

III. THE NEWARK COLLEGE COMPLEX

A. Introductory Remarks

This section describes and evaluates the relationship of Newark College of Engineering with the three other institutions of higher education in Newark. NCE is under intense pressure to cooperate with its sister institutions for a number of reasons. Their close proximity to each other makes cooperation, in a physical sense, easily possible. An interdependence born of new interdisciplinary approaches to higher learning provides another reason. The economics of shared costs and facilities presents another. For these and other reasons, all of the colleges are being urged by the office of the Chancellor of Higher Education in New Jersey to develop meaningful understandings and programs as quickly as possible.

The essential problem has been that until this past August no one in the State knew what the ground rules or frame of reference for such cooperation would be. Now, however, guideposts for cooperation are being established and some definite progress can be expected during the present academic year and in the years to follow. It is impossible to predict with any accuracy the ultimate form that this cooperation will take, because of New Jersey's involvement in the developing master plan, already referred to, for all higher education, public and private, whose ramifications are many and whose eventual specifications will affect Newark's institutions in presently unforeseen ways.

Essentially, however, the four institutions to be described are in two relationships at once: each is changing internally in pursuit of its own individual destiny as an institution and each is seeking valid means of cooperating with the others. Internal and external change within this context is responsible for much of the difficulty so far encountered in establishing the kind and degree of cooperation required.

At present the situation, in terms of State governance, is as follows, as

reported in the NEWARK STAR-LEDGER For August 7, 1971:

"The State Board of Higher Education yesterday adopted a plan to create a university center in Newark, the state's largest city.

"The action establishes what is expected to become New Jersey's largest and most diversified center for higher education, with an enrollment potential of more than 30,000 students.

"The center will be created from the four existing institutions within the city -- Rutgers University in Newark, Newark College of Engineering, the New Jersey College of Medicine and Dentistry and Essex County College -- plus any additional institutions these four schools may jointly create.

"Each institution will retain its separate identity within the university center, although future planning and development, as well as actual merger of programs, will be supervised and coordinated by a central planning agency -- the Council for Higher Education in Newark (CHEN).

"In adopting the action, recommended by a special two-member committee of the higher education panel, the state board also urged 'immediate implementation' of the office of Coordinator of Higher Education in Newark.

"This new post would be directly responsible to the boards of the four institutions and, indirectly, to the state board.

"The action culminates years of planning, behind-the-scenes persuasion and discarding of alternatives, one of which included the direct administrative merger of the four schools.

"However, this plan calls for the academic and facility integration of the institutions, while actual administrative policy will be dictated by the governing boards of the individual institutions."

In actual fact, the four institutions have been cooperating on a rather informal basis since 1968, as will be indicated in some detail later in this presentation.

B. Identification of the Institutions Involved

Of the four institutions in Newark, NCE is the oldest, having grown out of a city-state venture in 1881. The College itself was instituted in 1919 as a devel-

opment of the original Newark Technical School. Major support now comes from the State, since Newark can make only a token appropriation each year.

The Newark Colleges of Rutgers-The State University (R-N) were originally a conglomerate of institutions, mostly proprietary, which became the University of Newark. In 1946 the University of Newark merged with Rutgers University. Rutgers-Newark maintains five day colleges: Arts and Sciences, Graduate Business, Law, Nursing, and Pharmacy, as well as divisions of three other late afternoon and evening units: Education, University College, and University Extension Division. It also houses sections of the Graduate School (Arts and Sciences) and the Graduate Schools of Social Work and of Library Service.

The College of Medicine & Dentistry (CMD) was incorporated in 1954 as the Seton Hall College of Medicine and Dentistry. It became a State school in 1965. In 1966 a major portion of its clinical and research programs in medicine was moved from Jersey City Medical Center to Martland Hospital in Newark. It recently merged with the medical school at Rutgers, New Brunswick and is now known formally as the College of Medicine and Dentistry of New Jersey in Newark. Interim facilities for instruction and administration were completed in the summer of 1969. Degrees offered include M.D., D.D.M., and Ph.D.; M.S. degrees are offered in anatomy, biochemistry and a number of other fields.

