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ABSTRACT

This two-part project was initiated to develop guidelines for the physical facilities required to meet the needs of Maine for higher education at less-than-baccalaureate levels. Part 1 evaluates the social, economic, and educational needs for general, technical, and occupational training and education. Existing institutions are currently working at near capacity even though student damand is low. Demand is increasing as Maine's economic base requires more technically trained personnel. This study assesses current facilities and examines the approaches taken by other New England states to determine how best to facilitate new programs. Off-campus locations, temporary facilities, space shared with established institutions, and educational TV and radio should all be explcited until enough data from student response can be gathered to indicate the most valuable locations for permanent construction. The second part of this report presents detailed information on the occupational opportunities becoming available, including educational and training requirements for certain jobs. The six vocational-technical institutions are listed with pertinent data, and the surveys completed by each vocational center are appended. (MJK)

SPECIAL OPPORTUNITY
FACILITIES PLANNING
PROJECT

A Report
to the
State of Maine
Higher Education Facilities Commission

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PURPOSE OF THE PROJECT

This project was initiated to develop guidelines and plans for the educational facilities needed to meet the needs of Maine's youth and adults for higher education at less-than-the-baccalaureate level.

The State of Maine compared to other states has a low percentage of its high school graduates participating in higher education. Analysis of data indicate that there is especially low enrollment in one- and two-year programs within the higher education spectrum. Several studies have suggested that Maine undertake a serious effort to increase the diversity and opportunity in one- and two-year programs of study.

Maine is an area suffering from cultural and economic poverty.[1] A community college development together with the vocational-technical institutes can offer many people in various areas of the State an opportunity to continue their education beyond the high school level. In addition to the provision of one- and two-year programs for youth, the concept of adult education can be advanced through a community college system with both on-and-off campus programs in various areas of the State.

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[1] Poverty in Maine by the Maine Office of Economic Opportunity, 3rd edition, August 1968.

These opportunities for training in academic, technical, and vocational subjects will develop individual abilities that in turn can contribute to economic growth for the State.

The physical facilities necessary to house these expanded opportunities should be made available in all areas of the State to provide the greatest opportunity at least cost to the student by enabling most students to commute. It is the purpose of this report to suggest the physical facilities need to make higher education at less-than-baccalaureate level available to the maximum number of Maine's citizens.

PROCEDURES

The social, economic, and educational needs for general, technical, and occupational education and training were evaluated for several areas of the State. Source materials from many facets of planning were examined, such as Model Cities, Manpower Agencies, various task force groups studying education in the State.

In addition, present and planned one- and two-year programs at all institutions of higher education in the State were secured and analyzed. High schools were contacted through a mailed questionnaire inquiring as to the plans of recent graduates for higher education. (See Appendix)

Through literature and visits, various concepts for higher education at the community college level were examined and evaluated.

Through many contacts, both formal and informal, ideas for programs and facilities were discussed, analyzed, and evaluated.

Community colleges, technical and vocational institutes, several private organizations, and many agencies have involved themselves in the study of one- and two-year programs in higher education in the State. It is therefore possible that several of the suggested procedures discussed in this report may overlap recommendations in other sources.

THE COMMUNITY COLLEGE CONCEPT

The community college is a relatively new function in the higher education system within the State. Advocates of such an institution have stressed that too little emphasis has been given to an educational endeavor which would appeal to students not interested or unable to attend a four-year baccalaureate degree institution.

Information presented to the Chancellor's Task Force on Less-Than-Baccalaureate Degree Programs indicated that total 1970 enrollment in all of Maine's publicly supported post-secondary vocational-technical schools was 1636. In addition to this figure there were approximately 925 students enrolled in two-year programs of a business or technical nature at the various campuses of the University of Maine. There are several private institutions in the State offering one- and two-year programs of instruction, generally of a technical nature. These institutions are relatively small in total enrollment and thus cannot offer the diverse programs that are needed in a dynamic, complex society.(See Table XIII, XIV for enrollment figures)

At the present time there are only two community college centers in the State, one at the University of Maine at Augusta and the other at the University of Maine at Bangor campus on the site of the old Dow Air Force Base. Programs at both of these campuses are varied in depth and scope. The Augusta campus has developed two-year programs of an academic and technical nature while the Bangor institution is being used primarily as a home for technically-oriented programs originally based on the Orono campus.

Two additional para-professional programs have been added and others are in planning stages. A major difference between these two campuses is that Augusta is strictly for commuters while Bangor has dormitories which are being used to house two-year students as well as others.

If the people of the State are to benefit from the type of education beyond high school that the community college can offer, serious consideration to the expansion of such a concept must be given by all concerned with higher education. Expansion may take place without disrupting the present system but it will necessitate a much closer relationship between existing institutions, the various communities, and the people desiring further education.

Promising steps have already been taken by the Department of Education and the University to coordinate planned expansion of two-year programs by the vocational-technical institutes and the community colleges in the University system.

SOCIAL NEED FOR GENERAL, TECHNICAL AND OCCUPATIONAL EDUCATION AT LESS-THAN-BACCALAUREATE LEVEL

There are several areas of the State which have a considerable out-migration of youths and young adults due in general to the lack of employment opportunities. Northern Aroostook County, a major part of Washington County, Knox and Lincoln Counties have experienced this phenomena of out-migration. Many people have sought at least a partial solution to this problem but in general, the problem still exists. (See MIGRATION RATES BY AGE, Table I)

Very often the main reason given for leaving a particular region of the State and also for leaving the State is the lack of opportunity, both in employment and education. In addition the wage factor has a bearing on the decision for leaving. Traditionally, whether right or wrong, Maine has been classified as a low-wage area due in part to the type of industry prevailing and in part to the level of educational attainment by a major sector of the employable population. In the past the opportunity for education beyond high school has been limited due to the lack of sufficient programs of a technical and vocational nature. Such programs are now more available but limitations do exist within those institutions offering such programs.

A study of higher education in Maine by the Academy for Educational Development stated that:

TABLE I

MIGRATION RATES BY AGE

MAINE COUNTIES 1950 - 1960

	ALL AGES		20 - 24		25 - 29	
	Number	Percent	Number	Percent	Number	Percent
Androscoggin	- 7,006	- 7.5	- 1,061	-17.7	- 1,580	-24.9
Aroostook	-14,655	-12.1	- 1,183	12.5	- 1,760	-19.3
Cumberland	- 6,581	- 3.5	- 815	- 7.1	- 1,975	-16.3
Franklin	- 3,164	-13.6	- 395	-21.8	- 560	-34.0
Hancock	- 2,304	- 6.7	- 625	-27.5	- 718	-30.5
Kennebec	- 5,209	- 5.5	- 1,187	-20.3	- 1,374	-22.0
Knox	- 1,258	- 4.2	- 530	-29.8	- 330	-18 9
Lincoln	- 635	- 3.3	- 168	-36.7	- 264	-21 3
Oxford	- 5,498	-11.0	- 1,332	-39.2	- 1,077	-31.4
Penobscot	- 611	- 0.5	2,152	26.5	135	1.6
Piscataquis	- 3,112	-15.2	- 696	-47.2	- 536	-39.1
Sagadahoc	- 215	- 0.9	- 302	-18.2	- 130	- 9.0
Somerset	- 4,589	-10.4	- 1,107	-34.7	833	-27.3
Waldo	- 1,218	- 5.1	- 621	-36.3	- 317	-20.1
Washington	- 4,839	-12.8	- 1,178	-42.8	- 885	-32.9
York	- 4,982	- 4.8	- 1,086	-16.1	- 1,221	-18.4
MAINE	-65,881	- 6.4	10,438	-15.2	-13,424	-19.3

Source: *Poverty in Maine*, Prepared by Maine Office of Economic Opportunity, Third Edition, August 1968.

> "No state which hopes to progress can remain aloof to the trend toward greater opportunity for higher education. . ."

The same study indicated:

> "If young people in a particular state are isolated too long from the enlarged educational opportunities they need, they will either leave their state to fill their needs (and probably never return) or accept gracefully their obsolescence, passing it on from generation to generation with obvious consequences for themselves, the local and state school system and the economy too."[2]

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[2] The First Business of Our Times, A Report to the Advisory Commission for the Higher Education Study - State of Maine.

MANPOWER NEED FOR GENERAL, TECHNICAL AND OCCUPATIONAL EDUCATION AT LESS-THAN-BACCALAUREATE LEVEL

The most comprehensive study of Maine's occupational needs for the next several years is a project completed in August 1969 by the University of Maine at Orono.[3]

The findings of this project suggest what educational programs should be offered throughout the State at less-than-the-baccalaureate level. When the 1970 Census Report for Maine is available, it would be desirable to update the information and make it more meaningful in light of population changes throughout the State.

The study sampled employment trends in about seventy-five percent of the State's economy, excluding several employment units which do have need for trained personnel. Among those excluded were agricultural workers, forestry, educational services, non-profit organizations, and several federal units of employment.

One of the basic findings of the study, relative to type of employment in the State, has definite impact on the educational needs in the State. Generally, Maine has a lower proportion of white collar jobs and a much larger proportion of blue collar jobs than the national average in 1960. Using projection techniques,

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[3]Clark, David H., Maine's Occupational Needs to 1975 - A Report to the Maine Manpower Advisory Committee - Manpower Research Project, University of Maine at Orono, August 1969.

the study indicated that the percentage change in the proportions would not be very significant for the year 1975.

The impact on planning for educational needs in the future can best be brought to attention through the following statement from the study:

> "Since 1960, the proportion of professional and technical, clerical and service workers has risen in the nation while the proportion of managers, sales workers and laborers has fallen--State trends are very unlike national trends: among the professional and clerical groups the growth in Maine has been much slower than found nationally and among craftsmen and non-farm laborers the trend in Maine has been exactly opposite of national trends."[4]

The author of the study did indicate that projections should take into consideration that occupational trends in the State are expected to become more similar to national trends.

(See Table II and Table III)

The study indicated that most firms in the State hiring professional workers require professional training at the college level. About one-half of the firms hiring clerical workers required some type of formal training. For operative, laborers, and service workers, almost no educational or training requirement was necessary as most of the firms established experience as the major requirement.

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[4] Clark, David H., Maine's Occupational Needs to 1975 - A Report to the Maine Manpower Advisory Committee - Manpower Research Project, University of Maine at Orono, August 1969.

TABLE II
OCCUPATIONAL DISTRIBUTION IN A SELECTED PART OF THE MAINE ECONOMY 1960 & 1968 AND PROJECTIONS FOR 1975

	1960	%	1968	%	1975 Projected Employment	%
White Collar Workers	84,396	33.6	93,002	35.5	101,121	35.6
Professional & Technical	10,550	4.2	12,706	4.8	15,844	5.6
Managers	17,331	6.9	25,698	9.8	27,260	9.6
Clerical & Kindred	33,909	13.5	35,582	13.6	19,106	6.7
Sales	22,606	9.0	19,016	7.3	38,911	13.7
Blue Collar Workers	149,954	59.6	148,825	56.8	158,700	55.9
Craftsmen	47,724	19.0	37,141	14.2	42,280	14.9
Operatives	82,387	32.8	82,415	31.4	87,336	30.8
Non-farm Laborers	19,843	7.9	39,269	11.2	29,084	10.2
Service	17,080	6.8	20,168	7.7	24,210	8.5
Total	251,430	100.0	261,995	100.0	284,031	100.0

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TABLE III
NEEDS FOR ADDITIONAL WORKERS IN A SELECTED PART OF THE MAINE ECONOMY 1968-1975

	Change in Number of Workers 1968-1975	Replacements	Total Needs to 1975
Professional and Technical	2813	2288	5101
Managers	1436	4522	5958
Sales	649	4010	4659
Office and Clerical	3253	8240	11493
Crafts	5419	5163	10582
Operatives	6491	10740	17231
Labor	-1666	3453	1787
Service	1039	5511	6550

Source Table II and Table III: Maine's Occupational Needs to 1975, Manpower Research Project, University of Maine, Orono, August 1969.

From an economic viewpoint this latter finding should not be reassuring as basically the less education needed, the lower the wage standards. True, the firms must abide by Federal wage standards for a particular industry but many workers can be paid at the lower end of the wage scale due to the lack of formal educational background.

The attraction for growth and diversification in the State's employment future must be based on well-trained personnel through programs which institutions of higher education can offer at less-than-the-baccalaureate level. The following list of occupations and jobs, as pointed out in the manpower study, tend to be employment opportunities for which people may be trained.

Professional:	Accountants Engineers Chemists Attorneys Social Workers
Technical:	Draftsmen Engineering Aides Computer Programmers Electronic Technicians Laboratory Technicians
Officials and Managers:	Officials, Buyers and Purchasers Managers, etc. especially in non-manufacturing
Sales Workers:	Sales Workers in wholesale and retail trade and finance
Clerical:	Secretaries and Stenographers General Office Workers Bookkeepers
Craftsmen:	Mechanics and Repairmen Foremen Electricians
Operatives:	Apprentices in Construction

If the professional area is to be filled by graduates with four-year and higher educational backgrounds, the remaining fields can very well be filled by people trained in technical and occupational programs offered by community colleges and/or vocational-technical institutes. The study indicates that changes must be made in entry and training requirements if Maine's employment trends are to shift toward the national trend.

The study of Maine's occupational needs outlines in some detail the various categories of employment possibilities that exist in the State. The study also brings to light the various levels of education and training that each of the various categories of employment will require for entry and replacement opportunities.

As this paper is for education and training at the technician and lower levels of employment, it will not dwell at length on professional personnel needs. It is expected that professional employment opportunities in the State will show a growth trend but the rate of growth will be slower than that found nationally. Professional entry positions as projected will require, in most instances, training at the specialized four-year college level.

The occupational needs study indicated that in both manufacturing and non-manufacturing industries, a majority of the firms' entry requirements favored post-secondary education and training at either the vocational or technical level.

In each occupation category of a technical nature rather than a professional one, the education and training requirements differ according to the needs of the particular occupation.

On one hand, managerial workers in manufacturing firms should have a college degree especially if they enter as an official. On the other hand, technical education might be required of persons involved in such an occupation as a buyer for a manufacturing firm while experience tended to be the basic requirement in many of the positions. For non-manufacturing firms, a wide variety of entry requirements existed for managerial positions.

Sales, clerical and kindred worker entry requirements tended to be basically of high school or specialized high school course graduate level. In a small percentage of both manufacturing and non-manufacturing firms, post-secondary education of a technical nature was required as a job entry factor.

It should be noted that the situation in the above paragraph may change as technology and new products may require more technical knowledge than can be acquired in high school or through employer training. As an example many sales firms (retail and wholesale) are relying on computers for inventory, credit, sales, and employee benefit controls. In today's and probably future sales operations, the complexities of many and varied products will require more sophisticated education and training procedures. It is therefore quite possible that technical education will become a necessity as an entry requirement in the field of sales and clerical work.

In the various categories of craftsmen-level occupations such as mechanics, machinists, carpenters, electricians, and plumbers, the occupational needs study indicated that education

TABLE IV

Education and Training Requirements for Technical Entry Jobs in Manufacturing

Training	Total	No Requirements	Years of School 4-8	9-11	12	12-14 Post-H.S.	Technical Institute	Some College	16	17+	Mixed
None	13	4	—	—	6	1	1	1	—	—	--
None— will train	19	2	--	-	12	4	1	—	—	—	--
Experience	44	7	2	-	14	1	14	4	2	—	—
Apprenticeship	7	—	--	-	6	—	1	--	--	—	—
Short Training Course	5	-	--	--	4	--	1	--	--	—	--
Specialized H.S. Course	-	-	--	-	—	—	--	--	--	—	--
Special Courses	3	-	-	--	3	--	—	—	--	-	--
Technical Institute	67	1	--	--	9	16	35	3	3	--	—
Specialized College	12	--	—	--	1	--	3	1	7	--	-
Mixed	-	-	—	--	—	—	--	—	—	-	--
Total	130	14	2	--	55	22	56	9	12	-	-

Source: Maine's Occupational Needs to 1975, Manpower Research Project, University of Maine, Orono, August 1969.

TABLE V

Education and Training Requirements for Technical Entry Jobs in Non-Manufacturing

Training	Total	No Requirements	Years of School 4-8	9-11	12	12-14 Post-H.S.	Technical Institute	Some College	16	17+	Mixed
None	18	--	--	—	4	2	6	4	2	-	--
None— will train	19	-	—	--	9	4	6	--	--	--	—
Experience	66	4	--	--	21	7	25	2	5	2	—
Apprenticeship	2	—	—	--	—	—	2	--	—	--	—
Short Training Course	12	3	—	—	1	5	3	-	--	—	—
Specialized H.S. Course	--	—	—	—	—	—	—	--	—	—	—
Special Courses	3	—	—	--	3	--	—	--	—	—	—
Technical Institute	82	3	--	—	8	11	57	3	--	—	—
Specialized College	16	-	-	-	--	—	5	2	8	1	—
Mixed	6	--	—	—	2	1	—	—	3	—	—
Total	224	10	—	—	48	30	104	11	18	3	—

Source: *Maine's Occupational Needs to 1975*, Manpower Research Project, University of Maine, Orono, August 1969.

and training varies from high school to some technical training with heavy emphasis on apprenticeship, short course and experience requirements for entry into the various occupations.

Operative, laborer and service occupations are basically entry type and, in most instances, do not require education and training beyond high school. Whether or not this will change in the future will depend largely on the changes in technology such as more complicated machinery to do the work now being done manually. These changes may become more prevalent in the operative category. As an example, sawmill and lumber operations are becoming more automated with complex machinery which will require skills of many types, some which can be learned on the job while others will require technical education beyond the high school level.

In general the need for post-secondary education at less-than-baccalaureate level for many of the employment opportunities in the State is now becoming more of a reality. Although the manpower study indicated that experience was a major factor as a job entry requirement for many occupations, the concept of continuing education has made in-roads within the State.

The up-grading of personnel at all levels in government, non-manufacturing and manufacturing organizations will require expanded vocational and technical programs throughout the State. One- and two-year programs will provide the base for this up-grading and retraining, but short-term training for current employees can also be expected to increase.

Programs of a semi- or para-professional nature can provide the needed personnel in health, community service, governmental operations, business, and a host of other areas relatively fast through less-than-baccalaureate programs. As society, either through private or public means, expands its concern for the welfare of the underprivileged, the sick, the aging, and also the environment in which it exists, the need for trained personnel becomes more prominent. One- and two-year programs can help fill some of the need.

There are many people who wish to gain further knowledge for their own self-satisfaction and not necessarily for occupations. Through such two-year programs as General Studies, these people can delve into literature, sociology, psychology, mathematics, science, history. To gain an appreciation for the world in which they live adds to their social, cultural, and economic well-being.

The Maine Cooperative Area Manpower Planning System Committee has indicated in its fiscal year 1971 manpower plan that Maine has unique problems of an economic nature which sustain a variety of manpower problems. Listed as factors in these problems are little or no public transportation, long distances between population centers, areas totally devoid of employment opportunities and areas containing concentrations of industry which pay only marginal wages.

Many small manpower training programs are in existence in the State and there is no doubt that such programs are of

importance to the overall employment situation. It is clear that all the programs involve both short- and long-term training of varied quality. On-the-job training tends to be the major component of such programs. The underlying limit on such programs seems to be the number of people that can be accommodated at any one time due to funding and opportunity limitations.

One- and two-year programs beyond high school which expose people to social, cultural, and technical-vocational studies will allow present and future employers to tap a pool of well-rounded and higher-trained personnel.

EDUCATIONAL OPPORTUNITY NEED
FOR
GENERAL, TECHNICAL AND OCCUPATIONAL TRAINING AND EDUCATION
AT
LESS-THAN-BACCALAUREATE LEVEL

> "---The more complex the society, the more necessary the development of each individual toward his full potential. High school graduation was once a satisfactory terminal point for a majority of students, but this is no longer so. New social problems at home and abroad have brought about the need for deeper insights. A new world of science has created a vacuum for those with no scientific knowledge. Developments in technology and automation have reduced the number and importance of many occupations and have given rise to new ones which depend more upon understanding than upon manipulative skill. The need to provide sufficient educational opportunities beyond high school for those who can profit from such opportunities, and to encourage people to take advantage of them, is clear."

The above statement is taken from the opening paragraph of the Report of the Chancellor's Task Force on Less-Than-Baccalaureate Degree Programs submitted to the Chancellor of the University of Maine in May 1970.

