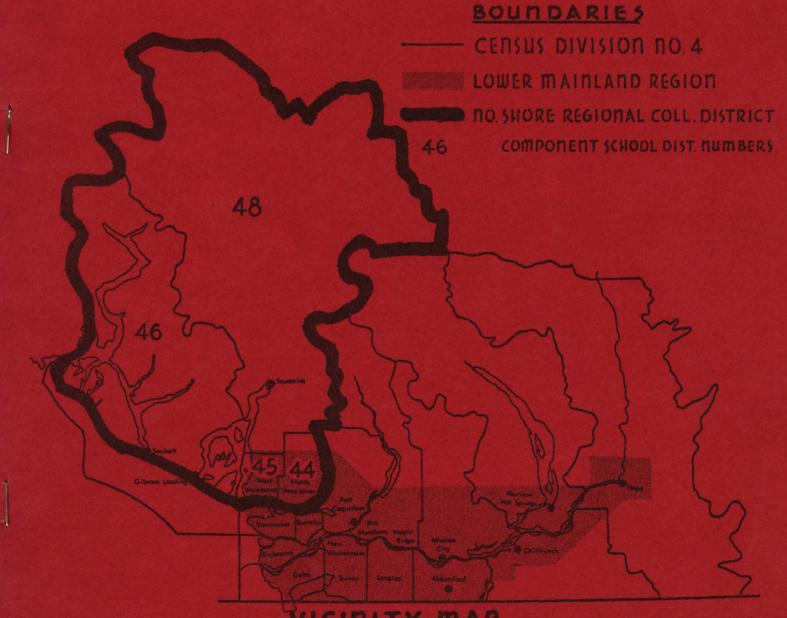
PRÉCIS

DAVIS-MACCONNELL-RALSTON, INC. REPORT

NORTH SHORE COMMUNITY COLLEGE



NORTH SHORE REGIONAL COLLEGE DISTRICT

FOREWORD

Recent sociological and technological development -- have created new ways of living and of earning a living.

These constantly changing conditions present a tremendous challenge to the college, directly influencing the educational program, and the kind, number, and location of facilities within which the program must function. It is imperative that change and its bearing on education, and education and its bearing on change, be studied, analyzed, and understood as prerequisites to intelligent planning.

The Consultants express their appreciation for highly valued advice and cooperation in the development of this report.

THE CHALLENGE FOR HIGHER EDUCATION

Education, concerned with the growth and development of the human mind, must assist each man and woman, to the extent it is possible, in realizing his or her potentials in order that they may be able to meet the many and diverse needs of our civilization.

INCREASING PROPENSITY IN COLLEGE ATTENDANCE

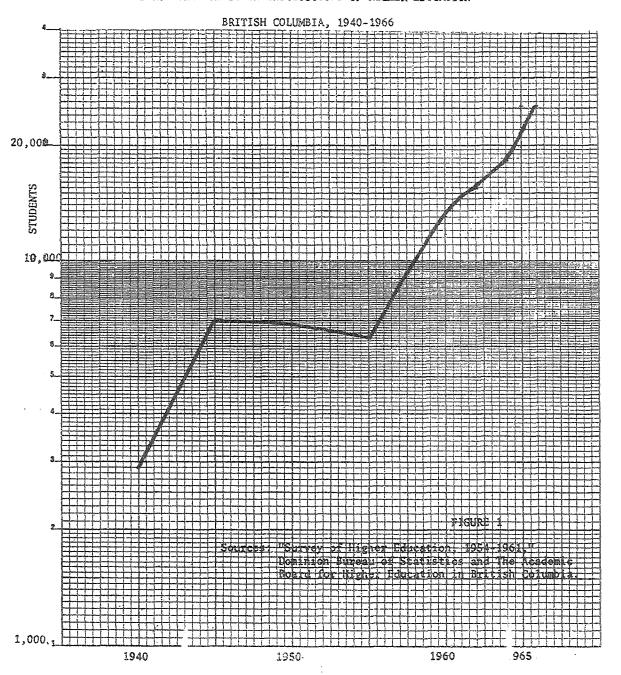
The upsurge in enrollments in the institutions for higher education discloses the growing propensity for educational attainment by a broader age group range of the population.