Essex County College (ECC) was created under a relatively new county college law. It has been supported by Essex County and the State since students were first admitted in 1968. The College offers transfer programs conferring A.A. or A.S. degrees and 2-year A.A.S. degree programs in occupational fields. The College is located temporarily in a 12-story building in the downtown area, but plans are under way for the erection of a megastructure closer to the other three institutions, on land that has already been acquired.

C. The Climate for Cooperation

At present, the four institutions are academically evolving and physically underdeveloped. With regard to evolution, NCE has stated its mission of developing toward a technological university; R-N seeks to continue development of its graduate and professional offerings, particularly, with emphasis on the applied fields; ECC and CMD are relatively new institutions. In regard to physical development, again it must be pointed out that ECC and CMD are in their earliest stages and carry on in temporary facilities; NCE has reached the capacity of its present campus; and, the R-N facilities are presently not only incomplete but also reflective of an imbalance. With regard to facilities and a drawing together of the institutions there is at present a lack of adequate parking and living facilities.

Curiously enough, each of the four institutions has a somewhat different relationship to the State, some of which will be obvious from the very brief discussion of their separate histories outlined above. The creation of the State Board and Department of Higher Education has seemed to offer both opportunities and problems. The opportunities would be the encouragement and support of cooperation and coordination among the institutions, and support, both of expertise and funds, for programs at all levels. There is hope that the master plan for higher education in New Jersey, which is perhaps at present the chief mission of the State Board and Department, will be a workable one.

From the point of view of the institutions, certain disadvantages which might arise from the existence of the Board and Department must be pointed out. There are dangers -- perhaps already apparent -- of bureaucratization and excessive control. There is also the problem of lack of encouragement, or more concretely, lack of financial support for new endeavors. The gravest danger at this writing is that the all-important master plan might be ill-conceived. There is already some evidence of a questionable base for State planning and a lack of consultation

with practitioners and, therefore, master plan proposals which do not reflect available education-academic expertise. Representatives of the institutions of higher education in the State, including the four colleges in Newark, feel that a basic fault of the current master plan draft is that it was created and presented for public discussion by department staff without seeking prior advice from those upon whom the responsibility for its implementation will fall.

D. The Situation in Newark

The factors that involve successful cooperation among Newark's four public institutions of higher education are many and complex. One of the paradoxes of their various relationships is that often a factor can be both an asset and a liability.

By far the most influential factor in Newark's situation is the difficult mix of white, suburban, relatively affluent members of the educational and business communities who invade the City each morning and leave each evening and the real population of Newark, poor for the most part, predominantly black and Puerto Rican, whose situation is in sharp contrast to that of the first group.

The daily tensions of life in Newark under these circumstances affect the educational institutions in various ways: vast numbers of students in northern New Jersey need the educational advantages Newark offers, yet there are serious problems of security, City services such as parking and housing, and transport congestion. The four institutions face these problems both separately and together with respect, for example, to security, adequate parking and dormitory facilities.

As a paradoxical element, the northern New Jersey industrial complex, with Newark as its hub, can also be thought of as a vast economic, social and political laboratory, whose very problems are an exciting stimulus to education in the

social and political sciences; in engineering applications such as housing, transit and urban renewal; in public health and a number of other fields.

Once this major element in the educational life of Newark is recognized, the assets, real and potential, begin to outweigh the liabilities. NCE and Newark-Rutgers, each with a quite new campus of about twenty acres face-to-face across High Street, have a growing number of excellent facilities with which to work.

Essex County College and the College of Medicine & Dentistry, already described, will within the next few years expand into their own new campuses. Thus the future, at least in terms of physical plant, is assured, although even here it must be admitted that the situation would appear far brighter if there were any real solution over the horizon for the lack of parking and dormitory facilities.

The future of public higher education in Newark is inextricably caught up in the future of the total State higher educational system. It is well known that New Jersey has lagged far behind the rest of the nation in its commitment to higher education. In recent years, the State has been working hard to catch up with reality. It has done this by expanding present facilities, by stimulating the growth of the 2-year county college system, by building a number of whole new four-year institutions -- by finding seats, in other words, for the hordes of college-bound students who until now have had to go outside New Jersey for an education.