Many other statements of the need for some type of educational opportunity beyond high school, especially at the technical level, are prevalent in reports of various groups studying the problem over the past several years.

The Academy for Educational Development, in its study of higher education in Maine by a select panel indicated:

> "Few states can ever hope to provide the tremendous diversity of specialized higher education services which its citizens may need, want and expect -- especially in professional

> and advanced graduate areas. Every state, however, must undertake to provide through its public system of higher education certain "basics" in higher education to which all of its citizens may expect ease of access regardless of where they live or what financial resources they have."

In the analysis of educational needs in the State at less-than-baccalaureate level, there are several factors which have been studied such as the number of high school graduates in the State in recent years, the plans of graduates who do not seek post-secondary education, the institutions offering programs of a vocational-technical nature at less-than-baccalaureate level.

A report to the Higher Education Facilities Commission entitled Higher Education in Maine: Its Facilities and Utilization by the Institute of Educational Development indicates that in 1969, 38.5 percent of the graduates of Maine high schools continued their education in Maine institutions, both degree-granting and those of a non-degree nature. The report also indicated that of the 1969 graduates going on to higher education, 25 percent continued their education in vocational, commercial or technical institutions and 38 percent entered some form of education beyond high school other than a four-year college or university.

The Maine State Department of Education indicated that there were 12,794 graduates of public high schools plus 2,032 from private high schools in 1969. During June 1969, and again in the spring of 1970, post-secondary plans of high school graduates were surveyed. The surveys were not complete in all aspects due to the fact that

TABLE VI

STUDENTS ENROLLED IN POST-SECONDARY EDUCATION OR TRAINING, CLASS OF 1969 *

	Attending In Maine		Attending Outside Of Maine		Total
	Public	Private	Public	Private	
Postgraduate High School Course	216	17	10	2	245
Junior College	186	50	171	72	479
College or University	2,987	412	1,021	583	5,013
Vocational, Commercial, or Technical	1,519	164	340	38	2,061
Nursing School	176	42	96	23	337
TOTAL:	5,084	685	1,638	718	8,135

*12,794 Public High School Graduates
2,032 Private High School Graduates

Source: *Higher Education in Maine: Its Facilities and Utilization*, Institute for Educational Development, New York.

all contact was made by mail rather than personal interviews with high school officials. In the 1969 survey, 105 schools, both public and private, returned the questionnaire. In 1970, 99 schools returned the questionnaire.

In the 1969 survey, 6,723 students in the class of 1969, from 105 schools, intended to continue their education beyond high school. Sixty percent of the students indicated plans to enter a four-year institution, thirteen percent to vocational-technical institutions and the remainder planned to go on in other two-year schools--business schools, nursing or other one year or less types of education.

In the 1970 survey, 7,039 students in the class of 1970, from 99 schools planned to further their education. Sixty percent indicated plans to enter four-year institutions, nine percent planned on entering two-year programs at four-year institutions, fifteen percent indicated going on to vocational-technical institutes. The balance of the students planned on entering business schools, beauty schools and other types of post-secondary education.

A caution in interpreting the above surveys is that the count indicates "plans" and not actual entry into occupations. In very few cases were high schools able to give follow-up information on graduates.

TABLE VII

RESULTS OF SURVEY OF HIGH SCHOOLS IN MAINE
REGARDING TYPE OF HIGHER EDUCATION
SOUGHT BY TENTATIVE GRADUATES - CLASS OF 1970

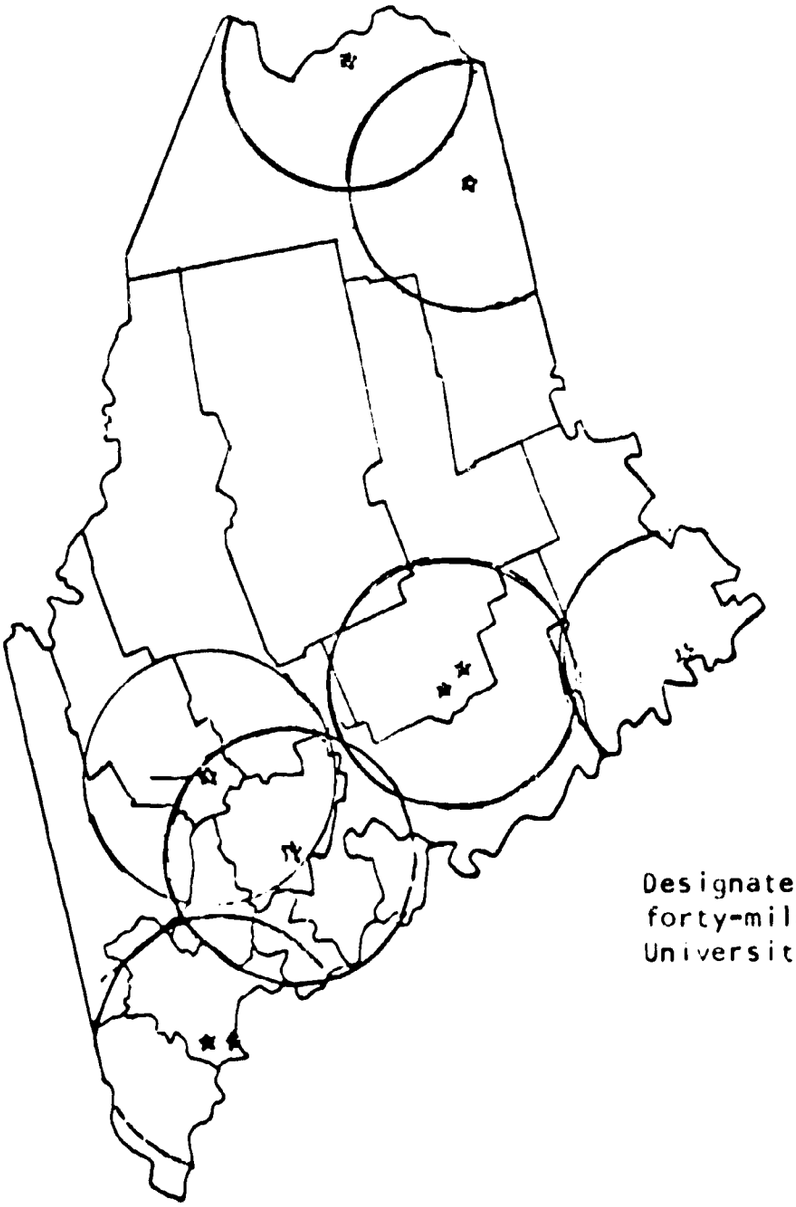
AREA by U of M Campus	TYPE OF HIGHER EDUCATION						
	4-Yr	2-Yr	VTI	Business College	Beauty School	Barber School	Other
	Number of Students						
Area I (Orono)	808	153	157	159	57	5	112
Area II (Augusta)	1182	176	255	193	56	4	155
Area III (Portland-Gorham)	1466	213	334	195	53	6	180
Area IV (Farmington)	328	56	113	73	18	5	60
Area V (Machias)	60	9	39	25	6	1	61
Area VI (Presque Isle)	358	73	125	73	42	3	49
Area VII (Fort Kent)	83	10	37	21	7	1	17
TOTALS.....	4286	690	1060	739	239	25	634

TABLE VIII

RESULTS OF SURVEY OF HIGH SCHOOLS IN MAINE
REGARDING TYPE OF HIGHER EDUCATION
SOUGHT BY TENTATIVE GRADUATES - CLASS OF 1969

[illegible]	4-Yr Institutions 4-Yr	4-Yr Institutions 2-Yr	2-Yr Institutions	Business Schools Less than 2-Yr	Diploma Nursing	Other
[illegible] Central [illegible] [illegible]	737	117	202	27	31	139
[illegible] Central Piscataquis [illegible] Obscot	616	60	161	51	35	86
Central-Western Androscoggin Oxford Franklin	611	51	196	36	41	80
Central Coastal Knox Lincoln Waldo Sagadahoc	296	43	132	30	15	49
South Western Cumberland York	1233	80	398	68	53	160
Eastern Coastal Washington Hancock	89	18	34	12	11	10
Northern Aroostook	408	44	176	27	30	30
TOTAL.....	3990	413	1299	251	216	554

In an effort to determine a regional breakdown of high schools, the 1970 survey used the seven major campuses of the University of Maine as a center point and the high schools reporting were classified as to a region for each campus if the high school location was within a forty-mile radius of each campus. In a very few cases, the high schools fell into more than one region. The major purpose for such classification was an attempt to see if those students from each high school not planning post-secondary education could commute to one of the seven campuses if less-than-baccalaureate programs were offered at those campuses. The forty-mile commuting radius is probably arbitrary but was used as a point of reference. In only a few instances were high schools outside the radius of any campus and as can be seen from the accompanying map, there were in northern sections of Piscataquis, Penobscot and Washington counties and in southern Aroostook county. Due to the fact that many of the schools not returning the questionnaire were within the areas outside the radius for that particular campus, it is not possible to determine if high school graduates from these schools would be interested in some form of post-secondary education. For the purpose of this study, an assumption has been made that some of the graduates of those schools would attend some type of post-secondary education program if it were available within a reasonable commuting distance. It may be necessary to have courses and/or programs of one- and two-year duration brought to the various areas through the mechanism of off-campus programs.



Designated regions within forty-mile radius of the University of Maine campuses.

TABLE IX

NUMBER OF MAINE STUDENTS WHO GRADUATED FROM GRADE 12 IN JUNE 1969, WHO ENROLLED IN POST-HIGH SCHOOL EDUCATION OR TRAINING IN THE FALL OF 1969

PUBLIC

	Attending in Maine	Attending Outside of Maine	Total
Post-Graduate High School Courses	216	10	226
Junior College	186	171	357
College or University	2,987	1,021	4,008
Vocational, Commercial or Technical Schools	1,519	340	1,859
Nursing Schools (including practical nursing schools)	176	96	272
TOTALS	5,084	1,638	6,722

Excluding those who enrolled in post-graduate courses, 51.2% of the graduating class of 1969 entered some form of higher education or training. 31.6% of the class entered 4-year institutions. This means that 61.7% of those who enrolled in higher education or training entered 4-year institutions.

-- Bureau of Statistical Services

Maine Department of Education

NUMBER OF MAINE STUDENTS WHO GRADUATED FROM GRADE 12 IN JUNE 1969, WHO ENROLLED IN POST-HIGH SCHOOL EDUCATION OR TRAINING IN THE FALL OF 1969

P R I V A T E

	Attending in Maine	Attending Outside of Maine	Total
Post-Graduate High School Courses	17	2	19
Junior College	50	72	122
College or University	412	583	995
Vocational, Commercial or Technical Schools	164	38	202
Nursing Schools (including practical nursing schools)	42	23	65
TOTALS	685	718	1,403

Excluding those who enrolled in post-graduate courses, 68.1% of the graduating class of 1969 entered some form of higher education or training. 48.9% of the class entered 4-year institutions. This means that 71.9% of those who enrolled in higher education or training entered 4-year institutions.

-- Bureau of Statistical Services

Maine Department of Education

TABLE XI

POST-HIGH SCHOOL ENROLLMENT STUDY BY COUNTY

PUBLIC - 1969

COUNTY	1969 HIGH SCHOOL GRADUATES	STUDENTS WHO ARE ENROLLED IN POST-H. S. EDUCATION	PERCENT
Androscoggin	1,117	549	49.1%
Aroostook	1,614	843	52.2%
Cumberland	2,498	1,445	57.8%
Franklin	350	186	53.1%
Hancock	451	196	43.5%
Kennebec	1,155	668	57.8%
Knox	324	184	56.8%
Lincoln	231	110	47.6%
Oxford	708	328	46.3%
Penobscot	1,479	811	54.8%
Piscataquis	211	95	45.0%
Sagadahoc	202	106	52.5%
Somerset	600	296	49.3%
Waldo	293	135	46.1%
Washington	363	172	47.4%
York	1,198	598	49.9%
TOTAL	12,794	6,722	52.5%

-- Bureau of Statistical Service

Maine Department of Education

TABLE XII

POST-HIGH SCHOOL EDUCATION
FALL 1969

	ON TO POST-HIGH SCHOOL EDUCATION			NUMBER OF GRADUATES	% TO CONTINUE EDUCATION
	IN-STATE	OUT OF STATE	TOTAL		
ANDROSCOGGIN	418	131	549	1,117	49.1%
AROOSTOOK	704	139	843	1,614	52.2%
CUMBERLAND	1,014	431	1,445	2,498	57.8%
FRANKLIN	156	30	186	350	53.1%
HANCOCK	166	30	196	451	43.5%
KENNEBEC	462	206	668	1,155	57.8%
KNOX	135	49	184	324	56.8
LINCOLN	80	30	110	231	47.6%
OXFORD	245	83	328	708	46.3%
PENOBSCOT	676	135	811	1,479	54.8%
PISCATAQUIS	70	25	95	211	45.0%
SAGADAHOC	79	27	106	202	52.5%
SOMERSET	257	39	296	600	49.3%
WALDO	106	29	135	293	46.1%
WASHINGTON	139	33	172	363	47.4%
YORK	377	221	598	1,198	49.9%
STATE TOTALS	5,084	1,638	6,722	12,794	52.5%

-- Bureau of Statistical Services

Maine Department of Education

Several points of major concern were forthcoming from the survey of high school guidance counselors and/or principals. One of the questions that was not answered is what happens to those high school graduates who do not enter some type of formal post-secondary education. If the reported percentage of high school students from Maine going into higher education is accurate, almost one-half of the graduates remain outside the higher education spectrum. In an effort to determine what these people needed in the way of post-secondary education, high school counselors were asked the following question:

> "What educational opportunities (including vocational-technical) beyond high school do you feel are lacking in Maine at the present time, based on your counseling experience and knowledge of the needs of young people?"

Analysis of the answers to this question indicated that guidance counselors tended to feel that a community college system should be of prime importance in Maine in an effort to bring higher education to the people of the State. Many of the counselors indicated that community colleges should be within commuting distance of major population areas of the State. Also that courses and programs should be varied and coincide with present employment opportunities in the State. Further analysis indicated that many of the counselors considered the programs at the vocational-technical institutes in the State were of extreme importance but that these institutions had far too stringent admission requirements for the type

of student who would benefit most from such training. Several of the replies to the question indicated that the mathematics requirements for admission to vocational-technical institutes were much too restrictive.

Other comments included such areas as more "open door" admission policies for the so-called terminal student, more general education programs, some type of cooperative education programs in which students would receive job training in conjunction with the academic training.

Following is a list of educational programs that guidance counselors submitted as being needed in Maine in greater quantity than now offered. It is recognized that several of the programs are available at one or more institutions in the State, but duplicate programs in other geographical areas would make them more accessible to more students.

Needed Educational Programs in Maine
At Less-Than-Baccalaureate Level

Nursing (RN and LPN)
X-Ray Technician
Dental Hygienist
Medical Technician
Surgical Technician
Mental Health Aides
Physical-Occupational Therapy
Photography
Secretarial (all levels)
Computer Operation and Technician
Aircraft Maintenance Technician
Airline Hostess
Commercial Art and Design
Radio and Television Broadcasting
Shoe Repair
Cabinet Making
Hotel and Resort Management

Ski Area Management
Ski Area Technician
Architectural Technician
Drafting
Conservation
Real Estate and Insurance
Fashion Design
Cosmetology
Culinary Arts
Masonry
Social Worker Aide
Library Aide
Merchandising
Law Enforcement
Journalism

One- and Two-Year Programs Available in Maine

Following is a list of one- and two-year programs at institutions in the State.

CENTRAL MAINE VOCATIONAL-TECHNICAL INSTITUTE - Auburn
- Licensed Practical Nursing
- Structural Technology
- Process Control
- Machine Shop
- Auto Mechanics
- Construction and Maintenance Trades
- Electricity
- Drafting
- Industrial Electricity
- Graphic Arts

EASTERN MAINE VOCATIONAL-TECHNICAL INSTITUTE - Bangor
- Distribution and Marketing
- Architectural Technology
- Electrical Technology
- Electronics Technology
- Machine Shop
- Auto Mechanics
- Construction and Maintenance Trades

WASHINGTON COUNTY VOCATIONAL-TECHNICAL INSTITUTE - Calais
- Motel-Motel Management
- Auto Mechanics
- Boat Building

NORTHERN MAINE VOCATIONAL-TECHNICAL INSTITUTE - Presque Isle
- Licensed Practical Nursing
- Accounting
- Secretarial
- Auto Body Repair

Auto Mechanics
Construction and Maintenance Trades
Masonry
Drafting
Radio and Television
Sheet Metal (1971)

SOUTHERN MAINE VOCATIONAL-TECHNICAL INSTITUTE - South Portland
Electrical Technology
Electronics Technology
Machine Shop
Oceanographic Technology
Air Conditioning, Heating
Auto Mechanics
Construction and Maintenance Trades
Electricity
Marine Technology
Wastewater Treatment
Culinary Arts
Police Service Training

KENNEBEC VALLEY VOCATIONAL-TECHNICAL INSTITUTE - Waterville
Distribution and Marketing
Health Aide (assistant)
Medical Assistant Aide
Secretarial
Heavy Equipment

MAINE SCHOOL OF PRACTICAL NURSING - Portland and Waterville
Licensed Practical Nursing

UNIVERSITY OF MAINE AT ORONO - Orono
Animal Technology
Animal Medical Technology
Food Service Management
Merchandising (Home Furnishings and Clothing)
Forest Management
Resource and Business Management
Chemical Engineering (Pulp and Paper) Technology
Civil Engineering Technology
Electrical Engineering Technology
Mechanical Engineering Technology

UNIVERSITY OF MAINE AT BANGOR - Bangor (Penobscot Valley Community College)
Law Enforcement
General Studies

UNIVERSITY OF MAINE AT PORTLAND-GORHAM - Portland
- Business Administration

UNIVERSITY OF MAINE AT AUGUSTA - Augusta
- Liberal Studies
- Art
- Administration - Business
  - Public
- General Studies
- Law Enforcement
- Nursing

HUSSON COLLEGE - Bangor
- Associate in Business Science
  - Accounting
  - Business Administration
    - Retail Merchandising (Women)
  - Secretarial Science
    - Executive Secretarial
    - Insurance Secretarial
    - Legal Secretarial
    - Liberal Arts Secretarial
    - Medical Secretarial
    - Office Science

THOMAS COLLEGE - Waterville
- Associate in Arts
  - General Studies
- Associate in Science
  - Executive Secretarial
  - Medical Secretarial
  - Legal Secretarial

BLISS COLLEGE - Lewiston
- Associate in Science
  - Liberal Arts
  - Elementary and Junior High Education
  - Business Education
  - Business Administration
    - Accounting
    - Administration
  - Secretarial Science
    - Executive Secretarial
    - Medical Secretarial
    - Legal Secretarial

NASSON COLLEGE - Springvale
- Associate in Arts
  - General Studies

UNITY COLLEGE - Unity
- Unity College Institute of Forestry
  - Forestry Option
  - Wildlife Option

WESTBROOK COLLEGE - Portland
- Liberal Arts
- General Studies
- Retailing
- Secretarial Studies
- Medical Secretary
- Dental Hygiene
- Nursing
- Medical Technology (3-year course plus one year affiliation)

BEAL COLLEGE - Bangor
- Associate in Business Science
  - Accounting
  - Business Management
    - Business Management
    - Electronic Data Processing
    - Aeronautical Science
    - Aviation
  - Secretarial Science
    - Executive Secretarial
    - Legal Secretarial
    - Medical Secretarial
    - Aeration Secretarial
  - Business Education (non-degree)
    - Accounting
    - Business Management
    - Secretarial

NEW CONCEPTS FOR FACILITIES

In an effort to determine what new concepts for facilities for community colleges, technical institutes, and other higher education programs were being established in the New England area, a visit was made to various institutions in Massachusetts and Connecticut.

This visit produced the feeling that all institutions have plans for expansion of physical plants, and in most cases, on new campus sites. Many of these plans are strictly in the talking stage, without any clear-cut strategy as to planning or funding.

