end of the lease the Authority gives the title to the entire property back to the college.

Since a question had been raised as to whether such an Authority might conflict with the Constitution of the State of New Jersey, the Attorney General has been asked to investigate this point and on September 16, 1965 rendered an opinion that it would *not* conflict with the Constitution. Some question has been raised as to whether any change in the scale of charges to students for room and board might be required, but in any event, the State has no obligation to furnish in its public institutions dormitory rooms and board at fees below the actual non-profit costs.

Appendix G

NEW JERSEY'S INADEQUACIES IN MEDICAL EDUCATION

Despite the facilities provided by the New Jersey College of Medicine and Dentistry and the newly established two year medical school at Rutgers, it is a recognized fact that New Jersey falls far short of providing its citizens with adequate resources for the training of physicians.

Prior to 1956 there was no medical school operating in New Jersey. Seton Hall University then established its own school using the Jersey City Medical Center for both teaching and clinical facilities.

In 1962 Rutgers, The State University, set out to establish a two year school on the campus at New Brunswick for a projected class of 64 pupils. It was expected that these students could gain entrance to other medical schools for their junior and senior years. The first pupils will be admitted in the Fall of 1966.

Because the rising costs of operating a medical

school were too great a drain on its resources, Seton Hall University proposed that the State take it over, and this was accomplished by act of Legislature in the Spring of 1965. It is now called the New Jersey College of Medicine and Dentistry and is administered by a Board appointed by Governor Hughes. As a result of the withdrawal of the school from the Jersey City Medical Center, the State is now faced with the immediate and urgent problem of finding the school a new home.

In 1964 there were 417 New Jersey students enrolled in medical schools, but 79% were studying out-of-state, since New Jersey provided for only 88 places, or 21%. This placed New Jersey at the bottom of the list of states in out-migration of medical students. The desperate national need to train doctors is a well established fact, and it is all too obvious that New Jersey is failing

miserably to carry its share.

The health of the citizens of the State can be affected when it is realized that the top young men graduating from medical schools usually choose to practice near centers of teaching and research. That New Jersey is less attractive to physicians is borne out by the fact that it is below the national average in the number of physicians per 100,000 population. While the State has been fortunate in being able to fall back on the great universities and hospitals of New York and Philadelphia, it is obvious that the quality of its medical care suffers seriously. The situation may well grow worse as a result of the State's rapid growth and the greater demands being made on out-of-state schools and hospitals.

How should the State meet this problem? An immediate study should be made to recommend a comprehensive plan for the future of medical education in the State. As to cost, it is fortunate that matching funds from the Federal Govern-

ment for medical education are now available. If the plan should provide for Rutgers to complete a four year school and provide a 450 bed University hospital, it would require \$30 million in State funds plus Federal matching funds. If an entirely new plant is to be built for the New Jersey College, a figure of \$45 million (plus Federal funds) would seem to be a minimum amount. If an existing hospital is taken over as the University hospital, this cost could be reduced. In addition to these two schools, the plan might call for the establishment of a third at an additional cost to the State of \$35 million. Thus, the nature of the financial requirements seems to be over \$100 million for capital construction in the next few years, with \$75 million needed at present. The plan would provide an estimate of additional operating costs.

This is a problem of immediate and personal concern to every person in the State. Our health and the health of our families are at issue.

Appendix H

STATISTICAL CONSIDERATIONS IN THE ENROLLMENT PROJECTIONS

Most of the essential assumptions in developing the various statistical tables have been stated in the report. This appendix will be limited to a brief discussion of the basic enrollment projections.

With respect to the basic projections for New Jersey students enrolled as full time undergraduates, the figures of 158,000 for 1970 and 221,500 for 1975 arise when an enrollment of 112,500 for 1965 is taken as the base and an annual growth rate of 7% is assumed. The figure of 7% was obtained on the basis of surveys of New Jersey students enrolled in-state and out-of-state for 1961 through 1964, and estimated figures for 1965. The average annual increment was approximately 7% during this period. (Of course, the very large increment between 1963 and 1964 was not used in obtaining the average trend, since this was obviously the result of the post-World War II "baby boom".) It may clarify the meaning of the results for 1975 if they are developed in a different way.