New Jersey is thus achieving quantity, but in the process is coming dangerously close to sacrificing quality. Whether the State can really invest in Newark as the great center of learning it envisions is, today, one of the most troublesome questions of all.

If the Legislature should decide to authorize State support of New Jersey's private colleges according to proposals recently advanced, a further thinning down of fiscal support for the public colleges would be one of the inevitable results.

E. The Development of CHEN to Date

Given all the above factors, it seemed almost inevitable that these four separate institutions with their four different missions, academically evolving, physically underdeveloped, with certain assets and certain liabilities, thrown together "by a set of curious chances" into geographic proximity and at the same time becoming parts of a new State system for higher education, should seek a way, jointly, to make the best of their situations.

In May of 1968 the State Board of Higher Education passed a resolution authorizing establishment of coordinating committees of presidents of public higher education units where they are in proximity. In the preceding February, the four colleges in Newark had already formed such an association on their own initiative but with the blessing of the Chancellor of Higher Education.

To date CHEN has dealt with problems largely on an upper-administrative level. The group is organized through an Operating Committee of Presidents and a few other selected administrators which meets at least monthly. The State Department is invited to be represented at all meetings. Policy matters are presented to the Boards of the individual institutions. A number of task forces have been established, which may be conveniently subdivided into basic categories indicating special areas in which CHEN feels it can operate effectively at its present stage of development. The following are the established task forces which have operated with varying degrees of success since their creation. They are listed by major category and are largely self explanatory:

1. Operating, Planning, Information -

- a. Planning, including the Model Cities Project
- b. Parking
- c. Legislator Information Sessions
- d. Response to "Wolfe-Baker" Committee. (This was the ad hoc sub-committee of the State Board set up to study higher education in the City of Newark.)
- e. Joint Facility Planning
- f. Joint Faculty Appointments
- g. Housing
- h. Common Calendar and Schedule Survey

2. Academic and Career Programs -
 - a. Allied Health
 - b. Nursing
 - c. Physiotherapy Career
 - d. 3-year undergraduate - 3-year medical degree
 - e. Clinical Pharmacy Internship
 - f. Extension and Continuing Education
3. Instruction and Institutional Resources -
 - a. Library and Audio-Visual
 - b. Computer Study
 - c. Animal Farm
 - d. NSF Chemistry Project
 - e. Social Work Cooperation
4. Students -
 - a. Disadvantaged Students
 - b. Relations with Central High School
 - c. 2-year transfers to 4-year units
5. Services -
 - a. Student Health
 - b. Day Care
 - c. Faculty Club

Several far-reaching projects have occupied CHEN during the 1970-71 period. The most taxing, perhaps, was that associated with the investigations and final recommendations of the Wolfe-Baker committee. As indicated earlier, that study has been completed and the committee's recommendations approved.

Another major activity has been the organization of information sessions at Newark for members of the New Jersey legislature. These have taken the form of presentations on behalf of each of the four colleges and of CHEN itself, by the presidents or their representatives.

During the year, application was made jointly by CHEN and the Newark Housing Authority for a HEW-HUD grant under the Model Cities Program to finance planning for the general four-college area -- that is those areas on the periphery of the four colleges. Earlier, using funds contributed by the Sloan Foundation, the group had contracted with the architectural firm of Haines, Lundberg, and Waehler

for a proposal in this area. The division of regional and community planning of that firm recently produced its report on this study entitled: "Proposed Program for the Joint Community-Higher Education Planning and Development Processes in Newark, New Jersey."

Two other major studies have been completed during the 1970-71 period including a parking study for R-N and NCE by E. A. Barton and Associates. Another is a study of the best method for handling computer services for the four colleges. The latter was supported by funds from the State Department of Higher Education. At the time of this writing both the parking and computer reports are still under study for possible implementation.