Cape Cod Community College in Hyannis, Massachusetts, has perhaps the newest campus in a relatively completed stage for enrollment of some two thousand commuting students. The architectural concept at this campus tended to be a cluster-type building plan with each building having a definite purpose, that is, classrooms in separate structures, science facilities by themselves, library in its own building. A unique point was that access to all buildings was fairly convenient to parking areas strategically located on the fringes of the building area. The new campus with its modern design was ready for occupancy in the fall of 1970. From its beginning, the community college has made use of an old building that had housed a Normal School located on one of the main streets in Hyannis. As student enrollment increased, lease arrangements were made in the Armory and other buildings in

the area. Faculty offices were in a house located a considerable distance from the teaching area. Officials at this institution indicated that the spreading out of classes to buildings away from the main point on campus did not adversely affect the continuity of programs. There was some indication that having faculty offices some distance from the areas where students congregated tended to have some negative effect on faculty-student relationships, especially in counseling and advising.

North Shore Community College in Beverly, Massachusetts, has made use of an old high school building that was released by the city after a new high school was completed. Located in the downtown section of the city, it is within commuting distance of a fairly large population. This college has also had to expand its facilities by leasing several other buildings such as an old grocery store located approximately two or three blocks away from the main building. The old grocery store (supermarket type) was partitioned off into several classrooms ranging in size from those accommodating twenty students to one holding approximately forty students. The building was one story high and was approximately twenty years old. Very little had been done in the way of maintenance due to the planning of a new campus which several people indicated would be forthcoming within two to three years.

Middlesex Community College in Middletown, Connecticut, holds its classes in the senior high school and is limited to class hours after the regular high school day is completed. The college does have access to some classrooms in Middlesex Memorial Hospital and in a vocational-agricultural building in the city. Plans for a new campus are aggressively being sought to allow the college to offer its courses in the daytime plus evening.

Manchester Community College in Manchester, Connecticut, was unique in that it started out in 1963 in the local high school offering late afternoon and evening classes. In 1967 the College acquired a vacant office building of an industrial plant and through imagination, converted the building to classroom, office and science facility use.

One area that had apparently been a storage area of approximately 1500 square feet had been converted into a student lounge area with a limited snack bar. The admissions office was to the left of the main entrance and readily available to all who entered the building. This space had apparently been one of the major offices for the industrial plant. Included with the admissions office was a reception-information function.

Classrooms were in areas previously used as office space by the plant plus some renovation of a small attached building that may have been used as a shipping point by the plant. Partitions were permanent type apparently of wallboard as they had been painted.

The College library, bookstore, and admissions office are located in the local high school. Late afternoon and evening classes, now too many to be housed in the main building, continue to be held in the local high school and a cooperative data processing center. Plans are being developed for a new permanent campus between East Hartford and Manchester.

Greater Hartford Community College in Hartford, Connecticut, is extremely unique in its setting and use of available space. Located in an industrial area of downtown Hartford, the college has made use of a converted factory building which once was part of a firearms company. Classroom space seemed ample although overcrowding is becoming a problem as enrollment expands. All facilities are located within the building, including the library, cafeteria, bookstore, language laboratory of the very latest design, a remedial reading laboratory with a full-time reading development specialist. An effort was made to determine if the location and the converted building might have been a deflating issue in student and faculty morale. It was found that both students and faculty were highly motivated and extremely proud of the institution.

In Norwich, Connecticut, a new community college was in the process of being established. At the time of the visit, renovation of an old elementary school was going on but was not far enough advanced to determine what facilities would be available.

While in Norwich a visit was made at the Thames Valley State Technical College which occupies a two-story building housing classrooms, library and up-to-date technical laboratory facilities.

Another new community college was being developed near Plainville, Connecticut, and would be making use of vacant areas in a shopping center complex. As this seemed to be a very new concept based on the so-called "storefront" movement, a visit to the area was disappointing as very little had been accomplished in renovating the site for use as a community college.

Literature on community college facilities is plentiful and readily available. New ideas in building construction, new materials, prefabrication of both metal and concrete materials have added interesting variety to the brick and mortar concepts. Due to time limitation it was not possible to visit campuses and/or facilities in other areas of the country. Some of the literature such as a study of twenty-five urban community college systems has been designed for facilities in the inner city of some of the larger metropolitan areas. In Newark, New Jersey, use was made of an old office building in a downtown district with a new central campus being developed on a twenty-three acre site within the same area. Many such innovations have taken place especially in urban renewal areas of the inner city.

Another new concept in construction is the "air structure" - buildings blown up and held up by air pressure.

Rhode Island Junior College has been housed in a vacant factory building in downtown Providence but will soon be moving to a new campus in Warwick to be known as the Knight Educational Campus. This campus is being developed to include programs as broad as possible, such as vocational, technical and liberal arts.

Basically community colleges offering a variety of technical, vocational and liberal study programs have started within the confines of an established four-year institution or have materialized through demand in various locations throughout the New England area. The demand for post-secondary education at less-than-the-baccalaureate level has brought pressure to bear on the various states. As a result, community colleges have made use of existing facilities until plans for new campuses have become solidified.

Primarily, in the New England area, use of local high schools has been made by holding late afternoon and evening classes. This is perhaps the simplest method as it requires almost no changes in the physical plant. It is true that adjustments have to be made in the scheduling of high school events and evening classes. In the Middlesex (Conn.) situation, the major complaint stated had to do with the custodial (janitorial) problem. The college had to hire its own evening custodians which was not completely satisfactory. The regular custodians complained that the evening custodians were not doing the work assigned. The use of high schools or other

public school buildings is not the most satisfactory arrangement but such use does lend itself more readily to the academic blend that is somewhat necessary to achieve.

Other types of buildings, such as industrial buildings, supermarkets, penal institution buildings, can be used but conversion must include the typical classroom situation - laboratories and other functions. Changes can be made in "set-up" later on but at the beginning, people like to be in a familiar setting.

The Greater Hartford Community College, located in a converted industrial building, looked from the outside like a factory but the inside had been partitioned to make classrooms, laboratories, a language lab, a reading lab, a library, bookstore, cafeteria, and offices that were typical of many college buildings specifically built for those purposes.

One point that was stated at each of the colleges visited was that new buildings are costly but conversion and renovation are also costly because maintenance of an older building may be constant with frequent repairs of many items. Consideration should be given to length of time building is to be used, amount of use, type of use.

In almost every institution visited, the space factor and overcrowding dominated the conversation. The number of students was increasing, space was limited yet an enrollment freeze was considered to be the last step. As a stop-gap measure several of the institutions had initiated 7 a.m. to 11 p.m. days with students and faculty being programmed into various time periods without

choice. At Manchester Community College an instructor indicated that he taught a class at 9 a.m. and another at 9 p.m., both classes being considered as part of his regular teaching activity. This type of teaching load did not seem to be prevalent but the concept of an extended day was used in several cases to utilize buildings and accommodate more students.

It might be well for Maine to make use of existing facilities on its present institutional campuses. Also use can be made of a variety of buildings in the various communities throughout the State.

PRESENT FACILITIES AND SOME APPARENT NEEDS FOR HIGHER EDUCATION IN MAINE

In the fall of 1970, a survey of present facilities at institutions of higher education in Maine, in conjunction with a survey of facility needs, indicated that, with a few exceptions, most institutions cannot expand enrollment to a great degree with present facilities. If expanded enrollment includes students in less-than-baccalaureate programs at institutions not now offering such programs, present facilities are termed inadequate. In those institutions now offering two-year programs, present facilities are either new, deemed fairly adequate, or lacking for an expanded enrollment.

At the University of Maine at Fort Kent, present facilities are deemed inadequate to accept additional students in less-than-baccalaureate programs, especially in areas of student housing and general classroom space. With present facilities and some minor alterations in space utilization such as converting storage space to academic use, enrollment at Fort Kent in both four- and two-year programs could not exceed the 400 student level unless housing (dormitory space) is provided.

Present facilities at the University of Maine at Presque Isle are termed adequate in dormitory and general classroom space for four-year and possible two-year programs. Some additional laboratory space will be needed for expanded enrollment.

At the University of Maine at Bangor, one hundred percent of the available space is used for less-than-baccalaureate programs during the daytime. It is felt that present facilities are adequate to

serve the present enrollment and that an additional hundred students could be accommodated in present facilities.

At the University of Maine at Machias, the dormitory space situation will limit any expansion of student population if residency on campus is required by these students.

Classroom and laboratory space is believed to be adequate if new facilities for science and mathematics and an addition to the library are realized. Some minor alterations and modifications would have to be made in classroom space if an initial program at less-than-baccalaureate level is instituted in the near future.

Husson College and Beal College at Bangor and Thomas College at Waterville have indicated that present facilities are adequate for present and projected enrollments for the next several years. Husson College indicated that it could increase its two-year enrollment by one hundred students with present facilities. Beal College officials felt that present facilities were adequate for an additional 150 students in less-than-baccalaureate programs. The new campus at Thomas College in Waterville has facilities planned for a total of 750 students as compared to present enrollment of approximately 460 students (fall 1970).

It is estimated that an additional one hundred students can be accommodated in less-than-baccalaureate programs over the next several years.

The present facilities at the University of Maine at Augusta are not entirely adequate for present enrollment and a projected increase of 175 students in the immediate future. The completion of an

additional building in the spring of 1971 will house a temporary library, nursing program laboratories and art program facilities. The possible renovation of an old farmhouse building, presently used by the art program, for faculty and supporting service office space will release some space for conversion to small class-seminar type classrooms. All programs at Augusta are less-than-baccalaureate level and projected enrollment of 575-600 students in the fall of 1971 will be full capacity for present facilities with above mentioned alterations.

Present facilities at Westbrook College termed inadequate for present enrollment as specialized use buildings are needed. A new library is being made by conversion of an old church on the fringe of the campus which will release space to classroom and office use. It is felt by officials at the college that present facilities cannot accommodate additional students in less-than-baccalaureate programs. Projected enrollment to 600 students will only be reached as facilities permit. A major space problem on this campus is in dormitory space which limits the number of resident students to be admitted.

At the Portland campus of the University of Maine at Portland-Gorham, present facilities were termed inadequate for all programs offered but from answers to the questionnaire, facilities seemed to be fairly adequate for present enrollment in less-than-baccalaureate programs. Expansion of student numbers in present and future two-year programs may be limited by available classroom space, especially

if projected enrollment is four-year and graduate programs at the Portland campus are realized.

Other Facility Studies

A study of higher education facilities in Maine, conducted by the Institute for Educational Development entitled "Higher Education in Maine: Its Facilities and Utilization" was published in July 1970 sponsored by the State of Maine Higher Education Facilities Commission.

Each of the institutions of higher education in the State were surveyed for this study. Classroom and laboratory space analysis was published for six campuses of the present University of Maine system thus limited information is available in published form concerning present classroom and laboratory space at each of the institutions of higher education in the State.

A general summary of space utilization for classroom and laboratories at six campuses of the present University system can be found tabulated within the IED study.

An inventory of classroom, laboratory, office and dormitory capacity is also available in the facilities study. It is assumed from information within the study that data were collected in 1969 so that information available is as up to date as feasibly possible without undue duplication of effort.

In another study "The First Business of Our Times" by the Academy for Educational Development as a report to the Advisory Commission for the Higher Education Study - State of Maine and published in 1966, two vocational-technical institutes described as needing extensive repair,

remodeling or replacement were Southern Maine Vocational-Technical Institute and Northern Maine Vocational-Technical Institute. It is assumed from observation and personal contact that this description would still be true today. Due to lack of readily available information, it has not been possible to determine the facility use or needs of each of the vocational-technical institutes and several of the private institutions in the State.

In order to have up-to-date information, a survey of Maine higher education institutions was made in the fall of 1970. (Schedule in Appendix)

Responses to the survey were received from seventeen of the twenty-two institutions. The questionnaires were mailed to the chief campus officer who in several cases responded. In other instances it could not be determined who answered.

Following is a narrative on the major facility needs as reported by the individual institutions. These needs are based on present and projected enrollment in both baccalaureate and less-than-baccalaureate programs over the next several years. Due to the lack of response from the vocational-technical institutes, facility needs at those institutions are not included.

The institutions responding have present facilities ranging from very few buildings to those with a multitude of buildings housing classrooms, laboratories and office space. As an increasing student population, both real and projected, place pressure on these institutions, there is a definite need for facility expansion on a

statewide basis to accommodate increased demand. With few exceptions each of the institutions responding indicated expanded facility needs.

In the northern part of the State, the University of Maine at Fort Kent indicated that student-faculty housing is extremely inadequate and that facilities are lacking for physical education and health services. In addition, general classroom space will have to be double the present capacity in the next decade to accommodate an expected increase in student enrollment. Laboratory space at the present time is termed inadequate and if language laboratories were included, an additional six laboratory rooms will be required to meet demand. Other facilities required include a doubling of dormitory space to accommodate 300-400 resident students, a library, a student union and additional administrative and faculty office space.

The University of Maine at Fort Kent does not have less-than-baccalaureate programs in its present curricula but plans are being studied to offer two-year programs in general studies and in health related areas within the next few years. The facility needs for this institution are based on an expanded baccalaureate demand and the addition of less-than-baccalaureate programs.

At the University of Maine at Presque Isle, the study of less-than-baccalaureate programs is being undertaken and facility needs are based, in part, on additional students enrolled in such programs. Additional facilities needed at this institution include a curriculum laboratory and a media center. It was felt that with these additional

facilities, both four-year baccalaureate and less-than-baccalaureate programs could be adequately served for the next several years.

According to the survey response from the University of Maine at Machias, present facilities are not adequate for present enrollment but if a new science-mathematics building and an addition to the library becomes a reality, renovation of existing space for additional classrooms would allow the addition of less-than-baccalaureate programs in a limited way. Additional dormitory space will be essential if the institution increases its enrollment in its baccalaureate programs and starts any less-than-baccalaureate programs.

At the University of Maine at Bangor, less-than-baccalaureate programs are generally administered from the Orono campus with the exception of a general studies and a law enforcement program. In order to more adequately serve the programs now offered at the Bangor campus and those programs which may be forthcoming from present curriculum planning, several areas of needed facilities will have to be accommodated. Included are laboratory space for criminalistics, chemistry, biology, and physics offerings as well as additional faculty and office space. If new programs at less-than-baccalaureate level are considered feasible, additional and new facilities needed include a dental hygiene laboratory, seminar rooms, standard classroom space, and a large lecture hall. Other needs include shop space for ceramics, woodworking, leather craft if programs being studied are to be offered as part of the overall curriculum.

In the Bangor area, two private institutions offering less-than-baccalaureate programs indicated that additional or new facilities were not to be contemplated in the immediate future. Husson College has recently occupied a new campus which had been planned with a moderate expansion of the student population in mind. At the present time no new facilities or renovations of present structures are planned to accommodate projected enrollment increases. At Beal College in Bangor, officials indicated that present facilities were adequate to accommodate expected increases in enrollment for the next several years. New facilities are not being planned with the possible exception of converting a recreation hall into use as a large lecture hall.

Thomas College at Waterville will be moving to a new campus complex in the fall of 1971 and officials at that institution indicated that they expected the new facilities to be adequate for present and projected enrollment for the next five to eight years. The new campus includes dormitories, classroom buildings, library, dining center, college union, physical education center, and administrative and faculty office space. Officials felt that any new facilities or changes in facilities could not be determined until the adequacies and inadequacies of the new campus were determined through use over the next few years.

In the western part of the State, the University of Maine at Farmington, several new facilities and renovations to existing structures were indicated by response to the survey of facility needs.

If projected enrollment increases at Farmington are realized, additional classroom space will be needed for the areas of professional, special, secondary, and physical education as well as home economics, mathematics, English, speech, and the fine arts. Laboratory space to double the present facilities will be needed for science, home economics, early childhood education, special education and mathematics. Dormitory space is expected to be used to capacity by 1971. It is estimated that with an expected approximate student population growth of nine percent a year, resident units will have to be added at the rate of 75 per year. Other facilities needed if projected growth is realized will be areas for library book and study space, materials preparation centers, bookstore space, individual and small group study space as well as student and social recreational areas.

At the University of Maine at Augusta, which moved into its new building during the fall of 1970, it is estimated that present facilities, which includes a building to be completed in the spring of 1971, will be able to accommodate approximately 600 students in less-than-baccalaureate programs. This enrollment is expected to be reached in the fall of 1971 and pressure for space will exist for supporting services for this enrollment. If plans for a learning-resources center are realized in the immediate future, some of the pressure for space will be relieved. This center will encompass the library, audio-visual and tutorial centers as well as contemplated service programs. If present plans for leased space in a City of

Augusta Civic Center become a reality, the projected enrollment increase for this community college can be accommodated if supporting services can be furnished. New facilities needed for this campus include a general classroom-laboratory type building to alleviate pressures on existing and probable space in such programs as nursing, law enforcement now in existence and other programs in the allied health field being studied at this time.

In the southern part of the State, Westbrook College is primarily a two-year institution offering programs in a variety of areas for young women. Its facilities are not considered adequate for many additional students thus enrollment pressures indicate the need for several general classrooms, improved language laboratory facilities, additional shorthand laboratories and a physics laboratory. Additional dormitory space will be required to accommodate 150 students as well as enlarged dining and kitchen facilities. Other facilities needed if projected enrollment figures are reached include an auditorium-theatre, a physical education center or a combination of these latter two functions.

If additional students in less-than-baccalaureate programs are to be accommodated at the Portland campus of the University of Maine at Portland-Gorham, new facilities needed include a multi-purpose classroom-office building. Other new facilities needed for all programs at this campus include a faculty-administration building, a general classroom building, a physical science building, a performing arts auditorium, and a student center. It is estimated, that laboratory space for less-than-baccalaureate programs could be shared with other

programs. At the present time only one two-year program is offered at this institution but studies are being made of possible additional programs in liberal studies, computer science and allied health.