During the period from 1965 to 1975 two factors are likely to dominate the enrollment trends. First, the number of high school graduates each year can be expected to increase steadily, mainly because of the increasing number of children born each year following the end of World War II. Second, the trend for an increasing percentage of high school graduates to seek higher education can be expected to continue. The basis for this belief has been well stated by Cartter and Farrell in the Spring 1965 issue of the *Educational Record*, as follows: "The bulge in enroll-

ments in the 1950's was attributed to the G. I. Bill, to a delayed reaction to the war years, to the cold war, and then to Sputnik. Now twenty years after the close of World War II, it is apparent that a permanent revolution in collegiate patterns has occurred, and that higher education has become and will continue to be the common training ground for American adult life rather than the province of a small, select portion of society."

Data on the effects of the increasing number of high school graduates are provided for New Jersey public schools in a report prepared by the Bureau of Research of the State Department of Education in March 1965. On the basis of this report it can be determined that the projected total number of high school graduates in the four years 1972 through 1975 will be 384,000 as compared with a total of 252,555 for the four years 1962 through 1965. College enrollments may be assumed to be proportional to the number of public high school graduates in the four most recent classes, as a reasonable approximation. On this basis, it would be expected that college enrollments would increase by 52% during the 10 year period. Using the figure of 112,500 for 1965, we would then expect an enrollment of 171,000 as the result of the increasing number of students reaching college age.

Subtracting 171,000 from 221,500 (the 1975 projection) yields an increase of 50,500 attributable to a rising demand for higher education. In order to evaluate this figure, it is useful to estimate the total number of New Jersey high school

graduates, both public and private, for the four years 1972 through 1975. This may be done by assuming that the number of private school graduates will be 19% of the number of public school graduates. The total turns out to be 456,960. Since 50,500 is 11% of the new figure, it may be concluded that if the percentage of recent high school graduates enrolled in college increases by 1.1% per year during the period 1965 to 1975, the resulting increment in enrollment will be 50,500 in 1975. For comparison, Dr. Strayer assumed a 0.9% annual increase in the percentage of New Jersey secondary school graduates entering college.

One factor which is likely to facilitate the obtaining of higher education by New Jersey students is the growth of county colleges. In this report, it has been estimated that these colleges will grow by some 32,000 students from 1965 to 1975. This figure was based on the estimate that county colleges will be enrolling about 15% of all New Jersey full-time undergraduates and

about 25% of the full-time undergraduates enrolled in the first two years of college. Thus, the growth of county colleges alone, if expectations are fulfilled, is more than three-fifths as large as the total increase of 50,500 attributed to the increased proportion of high school students going on to college in this method of developing the estimates.

The foregoing analysis attributes somewhat more of the growth to the increase in high school graduates than to the increase in the proportion of graduates going on to college. An alternative development, based on data for the 18 to 21 year age group in successive years would attribute substantially more of the estimated growth to the increase in the *proportion going to college* than to the basic increase in the age group. For this reason, the relative importance of the two major factors in producing the estimated growth should be regarded as open, pending the development of further data.

Appendix I

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"... IF THOSE WHO TALK ABOUT STATES' RIGHTS MEAN STATES' RESPONSIBILITIES, THEN NEW JERSEY MUST ACCEPT ITS CHALLENGE; MUST SEIZE ITS OPPORTUNITY TO PLAN FOR THE FUTURE, MUST SEEK THE FUNDS FOR THE FUTURE, AND MUST LET ITS IMAGINATION RUN TO THE BOLD, THE NEW, AND THE EDUCATIONALLY DARING."

—Governor Richard J. Hughes
at Princeton University
September 22, 1965

"STATE BY STATE CITIZENS MUST REAPPRAISE THE PUBLICLY SUPPORTED EDUCATIONAL SYSTEM FROM TOP TO BOTTOM AND DECIDE WHAT ADJUSTMENTS MUST BE MADE TO HANDLE THE VAST INCREASE IN THE NUMBERS OF YOUTH."

—James B. Conant
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