In view of a rapidly increasing population in the Lower Mainland Region and the assumption that this trend will continue, anticipating the growth in numbers of college students during the next years represents a major problem. More institutions and new types of educational centers are needed to serve growing and changing demands for post-secondary education.

THE NEED FOR NEW INSTITUTIONS OF HIGHER EDUCATION IN METROPOLITAN AREAS

Large urban agglomarations are in need of educational institutions geared to the training of students in skills required by businesses and industries located in the metropolitan complex. The bulk of future enrollment will have to be located in institutions that are within commuting distance from the centers of population, if the proportional enrollment predicted for the future is to be achieved.

ENROLMENT TRENDS IN INSTITUTIONS OF HIGHER EDUCATION



THE COMMUNITY COLLEGE AS PART OF HIGHER EDUCATION

The forces which led to the establishment of the community college were twofold.

1) Demographic Forces

- a. Rapid growth in the college-age population.
- b. A rising rate of the college-age population enrolling in institutions of higher education, not necessarily for four years or for full-time, but certainly for a substantial period beyond high school.
- c. The growing proportion of adults seeking further education both as an end in itself and as a means for achieving or holding a position in a competitive society.

2) Economic Forces

Manpower needs in professional and vocational areas created by the explosive expansion of technology; the emergence of new patterns of employment and consumption practices in an expanding economy.

For a large number of occupations in today's circumstances a much more elevated level of general education than in the past is required before a man or woman can profitably embark on his or her professional training.

Interpretation of the place of this institution in the total educational enterprise is a continuing process.

SOCIO-ECONOMIC SURVEY OF THE NORTH SHORE DISTRICT AREA

POPULATION

More than half of British Columbia's population is concentrated in the valleys of the Pacific rim - the Lower Mainland Region with Vancouver as the central city.

One of the fastest growing areas in this region is the North Shore area. While the population in British Columbia increased by 60 percent and that of the Lower Mainland Region by 62.4 percent during the fifteen-year period of 1951 to 1966, the population in the North Shore area increased by approximately 150 percent during the same period.

TABLE 3

NORTH SHORE REGIONAL COMMUNITY COLLEGE DISTRICT

COMPARATIVE POPULATION STATISTICS IN SELECTED AREAS OF BRITISH COLUMBIA

•	CENSUS OF CANADA			L.M.R.P.B. ESTIMATES				
	1951	1956	1961	1966	1971	1976	1981	1986
British Columbia Percent Increase	1,165,210	1,398,464 + 20.0%	1,629,082 + 16.5%	1,876,900 + 15.2%	2,163,100 + 15.2%	2,498,300 + 15.5%	2,912,000 + 16.6%	
Lower Mainland Percent Increase	636,548	752,983 + 18.3%	893,619 + 18.7%	1,034,000 + 11.6%	1,188,300 + 14.9%	1,348,750 + 13.5%	1,518,400 + 12.6%	1,700,000**
North Shore Regional College District Area West Vancouver North Vancouver City North Vancouver Dist		19,197 19,951 26,252	25,454 23,656 38,971	31,000 27,300 51,500	36,000 31,000 64,000	38,000 33,000 73,500	39,500 34,800 78,200	
Total No. & West Vanc Percent Increase	ouver 44,146	65,400 + 48.1%	88,081 + 34.7%	109,800 + 24.7%	131,000 + 19.3%	144,500 + 10.3%	152,500 + 5.5%	
Howe Sound Percent Increase	N.A.	6,969	4,579 - 24.6%	8,116 + 77.2%	10,360* + 27.6%	13,232* + 27.7%	15,437* + 16.6%	
Sechelt-Gibsons Land Percent Increase	ling N.A.	6,713	7,208 + 10.7%	8,500 + 11.8%	9,480* + 11.5%	9,590* + 11.5%	10,700*	
TOTAL NORTH SHORE DIST	RICT AREA	78,182	99,868	126,416	150,840	167,322	178,637	187,000*

15-YEAR PERCENT INCREASE IN POPULATION, 1951-1966

British Columbia 61.0% Lower Mainland Region 62.4% North Shore Area 148.7%

Sources: Census of Canada, 1951, 1956, 1961, and 1966.