Other Institutions

The following institutions indicated that they did not offer less-than-baccalaureate programs and were not planning such programs in the immediate future:

Bates College
Bowdoin College
Colby College
Maine Maritime Academy
St. Francis College
St. Joseph's College

The vocational-technical institutes did not respond to the survey and thus could not be evaluated for this report. Other institutions not responding were:

Bliss College
John F. Kennedy College
Nasson College
Ricker College
Unity College
University of Maine at Orono
University of Maine at Portland-Gorham (Gorham campus)

TABLE XIII
ENROLLMENT IN VARIOUS PROGRAMS AT SEVERAL INSTITUTIONS OF HIGHER EDUCATION IN MAINE
1968-70

School	4-Year Enrollment 1968	1969	1970	Percent 1968-69	Percent 1969-70	Percent 1968-70	2-Year Enrollment 1968	1969	1970	Percent 1968-69	Percent 1969-70	Percent 1968-70
Bates College	1001	1110	1135	10.89	2.25	13.38	-	-	-	-	-	-
Beal College	-	-	-	-	-	-	150	182	232	21.33	27.47	54.67
Bowdoin College	951	956	966	.52	1.04	1.58	-	-	-	-	-	-
Colby College	1568	1506	1534	-3.95	1.8	-2.17	-	-	-	-	-	-
Husson College	1081	955	853	-11.65	-10.68	-21.1	149	128	158	-14.09	23.44	6.04
Maine Maritime Academy	536	516	534	-3.73	-3.49	-.37	-	-	-	-	-	-
St. Joseph's College	-	167	229	-	37.12	-	-	-	-	-	-	-
Thomas College	279	318	356	13.98	11.95	27.59	92	104	102	13.04	1.92	10.87
Westbrook College	40	38	40	-5.	5.26	0	442	460	438	4.08	-4.78	-.90
University of Maine at												
Augusta	-	-	-	-	-	-	242	315	443	30.1	40.63	83.05
Bangor	-	-	-	-	-	-	-	465	551	-	18.41	-
Farmington	990	1111	1271	12.22	14.4	28.38	-	-	-	-	-	-
Fort Kent	308	357	368	15.9	3.08	19.48	-	-	-	-	-	-
Machias	438	494	572	12.78	15.79	30.59	-	-	-	-	-	-
Portland-Gorham	2289	2713	3136	18.52	15.59	37.	211	208	206	-1.42	-.96	-2.37
Presque Isle	499	554	663	11.02	19.67	32.86	-	-	-	-	-	-
TOTALS	9980	10795	11657	8.17	7.98	16.80	1286	1862	2130	44.79	14.39	65.63

TABLE XIII (Continued)
ENROLLMENT IN VARIOUS PROGRAMS
AT SEVERAL INSTITUTIONS OF HIGHER EDUCATION IN MAINE
1968-70

School	1-Year Enrollment						Total Enrollment					
	1968	1969	1970	Percent Increase 1968-69	Percent Increase 1969-70	Percent Increase 1968-70	1968	1969	Percent Increase 1968-69	1970	Percent Increase 1969-70	Percent Increase 1968-70
Bates College	-	-	-	-	-	-	1001	1110	10.89	1135	2.25	13.38
Beal College	100	101	61	1.	-39.6	-39.	265	298	12.45	305	2.35	15.09
Bowdoin College	-	-	-	-	-	-	951	956	.52	966	1.05	1.57
Colby College	-	-	-	-	-	-	1603	1531	-4.49	1561	1.96	-2.62
Husson College	1,	-	-	-100.	-	-	1261	1097	-13.00	1033	-5.83	-18.08
Maine Maritime Academy	-	-	-	-	-	-	536	516	-3.73	534	3.48	-.37
St. Joseph's College	-	-	-	-	-	-	230	240	4.35	316	31.67	37.39
Thomas College	-	-	-	-	-	-	374	426	13.9	463	8.68	23.79
Westbrook College	-	-	-	-	-	-	492	503	2.24	484	-3.78	-1.62
University of Maine at												
Augusta	-	-	-	-	-	-	242	315	30.1	443	40.63	83.05
Bangor	-	-	1	-	-	-	-	465	-	552	18.71	-
Farmington	-	-	-	-	-	-	1020	1144	12.16	1302	13.81	27.65
Fort Kent	-	-	-	-	-	-	308	357	15.91	368	3.08	10.48
Machias	-	-	-	-	-	-	438	494	12.78	572	15.79	30.59
Portland-Gorham	-	-	-	-	-	-	2510	2921	16.51	3342	14.4	[illegible]3.31
Presque Isle	-	-	-	-	-	-	499	554	11.02	66[illegible]	19.67	[illegible].86
TOTALS	113	101	62	-10.62	-38.61	45.13	11730	12927	10.24	14039	8.60	19.68

TABLE XIV

PROJECTED ENROLLMENT IN VARIOUS PROGRAMS AT SEVERAL INSTITUTIONS OF HIGHER EDUCATION IN MAINE 1971-1980

School	Projected Enrollment 4-Year					Percent 1971-72	Percent 1972-75	Percent 1975-78	Percent 1978-80	Percent 1971-80
	1971	1972	1975	1978	1980					
Bates College	1150	1175	1300	1400	1450	2.17	10.64	7.69	3.57	26.08
Beal College	-	-	-	-	-	-	-	-	-	-
Bowdoin College	1020	1080	1250	1250	1250	5.88	15.74	0	0	22.55
Colby College	Maintain about 1535									
Husson College	1035	1150	1400	1600	1750	11.11	21.73	14.28	9.37	69.08
Maine Maritime Academy	575	600	600	600	600	4.34	0	0	0	4.34
St. Joseph's College	303	362	410	500	600	19.47	13.26	21.95	20.	98.02
Thomas College	400	425	500	500	525	6.25	17.65	0	5.	31.25
Westbrook College	-	-	-	-	-	-	-	-	-	-
University of Maine at										
Augusta	-	-	-	-	-	-	-	-	-	-
Bangor	-	-	-	-	-	-	-	-	-	-
Farmington	1395	1521	1898	2240	2470	9.03	24.78	18.01	10.26	77.06
Fort Kent	400	430	520	610	670	7.5	20.93	17.3	9.83	67.5
Machias	625	665	830	1040	1100	6.4	24.81	25.3	5.76	76.
Portland-Gorham	-	-	-	-	-	-	-	-	-	-
Presque Isle	795	989	1508	2023	2307	24.4	52.47	34.15	14.03	190.18
TOTALS	7698	8397	10216	11763	12772	9.08	21.66	15.14	8.15	65.26

TABLE XIV (Continued)

PROJECTED ENROLLMENT IN VARIOUS PROGRAMS AT SEVERAL INSTITUTIONS OF HIGHER EDUCATION IN MAINE 1971-1980

	Projected Enrollment 2-Year									
	1971	1972	1975	1978	1980	Percent 1971-72	Percent 1972-75	Percent 1975-78	Percent 1978-80	Percent 1971-80
Bates College	-	-	-	-	-	-	-	-	-	-
Beal College	250	275	300	325	350	10.	9.09	8.3	7.69	40.
Bowdoin College	-	-	-	-	-	-	-	-	-	-
Colby College	-	-	-	-	-	-	-	-	-	-
Husson College	165	200	250	250	250	21.2	25.	0	0	51.5
Maine Maritime Academy	-	-	-	-	-	-	-	-	-	-
St. Joseph's College	-	-	-	-	-	-	-	-	-	-
Thomas College	125	150	200	200	225	20.	33.	0	12.5	80.
Westbrook College	Increase to 600									
University of Maine at										
Augusta	545	650	1006	1250	1550	19.27	57.77	24.25	24.	184.4
Bangor	670	755	850	960	1080	12.68	12.58	12.94	12.5	61.2
Farmington	30	60	200	300	500	100.	233.	50.	66.	1566.
Fort Kent	20	30	80	125	175	50.	166.	56.	40.	755.
Machias	50	100	100	100	100	100.	0	0	0	100.
Portland-Gorham	400	600	1500	3500	5000	50.	150.	133.3	42.8	1150.
Presque Isle	-	-	-	-	-	-	-	-	-	-
TOTALS	2255	2820	4486	7010	9230	25.05	59.08	56.26	31.67	309.31

TABLE XIV (Continued)

PROJECTED ENROLLMENT IN VARIOUS PROGRAMS AT SEVERAL INSTITUTIONS OF HIGHER EDUCATION IN MAINE 1971-80

	Projected Enrollment 1-Year									
	1971	1972	1975	1978	1980	Percent 1971-72	Percent 1972-75	Percent 1975-78	Percent 1978-80	Percent 1971-80
Bates College	-	-	-	-	-	-	-	-	-	-
Beal College	75	85	95	105	115	13.3	11.7	10.5	9.5	53.3
Bowdoin College	-	-	-	-	-	-	-	-	-	-
Colby College	-	-	-	-	-	-	-	-	-	-
Husson College	-	-	-	-	-	-	-	-	-	-
Maine Maritime Academy	-	-	-	-	-	-	-	-	-	-
St. Joseph's College	-	-	-	-	-	-	-	-	-	-
Thomas College	-	-	-	-	-	-	-	-	-	-
Westbrook College	-	-	-	-	-	-	-	-	-	-
University of Maine at										
Augusta	-	-	-	-	-	-	-	-	-	-
Bangor	-	15	20	30	30	-	33.	50.	0	-
Farmington	-	20	60	80	100	-	200.	33.	25.	-
Fort Kent	-	-	-	-	-	-	-	-	-	-
Machias	-	-	-	-	-	-	-	-	-	-
Portland-Gorham	-	-	-	-	-	-	-	-	-	-
Presque Isle	-	-	-	-	-	-	-	-	-	-
TOTALS	75	120	175	215	245	60.0	45.83	22.05	13.9	22.66

SUGGESTED WAYS TO MEET FACILITY NEEDS FOR HIGHER EDUCATION IN MAINE

The need for additional facilities of varying type at institutions of higher education in Maine has been pointed out in the section prior to this one. It is realized that all institutions are not represented due to non-response to questionnaires or that several of the institutions did not have and were not planning to offer programs at less-than-baccalaureate level. In general those institutions offering or planning to offer two-year (and less) type programs have varying degrees of facility needs in general classroom space, laboratory space for the physical and biological sciences, education programs, allied health programs and law enforcement. In addition, those campuses on which students reside and need living, dining, and recreational-social facilities indicated that additional students in less-than-baccalaureate programs will need expansion in facilities for the above mentioned functions.

ADDITONAL FACILITIES NEEDED AT PRESENT INSTITUTIONS

Following is a listing of additional facilities needed at several existing institutions of higher education in Maine. In several cases it was not possible to separate those facilities needed specifically for less-than-baccalaureate programs as the institutions considered the total academic "job" to be done with facilities being used for all types of programs, both day and evening. As can be noted from the exhibits of several institutions, the addition of less-than-baccalaureate programs will be difficult without additional facilities. The expected increase in enrollment plus an expansion in program offerings must be met with facilities and supporting services if two-year and less educational opportunities are to be available to Maine citizens.

FACILITIES NEEDED	INSTITUTION
General Classrooms	University of Maine at Augusta Bangor Farmington Fort Kent Machias Portland-Gorham Westbrook College
Laboratory Space Physical and Biological	Westbrook College University of Maine at Augusta Bangor Farmington Fort Kent
Specialized (i.e. nursing law enforcement, allied health, special education, language, shop space)	University of Maine at Augusta Bangor Farmington Fort Kent Presque Isle Westbrook College

FACILITIES NEEDED	INSTITUTION
Dormitory Space	University of Maine at Farmington Fort Kent Machias Westbrook College
Other Facilities	
Dining-kitchen space	Westbrook College
Auditorium-Physical Education	Westbrook College
Physical Education space	University of Maine at Farmington Fort Kent
Library space	University of Maine at Farmington Fort Kent Westbrook College
Recreational-Social (Student Center)	University of Maine at Farmington Fort Kent Westbrook College
Media Center	University of Maine at Bangor Farmington Presque Isle

CONSTRUCTION AT NEW LOCATIONS

If the community college concept with its one- and two-year programs is to be available to as many people in the State as possible, it is suggested that consideration be given to locations where the population base will support such an effort and that commuting distance to existing institutions which offer such programs is beyond a reasonable distance (40 miles is suggested).

Based on population, new facilities should be considered for less-than-baccalaureate programs in the York County area and the Lewiston-Auburn industrial complex area. Although both of these areas are within a reasonable commuting distance of institutions offering less-than-baccalaureate programs, increased student enrollment at these institutions will place extreme pressure on existing facilities which may be relieved by the development of facilities within these two areas. Another area which may be considered for development of facilities for less-than-baccalaureate programs is the Rockland-Camden area, not so much a population base as on a reasonable commuting base.

With new ideas in construction that are coming into the picture, it is conceivable that new construction might be more economically feasible than renovation of some existing facility. It is true that with new construction, acquisition and development of needed land space may be prohibitive. Some of the new concepts in construction include use of mobile trailer units placed in such a manner as to

allow stacking, connecting with each other so that each unit is a classroom or laboratory. A large amount of space can be had with a reasonable outlay of money as well as an added feature of low maintenance due to the type of material used in construction. The use of module construction with pre-cast concrete sections is becoming more prevalent in school construction. Other types being used are steel structures put up in sections in reasonably short time and at a rather minimal cost per square foot of usable space. This latter concept has been used on the Augusta campus. Consideration can be given to the "open-space" concept of construction with the use of folding walls which make the space adaptable to either small or large class use. This type of construction has been used in Houlton, Maine, for a new elementary school.

The "air-bubble" building concept may be used for such facilities as physical education or other large space use programs. This concept has been tried in a climate such as Maine's at Southern Maine Vocational-Technical Institute but if problems do exist, it is not known at this time.

The cost factors in any type of new construction must be considered in comparison with the costs of renovating and remodeling of an existing structure. In addition maintenance costs must be considered over the long run. The use of pre-cast concrete sections, steel, aluminun, and vinyl plastics by today's construction industry indicate that the conventional building materials and methods may be "things of the past." Conventional construction costs keep spiraling and therefore careful consideration to alternative techniques and materials must be given.

RENOVATION AND USE OF OTHER TYPE BUILDINGS

As stated in a prior section of this report, several institutions are making use of other type buildings for college programs such as old supermarkets, old and vacant industrial buildings and in some cases vacated government buildings such as a mental hospital building in Connecticut.

"The Urban Community College 1969--A Study of 25 Urban Community College Systems" by Caudill, Rowlett, Scott (Architects, Planners, Engineers) indicates what various cities throughout the United States have done in making use of various type buildings within the city limits to house community colleges. As an example of how one college started, Staten Island Community College was established in 1955 in its original facility, a Consolidated Edison office building, then added rooms in a converted bank buildings, the top floor or a new office building, the basement of the Borough Hall and a private high school. This institution has now moved to its own 40-acre campus site. Another example of use of older and vacated buildings is in Philadelphia where the Community College of Philadelphia opened in 1965 in an eight-story department store building. Renovation of the entire building has been completed and includes classrooms, laboratories, offices, library, bookstore, lounge and food service areas.

Rhode Island Junior College started in a converted factory as did the Greater Hartford Community College. Both of these have been mentioned in a previous section.

There are arguments on both sides, pro and con, about the renovation and use of old vacated buildings. On the pro side, a college program can be started without waiting months and sometimes a year before a building can be built from the ground up. Usually the buildings such as factories, vacated schools, vacated supermarkets, church buildings, grange halls, have a heating system, water and perhaps a fire prevention system. True it takes planning to convert to classroom use but very often some space can be converted for immediate use by a limited number of students while further conversion can progress as classes are being conducted. Another pro for these types of buildings is that they are usually within a town or city, within fairly reasonable commuting distance for a large number of people. The major drawback about this latter point is that there is usually little space in which to expand if the demand increases as should be expected. Another limitation to the use of industrial and business buildings is the noise factor which must be overcome by use of soundproofing or staggered studding within partitions. Careful planning in the utilization of the space may also help in overcoming this fault. Another negative feature for a commuter type college started in an inner town or city location is the parking situation. With a general lack of public transportation in most towns and cities in Maine, this could be a serious flaw. Arrangements can be made which would allow students to park in nearby areas, either on-street or in other type parking areas.

Old school buildings which have been vacated, old factory office buildings, some types of government buildings can be converted with more ease than factory buildings. The walls are up, usually a better type flooring, lower ceilings are items which would have to be erected in an open type factory building.

There are pros and cons in every type of situation that might arise where a college program might get started. Each situation must be investigated with respect to the type of programs to be offered. Renovation of old buildings is not always inexpensive. There are many towns and cities in Maine which have vacated department stores, industrial buildings, supermarkets and many other type buildings which might be converted to classroom use. Many towns have experienced the closing of parochial schools, both elementary and secondary.

If conversion of older buildings is to be considered at any location in Maine, the planning should include the concept that a full program of courses be offered as in a community college. This should be done to make the overall cost of conversion more economically feasible when spread over more units of instruction.

It should be pointed out that it is not absolutely necessary that all programs and courses be offered and taught under one roof. It is feasible that several buildings in an area, such as along a main street, could be used by one institution. Students and faculty could move from one location to another (time permitting) much as they do on a conventional large campus.

USE OF OTHER THAN COLLEGE BUILDINGS FOR CLASSES

This concept of the off-campus class is not at all a new idea in educational circles. The Cooperative Extension Service, almost since its start in 1914, has made a practice of holding informal educational programs in almost every conceivable type of building.

More and more industrial organizations have added conference type rooms to their buildings which can be used for educational purposes. For the past year and a half, the Continuing Education Division at the University of Maine at Augusta has been conducting formal educational programs for personnel of the Maine Employment Security Commission in one of the Commission's buildings. The instructors go to the student rather than the students going to the instructor.

Advocates of this type of educational endeavor indicate that the student is more relaxed, in his own environment. The International Paper Company (in Maine) has indicated an interest in this "in plant" training for some of its personnel. Local merchant bureaus and Chambers of Commerce have sought out higher education personnel to investigate the possibilities of college programs being conducted in retail stores after business hours and in small industrial plants.

The "off-campus" concept in such types of settings has not been thoroughly investigated in Maine. It is becoming more common in other areas of the country. Bringing college programs to the people should be a major function of the public service arm of any higher education institution. The costs are reasonable as usually the facilities are available.

The use of school buildings, especially high schools and junior high schools, to bring college programs to many communities in Maine, has been one of the major resources of the Continuing Education Division of the University system. Usually these facilities are readily available in any community and are adaptable to most college programs including those of a vocational nature. The use of elementary schools is not recommended as usually the type of seating available is not comfortable for the average college program student. Generally high schools and junior high schools are available in off-peak times which make for more efficient use of community resources. The after school hours do allow many individuals to work on college programs on a part-time basis while being employed during the day. Complaints are heard from people who work evenings that such programs are not available to them due to their work hours. This drawback is being overcome in some areas of the State as some employers are allowing employees time off from work to improve their educational background. "In-plant" education is also helping these people limited by programs in the early evening hours.

There are few major drawbacks in the use of local school facilities. Generally, the complaints are in the custodial area and in a few cases teachers do not like to have "their" classrooms disrupted by others whose teaching techniques vary from theirs, such as desks and chairs in circles, blackboards not erased and a myriad of like complaints. These can be overcome by close supervision and the use of additional custodial help after class time to put rooms back in order.

Experience has shown that the use of church halls or semi-school rooms can be made for college-oriented programs that do not require specialized equipment. If the classes are of a lecture or demonstration nature, these types of facilities are generally available if proper arrangements are made.

The pros outweigh the cons in the use of school, church and civic buildings but careful planning must be exercised in all cases. From observation there seems to be such space available in Maine that can be used for educational purposes. To pinpoint these facilities as to location would be time-consuming and costly. As programs and/or courses are demanded in various locations throughout the State, the statewide network of public service personnel could be used to locate space, contact the people concerned and provide the guidance needed.

DIFFERENT USES OF PRESENT FACILITIES OF A CAMPUS

Planning is taking place at several institutions of higher education in Maine to make more efficient use of existing facilities.

Among the ideas being considered are longer hours of facility use extending into the evening hours for daytime classes, return to Saturday classes, short courses and seminars during vacation periods, and sharing of facilities with other higher education institutions within respective areas.

The idea of using facilities for longer hours for class scheduling may be an outcome of the use of facilities by continuing education and extension units of institutions. These units have been scheduling classes in the late afternoon and early evening hours for a number of years. As student population increases and projections indicate even greater numbers, it will be to the advantage of facility use planners to extend classes into the evening, even as late as midnight. There are institutions in the metropolitan areas of the country that are scheduling classes into the early hours of the morning. Experience with students attending early evening hours has, as a rule, been quite successful.

The use of facilities on Saturdays is not new for many institutions but in recent years there has been a shift away from this scheduling. The major argument against Saturday classes comes from students and to a degree, faculty, but with increasing problem of overcrowding during a five-day week, serious consideration should be given to Saturday scheduling.

Vacation schedules at most institutions of higher education generally leave facilities without use. Some institutions have scheduled accelerated courses, short courses and conferences to take up the slack use periods. The summer session schedules of several Maine institutions are being extended. (University of Maine at Farmington is considering this.) Other ideas being investigated are quarter sessions (four per year) and trimester systems. The trimester schedule has been used in other states. Some of the problems with this system includes faculty scheduling, i.e. when are vacations taken, method of salary payment, fewer offerings per semester. Again careful planning is a foremost consideration with any new concept.

Some experiments have been tried in the sharing of facilities by institutions within a geographical area. As an example of this, the University of Maine at Augusta has been fortunate to be able to use facilities at Thomas College in Waterville for various programs which are a part of the UMA offerings. Such institutions as the University of Maine at Presque Isle and Northern Maine Vocational-Technical Institute may find it advantageous to share facilities, even on a contractual basis, due to the proximity of the campuses. Other areas of possible cooperation in facility sharing might be in the Bangor area between the University of Maine at Bangor, Husson College, Beal College, and Eastern Maine Vocational-Technical Institute

Investigation of this type of activity could be started by individuals within each of the institutions. Any formal agreement would have to be made by administrators at each institution.

EDUCATIONAL TELEVISION AND RADIO

The educational television networks in Maine have cooperated in many areas over the past few years. Programs originating at the University have been carried by the Colby, Bates, Bowdoin system which has allowed people enrolled in University courses such as anthropology and mathematics to continue their education at home.

The use of television and radio could be expanded to include many courses which are adaptable to presentation by these media. Production costs and technical difficulties will vary with the type of course to be offered. It is possible that certain segments of particular courses could be offered by television and radio and the balance taught in a formal class atmosphere.

Sharing of facilities could also be accomplished if courses could be offered over closed circuit television to various institutions thus using one or two instructors to reach students throughout the State at the same time. This type of approach needs close coordination between institutions in relation to course content, course credit, and time of offerings. Offerings of this type might be made during evening hours after peak loads on facilities have eased.