F. Real Accomplishments Thus Far

CHEN is limited in its ability to do concrete things because of the uncertainty of its permanence and support. A request was put in the budget for funds to support a full-time administrator and the appointment has recently been made. The group has until now been limited to those considerations which could be accomplished within the time available to top administrators who normally operate on a policy level. Examples are:

1. Intercollegiate Registration. The programs presently include registrations between NCE and R-N. Among the courses taken by NCE students at Rutgers are biology, physiology and anatomy -- important to those planning to do graduate work in biomedical engineering or who are pre-med majors. Other students are taking courses of personal interest, such as foreign languages, philosophy, urban sociology, and literature. R-N students, on the other hand, are studying computer programming and special mathematics and engineering courses at NCE.
2. Transfer Procedures. NCE and R-N have worked closely with ECC to facilitate the transfer of qualified students from the 2-year to the senior institutions.

3. Library Cooperation. A committee of the four units' libraries holds periodic meetings. At present actual cooperation is limited to inter-library loans and use.
4. Joint Faculty Appointments. To date a R-N sociology professor has been given a joint appointment at CMD and an NCE faculty member has lectured at CMD. Other possibilities are under study.

G. The Future

Present thinking among representatives to CHEN favors the development of a consortium. This assumes -- as seems reasonable at this time -- that the State will not insist upon an actual merger of two or more of the presently existing institutions. With this idea in mind and without regard, for now, to the precise administrative setup for such a consortium, the following areas would certainly be among those receiving top priority (the order is not necessarily significant):

1. Expansion of Intercollegiate Registration. In addition to the encouragement of greater use of this idea along lines already established, the whole concept should be expanded to cover a number of interdisciplinary programs presently under consideration. Fundamental to current CHEN thinking is the concept that the major function as educational institutions is to provide the maximum number of "paths for students". There are currently limited paths inter-institutionally. The main thrust for the future must be aimed at providing greater opportunities for movement to assist students, properly guided, in following programs of interest and value to them. In this sense, then, all other cooperative efforts are merely peripheral to the goal of maximum opportunities for our chief constituency, the students.
2. Increased Laddering Opportunities. Closely related to "1" above is the whole question of programs fitted to one another. The primary example

is the articulation necessary for transfer programs from 2-year to 4-year institutions, but there are other laddering paths that must be articulated as well.

3. Interdisciplinary Programs. Related to "1" and "2" above is the proliferation of programs designed to utilize the specialized staff and facilities of the four institutions. These could be called "program paths" as opposed to "student paths". Two programs which the four colleges hope very much are in their immediate futures are a College of Allied Health and an Architectural School. If recommended by a State Committee, the latter could be based at NCE.
4. Faculty Interchange and Joint Appointment. The student and program paths all suggest additional areas in which such cooperative arrangements might be considered.
5. Materials Interchange. At present the four libraries have arrangements only for inter-use and inter-loan. If funding is received, it would be possible to institute a union catalog and an information retrieval system. At a later time these efforts could be extended to joint acquisition. When the facilities of Essex County College are built, joint audio-visual processing should also be a possibility.
6. Joint Facilities. There are some facilities which could be built as a joint effort and these possibilities are under study by committees of CHEN. Two obvious examples are in the areas of parking and living facilities. Closely related are the possibilities for sharing of services such as in student health and computer facilities. The Chancellor has recently indicated to R-N and ECC, both of which are interested in physical educational facilities, that no new construction will be permitted until a thorough examination has been made of all needs within that sphere in Newark.

7. Planning. It has already been demonstrated that joint planning can be effectively carried out either by the four-college staff or through outside consultants. Much more needs to be done in this important area.
8. Coordination of Graduate Programs. The draft of Phase II of the Master Plan, published in January, 1971, was devoted in large part to a plan for graduate programs in New Jersey. Recommendations relating to graduate programs in Newark called for a graduate university of New Jersey to be headed by a Vice Chancellor. Prior to the dissemination of Phase II, CHEN had already proposed its own suggested organization of graduate study in Newark in terms of a Graduate Advisory Council. While this proposal allows for participation by others, it applies primarily to the four colleges -- and particularly, of course, the three which offer graduate programs. All four institutions in Newark -- indeed, virtually all institutions of higher education in New Jersey -- were in agreement that the so-called "graduate university" plan was unworkable and undesirable. The plan was therefore dropped in favor of the advisory council approach.