1971-1981 Estimates by Lower Mainland Regional Planning Board.

^{*} Estimates by Davis-MacConnell-Ralston, Inc.

^{**} Interpolation of population projections for 1991 prepared by Lower Mainland Regional Planning Board. N.A. = Not Available.

ECONOMIC FORCES

Because the Regional College assumes the function of providing to the people in the District area continuing education for cultural, civic, and avocational growth, it cannot operate independently of the characteristics of the people and the region it serves.

Metropolitan Variouver. The broad economic region of which the North Shore District area is an integral part is the Metropolitan Vancouver area including the Burrard Peninsula, the North Shore, and the Richmond-South Shore. The economies of the various sub-areas within Metropolitan Vancouver are mutually interdependent.

The chief manufacturing industries in Vancouver are food processing, wood processing, metal fabricating, printing, and publishing.

The service industries play a key role in Vancouver's economy. Shipping and trade are important employment ategories.

NORIH SHORE REGIONAL COLLEGE DISTRICT

The following pages present a brief review of the population and labor force, employment centers, and occupation categories in the component sub-areas of the North Shore District area.

CITY AND DISTRICT OF NORTH VANCOUVER

POPULATION: The North Vancouver area is an important suburban residential community, with many residents employed in the Metropolitan Vancouver area. Between 1956 and 1961 the combined population in North Vancouver City and District increased by 16,424 persons. This figure represents a gain of 35.5 percent. Between 1961 and 1966 population in the North Vancouver area increased by 16,173 persons - a gain of 25.8 percent. During the same period, population in the Lower Mainland Region increased by 11.6 percent.

It is assumed that the planned third crossing from the Burrard Peninsula to the North Shore will accelerate future development activities and population growth in the North Vancouver area.

Labor Force: Of the 22,264 persons in the labor force recorded in 1961 in North Vancouver, local industries employed 8,892 persons. The principal sources of employment in North Vancouver are:

Service industries Trade Manufacturing Forest industries Tourism

WEST VANCOUVER

POPULATION: The Municipality's attractiveness as a residential area caused many people working in the urban Vancouver area to move to this community. Between 1961 and 1966 population increased by 5,476 persons or by 21.7 percent.

<u>Labor Force:</u> The recorded 1961 labor force in West Vancouver was 9,083 persons; service industries constituted the major employment category occupying 3,400 persons in community, business, and personal services.

Employment Centers: The principal sources of employment in West Vancouver are the service industries and retail trade. Many residents of West Vancouver are employed in other parts of the Metropolitan Vancouver area.

SQUAMISH-HOWE SOUND AREA

POPULATION: Between 1956 and 1961 the population in the Howe Sound area decreased from 6,069 persons to 4,579 persons. By 1966, the area's population had increased to 8,116 persons.

Employment: Continued development of the port of Vancouver will undoubtedly result in a spillover into Howe Sound at some future date. Squamish will be in a position to accept almost any type of port development and manufacturing facilities.

The Howe Sound area has a favorable tourist potential.

SECHELT-GIBSONS LANDING

In 1966 the area had a population of approximately 8,500 persons. This area is a popular summer resort district and a favored spot for retired people.

Employment: Forest activities provide most of the employment in Sechelt.

Outlook: The production of pulp chips from small wood and logging residue offers a promising avenue for new investment. Sechelt is one prospective location to be chosen for the production expansions of pulp chips.

ENROLLMENT PROJECTIONS

The premise upon which the enrollment projections of the Regional College are based is the fulfillment of five major educational objectives.

1. Universal Opportunity for Post-High School Education

To have in the school system an educational unit at the post-high school level which channels on to advancement and growth those who are motivated.

To reduce or eliminate the barriers of cost, distance, social status, or similar impediments to continued schooling.

2. Education in Art and Science

To provide opportunity for academic training beyond the high school for an increasing number of people.

3. Vocational Education

To provide programs that prepare people to hold jobs at the semiprofessional or technical level.