Television courses could possibly be "piped" into industrial plants, high schools and other type buildings which would disseminate program offerings to a wider audience on a more formal basis than home viewing. Follow-up instruction may then be possible if this approach were used.

SUMMARY AND CONCLUSIONS

This report has attempted to provide evidence of the needs for additional facilities to house one- and two-year programs of post-high school education in Maine. The original objectives of the study have been met only in part due to (1) lack of responses from some Maine institutions and (2) the incompleteness of institutional planning. Within these limitations it is possible to summarize what appear to be some salient factors of need for facilities, and to draw at least tentative conclusions for consideration by the Higher Education Facilities Commission.

A review of the estimated training needed for Maine's occupations discloses that post high school occupational and technical education may be needed more by employed persons to improve their skills and advance on the job than for initial job entry. However, there are some new paraprofessional occupations emerging which will require one or two years of college or technical education prior to entry. As technology spreads further in Maine business and industry, the need for upgrading of the employees will become more urgent.

Other data evaluated indicates that the Class of 1969 preferred four-year college to two-year college or

technical schools by a 2 to 1 ratio continuing an historical trend in Maine. Furthermore, the Class of 1969 record shows that of the six counties with the lowest rate of college going, five have no institution of higher education within their borders. Statewide the record shows only 52% of the graduates of 1969 continued on to any post high school education. Clearly, the demand for one- and two-year educational programs is a sleeping giant which, if awakened, will place unbearable stress on the present facilities.

A survey of Maine institutions providing one- and two-year programs indicates that at most there is space now for approximately 500 additional students. Most of this space is in three private institutions which do not plan to grow beyond their facilities. Westbrook College is the only private institution (among the respondents) which indicates an intention to grow and a need now for additional facilities. The public institutions, on the other hand, all have enrollment expansion aspirations. The actual rate of growth and ultimate size of the University units as reported in this survey must be taken as a tentative report. Further development of the master plan for the University may adjust the details, but the overall trend is upward with high priority assigned to one- and two-year programs. Although the vocational technical institutes did not contribute data to this survey, it is well known that they are near capacity.

Thus, it appears that there is a present shortage of facilities for one- and two-year programs even while student demand is probably at a low, if not minimum, level.

Additional evidence of impending pressure for more facilities appears in a recently published report for the State Planning Office.[5] In the field of Education the two highest priorities are (1) support of vocational technical training, and (2) funding of a statewide system of comprehensive community colleges. The latter recommendation is already being implemented within the University of Maine system. Procedures have been established between the University and the State Department of Education to avoid duplication of programs and facilities. Both types of post-high school education are needed by the youth and by the business and industry of Maine. Collaboration between VTIs and the University community colleges is in being which will help to make optimum use of facilities, but more resources will be needed if this recommendation to the State Planning Office is to be translated into action.

In looking ahead to the need for expanded facilities, this study has examined the experience of several other states in New England. Customarily, it appears, new two-year public institutions start out in renovated space or

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[5] Maine's Public Investment Needs of Highest Priority, ISCO Research, Inc., October 1970.

in public school buildings. The urgency of providing educational opportunity cannot wait for a capital construction program. While there are drawbacks, no overwhelming educational losses seem to be encountered in using such "temporary" facilities. On the other hand, each institution aspires to its own shiny new campus and eventually moves in that direction.

The actual determination of relative value of new construction over renovations of alternative space must be made with reference to specific projects and locations and is beyond the scope of the present study. In conclusion, however, we venture some thoughts based upon our findings in this study and a general awareness of the present economic climate in the State of Maine.

It appears true that:

1. The student demand for one- and two-year programs has not yet fully manifested itself either in program requests or by geographical locations.
2. The potential student demand for one- and two-year programs will be translated into actual demand by easier access to courses for both recent high school graduates and those adults with work and home responsibilities.

3. The commuter concept of a community college, while highly suitable for urban areas, is less appropriate in Maine with almost no public transportation, with long distances on country roads, and with parking problems for any town that becomes the home for a college in which every student has a car.

Therefore, it is suggested that:

1. Existing institutions should provide individual courses for part-time students at a variety of off-campus locations in order to reach those who do not otherwise apply for admission. Special effort should be made to deliver courses in counties that have no higher education facilities.
2. Locations for those courses should use schools, industrial plants, empty stores on main streets and similar temporary facilities, adequately refurbished to serve day and evening students as close to home and work as possible with courses not requiring special shop or laboratory facilities.
3. Evening and Saturday hours should be fully utilized on existing campuses before new facilities are constructed.
4. Institutions should expand the courtesy, already established, of loaning their facilities to each other for adult education and evening courses.

5. Public broadcasting should be used more extensively by both public and private institutions to deliver courses to learners at home.
6. From student response to this truly "extended" operation, hard data can be gathered to plan permanent construction at either present or new locations most accessible to individuals not previously attending a college or technical school.
7. Construction of additional facilities at present locations should proceed as soon as student demand warrants.

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APPENDIX

SPECIAL OPPORTUNITY FACILITIES PLANNING PROJECT

QUESTIONNAIRE
(Guidance Counselors)

HOW MANY GRADUATES PLAN TO ATTEND: 4-Year College _____

2-Year College _____

Vocational-Technical Institute _____

Business School _____

Beauty School _____

Barber School _____

Other (Specify) _____

WHAT EDUCATIONAL OPPORTUNITIES (INCLUDING VOCATIONAL TECHNICAL) BEYOND HIGH SCHOOL DO YOU FEEL ARE LACKING IN MAINE AT THE PRESENT TIME, BASED ON YOUR COUNSELING EXPERIENCE AND KNOWLEDGE OF THE NEEDS OF YOUNG PEOPLE?

_____

_____

_____

_____

_____

_____

_____

_____

Signed _____

School _____

UNIVERSITY OF MAINE • AUGUSTA, MAINE 04330

99 Western Avenue
Augusta, Maine

December 8, 1969

Under a grant from the Higher Education Facilities Commission, the University of Maine has undertaken a Special Opportunity Facilities Planning Project. The basic purpose of this project is to provide guidelines for the Commission and the State of Maine to help plan adequate facilities for one- and two-year programs of higher education -- both public and private. This study is not directly concerned with the administrative organization of higher education.

We are seeking information from each guidance counselor in the state which will aid in making certain determinations relative to these needs. We would appreciate your answering the enclosed questionnaire and returning it to us at your earliest opportunity. (Self-addressed return envelope enclosed - postage prepaid) Also, if there are pertinent published materials, reports, etc. available we would appreciate receiving copies.

Thank you for your assistance.

Yours very truly,

William E. Robinson
Research Associate
Special Opportunity Facilities
Planning Project

UNIVERSITY OF MAINE • AUGUSTA, MAINE 04330
99 Western Avenue
Augusta, Maine

February 18, 1970

On December 8, 1969 we submitted to you a questionnaire relative to our Special Opportunity Facilities Planning Project. As yet this questionnaire has not been returned to us. It would be most helpful to our project if you could reply to the questionnaire and return it to us.

In the event that it may have been misplaced we are enclosing another for your convenience along with a return envelope (postage prepaid).

Thank you for your attention to this matter.

Yours very truly,

William E. Robinson
Research Associate
Special Opportunity Facilities
Planning Project

WER/cmf
Encs.

SURVEY OF
PRESENT AND FUTURE HIGHER EDUCATION FACILITIES AND UTILIZATION
FOR
LESS THAN BACCALAUREATE PROGRAMS

1. Name of Institution _____

2. Location _____

Public _____ Private _____

3. Total Enrollment:

Fall 1968 _____

Fall 1969 _____

Fall 1970 _____

4. Enrollment (by degrees and/or programs)

	Fall 1968	Fall 1969	Fall 1970
Graduate			
4-Year			
2-Year			
1-Year			
Other(please specify)			

5. Projected Enrollment (by degrees and/or programs)

	1971	1972	1975	1978	1980
Graduate					
4-Year					
2-Year					
1-Year					
Other(please specify)					

6. Are the present facilities now in use for classrooms, laboratories, specialized use buildings and dormitories adequate to serve your present total enrollment?

Yes _____ No _____ If no, explain _____

_____

_____

_____

_____

_____

_____

7. What percent of your present facilities are used for:

	During Day Percent	During Evening Percent
2-Year Programs	_____	_____
1-Year Programs	_____	_____
Other (please specify)		
_____	_____	_____
_____	_____	_____
_____	_____	_____

8. Please list all two year (or less) programs offered at your institution.

Two Year	One Year	Other
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

9. With present facilities, how many additional students could you serve in the future in:

	1971	1972	1975	1978	1980
2-Year Programs					
1-Year Programs					
Other (please specify)					

10. Assuming you could serve additional students in less than baccalaureate programs with present facilities in the near future, what renovations, remodeling or other changes would be needed in the facilities?

11. If you <u>now</u> serve students in less than baccalaureate programs <u>or plan to add such programs in the future</u>, what new facilities will be needed at your institution to accommodate additional students in these programs? Please be specific.

Classrooms

Laboratory Space

Shop Space

Dormitories (If applicable)

Other facilities

12. If you now offer less than baccalaureate programs, what new programs of this type do you plan to offer in the future, provided that facilities were available?

13. If you do not offer less than baccalaureate programs at this time, do you contemplate offering such programs in the future?

Yes _____ No _____

If yes, when and what programs?

Program	Possible Target Date

14. What new ideas do you now have or foresee in the use of existing buildings at your institution or in the use of new facilities which may be forthcoming?

15. What use is made of your classrooms, laboratories and other teaching areas during the evening hours or on Saturdays?

UNIVERSITY OF MAINE at Augusta

Office of the Dean
Adult Education & Community Services

University Heights
Augusta, Maine 04330
207-622-7131

January 31, 1972

Mr. Wayne Ross
Higher Education Facilities Commission
State Department of Education
Augusta, Maine 04330

Dear Mr. Ross:

Enclosed herewith is additional information which was not included with the original report entitled "Special Opportunity Facilities Planning Project." The information included here hopefully answers the questions which were asked as a result of the original information provided in the above named report.

Sincerely,

William E Robinson

William E. Robinson
Dean

WER/pg

enc

SPECIAL OPPORTUNITY FACILITIES PLANNING PROJECT

A Report
to the
State of Maine Higher Education Facilities Commission

Supplemental Report

EMPLOYMENT OPPORTUNITIES

Time magazine dramatically called the nation's attention to the dearth of jobs for many of the young men and women graduating with traditional degrees in Arts and Sciences. The article also called attention to the great increased supply but decline in demand for persons with PhD degrees. "A number of radical education experts argue that the U. S. has become an overtrained society, producing too many specialists for too few jobs." The article goes on to state that 80% of all jobs available in the U. S. are within the capabilities of those with high school diplomas. "Even without a recession 25% of all graduates will be working at jobs for which college degree is not needed at all." Although it is estimated there will be a need for 25% more people to fill the jobs by 1980 the greater increase in demand will be for systems analysts, programmers, oceanographers, social workers and in the field of health!

Another article based on Department of Labor estimates, presents a list of the 10 jobs which promise to have the most openings during the 1970's. Listed in order of the number of people to be hired each year these jobs are: (1) teachers (2) secretaries (3) household workers (4) retail salespeople (5) truck drivers (6) engineers (7) mechanics and repairmen (8) building trades (9) bookkeepers and (10) cashiers. Half of these jobs do not require a college education.[2]

1. Time, May 24, 1971, page 58
2. Science and Mechanics, March 1971, page 46

The so called Clark report shows that about 78 per cent of the jobs in Maine require a high school diploma or less for job entry (table 1). About 7 per cent of the jobs require the education provided by a technical institute or some college while only 4 per cent require that of a bacculaureate degree.[3] As far as training requirements for job entry, about 9 per cent of the job openings required the training provided by technical institutes and about 6 per cent by that of a specialized college program (table 2).

Clark's survey also showed the greatest number of jobs in Maine will be in the area of retail trade, public administration, wholesale trade, leather and leather products, paper and allied products, transportation, finance, insurance and real estate, and contract construction. About 70 per cent of the job opportunities in Maine will be in these areas (table 3). Persons classified as operative, craftsmen, office or clerical and service will account for more than 70 per cent of these jobs.

HIGH SCHOOLS SENIOR'S ASPIRATIONS - EXPECTATIONS

Although the educational and training requirement for jobs in Maine industries are largely for less than college trained people (general as well as technical), the aspirations and expectations of high school seniors are greatly different from the needs to gain employment within the state. A stratified random sample of 1910 students graduating from Maine high schools in 1969 showed that although 55 per cent believe that their four years in high school did adequately prepare them for their occupational or educational plans (table 4), 68 per cent did plan to attend college or other post-high school training (table 5). Only about one-half of the

[3] Adapted from tables in Maine's Occupational Needs to 1975, David H. Clark, Manpower Research Project University of Maine, Orono August 1969

Table 1

EDUCATIONAL REQUIREMENTS FOR JOB ENTRY
TO VARIOUS OCCUPATIONS

Educational Requirements by number of entry jobs

cupation	No requirement or less than High School	High School Diploma	Post-High School	Technical Institute	Some College	College or more	Total
ofessional	37	84	19	60	25	751	976
chnical	26	103	52	160	20	33	394
ficials & nagers	254	868	128	165	21	606	2042
les	334	1332	78	53	5	133	1935
fice & erical	295	3947	401	527	26	91	5277
aftmen	1395	1268	142	153	16	13	2983
erative	1277	992	19	15	--	5	2308
borers	849	377	7	1	1	--	1235
rvice	784	401	23	9	--	5	1222
tal	5241	9372	875	1133	114	1637	18,372

PERCENT

ofessional	3.4	8.6	1.9	9.7	2.6	76.9	100.0
chnical	6.6	26.1	13.2	40.6	5.1	8.4	100.0
ficials & nagers	12.4	42.5	6.3	8.1	1.0	29.7	100.0
les	17.3	68.8	4.0	2.7	0.3	6.9	100.0
fice & erical	5.6	74.8	7.6	9.8	0.5	1.7	100.0
aftsmen	46.4	42.5	5.0	5.1	0.5	0.4	100.0
erative	55.3	43.0	0.8	0.6	---	0.2	100.0
borers	68.7	30.5	0.6	*	*	----	100.0
rvice	64.2	32.8	1.9	0.7	---	0.4	100.0
tal	28.5	51.0	4.8	6.2	0.6	8.9	100.0

ss than 0.1 percent

ference - Adapted from tables in Maine's Occupational Needs to 1975, David H. Clark, Manpower Research Project, University of Maine, Orono, August 1969

Table 2

TRAINING REQUIREMENTS FOR JOB ENTRY TO VARIOUS OCCUPATIONS

Training Requirements by number of Entry Jobs

Occupation	None	None-will train	Experience	Apprentice-ship	Short Training courses	Specialized High School courses	Special Course	Technical Institute	Special college	Mix	Total
Professional	67	21	127	1	27	2	--	83	640	8	976
Technical	31	38	110	9	17	--	6	149	28	6	394
Officials											
Managers	323	127	877	---	76	11	34	202	380	12	2042
Sales	437	329	599	1	41	17	33	39	42	2	1935
Office											
Clerical	1331	365	926	---	68	1077	51	706	45	8	5277
Craftsmen	368	382	1595	66	157	1	45	326	9	34	2983
Operative	821	498	730	150	36	3	28	37	---	5	2308
Laborers	907	214	98	---	2	1	9	4	---	-	1235
Service	638	203	295	---	41		4	38	3	-	1222
Total	5316	2177	5357	227	465	1112	910	1584	1147	75	18,372

PERCENT

Professional	6.9	2.2	13.0	0.1	2.8	0.2	---	8.5	65.6	0.8	100.0
Technical	7.9	9.6	27.9	2.3	4.3	---	1.5	37.8	7.1	1.5	100.0
Officials &											
Managers	15.8	6.2	42.9	--	3.7	0.5	1.7	9.9	18.6	0.6	100.0
Sales	43.0	17.0	31.0	0.1	2.1	0.9	1.7	2.0	2.2	0.1	100.0
Office &											
Clerical	25.2	6.9	17.5	---	1.3	20.4	14.2	13.4	0.9	0.2	100.0
Craftsmen	12.3	12.8	53.5	2.2	5.3	*	1.5	10.9	0.3	1.1	100.0
Operative	35.6	21.6	31.6	6.5	1.6	0.1	1.2	1.6	----	0.2	100.0
Laborers	73.4	17.3	7.9	---	0.2	0.1	0.7	0.3	----	---	100.0
Service	52.2	16.6	24.1	---	3.4	---	0.3	3.1	0.2	---	100.0
Total	28.9	11.8	29.2	1.2	2.5	6.1	5.0	8.6	6.2	0.4	100.0

Reference - Adapted from tables in Maine's Occupational Needs to 1975, David H. Clark, Manpower Research Project, University of Maine, Orono, August 1969

Table 3

EMPLOYMENT NEEDS BY INDUSTRY AND OCCUPATIONAL GROUPS 196[illegible] - 1975

Industry	Occupational Group (number needed)									
	Professional & Technical	Official & Managers	Sales Workers	Office Clerical	Craftsmen	Operatives	Laborers	Service	Total	Percent
Contract Construction	135	467	85	420	2119	867	419	31	4737	7.5
Food Products	71	214	177	356	363	1277	635	96	3178	5.0
Textile Mill Products	16	30	---	75	81	-495	-475	-18	-796	-1.2
Apparel & related Prod.	23	178	43	163	106	3094	67	46	3720	5.9
Lumber & Wood	55	52	25	132	268	655	-20	47	1146	1.8
Paper & Allied Prod.	574	311	50	413	1695	1186	-259	98	4050	6.4
Printing & Publishing	20	13	15	44	-48	21	-15	-1	49	0.1
Chemicals & Allied Prod.	23	6	7	10	7	62	-123	--	-8	
Rubber & Plastics	5	30	21	37	78	491	22	-1	687	1.1
Leather & Leather Prod.	23	144	52	162	386	3238	405	53	4248	6.7
Other Durables	46	22	3	70	74	158	-34	92	431	0.7
Fabricated Metal Products	49	28	10	47	102	114	-5	4	347	0.6
Non-Electric Machinery	54	110	16	104	231	235	17	21	788	1.2
Electric Machinery	189	113	14	117	184	2071	96	33	2817	4.5

Table 3 (cont.)

EMPLOYMENT NEEDS BY INDUSTRY
AND OCCUPATIONAL GROUPS
1968 - 1975

Occupational Group (number needed)

Industry	Profess-ional & Technical	Official Managers	Sales Workers	Office & Clerical	Crafts-men	Opera-tive	Labor-ers	Service	Total	Percent
Transportation Equipment Trucking	219	310	30	257	1629	978	137	70	3844	6.1
Trans. Misc.	34	44	41	188	85	662	13	7	1097	1.7
Communication	136	174	34	160	133	2	2	9	616	1.0
Public Utilities	70	87	4	110	154	25	-26	5	369	0.6
Other Trans.	8	21	3	42	4	53	-29	3	105	0.2
Wholesale Trade	154	464	790	1176	752	1173	237	12	4925	7.8
Retail Trade	81	791	2427	2092	1246	918	326	2079	9969	15.8
Finance Insurance Real Estate	137	994	370	2327	11	14	18	64	3775	6.0
Misc. Services	883	419	242	1132	256	390	262	1134	4720	7.5
Public Administration	2096	864	142	1849	461	149	38	2664	8244	13.1
Total	5101	5976	4592	11,497	10,582	17,233	1710	6550	63,058	100.0
Percent	8.1	9.5	7.3	18.2	16.8	27.3	2.7	10.4	100.0	

Reference - Adapted from tables in Maine's Occupational Needs to 1975, David H. Clark, Manpower Research Project, University of Maine, Orono, August 1967

Table 4

DO YOU THINK THAT YOUR YEARS IN HIGH SCHOOL ADEQUATELY PREPARED YOU FOR YOUR OCCUPATIONAL OR EDUCATIONAL PLANS?

N = 1910

RESPONSES	FREQUENCY	PERCENT
Yes 1	1054	55.2
No 2	790	41.4
No information	66	3.4
TOTAL	1910	100.0

Reference - Educational and Occupational Aspirations and Expectations of High School Students in the State of Maine - unpublished report by Bopinda S. Bolaria, Manpower Research Project, University of Maine, Orono

Table 5

RESPONSE TO THE QUESTION, "DO YOU PLAN TO ATTEND COLLEGE OR OTHER POST-HIGH SCHOOL TRAINING?"