In speculating on any future plan of action, one of the major obstacles is that the present state of affairs within the Newark Complex tells very little about the attitudes of the real cooperators. This makes it very difficult to identify what actual problems must be approached if the efforts at cooperation are to be successful. The main task seems to be to determine some facts about the possibilities for development in certain categories or "pathways" for cooperation and/or movement among our various constituencies. With this background in mind, a brief consideration of each of three broad categories follows, with some tentative thoughts about means of future cooperation.

H. Student Pathways

There are many avenues through which NCE students could become more involved

with students at the other institutions in Newark. These "paths" range from joint social activities to increased cross registrations and combined academic programs. Each of these would greatly increase the contact of NCE students with students at the other institutions. There are three other colleges to be considered, but because of the nature of Essex County College and the College of Medicine and Dentistry, it is not likely that greatly increased student contacts can be expected there. The focus for the future, then, will probably be on interrelationships between students at NCE and those at Rutgers-Newark.

It is probable that cooperation among students will be easily achieved. Students generally seem to view suggestions of cooperation as related to their area of primary concern -- that is to say, social interrelationships. The administrative point of view, on the other hand, will probably reflect a concern for academic programs and the means for facilitating them. Both attitudes are most important for the future of cooperative efforts.

This coming together of student populations will probably be enhanced by the fact that the studies at Rutgers-Newark are tending more toward the applied science areas and the technological studies at NCE are becoming more socially and humanistically oriented. At what point these two worlds become sufficiently alike to make a student in one feel not only comfortable but accepted in the classes of the other remains a matter of pure speculation. It is at this point, however, that joint academic programs and cross registrations will become most feasible from a "student pathways" point of view.

I. Faculty and Program Pathways

It has been sagely said that a faculty person may be defined as one who thinks otherwise. If this is true within disciplines and within institutions, how much more must it be evident with regard to inter-institutional issues! If one adds to disciplinary rigidity and the exclusivity of specialization the factors of

institutional snobbery and various forms of personal and professional insecurity, among other things, it becomes readily apparent that faculty are not going to accept cooperation as a way of life without some very intriguing academic rewards, realistic assurances of good motives and/or convincing threats.

Preliminary investigations have revealed little contact among faculty at the various institutions except in certain research areas. Indeed, it appears that the greatest possibilities for the development of cooperative efforts lie in the areas of research and graduate study.

Whatever the area of study under consideration, there are the questions in each case of: who offers what?; who should offer what?; who is interested in what?; can he be accommodated?; and, what administrative procedures are to be followed?. None of these is a simple question, but one can easily speculate that they must be faced and answered in the future not just in the interest of cooperation but also as a sine qua non for the continued development of these two institutions in Newark as autonomous units. Returning to the original point, then, with regard to the issue at hand faculty must be convinced of the wisdom of thinking cooperatively rather than otherwise.

With the developing new curriculums at the College, some former service departments are becoming in a sense degree-granting as well; but the primary concern here is with the traditional engineering departments and how they might relate realistically to programs -- particularly professional programs -- at other institutions in Newark. Present judgment in this area with regard to cooperative efforts between NCE and the other institutions on this level may be summarized as follows:

1. College of Medicine and Dentistry: A committee has been studying the feasibility of developing a biomedical engineering program, and its findings suggest that NCE should not become involved in such a program at this time. Nevertheless, there are a number of researchers at NCE who are interested in and involved with research related to medical problems. It would appear then that joint research

interests should be the basis for initial explorations of expanded cooperation with CMD.

2. The professional schools of Rutgers-Newark: With an increasing interest on the part of many engineering students in the relationships between engineering solutions and societal problems, there are very natural interests in the legal aspects of such concerns. At the same time, law school curriculums seem more and more oriented toward the same problems, again at the demand of the students. Here is a natural area for exploration of coursework jointly developed by the faculties of NCE and Rutgers School of Law. An excellent example would be in the area of environmental law, where there might well be serious discussion of joint course development or actual interchange of faculty. Similar program ideas should and will be explored at Rutgers Graduate School of Business in Newark. As a matter of fact, preliminary discussions have already been initiated by NCE personnel with their counterparts at the professional schools of Rutgers-Newark. Several specific programs suggest themselves as areas for real cooperative efforts in the near future, i.e., Architecture and Public Administration.