4. To provide readily available educational centers for training and retraining out-of-school youth and adults.

5. Cultural Education

To provide the means to keep intellectual curiosity alive in students and citizens alike, to stimulate their quest for learning, and to improve the quality of their lives as individuals and as citizens.

METHOD OF STUDY

a. Enrollment estimates were computed by applying selected enrollment rates to the college-age group 17-34 years old. The projections were keyed into fall opening enrollment data. It was assumed that enrollment rates would increase in the future. At ages 18-19 the college enrollment rate is expected to be 40 percent by 1980, at ages 20-21

Regional College enrollment projections for academic and occupational-vocational programs are combined in Summary Table 10.

TABLE 10

ENROLLMENT PROJECTIONS - SUMMARY TABLE
1970-1985

NORTH SHORE REGIONAL COLLEGE

Type of Program	1970	1975	1980	1985
General Studies and Transfer Programs Ages 17-34	1,319	2,234	2,885	3,158
Vocational Training and Occupational Programs Ages 17-64	4,270	5,269	6,000	6,848
TOTAL	5,589	7,503	8,885	10,006

The projections in the above table refer to total enrollments in the respective years. An estimated conversion of the total enrollment figures to full-time equivalent students indicates 2,000 FTE students in the early 1970's, 3,500 FTE students in the late 1970's, and an ultimate enrollment of 6,000 FTE students by 1985.

the rate of 27.6 percent is anticipated and at ages 22-24 a rate of 15.0 percent is expected by 1980.

b. Enrollment estimates for occupational and vocational training were computed by applying selected enrollment rates to youth 17-19 years old, and to youths and adults 20-64 years old.

In the area of adult education the regional or community college is in a position to contribute importantly.

ENROLLMENT PROJECTIONS - PLANNING RECOMMENDATIONS

Based upon the summary of potential enrollments the Consultants see a need for the North Shore Regional College Coordinating Committee to plan on a total of:

- 2,000 students by the early 1970's.
- 3,500 students by the late 1970's.

An ultimate enrollment in the neighborhood of 6,000 students.

OPTIMUM SIZE OF THE REGIONAL COLLEGE

While the specific recommendations for the size of the Regional College have already been given, the establishment of an enrollment ceiling for the planned Regional College might also be helpful to proper planning of educational programs and physical plant.

Setting a Minimum Enrollment Figure:

A minimum enrollment figure is **ess**ential as a guide in determining the need for a new college campus in a particular area. The enrollment minimum should be based on the type and quality of education desired and the unit costs involved. A new campus should be expected to grow in a reasonable length of time to a point where costs are in line with comparable institutions and the educational program is assured of reaching a desired minimum offering.

Setting a Maximum Enrollment Figure:

7,500 full-time students appears to be an appropriate recommended ceiling for Junior Colleges allowing for a maximum of service to a community. The likelihood of the need for larger campuses is

remote in view of the Junior Colleges' objective to serve a commuting public.

SITE SELECTION STUDY

When determining the placement of the campus in relation to the region, consideration should be given to the particular functions assumed by the community college.

Method of Site Selection

Major criteria applied in the selection of the Regional District College campus refer to:

Site Size

Transportation Network

Community Relationship

Physical Characteristics

Cost Considerations

Determining Optimum Campus Size

As a result of past experiences, an authority in campus planning, prescribes a minimum of 100 usable acres for a community college campus site.

Location Criteria

Transportation Net: Highly accessible to as many people as possible.

<u>Community Relationship:</u> Location of the Community College should be such: that it is, an educational and cultural nucleus of the community; situated on a level to rolling terrain; protected from through traffic and incompatible uses; and have easy approaches to the site.

On-Site-Cost Considerations

Physical Characteristics: Reasonably level land, for facilities involving structures, accessory parking, and active recreation areas.

<u>Cost Consideration:</u> Specific cost items: a) land acquisition, b) improvements upon the land, c) connection with utilities, d) cost of access roads to site.