N = 1910

Responses	Frequency	Percent
Yes, I plan to attend	1300	68.1
No, I do not plan to attend	598	31.3
No information	12	0.6
TOTAL	1910	100.0

Reference - Educational and Occupational Aspirations and Expectations of High School Students in the State of Maine - unpublished report by Bopinda S. Bolaria, Manpower Research Project University of Maine, Orono

students planned to obtain jobs in Maine while 34 per cent definitely stated they expected to find jobs outside the state (table 6). These expectations were in rather close agreement with job placement for the 1970 graduating class of the University of Maine, Orono where 57 per cent obtained jobs in Maine and 43 per cent found jobs outside the state.[4] Of those high school seniors who expected to find jobs outside of Maine about 42 per cent were of the opinion that better opportunities for employment existed outside than within the state of Maine. (table 7)

The study of graduating high school students showed that at least 1 per cent aspired to more than a high school education and that about two-thirds expected to further their education beyond high school (table 8). About 22 per cent of the seniors expected to attend a business, commercial, technical, vocational school, or junior college while about 45 per cent stated they expected to attend a college or university.

Of their expectations as to occupations they would be involved in, 43 per cent expected to be considered as Professional or Technical workers, 0 per cent expected to be engaged in office and clerical work, 10 per cent to be employed as craftsmen or operators, and all other occupations 18 per cent. Nineteen per cent of the students didn't respond to the question (table 9). Their expectations were greatly different from the job positions that will be available to students from Maine industries according to the Clark report.

It is quite evident that for the graduating high school seniors to obtain employment in the occupations to which they aspire, most of them will need to look for these jobs outside the state (table 10).

Even at two-year educational institutes which confer only less-than-

4 Career Planning & Placement, Annual Report 1969-70 Philip J. Brockway, University of Maine, Orono, Maine p. 5

Table 6

STUDENTS' WORK PLANS BY LOCATION

N = 1910

Location	Frequency	Percent
Maine	970	50.8
Outside of Maine	645	33.8
Don't Know	127	6.6
No information	168	8.8
Total	1910	100.0

Reference - Educational and Occupational Aspirations and Expectations of High School Students in the State of Maine - unpublished report by Bopinda S. Bolaria, Manpower Research Project, University of Maine, Orono

Table 7

REASONS GIVEN BY THOSE WHO DO NOT PLAN TO WORK IN MAINE

N = 645

Reasons	Frequency	Percent
Better vocational opportunities outside of Maine	132	20.5
Better opportunities outside of Maine	81	12.6
Better economic opportunities elsewhere (more money outside)	57	8.8
Non-resident of Maine, returning home	15	2.3
Does not like Maine	19	2.9
Desire to travel, like cities	29	4.5
Like the other states	27	4.2
Will work elsewhere and then return	6	0.9
Family business to return to	4	0.6
Armed services	9	1.4
Other reasons (environmental, personal etc.)	88	13.6
Did not give specific reasons	157	24.3
Total	645	100.0

Reference - Educational and Occupational Aspirations and Expectations of High School Students in the State of Maine - unpublished report by Bopinda S. Bolaria, Manpower Research Project, University of Maine, Orono

Table 8

STUDENT'S EDUCATIONAL ASPIRATIONS AND EXPECTATIONS

N = 1910

Educational level	Aspirations		Expectations	
	Frequency	Percent	Frequency	Percent
Quit High School and not go to any kind of school again	14	0.7	8	0.4
Graduate from High School	305	16.0	474	24.8
Attend business or commercial school (not college level)	152	7.9	126	6.6
Attend technical or vocational school (not college level)	238	12.7	221	11.8
Attend junior college	53	2.8	67	3.5
Attend a college or university	155	8.1	157	8.2
Graduate from a college or university	413	21.6	486	25.4
Work for a M.A. Degree	211	11.0	140	7.3
Work for a doctor's degree	141	7.4	70	3.7
No information	228	11.9	161	8.4
Totals	1910	100.0	1910	100.0

Reference - Educational and Occupational Aspirations and Expectations of High School Students in the State of Maine - unpublished report by Bopinda S. Bolaria, Manpower Research Project, University of Maine, Orono

Table 9

STUDENTS' OCCUPATIONAL ASPIRATIONS AND EXPECTATIONS

N = 1910

Occupation	Aspirations		Expectations	
	Frequency	Percent	Frequency	Percent
Professional-Technical	1061	55.6	819	42.9
Officials-Managers	61	3.2	56	2.9
Office-Clerical	138	7.2	194	10.2
Sales workers	41	2.2	44	2.3
Craftsmen	154	8.1	136	7.1
Operatives	62	3.3	61	3.2
Service workers	115	6.0	94	4.9
Laborers	22	1.2	51	2.7
Housewives	22	1.2	90	4.7
No information	234	12.0	365	19.1
TOTALS	1910	100.0	1910	100.00

Reference - Educational and Occupational Aspirations and Expectations of High School Students in the State of Maine - unpublished report by Bopinda S. Bolaria, Manpower Research Project, University of Maine, Orono

Table 10

EMPLOYMENT NEEDS IN MAINE COMPARED
WITH GRADUATING HIGH SCHOOL SENIORS
JOB EXPECTATIONS

Occupation	Maine's Employment Needs (Percent)#	Students Job Expectations (Percent)+
Professional & Technical	8.1	42.9
Officials & Managers	9.5	2.9
Sales Workers	7.3	2.3
Office & Clerical	18.2	10.2
Craftsmen	16.8	7.1
Operative workers	27.3	3.2
Laborers	2.7	2.7
Service Workers	10.4	9.6*
Not Given	----	19.1
TOTAL	100.0	100.0

*Includes Housewives, 4.7 percent

From Table 3

+ From Table 8

bacculaureate degrees most of the students aspire for the bachelors or more advanced degrees. At the University of Maine at Augusta 78 per cent of the entering freshmen had aspirations of at least acquiring a bachelor's degree (table 11). This was not too greatly different from the national average of 71 per cent for all two-year colleges. Of those entering 4-year institutions 81 per cent expected to obtain at least the bachelors degree.

Society and our educational system is largely responsible for many students believing that the bachelor's degree should be at least their minimum educational goal. Many parents encourage their children to "go to college" which generally is interpreted as getting a bachelor's degree. Guidance counselors generally direct the students with "educational" ability to "get a college degree". The high school college preparatory programs have status implications while the vocational and occupational tracks are at times looked upon as a repository for those unable to make it in a "college" program. "Some parents and guidance counselors have a "stigma" against vocational education".[5] As further indication of the prestige position students place bacculaureate degrees, 54 per cent of the students graduating with terminal degrees in general studies and administration in 1970 and 1971 either transferred to 4-year colleges or continued their education for a "degree" under the Continuing Education Program.[6]

5/ The Maine State Plan for Vocational Education, Part 2, Long Range Program Plan and Provisions, 1972, Maine Department of Education, page 116.

6/ Information supplied by Philip A. Watkins, Director of Financial Aid and Job Placement, University of Maine at Augusta, August 1971

Table 11

Education plans of entering freshmen students at the University of Maine at Augusta compared with the national norms for 2-year and 4-year colleges.

Highest Degree Planned	University of Maine at Augusta	National	
		2-year#	4-year*
None	0.4	4.5	1
Assoc. or equivalent	19.6	18.5	13
Bachelors	52.2	37.8	47
Masters or more	26.3	33.7	34
Other	1.3	5.5	5
TOTAL	100.0	100.0	10.0

References - #Student Information Research Study, Harry H. Murchie, University of Maine at Augusta, Maine 1970, page 36.

*Vocational Education and the Area Schools, A report to the State of Iowa Office for Planning & Programming, Institute for Educational Development, August 1970 page 47

Even though there may not be enough jobs to employ all the bachelor degree recipients in areas of their specialized interests, many believe that society as a whole is better served in the long run to educate its youth to their aspirations rather than to the restricted educational requirements for job entry in a particular area. Some states are planning their higher education responsibilities on broader assumptions than student willingness and aspirations and are asking themselves "how many of our young people should have some post-secondary educational training".[7] This thinking is based on the assumption that education is the best way to prepare young people for adapting to changes they must face during their productive lives.

The previous discussion should not cause one to lose sight of the fact that about one-fifth of the students interviewed expressed their desires for less-than-bacculaureate degree educational programs. These students are interested in the technical, vocational, and occupational programs to which this report is directed.

DEMAND PROJECTIONS FOR LESS-THAN BACCULAUREATE DEGREE PROGRAMS

As shown in Table 8, Bolaria's study of senior high school students showed that about 23 per cent had <u>aspirations</u> for and 22 per cent <u>expected</u> to be enrolled in post high school educational programs of less than a bacculaureate nature. A similar survey by Robinson of

7/ The First Business of Our Times, Academy for Educational Development, September 1966, page 42

the senior high school students of the class of 1970 showed that 23 per cent expected to continue their education in non-bacculaureate degree programs.[9] The figures generated by both of these reports were in rather close agreement with the 19.4 per cent of the 1969 high school graduates who were actually enrolled in such programs during the fall of 1969.[10] (table 12)

Projected student numbers in 1 and 2 year programs are based on the assumption that 20 per cent of the high school graduates are interested in such programs. Since only three-fourths of the students from the graduating class of 1969 enrolled in these programs at educational institutions located within the state (one-fourth enrolled in schools outside the state) it is assumed that three- fourths of the 20 per cent interested or 15 per cent will be demanding 2 year educational programs to be offered by institutions located within the state.

To be sure the 15 per cent is rather arbitrary and is subject to change for a variety of reasons. It does serve as a starting point for estimating the numbers which may be involved in these programs. Important factors which could increase this percentage would be a loss of prestige of the bacculaureate degree or a greater acceptance of educational programs to acquire marketable skills. Thus any projection is subject to revision upon acquiring new information. Currently the 15 per cent appears to be conservative for estimating the demand for 1 & 2 year programs within the state.

9/ Special Opportunity Facilities Planning Project, Preliminary Report, William E. Robinson, page 23

10/ Adapted from Table 4 of Higher Education in Maine, Its Facilities & Utilization, Institute for Educational Development, page 21

Table 12

BASIS FOR DEMAND PROJECTION FOR POST-SECONDARY
1 & 2 YEAR EDUCATIONAL PROGRAMS

Reference	Percent
(a) Bolaris's Report 1/ (Survey of 1969 high school Seniors) Percent expecting to attend:	
(1) Business or Commercial colleges	6.6
(2) Technical or Vocational schools	11.8
(3) Junior colleges	3.9
Total	21.9
(b) Robinson's Survey 2/ (Survey of 1970 high school Seniors) Percent expecting to attend:	
(1) 2 year Institutions	4.7
(2) V.T.I.	7.2
(3) Business colleges	5.0
(4) Beauty School	1.6
(5) Barber School	0.2
(6) Other	4.3
Total	23.0
(c) Institute for Educational Development Report 3/ Percent of 1969 high school graduated enrolled in	
(1) Vocational, Commercial or Technical schools	13.9
(2) Nursing programs	2.3
(3) Junior colleges	3.2
Total	19.4

1/ Bolaris - op. cit.
2/ Robinson - Special Opportunity Facilities Planning Project page 23
3/ Higher Education in Maine, Its Facilities & Utilization IED page 21

The establishment of a number of new large industries or expansion of present firms' requirements for skilled workers could change this figure materially upward.

The numbers generated by the 15 per cent is considerably different from enrollment projections made in 1966 by the Academy for Educational Development. According to their forecast there would be about 13,000 students in 1 & 2 year terminal programs in the state by 1975 of which 8,000 would be full-time and 5,000 part-time.[11] The University of Maine has indicated considerable expansion in these programs as indicated by their statement "one and two-year programs as planned by the Board of Trustees of the University of Maine to be offered throughout the State will require a distinct increase in public investment",[12] "An orderly plan for the development of these programs has been accepted as a definite committment by the Board of Trustees, which feels that the citizens of Maine will increase their demands upon the University for this kind of service."[13] The Vocational-Technical Institutes are expected to have an enrollment of 2300 by 1975 an increase of 12 per cent over 1972.[14] Building capacity is expected to increase

11/ The First Business of our Times, AED, page 50
12/ Maine Public Investment Needs etc. page 141
13/ ibid, page 141
14/ The Maine State Plan for Vocational Education, Part 2 Long Range Program Plan etc. page 129

by a total of 335 students at these schools by June 1973.[15] The Esco Research, Inc. report of October 1970 stated in its recommendations that "Highest priority should be given to as rapid increase as possible in enrollment in full-time and part-time students who are studying vocational and technical subjects .....Highest priority should be given to the need to develop a state-wide system of community colleges. These two-year schools, granting the Associate Degree....."[16] "From this information, it is evident that approximately three times as many people should participate in post-secondary one or two year educational programs of a vocational or technical nature as in four year programs". "There are some 13,860 full-time students in the four-year undergraduate programs of the University of Maine, and several thousands more in private colleges in the State".[17]

Despite the predictions for greatly expanded numbers of students enrolled in 1 & 2 year programs and the desirability for increased enrollment, there will need to be a great change in your peoples' attitudes toward programs of a vocational or occupational nature before greatly expanded numbers become enrolled. As long as the stigma of vocational education remains, great expansion in enrollment is not expected to take place. Perhaps changing the names of the Vo-Tech Institutes to Community Colleges might help remove this stigma.

15/ The Maine State Plan for Vocational Education, Part 3, Annual Program Plan Provisions, Maine Department of Education, 1971, page 144

16/ Esco Report - page 128

17/ Ibid pages 129 and 130

Table 13 shows the predicted number of students expected to be graduating from Maine High schools during the 1972 to 1980 period. Table 14 shows the number that can be expected to enroll annually in 1 and 2 year post-secondary educational programs in Maine schools. Table 14 also shows predicted numbers based on assumptions of greater than 15 per cent of graduates desiring 1 or 2 year programs.

Using 15 per cent as the percentage of high school graduates that would enroll in 1 and 2 year post-secondary programs within the state, the estimates show that about 1775 graduates would enroll in 1972 and about 1600 in 1980. Using a 20 per cent rate, the numbers would be 2366 in 1972 and 2127 in 1980. At a 30 per cent rate, the estimates are 2550 for 1972 and 3190 for 1980. These estimates of student demand can now be compared with classroom capacity to handle these numbers of students. This evaluation follows in the following section.

Table 13

ESTIMATED NUMBER OF STUDENTS GRADUATING
FROM MAINE HIGH SCHOOLS 1972 - 1980

Year	Number In Grade 12	Graduating*
1972	12,236	11,832
1973	11,356	10,981
1974	11,441	11,063
1975	11,220	10,850
1976	10,971	10,609
1977	10,935	10,574
1978	10,850	10,492
1979	10,973	10,610
1980	10,998	10,635

Reference - Unpublished data supplied by Harold M. Grodinsky, Director Higher Education Facilities Planning, State of Maine, Department of Education

*The number of graduates are estimated by using the five year average percentage of 96.7 per cent of high school students in the 12th grade that ultimately graduated from high school during the 1966 - 1970 period

Table 14

ESTIMATED NUMBER OF HIGH SCHOOL GRADUATES ENROLLING IN POST-SECONDARY 1 AND 2 YEAR EDUCATIONAL PROGRAMS IN MAINE SCHOOLS

Year	Number of High School graduates*	Number of graduates enrolling in 1 & 2 year programs in the State based on percentage enrollment rate of#		
		15%	20%	30%
1972	11,832	1775	2366	3550
1973	10,981	1647	2196	3294
1974	11,063	1659	2213	3018
1975	10,850	1627	2170	3255
1976	10,609	1591	2122	3183
1977	10,574	1586	2115	3172
1978	10,492	1574	2098	3147
1979	10,610	1592	2122	3184
1980	10,635	1595	2127	3190

*Reference - see table 13

#Percentage of high school graduates enrolling in 1 & 2 year non bacculaureate degree programs

SPACE UTILIZATION

"Utilization is a measurement of the use of physical space in terms of time."[18] Using this definition, if all the beds in a dormitory are assigned to students, the utilization is 100 percent. With classrooms it is different. There is no standard with regard to the number of hours the classroom should be used a week or the average number of students one should expect to be in the classroom when it is in use. Thus efficient utilization of classroom will depend on the judgement of the college administration considering the goals of the institution.

The Western Interstate Commission for Higher Education has released preliminary manuals on methodologies for evaluating and projecting the requirements for the various types of space at Institutes of higher education. In the introduction it emphasizes that the consideration of "aesthetic" and "quality" of the academic environment are equal (or exceed) in importance to those considerations limited to the determination of the quantities of space required."[19] The report also states there are no satisfactory ways to measure quality of appropriateness of the environment. Such measures must be based on subjective judgements at the institutional level. Thus utilization comparisons of institutions are difficult. The preliminary evaluation and projection methods developed by WICHE are geared to the more traditional forms of education and thus may not be particularly applicable, to evaluating the utilization of vocational and technical

18/ The Feasibility of Automating Classroom Utilization Data, Dept. of Municipal Affairs, Depositors Trust Company, Augusta, Maine. December 1970, page 4

19/ Higher Education Facilities Planning & Management Manuals. Preliminary Field Review Edition; Nov. 1970. Technical Report 14, Planning and Management Systems Division, Western Interstate Commission for Higher Education. Bolder, Colorado. PP 18-19.

institutes, or programs deviating greatly from standard measures of educational activity such as student credit hours and weekly student hours.[20]

Because of the complications and problems of evaluating utilization and capacity, as outlined in the preceding paragraphs, about the only acceptable measure of student capacity at educational institutions are the figures developed by the institutions themselves. In this report, the capacity of an institution is that supplied by the institution.

DEMAND FOR SPACE COMPARED WITH CAPACITY

Currently (1971) it is estimated there is at least a student capacity for about 6000 students in post-secondary 1 and 2 year programs in Maine. (table 15). This includes 1578 spaces for adults who are assumed to be enrolled for evening classes. Thus there is a daytime student capacity for about 4400 students. As mentioned previously, capacity figures are based on institutional estimates.

If only 15 per cent of the high school graduates will be looking for 1 and 2 year educational programs in Maine institutions, this 4300 daytime student capacity is adequate to fulfill the demand. For example, in 1972 it is estimated that 1775 Maine high school graduates will be seeking 1 and 2 year programs in Maine. If all these students stay for the second year of training in 1973 plus the new graduates from the 1973 class who want this training it will mean that 1775 plus 1647 or 3422 students

20/ ibid page 18

Table 15

ESTIMATED STUDENT CAPACITY IN POST SECONDARY EDUCATIONAL 1 & 2 YEAR PROGRAMS IN THE STATE OF MAINE

Institution	Estimated Capacity	Comment
Five Vocational-Technical Institutes [1]	2005	(1971)
Thirteen Technical-Vocational Centers [1]		
Total student capacity 9327		
Adult enrollment in 1969-70 [2]	1578	
University of Maine [3]		
Augusta	600	estimated enrollment 1971
Bangor	670	
Farmington	30	"
Ft. Kent	20	"
Machias	50	"
Portland-Gorham	400	"
Private		
Beal College [3]	325	"
Husson College	165	"
Thomas College	125	"
Total	5968	

1/ Vocational Education in Maine, Table XXI, Supplement, page 11
2/ Adult enrollment in post secondary vocational program are estimated to be 5552 in 1972 Part 3, Maine State Plan for Vocational Education, page 143
3/ Special Opportunity Facilities Planning Project, Robinson, page 59

enrolled in daytime classes at these schools. Thus the State's daytime student capacity would be used at 74 percent of capacity.

This does not mean that there are adequate facilities for all educational programs at all locations in Maine. Some programs requiring specialized space, could be in great need at some institutions. Also some areas of the State may not have the space to take care of their local demands. From an overall viewpoint, however, there is adequate facilities for the current demand of students for these programs.

Some educators believe that the demand for 1 and 2 year post secondary programs will increase as students become more familiar with the offerings of these institutions. Also if all the high school graduates desiring these programs elected to obtain their education in Maine it would mean 20 percent of the graduates would need space. If this were true the daytime student capacity theoretically could be exceeded by 4 percent.

If one should assume that 30 percent of the high school graduates wanted to pursue 1 and 2 year programs, the current daytime capacity would be exceeded by 62 percent under the assumption there will be no dropouts from the first year of the two year program and that all students are enrolled in a 2 year program.