3. R-N College of Arts and Sciences: Two avenues must be explored here as representing an expansion of the present somewhat limited cross-registrations. The first is special courses developed by NCE for Rutgers students and vice versa. The second is the possibilities for greater enrollment of NCE and R-N students in the same classes.

J. Pathways to Facilities

These last two items are linked in the same general category because they are both matters primarily within the purview of administration. Questions involving the joint use of facilities and equipment such as, for example, physical education buildings or audio-visual equipment except as they involve the services of faculty personnel, are generally thought of as administrative problems. A recent

action by the Chancellor of Higher Education dictating that R-N and ECC may not proceed with plans for physical education facilities before a study of the needs of the entire higher education community in Newark are examined, tends to indicate that many of these kinds of decisions are being shifted to a higher administrative level.

Most questions related to facilitation of pathways are purely administrative. For example, questions of cross-registration must involve on their several levels the deans and the registrars. So also the question of a possible common card catalog while requiring decisions on a number of levels could not be accomplished without the cooperation of the librarians.

An interesting recent case of evolving administrative cooperation on the staff level arose from an action by CHEN, working through the public relations directors of the four institutions, to set up meetings of administrative staff members with similar job descriptions to discuss mutual problems and possibilities for joint efforts. It seems quite clear that no effective cooperative programs can be carried out without this type of contact linked with a clear understanding of the mission of CHEN and the urgency of attainment of its goals in the interests of the development of the Newark Complex.

K. A Few Last Words

In the final analysis only those in a position to have an overview of the entire institution can be expected to have a sure sense of those areas where cooperation might best aid development. It is hoped that everyone participating directly in the case study may be brought to this point of overview at NCE -- often limited to trustees, administrators, and a few faculty. NCE believes that as the senior institution in Newark it must assume leadership both in the initiation and guidance of programs of cooperation. Evidence of this ability to accept and carry out a leadership role will be an essential part of the proof that NCE is in a

position to continue to develop as a high quality technological institution.

While it is perhaps poor psychology to end on a negative note, this paper is meant to raise issues; and, it seems appropriate to bring this section to a close by placing emphasis on what is considered one of the most perplexing problems facing those who would like to see cooperative efforts serve our development. In the simplest terms, the problem is "people". It has already been pointed out that cooperative efforts can succeed only if those who must do the cooperating are aware of its importance and willing to indulge in it. Administrators are practical people and will cooperate whether they really like it or not, either because they are told to do so by some higher authority or because it is politically expedient. The same constraints do not generally apply to faculty and students!

An interesting generalization concerning attitudes may serve to state (perhaps overstate) the issue. It has already been pointed out that NCE's primary cooperative efforts in the faculty and student pathways will probably be with Rutgers-Newark. The generalization says that faculty at R-N tend to look down on faculty at NCE while students at NCE tend to look down on students at R-N. At first glance this seems to be a sort of paradox. Yet there is a certain logic. The University would be expected to draw a research- and publication-oriented faculty; and yet the University has few graduate programs in Arts and Sciences in Newark at this time. NCE's faculty, in general, would seem to be more practice and teaching oriented; and yet there is a cadre of research-oriented faculty and there is a highly developed graduate program at NCE. With regard to students, it is probably true that admissions requirements (particularly in Math-Science) are higher at NCE than at R-N and that work schedules are more demanding. But, perhaps more important, there are also certain social differences which are reflected in various student orientations toward both study and study environment.

The question of whether the development of NCE into a technological university can take place in serious cooperation with its neighboring branch of the

State University or independently may well depend upon the resolution of these counter-productive attitudes.

(Generalizations are only generalizations! At the initiative of several Rutgers faculty members, a voluntary collaborative seminar on "Technology and Society" was begun in November, 1971. About two dozen faculty from Rutgers and NCE are participating, although all four institutions were invited to join. The seminar, which meets weekly to discuss brief papers, represents for most of its members the first interaction between the faculties themselves, on a scholarly level, without the mediation or presence of administrators from the colleges.)