GENERAL CONCLUSIONS

The Consultants sincerely hope that in the ultimate size acquisition the compromise on size will not result in a major reduction from the prescribed acreage. The Consultants recommend that comparative costs of alternate sites be investigated in great depth by a Site Selection Committee to be appointed by the Coordinating Committee of the North Shore Regional College.

AN APPROACH TO THE CURRICULUM

A DUAL APPROACH

At this particular point in time, the Consultants feel that it is necessary to utilize two different approaches.

First, in terms as specific as possible, the Consultants have projected the square footage needs for classroom spaces based upon a straightforward type of instructional program.

The man who must spend full time on the neverending task of curriculum building and modification - the Principal - has not yet been appointed.

The curriculum as proposed has been structured around the areas of instruction and is not intended as a guide to the methods of instruction. The Consultants assume that while the administration of the new College may indeed encourage experimentation and innovation, it will still be forced to operate within set budgetary limitations.

THE CURRICULUM - FUTURE TRENDS

In the middle and latter part of the Twentieth Century even the most highly trained scholar can comprehend only the barest outlines of a tiny portion of the known universe.

Higher education has reacted to the knowledge explosion in widely differing ways. We see at two ends of a continuum St. Johns College, Maryland in which the Great Books are studied for their eternal verities and at the other end of the continuum the multiversity with its several campuses and purposes, coupled with its hundreds of separate departments. Somewhere in between these two extremes along the same educational continuum would be such other answers as interdisciplinary courses, the general education movement, experimental colleges, the cooperative education

movement, honors programs, cluster college experiments, manipulation of the academic calendar, and, the free university. In considering the future of higher education Professor Lewis B. Mayhew of Stanford University has noted the following present and developing curricular trends:

- A developing interest in the performing arts as essential elements of academic life.
- . The re-establishment of religion and theology as important areas of study within the curriculum.
- . Condominiums to combine the strengths of several small campuses, sometimes with the use of intra and inter-campus telephone and television.
- . An off-campus learning experience, usually in a foreign country, for practically all students.
- . Further development in living-learning units and in cluster colleges.
- . A de-emphasis and in some cases the elimination of conventional grading systems.
- . A change from courses which speak primarily to facts and skills toward courses which speak to the development of the student and his individual needs.
- . Course work in non-western subjects.
- . Fewer courses being taken at one time thus allowing depth to supplant breadth.
- . An awareness of the change in survival values in modern Western society.
- . Flexible scheduling to take advantage of lessons learned from educational psychology.
- . The establishing of offices of improvement of instruction.
- . The encouraging of teaching on the part of all upper division students, not as a device to obtain 'slave labor," but rather as a method of furthering learning on the part of these student teachers.

. A dramatic shortening of the number of hours per week which the teacher will spend in actual class instruction time and the concomitant increase in the time he will spend in individual student counseling and in course preparation.

The college which chooses to ignore such innovations will almost automatically be putting itself in jeopardy. It is extremely important that faculty members and chief administrators alike be aware of the changes and ferment within higher education and be willing to adopt or adapt the ideas which seem applicable to a given institution.

CLASS SIZES AND TEACHING METHODS

A combination of large lecture and small discussion sections is preferable to the common arrangement of several sections of unwieldly medium size.

While hard and fast rules cannot be given there are indications that classes, both large and small, and methods of instruction which run the gamut from straight lecture to student-initiated discussion may well have a place in the College's overall pattern of course arrangement. It would be desirable for the College to be able to depend heavily on the small class. This is an expensive procedure and it will probably be necessary to rely on a mixture of large groups, small groups, and individual student study.

CLASS SIZES

Basic ideas concerning class sizes have broad-scale applicability.

Assumptions: (1) a student-teacher ratio of 20 to one,

(2) a full-time faculty teaching load of nine hours per week, (3) a student classroom load of 12 credit hours per week.

On the basis of research, a large number of teaching hours spent in class will not necessarily produce the desired educational results. In some cases a reduction in the number of in-class teaching hours may actually prove beneficial to the learning process. It is learning on the part of the student that is desired by the College. If it is the desired outcome then it will be vital for the Coordinating Committee to choose a man as Principal and to back up his choices of administrators and faculty - who will be much

more concerned with the quality of student learning than with the quantity of faculty instructional hours.