POST SECONDARY VOCATIONAL-TECHNICAL INSTITUTES

AND

REGIONAL VOCATIONAL CENTERS IN MAINE

The Vocational-Technical Institutes in the State have been located in various geographic areas to best serve the population of the State. The six institutes offer a variety of two year, one year and short course programs in many different vocational-technical disciplines.

In addition to the regular daytime student, usually recently graduated from high school, the Institutes have undertaken a variety of adult education programs to upgrade and/or re-train the adults who may have been or are in the labor force in the State in some capacity.

It is the opinion of the state directors of vocational-technical education that the present Institutes do not need physical expansion, but need to broaden the various programs' offerings to better serve the student and also the adult population in the area which they serve. It is also an opinion that the several regional vocational centers in the State will provide adequate space within which program offerings may be expanded, especially in the area of adult education.

At the present time the Regional Vocational Centers are basically designed for the 11th and 12th year of secondary education. There is some feeling that these centers could be used as post secondary vocational-technical training facilities, perhaps during late afternoon and evening hours and possibly expanding into Saturdays. These regional centers can provide facilities for expansion of vocational-technical institute offerings in the various areas of the State, and without infringement upon the programs of the centers with careful planning and

coordination within the office of the Director of Vocational Education in the State Department of Education.

Attached as part of this report are the reports in questionnaire form from several of the regional vocational centers in the State which indicate that several of the centers are experiencing expansion in student numbers and programs. Projected enrollments at several of the centers show that vocational-technical education at the secondary level is progressing repidly and will provide this State with trained employable personnel. Those students who go on to the post-secondary vocational-technical institutes will be well prepared and will put pressure on the institutes for quality programs and instruction.

Also attached as part of this report is a survey summary of the programs, facilities and student enrollment at the six Vocational-Technical Institutes in the State during the 1971-1972 year. It would be redundant to summarize the findings in different form as the attached report is well done and meaningful to those planning vocational education in the State.

LIST OF TABLES

CENTRAL MAINE VOCATIONAL-TECHNICAL INSTITUTE

EASTERN MAINE VOCATIONAL-TECHNICAL INSTITUTE

NORTHERN MAINE VOCATIONAL-TECHNICAL INSTITUTE

LIST OF TABLES (Continued)

SOUTHERN MAINE VOCATIONAL-TECHNICAL INSTITUTE

WASHINGTON COUNTY VOCATIONAL-TECHNICAL INSTITUTE

KENNEBEC VALLEY VOCATIONAL-TECHNICAL INSTITUTE

CENTRAL MAINE VOCATIONAL-TECHNICAL INSTITUTE

1971-1972

TABLE I

Personnel

Instructional	30
Administrative	2
Office	6
Custodial	6
Food Service	0
House Mother(s)	1
Total	45

TABLE II

Student Enrollment

Course	Freshmen Male	Freshmen Female	Seniors Male	Seniors Female	Male	Female
Auto Mechanics	22		14			
Building Construction	13		12			
Architectural Drafting	11		10			
Mechanical Drafting	16	1	6			
Industrial Electricity	26		16			
Graphic Arts*					40	6
Process Control	11		8			
Machine Tool	20		13			
Practical Nursing	4	37	—		—	—
Sub-total	123	38	79		40	6

TOTAL ENROLLMENT ALL COURSES - 286

*Because of staggered enrollments it is not possible to differentiate between Freshmen and Seniors

TABLE III

Adult Education Enrollment
Fall Semester 1971-72

1,000 (estimated)

TABLE IV

Dormitory Capacity at Central Maine Vocational-Technical Institute

57 students

TABLE V

Full-time Students at
Central Maine Vocational-Technical Institute
Enrolled in the Following:

	Male	Female	Total
Two year programs	238	7	245
One year programs	4	37	41
Six month programs			
Less than six month programs			
Totals	242	44	286

TABLE VI

Operating and Planned Programs at
Central Maine Vocational-Technical Institute
of One-Year Duration or Less

Licensed Practical Nurse Program

Proposed Courses to Start this Fall

Construction Maintenance
Graphic Arts
Industrial Electricity
Machine Tool

TABLE VI (Cont'd)

Proposed Short Intensive Programs for New Wing

Office Machine Repair
Welding
Maintenance Mechanic
Marketing & Advertising
Meat Cutting
Upholstery
Radio-TV Advertising
Commercial Art
Introductory Courses in Plumbing
Oil Burner Repair
Photography
F.C.C. Licensing
Metal Fabrication
A & E Specialties (Aircraft)
Supervisory Courses (Expansion)
Veterinary Assistants
Health Occupations - Dental, medical assistants, etc.
Heavy Equipment
Coordination of Training with Agencies MDTA, Maine-CED, etc.
Mobile Home Installers
Book Bindery
Pumping Station Operation
Air Conditioning
Recreation Assistants

EASTERN MAINE VOCATIONAL-TECHNICAL INSTITUTE

1971-1972

TABLE I

Personnel

Instructional	36
Administrative	3
Office	5
Custodial	3
Food Service	(Contract)
House Mother(s)	1
Total	48

TABLE II

Student Enrollment

	Freshmen		Seniors	
Course	Male	Female	Male	Female
Automotive	25		17	
Building Construction	37		16	
Distributive Education	45	2	33	
Electronics	43		16	
Machine Tool	24		22	
Technical Power	19		13	
Environmental Control	21			
Institutional Foods	9	1		
Medical Laboratory	11	20		
Sub-total	234	23	117	

TOTAL ENROLLMENT ALL COURSES - 374

TABLE III

Adult Education Enrollment
Fall Semester 1971-72

430

TABLE IV

Dormitory Capacity at Eastern Maine Vocational-Technical Institute

90 students

TABLE V

Full-time Students at
Eastern Maine Vocational-Technical Institute
Enrolled in the Following:

	Male	Female	Total
Two year programs	342	22	364
One year programs	9	1	10
Six month programs			
Less than six month programs			
Totals	351	23	374

TABLE VI

Operating and Planned Programs at
Eastern Maine Vocational-Technical Institute
of One Year Duration or Less

The new licensed practical nurse program and the institutional foods program are both of one-year duration. In addition, the new medical lab technology course will include one year on-campus study plus a year of work experience at a hospital.

Proposed Summer Programs

These programs will be offered over a six-week period. Each class will meet three evenings per week for a total training time of 54 hours. This proposal is, of course, dependent upon availability of State funds.

Pretechnical Post High School Program (6 weeks)

Elementary Physics or Chemistry
Geometry, Intermediate Algebra, Trigonometry
Communications Skills (writing, reading, speaking)

Proposed Summer Programs (cont'd)

Business and Industrial Management (6 weeks)

Human Relations and Leadership
Cost Analysis
Personnel Management
Public Relations
Industrial Relations

Technical and Industrial (6 weeks)

Welding
Oil Burner Repair
Small Engine Repair
Building Construction
Basic Electricity
Automotives
Surveying
Airconditioning Repair
Radio-Television Repair
Short-order Cook
Baking
Hotel-Motel Management

NORTHERN MAINE VOCATIONAL-TECHNICAL INSTITUTE

1971-1972

TABLE I

Personnel

Instructional	29 1/2
Administrative	3
Office	7 1/2
Custodial/ Maintenance	14
Food Service	5 1/2
House Mother(s)	3
Total	62 1/2

TABLE II

Student Enrollment

	Freshmen		Seniors	
Course	Male	Female	Male	Female
Accounting	20	7	11	7
Auto Body Repair	16		10	
Automotive Service	32		17	
Carpentry	18		14	
Computer Programmer	7	1		
Construction Drafting	16	1	10	
Electrical Construction	19		15	
Masonry-Bricklaying	15			
Practical Nursing	1	24		15
Radio TV Service	16		12	
Secretarial Science		27		7
Sheet Metal	15	—	—	—
Sub-total	175	60	89	29

TOTAL ENROLLMENT ALL COURSES - 353

TABLE III

Adult Education Enrollment
Fall Semester 1971-72

15

TABLE IV

Dormitory Capacity at Northern Maine Vocational-Technical Institute

207 students

TABLE V

Full-time Students at
Northern Maine Vocational-Technical Institute
Enrolled in the Following:

	Male	Female	Total
Two year programs	248	50	298
One year programs	16	39	55
Six month programs			
Less than six month programs			
Totals	264	89	353

TABLE VI

Operating and Planned Programs at
Northern Maine Vocational-Technical Institute
of One Year Duration or Less

Masonry-Bricklaying
Practical Nursing
Computer Programmer (covers three semesters)

Future:

Heating & Plumbing
Agriculture Equipment Mechanics

SOUTHERN MAINE VOCATIONAL-TECHNICAL INSTITUTE

1971-1972

TABLE I

Personnel

Instructional	61 - incl. 4 shipboard personnel
Administrative	7 - incl. Librarian & Business Mgr.
Office	15
Custodial	15
Food Service	6
House Mother(s)	1
Total	105

TABLE II

Student Enrollment

	Freshmen		Seniors	
Course	Male	Female	Male	Female
Applied Marine Biology	22	6	11	6
Automotive Technology	59		38	
Automotive Technology Co-op	32			
Building Construction	41		20	
Culinary Arts	43	6	36	7
Culinary Arts One-Year	11	2		
Electrical Technology	23		10	
Electronics Technology	12		2	
Fire Science Technology	13		6	
Heating & Air Conditioning	29		28	
Industrial Electricity	22		25	
Industrial Elec. Tech.	29		18	
Law Enforcement Tech.	30	4	21	1
Marine Science	53		33	
Machine Tool Technology	29		20	
Wastewater Treatment Tech.	34	—	—	—
Sub-total	482	18	268	14

TOTAL ENROLLMENT ALL COURSES - 782

TABLE III

Adult Education Enrollment
Fall Semester 1971-72

750

TABLE IV

Dormitory Capacity at Southern Maine Vocational-Technical Institute

234 students

TABLE V

Full-time Students at
Southern Maine Vocational-Technical Institute
Enrolled in the Following:

	Male	Female	Total
Two year programs	673	30	703
One year programs	77	2	79
Six month programs			
Less than six month programs			
Totals	750	32	782

TABLE VI

Operating and Planned Programs at
Southern Maine Vocational-Technical Institute
of One Year Duration or Less

Culinary Arts - operating
Wastewater Technology - operating
Automotive Tech. Co-op - operating
Child Care - planned

WASHINGTON COUNTY VOCATIONAL-TECHNICAL INSTITUTE

1971-1972

TABLE I

Personnel

Instructional	10
Administrative	2 - incl. 1 on Project Salvo
Office	2
Custodial	1
Food Service	
House Mother(s)	—
Total	15

TABLE II

Student Enrollment

Course	Freshmen		Seniors	
	Male	Female	Male	Female
Automotive	26		11	
Boatbuilding	21	1	5	
Hotel Resort Management	22		4	
Food Processing*	—	—	—	
Sub-total	69	1	20	

TOTAL ENROLLMENT ALL COURSES - 90

*Course will commence November 1 with expected enrollment of twenty male students

TABLE III

Adult Education Enrollment
Fall Semester 1971-72

300

TABLE IV

Dormitory Capacity at Washington County Vocational-Technical Institute

0

TABLE V

Full-time Students at
Washington County Vocational-Technical Institute
Enrolled in the Following:

	Male	Female	Total
Two vear programs	82		82
One Year programs*	7	1	8
Six month programs			
Less than six month programs	—	—	—
Totals	89	1	90

TABLE VI

Operating and Planned Programs at
Washington County Vocational-Technical Institute
of One Year Duration or Less

Project Salvo
Foods Course (Secondary High School)
Boatbuilding (Secondary High School)
**Basic Electricity (Secondary High School)

*Taking vocational subjects only
**At Lubec and Jonesport-Beals High Schools

KENNEBEC VALLEY VOCATIONAL-TECHNICAL INSTITUTE

1971-1972

TABLE I

Personnel

Instructional	10
Administrative	2
Office	1 1/2
Custodial	1
Food Service	
House Mother(s)	—
Total	14 1/2

TABLE II

Student Enrollment

Course	Freshmen Male	Freshmen Female	Seniors Male	Seniors Female
Pre-Apprenticeship Carpentry			12	
Heavy Equipment Maintenance			33	
Medical Assistant				10
Health Assistant			2	19
Business Occupations				5
Distributive Education	12		3	—
Sub-total	12		50	34

TOTAL ENROLLMENT ALL COURSES - 96

TABLE III

Adult Education Enrollment
Fall Semester 1971-72

0

TABLE IV

Dormitory Capacity at Kennebec Valley Vocational-Technical Institute

0

TABLE V

Full-time Students at
Kennebec Valley Vocational-Technical Institute
Enrolled in the Following:

	Male	Female	Total
Two year programs	15		15
One year programs	14	34	48
Three semester program	33		33
Less than six month program	—	—	—
Totals	62	34	96

TABLE VI

Operating and Planned Programs at
Kennebec Valley Vocational-Technical Institute
of One Year Duration or Less

Business Occupations
Health Assistant
Medical Assistant
Pre-Apprenticeship Carpentry

SURVEY OF
PRESENT AND FUTURE HIGHER EDUCATION FACILITIES AND ATTENDANCE
FOR
LESS THAN BACCALAUREATE PROGRAMS

1. Name of Institution Capitol Area Regional Vocational Center (Cony High)

2. Location Augusta, Maine

Public x Private _____

3. Total Enrollment:

Fall 1968 431

Fall 1969 387

Fall 1970 567

4. Enrollment (by degrees and/or programs)

	Fall 1968	Fall 1969	Fall 1970
Graduate			
4-year			
2-year (Grades 11 and 12)			
1-year			
Other (Please specify)			

5. Projected Enrollment (by degrees and/or programs)

	1971	1972	1975	1978	1980
Graduate					
4-year					
2-year	~~625~~	650	900		
1-year					
Other (please Specify)					

6. Are the present facilities now in use for classrooms, laboratories, specialized use buildings and dormitories adequate to serve your present total enrollment?

Yes _____ No x If no, explain _____

We have added programs until we have used up all avialable space during the regular school day.

7. What percent of your present facilities are used for:

	During Day Percent	During Evening Percent
2-year Programs(Grades 11 & 12)	100 %	T.& I. 66 2/3
1-year Programs(Data Pro.)	100 %	Bus. & H.Ec. 100% 2 nights a week

Other (please Specify)

There are openings in some adult courses and this year there are openings in the Voc. II day programs. This situation will only last one year because of the change to separate junior and senior programs.

8. Please list all two year (or less) programs offered at your institution.

Two Year	One Year	Other
Automotives	Data Processing	
Carpentry		
Drafting		
Elec/Electronics		
Dist. Education		
Graphic Arts		
Machine Shop		
Secretarial Business		
Clerical Business		

9. With present facilities, how many additional students could you serve in the future in:

	1971	1972	1975	1978	1980
2-year Programs	50-75	25			
1-year Programs					
Other (please specify)					

10. Assuming you could serve additional students in less than baccalaureate programs with present facilities in the near future, what renovations, remodeling or other changes would be needed in the facilities?

New facilities

11. If you now serve students in less than baccalaureate programs or plan to add such programs in the future, what new facilities will be needed at your institution to accommodate additional students in these programs? Please be specific.

Classrooms We have a new 80,000 sq. foot vocational center at the architects hoping to break ground in the spring of 1972.

Laboratory Space

Shop Space

Dormitories (if Applicable)

Other facilities

12. If you now offer less than baccalaureate programs, what new programs of this type do you plan to offer in the future, provided that facilities were available?

Auto body _____

Small Engines _____

Industrial Electricity _____

Metal fabrication _____

Heating & air conditioning _____

Conservasion _____

Child care _____

Nurses Aide _____

Food Services _____

13. If you do not offer less than baccalaureate programs at this time. do you contemplate offering such programs in the future?

Yes _____ No _____

If yes, when and what programs?

Program	Possible Target Date
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

14. What new ideas do you now have or forsee in the use of existing buildings at your institution or in the use of new facilities which may be forthcoming?

More adult programs in evenings

Possible 13th year programs- late afternoons

Summer programs for disadvantaged

15. What use is made of your classroom, laboratories and other teaching areas during the evening hours or on Saturdays?

A good adult program in the evening which is expanding rapidly

No Saturday programs as yet.

SURVEY OF
PRESENT AND FUTURE HIGHER EDUCATION FACILITIES AND UTILIZATION
FOR
LESS THAN BACCALAUREATE PROGRAMS

1. Name of Institution Regional Vocational Center

2. Location 826 High Street, Bath, Maine

Public x Private ____

3. Total Enrollment:

Fall 1968	---
Fall 1969	400
Fall 1970	450

4. Enrollment (by degrees and/or programs)

	Fall 1968	Fall 1969	Fall 1970
Graduate			
4-year	NOT APPLICABLE		
2-year			
1-year			
Other (Please specify)			

5. Projected Enrollment (by degrees and/or programs)

	1971	1972	1975	1978	1980
Graduate					
4-year					
2-year		NOT APPLICABLE			
1-year					
Other (please Specify)					

6. Are the present facilities now in use for classrooms, laboratories, specialized use buildings and dormitories adequate to serve your present total enrollment?

Yes X No _____ If no, explain _____

7. What percent of your present facilities are used for:

	During Day Percent	During Evening Percent
2-year Programs	66 2/3%	30%
1-year Programs	66 2/3%	0%
Other (please Specify)		
_____	_____	_____
_____	_____	_____
_____	_____	_____

8. Please list all two year (or less) programs offered at your institution.

Two Year	One Year	Other
Automotives	Child Care	_____
Carpentry	Nurses Aide	_____
Plumbing	_____	_____
Electricity	_____	_____
Drafting	_____	_____
Business Ed.	_____	_____
Dist. Ed.	_____	_____
_____	_____	_____

9. With present facilities, how many additional students could you serve in the future in:

	1971	1972	1975	1978	19[illegible]
2-year Programs		100			
1-year Programs		20			
Other (please specify)					

10. Assuming you could serve additional students in less than baccalaureate programs with present facilities in the near future, what renovations, remodeling or other changes would be needed in the facilities?

NONE

11. If you now serve students in less than baccalaureate programs or plan to add such programs in the future, what new facilities will be needed at your institution to accommodate additional students in these programs? Please be specific.

Classrooms NONE

Laboratory Space NONE

Shop Space 1 shop space

Dormitories (If Applicable) Not applicable

Other facilities

12. If you now offer less than baccalaureate programs, what new programs of this type do you plan to offer in the future, provided that facilities were available?

Short term trade courses

13. If you do not offer less than baccalaureate programs at this time, do you contemplate offering such programs in the future?

Yes _____ No x

If yes, when and what programs?

Program	Possible Target Date

14. What new ideas do you now have or forsee in the use of existing buildings at your institution or in the use of new facilities which may be forthcoming?

3rd session of classes in shop areas and offering of short term trade courses with a greatly expanded adult program.

15. What use is made of your classroom, laboratories and other teaching areas during the evening hours or on Saturdays?

Adult programs

PRESENT AND [illegible] EDUCATION [illegible] AND UTILIZATION
FOR
LESS THAN BACCALAUREATE PROGRAMS

Sep 27 10 49 AM '71

1. Name of Institution BIDDEFORD REGIONAL VOCATIONAL CENTER

2. Location MAPLEWOOD AVE.
BIDDEFORD, MAINE 04005

Public X Private ____

3. Total Enrollment:

Fall 1968	
Fall 1969	575
Fall 1970	631

4. Enrollment (by degrees and/or programs)

	Fall 1968	Fall 1969	Fall 1970
Graduate			
4-year			
2-year			
1-year			
Other (Please specify)			

5. Projected Enrollment (by degrees and/or programs)

	1971	1972	1975	1978	1980
Graduate					
4-year					
2-year					
1-year					
Other (please Specify)					

6. Are the present facilities now in use for classrooms, laboratories, specialized use buildings and dormitories adequate to serve your present total enrollment?