The recommendation that both teachers and students spend less time in class has implications for physical facilities which will be discussed later.

Different courses and different parts of the same course involve (1) a certain amount of information-giving on the part of the teacher,

(2) a certain amount of student-teacher and student-student discussion, and (3) a certain amount of tutorial work and independent study.

A newly-appointed Principal would consider first the kind of educational effort that is to be made and then to plan the facilities accordingly.

INNOVATION IN THE CAREER PROGRAMS

While this approach may speak most directly to transfer and general education courses, there is no reason at all that innovative planning should not also apply to the career programs. The needs of the career programs may often require a richer faculty/student ratio, smaller classes, and a great deal of opportunity for "hands on" experience with specific pieces of equipment.

It is not the suggestion that the College teach all of its courses in this manner but rather that the Committee, along with the Principal and his staff, be ready to experiment with new instructional techniques in all phases of the College's program, both as a means of continually searching out the best in instructional methods and as a means of stimulating both students and teachers.

AN INNOVATIVE CURRICULUM

An innovative and experimental approach be taken to the curriculum and to curriculum planning. Types of approaches are: "Wonderful Wednesday", "No class Course", "New Division", "Triplum", "Core of integrated humanities course".

The Coordinating Committee has already decided upon a broad program of general education for all students. It is the Consultants! belief that an approach such as a Core program is far better educationally -

even if more difficult to implement - than is the "distribution requirement" approach which typically fails to speak to the needs of a true general education program.

THE CLUSTER APPROACH

The cluster approach consists basically of a finite number of students and three or four faculty members with whom these students work. The professors work together as a team so that the student's work will be directly related to several of the subject matter areas within one particular assignment. The professors use a team approach which cuts across traditional time, space, and disciplinary boundaries and accepts the concept that it may be more important for the student to pursue a certain idea once he has gotten hold of it than to stick to a particular schedule simply for the sake of that schedule.

To establish a strong foundation upon which to build that the Committee should seriously consider a cluster approach to be built around an experimental program which will both meet the needs of the students and of the College and, as well, the needs of College-Community interaction. And for the purpose of establishing a valid and workable model which will relate to all of these needs, the Consultants recommend that the Experimental Freshman Year Program be examined.

THE EXPERIMENTAL FRESHMAN YEAR PROGRAM

The Experimental Freshman Program causes the student to take all of his general education course work for the year with the same group of professors and the same group of students.

The intention of this experimental program is to develop the student, the curriculum, and the College-Community relationship.

The Coordinating Committee does not intend to oversee the establishment of "just another college," but that it rather intends to plan an educational institution which, while not rejecting the lessons learned in the past is dedicated to trying new and innovative approaches to meet the educational needs of the community.

THE EXPERIMENTAL FRESHMAN AND SOPHOMORE PROGRAM

The Experimental Collegiate Program is made up of five professors from different academic disciplines and five teaching assistants who began their work with 75 freshman men and 75 freshman women who were selected at random from a group of 325 intrested freshman.

Its essential structural feature is that it abandons the course system and instead organizes the educational life of the student around the study of significant themes and problems.

THE CLUSTER APPROACH

The Cluster approach has proved successful and effective

PROGRAMS TO BE OFFERED

General Education

General Education Examination Program

Transfer Courses

Career Programs

Cultural Programs

Consultants! Recommendations for the Curriculum

GENERAL EDUCATION

General education should play a significant role in each student's curriculum. The College as a comprehensive institution of higher education must be concerned with the student's entire curriculum as well as his future success and well being.

The College should design and institute a special course or a series of courses which will have as their objective the development, within each student, of a deep and lasting awareness of himself, of others, of the society in which he lives, and an understanding of the ways in which all of these interact in terms of their history and values.

GENERAL EDUCATION EXAMINATION PROGRAM

The general education program suffers from the same kinds of problems which plague other general education courses. The major potential problem concerns the student who is either quite advanced generally or who already has competencies and abilities in a certain area covered by the general education program. Alternatives are open to the College in handling

such a problem including advanced placement, waiver of course requirements, granting of credit through tests.

TRANSFER COURSES

The College has decided to adopt the single-track type of program so that each basic course in English, math, physics, etc., will be so designed as to accomplish both the transfer and the terminal functions and, more importantly, will speak directly to the College's own requirements in the given instructional area.

CAREER PROGRAMS

Consideration must be given to (1) the demand for a particular program, (2) the gainful employment opportunities available upon completion of a course, (3) and the total cost involved in offering the course. It is possible to ascertain clusters of career offerings that may serve to encompass any particular course. The assumption is made that most young people, and virtually all young men, should see themselves as developing a career rather than as merely getting a job or following an occupation and that the College will, as a part of its career training, help its students to see this difference.

Business Related Occupations - The area of business is being one of the two major areas of occupational concern for the College both at the beginning of its operation and a decade or two into the future.

Data Processing - Current developments in data processing serve to integrate work processes that have, for some decades, been performed separately. In this area the three distinct fields are: the programmer, the operator, and the programming aide. It is felt that an intensive growth in these occupation areas will continue.

Para-Medical - A full-fledged program in the para-medical services would be a logical major section of the career program curriculum at the College. Programs in this area would include nursing, biomedical, dental technicians, and X-ray and laboratory technicians.

Personal Services - These services will almost certainly increase as the economy becomes even more affluent and more people can afford the luxury of travel, leisure time activities.

This would seem to behoove the College to offer courses in fields such as hotel management, restaurant management, nutrition and other food services, resort operation and management, and other tourist-related activities.

Electronics and Computer Technicians - According to information available *here will be, in the future, an increasing need for technicians in the areas of operation, maintenance, and trouble-shooting of electronic equipment.

<u>Construction Trades</u> - Until specific needs arise and are identified by the College, the College Consultants would not undertake specific courses in these areas at this time.

CULTURAL PROGRAMS

The North Shore Regional College should provide a total educational snvironment, dovetailing educational and training activities with occupational needs, and also providing educational opportunities in the more humane aspects of cultural life to which all people are entitled by their rights and nature as human beings. This will provide the means to keep intellectual curiosity alive in students and citizens alike, to stimulate their quest for learning, and to improve the quality of their lives as individuals and as citizens.

RECOLLIENDATIONS FOR THE CURRICULUM

An equitable and effective "mix" of large and small class sizes should be employed at the NSRC and this mix should relate, insofar as it is possible, to all class levels and all disciplines.

General education courses should be offered and required throughout the two year sequence.

The College should offer no majors in departments which consist of less than three full time faculty members.

Majors should represent a joining rather than a separation of capabilities.

The course offerings at the NSRC could well be at the four or five hour level of offering rather than the traditional three hour level.

The 12 hour teaching load rather than the 15 hour teaching load should be the norm for the NSRC.

FACILITIES AND COSTS

Design Implications
Space Considerations
Building Costs
Operational Expenses

DESIGN IMPLICATIONS

It is the function of the building to facilitate the educational program.

The concepts which must receive detailed consideration in the planning of all educational facilities would include the following items.

- 1. Adaptability, Flexibility, and Expansibility.
- 2. Environmental Control.
- 3. Display Areas.
- 4. Administrative Facilities.
- 5. Communication System.
- 6. Use and Occupancy.
- 7. Basic Teacher Requirements.
- 8. Basic Student Requirements.
- 9. Auxiliary Service Areas and Conditions.

SPACE CONSIDERATIONS

For the space adequacy survey the subject areas were divided into faculty of arts, faculty of science, communications, home and practical arts, technology, business education, para-medical, cultural arts, and physical education.

BUILDING COST

Construction costs vary for several reasons, including:
(1) size of the project, (2) locality, (3) time of bidding, (4) planning done by project architects, (5) promptness with which construction is activated, (6) availability of labor, and (7) number and type of special facilities constructed.

OPERATIONAL EXPENSES

For the first year or two, it is normal for a new and rapidly expanding college to experience 25 to 30 percent additional cost.

FIGURE 5-1
PROJECTED OPERATING EXPENSE PER STUDENT