Yes X No _____ If no, explain _____

_____

_____

_____

_____

_____

7. What percent of your present facilities are used for:

	During Day Percent	During Evening Percent
2-year Programs	_____	_____
1-year Programs	_____	_____
Other (please Specify)		
_____	_____	_____
Secondary	100%	75%
_____	_____	_____

8. Please list all two year (or less) programs offered at your institution.

Two Year	One Year	Other	Secondary
_____	_____	T&I	Auto Mechanic
_____	_____		Auto Body
_____	_____		Building Trades
_____	_____		Electrical
_____	_____		Drafting
_____	_____		Machine Trades
_____	_____	H.E.	Clothing
_____	_____		Health Occupations
			Home Economics
			Business Education

9. With present facilities, how many additional students could you serve in the future in:

	1971	1972	1975	1978	[illegible]
2-year Programs	50				
1-year Programs					
Other (please specify)					

10. Assuming you could serve additional students in less than baccalaureate programs with present facilities in the near future, what renovations, remodeling or other changes would be needed in the facilities?

11. If you now serve students in less than baccalaureate programs or plan to add such programs in the future, what new facilities will be needed at your institution to accommodate additional students in these program ? Please be specific.

Classrooms

		AREA SQUARE FT.
Laboratory Space	Vocational Home Economics I	-----1088
	Vocational " " II	-----1088
	Clothing & Textiles	-----1054
	Health Occupations	-----1054
Shop Space	Machine Trades	------3040
	Electrical Shop	------1976
	Welding Shop	------2584
	Building Trades	------3116
	Auto Body	------3192
	Automotive	------3040
	Drafting	------1332
Dormitories (if Applicable)	None	
Other facilities	Business Education areas: 3 classrooms (9183)	2754
	Typing/shorthand	1326
	Typing	1156
	Data Processing	816
	Bookkeeping	1088
	Business Machines	1020

(see attached copy on further information)

WORKSHEET REGIONAL TECHNICAL AND VOCATIONAL CENTERS
(Title 20, § 2356 A and § 2356 B, R. S. 1964)

FORM VCA-2

APPLICANT BIDDEFORD

(Signature of Superintendent of Schools)

FILING DATE 1/15/69

VOCATIONAL CENTER FACILITIES

AREA SQ. FT.

SHOP AREAS

Machine Trades-3040
Electrical ----1976
Spare Shop-----2584
Bldg. Trades---3116
Auto Body------3192
Automotive-----3040
Drafting-------1332

HOME ECONOMICS AREAS

Voc.HmEc. I----1088
Voc.HmEc.II----108[illegible]
Clothing-------10[illegible]
Health------
Class Room----- [illegible]

BUSINESS EDUCATION AREAS

[illegible] Classrooms-([illegible]
Typing/Shorthand- -13[illegible]
Typing ------------ 1[illegible]
Data Processing---- 81[illegible]
Bookkeeping---------108[illegible]
Business Machines---102[illegible]

OTHER TEACHING AREAS — AREA SQ. FT.

6 Trade and Industrial Classrooms--36 [illegible] 2160
Special Needs-------------------- [illegible]
Distributive Education------------ [illegible]

AUXILIARY AREAS (Corridors, Toilets, Etc.)

[illegible]
2 Stairwells-[illegible]
Storage ---[illegible]
Toilets-----[illegible]
Storage----[illegible]
Conference Rms.[illegible]
Offices----[illegible]
[illegible]dors--[illegible]
[illegible]dor---[illegible]
------[illegible]

[illegible] 39[illegible]

[illegible] DAI[illegible] CENTER [illegible]

Date of State approval of plans [illegible] Date project complete [illegible]

Note: List each individual area [illegible] area in square feet.

12. If you now offer less than baccalaureate programs, what new programs of this type do you plan to offer in the future, provided that facilities were available?

Additional Trade & Industrial Shop

" Special Education Programs

" Wage Earning for girls

13. If you do not offer less than baccalaureate programs at this time. do you contemplate offering such programs in the future?

Yes _____ No _____

If yes, when and what programs?

Program	Possible Target Date

14. What new ideas do you now have or forsee in the use of existing buildings at your institution or in the use of new facilities which may be forthcoming?

15. What use is made of your classroom, laboratories and other teaching areas during the evening hours or on Saturdays?

Approximately 650 adults in 69-70

" 800 " " 70-71

About 75% capacity

SURVEY OF
PRESENT AND PLANNED HIGHER EDUCATION FACILITIES AND UTILIZATION
FOR
LESS THAN BACCALAUREATE PROGRAMS

1. Name of Institution: Lake Region Area Vocational Center

2. Location: Naples-Bridgton, Maine

Public: x Private: _____

3. Total Enrollment:

Fall 1968	
Fall 1969	460
Fall 1970	475

4. Enrollment (by degrees and/or programs)

	Fall 1968	Fall 1969	Fall 1970
Graduate			
4-year			
2-year			
1-year	N/A		
Other (Please specify)			
Vocational		216	237

5. Projected Enrollment (by degrees and/or programs)

	1971	1972	1975	1978	1980
Graduate					
4-year					
2-year		N/A			
1-year					
Other (please Specify)					

6. Are the present facilities now in use for classrooms, laboratories, specialized use buildings and dormitories adequate to serve your present total enrollment?

Yes x No _____ If no, explain _____

Generally yes----The Food Service Lab needs additional Equipment and utilities.

7. What percent of your present facilities are used for:

	During Day Percent	During Evening Percent
2-year Programs		
1-year Programs		
Other (please Specify)		
Secondary Day Programs	100	
Adult Retraining or Upgrading Programs		25

8. Please list all two year (or less) programs offered at your institution.

Two Year	One Year	Other Secondary
		Automotive Servicing
		Electrical Occupations
		House Construction
		Drafting
		Food Service
		Data Processing
		Office Occupations
		Cooperative Education
		Consumer Living & Homemaking

9. With present facilities, how many additional students could you serve in the future in:

	1971	1972	1975	1978	1980
2-year Programs					
1-year Programs		N/A			

Other (please specify)
All facilities are available after 7 P.M. for post-secondary level programs - the Center can serve 175 students easily for such programs.

10. Assuming you could serve additional students in less than baccalaureate programs with present facilities in the near future, what renovations, remodeling or other changes would be needed in the facilities?

Provision for:

Additional storage

Administrative Office Space

Miscellaneous items of Equipment

Miscellaneous convenience utilities

Utilizing available expansion area for T & I lab (Now used for maintenance)

11. If you now serve students in less than baccalaureate programs or plan to add such programs in the future, what new facilities will be needed by your institution to accommodate additional students in these programs? Please be specific.

Classrooms One related classroom for Trade & Technical Areas adjoining existing facilities.

Laboratory Space Health Occupations Lab

Shop Space Additional Shop for Small Engine Instruction

Dormitories (If Applicable)

N/A

Other facilities Parking area for cars

Receiving area for supplies, etc.

12. If you now offer less than baccalaureate programs, what new programs of this type do you plan to offer in the future, provided that facilities were available?

Graphic Arts

Health Occupations

Recreational Small Engine Repair

13. If you do not offer less than baccalaureate programs at this time, do you contemplate offering such programs in the future?

Yes x No

If yes, when and what programs?

Program	Possible Target Date
We can offer programs on the Post-Secondary - VPT level in all areas now available as the need arises.	

14. What new ideas do you now have or forsee in the use of existing buildings at your institution or in the use of new facilities which may be forthcoming?

For Post Secondary Programs coordinated with VTI's

15. What use is made of your classroom, laboratories and other teaching areas during the evening hours or on Saturdays?

Evening Adult Programs -

Monday thru Thursday during school year - 24 weeks

SURVEY OF
PRESENT AND FUTURE HIGHER EDUCATION FACILITIES AND UTILIZATION
FOR
LESS THAN BACCALAUREATE PROGRAMS

Aug 27 10 29 AM '71

1. Name of Institution Lewiston Regional Technical Vocational High School

2. Location 60 Central Avenue, Lewiston, Maine 042[illegible]

Public XX Private _____

3. Total Enrollment:

Fall 1968 1633

Fall 1969 1668

Fall 1970 1620

4. Enrollment (by degrees and/or programs)

	Fall 1968	Fall 1969	Fall 1970
Graduate			
4-year			
2-year		350	399
1-year		164	154
Other (Please specify)			

5. Projected Enrollment (by degrees and/or programs)

	1971	1972	1975	1978	1980
Graduate					
4-year					
2-year	495	500	600	625	650
1-year	3[illegible]	200	300	325	340
Other (please Specify)					

6. Are the present facilities now in use for classrooms, laboratories, specialized use buildings and dormitories adequate to serve your present total enrollment?

Yes _____ No XX If no, explain _____

We are presently using substandard facilities while waiting construction of the Comprehensive High School.

7. What percent of your present facilities are used for:

	During Day Percent	During Evening Percent
2-year Programs	_____	_____
1-year Programs	_____	_____
Other (please Specify)		
_____	_____	_____
_____	_____	_____
_____	_____	_____

8. Please list all two year (or less) programs offered at your institution.

Two Year	One Year	Other
Auto Mechanics	Building Trades	_____
Graphic Arts	Machine Tools	_____
Drafting	Electricity	_____
General Trades	Health Occupations	_____
Distributive Ed.	_____	_____
Business	_____	_____
_____	_____	_____
_____	_____	_____

9. With present facilities, how many additional students could you serve in the future in:

	1971	1972	1975	1978	1980
2-year Programs	0	0	0	0	
1-year Programs	0	0	0	0	0
Other (please specify)					

10. Assuming you could serve additional students in less than baccalaureate programs with present facilities in the near future, what renovations, remodeling or other changes would be needed in the facilities?

Cannot apply.

11. If you now serve students in less than baccalaureate programs or plan to add such programs in the future, what new facilities will be needed by your institution to accommodate additional students in these programs? Please be specific.

Classrooms Again, we are making no plans to change any of the facilities because of the up coming school.

Laboratory Space

Shop Space

Dormitories (if Applicable)

Other facilities

12. If you now offer less than baccalaureate programs, what new programs of this type do you plan to offer in the future, provided that facilities were available?

Child Care (This would not constitute a change in physical facilities. It would necessitate possible equipment for the program.)

13. If you do not offer less than baccalaureate programs at this time, do you contemplate offering such programs in the future?

Yes _____ No _____

If yes, when and what programs?

Program	Possible Target Date

14. What new ideas do you now have or forsee in the use of existing buildings at your institution or in the use of new facilities which may be forthcoming?

As reported in the final plan for the Vocational programs in Lewiston, many additional courses will be offered that were backed-up by surveys prior to the State Board approval. Please refer to this book.

15. What use is made of your classroom, laboratories and other teaching areas during the evening hours or on Saturdays?

Additional Vocational programs will be offered as well as apprenticeship programs which are as follows:

Sheet Metal

Glazing

Blue Print Reading

Business Education

Electrical

SURVEY OF
PRESENT AND FUTURE HIGHER EDUCATION FACILITIES AND UTILIZATION
FOR
LESS THAN BACCALAUREATE PROGRAMS

1. Name of Institution **Sanford Vocational Technical Center**

2. Location **Sanford, Maine 04073**

Public X Private _____

3. Total Enrollment:

Fall 1968 307

Fall 1969 432

Fall 1970 542

4. Enrollment (by degrees and/or programs)

	Fall 1968	Fall 1969	Fall 1970
Graduate			
4-year			
2-year			
1-year			
Other (Please specify)			

5. Projected Enrollment (by degrees and/or programs)

	1971	1972	1975	1978	1980
Graduate					
4-year					
2-year					
1-year					
Other (please Specify)					

6. Are the present facilities now in use for classrooms, laboratories, specialized use buildings and dormitories adequate to serve your present total enrollment?

Yes _____ No X If no, explain There are several new programs we would like to implement but do not have space available.

7. What percent of your present facilities are used for:

	During Day Percent	During Evening Percent
2-year Programs		
1-year Programs		
Other (please Specify)		
Secondary T & I Programs	95%	25%
Other Vocational	100%	20%

8. Please list all two year (or less) programs offered at your institution.

Two Year	One Year	Other
Machine Trades	Child Care	Clerical and Secretarial Courses
Power Mechanics	Data Processing	
Electricity - Electronics	Co-operative Education	
Drafting		
Agriculture - Horticulture		
Welding - Metal Fabrication		
Building Construction		
Co-operative Education		

9. With present facilities, how many additional students could you serve in the future in:

	1971	1972	1975	1978	1980
2-year Programs	30	10	Capacity reached		
1-year Programs	Capacity reached				
Other (please specify)					

10. Assuming you could serve additional students in less than baccalaureate programs with present facilities in the near future, what renovations, remodeling or other changes would be needed in the facilities?

If courses were offered in the evening little physical change would have to take place other than the aquisition of specialized pieces of equipment as required. If courses were offered in the daytime, students would have to be accepted on a limited basis due to lack of space.

11. If you now serve students in less than baccalaureate programs or plan to add such programs in the future, what new facilities will be needed at your institution to accommodate additional students in these programs? Please be specific.

Classrooms Depending on types of programs to be offered, an additional of at least (2) classrooms would be required. Also see #10 above.

Laboratory Space Would depend on type of program to be offered.

Shop Space Would depend on type of program to be offered.

Dormitories (if Applicable) Not Applicable

Other facilities Not Applicable

12. If you now offer less than baccalaureate programs, what new programs of this type do you plan to offer in the future, provided that facilities were available?

We would welcome the opportunity of availing our facilities to the V.T.I.'s and and University of Maine, Portland-Gorham for extension courses.

13. If you do not offer less than baccalaureate programs at this time. do you contemplate offering such programs in the future?

Yes X No _____

If yes, when and what programs?

Program	Possible Target Date
This would depend wholly on a survey of needs for determining what types of programs might be offered; the number of interested students; availability of funds, etc.	

14. What new ideas do you now have or forsee in the use of existing buildings at your institution or in the use of new facilities which may be forthcoming?

See Item no. 12

15. What use is made of your classroom, laboratories and other teaching areas during the evening hours or on Saturdays?

Regular Adult Education Programs both academic and vocational.

SURVEY OF
PRESENT AND FUTURE HIGHER EDUCATION FACILITIES AND UTILIZATION
FOR
LESS THAN BACCALAUREATE PROGRAMS

1. Name of Institution Waterville Regional Technical Vocational Center and Kennebec Valley Vocational Technical Institute

2. Location Brooklyn Avenue, Waterville, Maine 04901

Public X Private _____

3. Total Enrollment:

Fall 1968 569 (Grades 9-10-11-12)

Fall 1969 647 "

Fall 1970 697 "

4. Enrollment (by degrees and/or programs)

	Fall 1968	Fall 1969	Fall 1970
Graduate	0	0	0
4-year	0	0	0
2-year	0	0	* 7
1-year	0	0	*30
Other (Please specify)	* Fall enrollment for first class at Kennebec Valley VTI.		

5. Projected Enrollment (by degrees and/or programs)

	1971	1972	1975	1978	1980
Graduate	0	0	0	0	0
4-year	0	0	0	0	0
2-year	15	30	Enrollment beyond Fall of 1972		
1-year	66	75	will depend upon future funding.		
Other (please Specify)					

AUG 4 7 40 AM '71

6. Are the present facilities now in use for classrooms, laboratories, specialized use buildings and dormitories adequate to serve your present total enrollment?

Yes _____ No XX If no, explain _____

Classrooms and laboratories are adequate for present high school and Institute enrollment but we do not have dormitories.

7. What percent of your present facilities are used for:

	During Day Percent	During Evening Percent
2-year Programs		
1-year Programs		
Other (please Specify) High School	100%	*25%

* This is only an estimate and would change from year to year depending on demands for short-term programs.

8. Please list all two year (or less) programs offered at your institution.

Two Year	One Year	Other
Distributive Ed.	Health Assist.	
	Medical Assist.	
	Bus. Occupations	
	Heavy Equipment	

9. In the areas of Auto Body, Auto Mechanics and Carpentry, I feel that the shop laboratories could not be used for dual programs on a one or two year basis. The size of live projects would mandate storage which would be impossible. Many short-term programs, which would involve specialized areas of the whole, such as wheel balancing, alignment, etc., would be most practical and possible.

In areas of Electricity-Electronics, Machine Tool, Maintenance Mechanics, Oil Burner-Refrigeration, Technical Drafting, Graphic Arts, Food Preparation, Data Processing and all Business Clerical-Secretarial,dual programs could be offered on a full time basis.

The number of additional students depends upon additional funding for operation.

9. With present facilities, how many additional students could you serve in the future in:

	1971	1972	1975	1978	1980
2-year Programs					
1-year Programs					
Other (please specify)	See enc.				

10. Assuming you could serve additional students in less than baccalaureate programs with present facilities in the near future, what renovations, remodeling or other changes would be needed in the facilities?

No changes necessary in facilities.

11. If you <u>now</u> serve students in less than baccalaureate programs <u>or plan to add such programs in the future</u>, what new facilities will be needed at your institution to accommodate additional students in these programs? Please be specific.

Classrooms None

Laboratory Space None

Shop Space None

Dormitories (if Applicable) None

Other facilities None

12. If you now offer less than baccalaureate programs, what new programs of this type do you plan to offer in the future, provided that facilities were available?

Pre-apprenticeship Carpentry

13. If you do not offer less than baccalaureate programs at this time, do you contemplate offering such programs in the future?

Yes _____ No _____

If yes, when and what programs?

Program	Possible Target Date

14. What new ideas do you now have or forsee in the use of existing buildings at your institution or in the use of new facilities which may be forthcoming?

15. What use is made of your classroom, laboratories and other teaching areas during the evening hours or on Saturdays?

SURVEY OF
PRESENT AND FUTURE HIGHER EDUCATION FACILITIES AND UTILIZATION
FOR
LESS THAN BACCALAUREATE PROGRAMS

1. Name of Institution Waterville Regional Technical Vocational Center and Kennebec Valley Vocational Technical Institute

2. Location Brooklyn Avenue, Waterville, Maine 04901

Public X Private _____

3. Total Enrollment:

Fall 1968 [illegible] (Grades 9-10-11-12)

Fall 1969 617 "

Fall 1970 [illegible] "

4. Enrollment (by degrees and/or programs)

	Fall 1968	Fall 1969	Fall 1970
Graduate	0		0
4-year	0	0	0
2-year	0		* 7
1-year	0	0	*30
Other (Please specify) * All applicants to first class at Kennebec Valley VTI.			

5. Projected Enrollment (by degrees and/or programs)

	1971	1972	1975	1978	1980
Graduate	0	0	0	0	0
4-year	0	0	0	0	0
2-year	15	30	enrollment beyond fall of 197[illegible]		
1-year	66	75	will depend upon future funding.		
Other (please Specify)					

6. Are the present facilities now in use for classrooms, laboratories, specialized use buildings and dormitories adequate to serve your present total enrollment?

Yes _____ No XX If no, explain _____

Classrooms and laboratories are adequate for present high school

[illegible] Institute enrollment but we do not have no [illegible]

7. What percent of your present facilities are used for:

	During Day Percent	During Evening Percent
2-year Programs	_____	_____
1-year Programs	_____	_____
Other (please Specify) [illegible]	[illegible]	*25

* This is only an estimate and would [illegible] on [illegible]

8. Please list all two year (or less) programs offered at your institution.

Two Year	One Year	Other
[illegible]	[illegible]	
	Medical Assist.	
	Bus. Occupations	
	Heavy Equipment	

9. In the areas of Auto Body, Auto Mechanics and Carpentry, I feel that the shop laboratories could not be used for dual programs on a one or two year basis. The size of live projects would tend to storage which would be impossible. Many short-term programs, which could involve [illegible] of the above, such as Wheel balancing, alignment, etc., would be most practical and possible.

In [illegible] of Electricity-Electronics, [illegible] Mechanics, Oil Burner-Refrigeration, Technical [illegible], Graphic Arts, Food Preparation, Data Processing and all Business Clerical Secretarial, dual programs could be offered on a full time basis.

[illegible] additional students depends upon additional funding [illegible].

9. With present facilities, how many additional students could you serve in the future in:

	1971	1972	1975	1978	1980
2-year Programs					
1-year Programs					
Other (please specify)					

10. Assuming you could serve additional students in less than baccalaureate programs with present facilities in the near future, what renovations, remodeling or other changes would be needed in the facilities?

11. If you now serve students in less than baccalaureate programs or plan to add such programs in the future, what new facilities will be needed at your institution to accommodate additional students in these programs? Please be specific.

Classrooms

Laboratory Space None

Shop Space None

Dormitories (If Applicable) N.A.

Other facilities None

12. If you now offer less than baccalaureate programs, what new programs of this type do you plan to offer in the future, provided that facilities were available?

e.g. apprenticeship, carpentry ______________________

____

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____

13. If you do not offer less than baccalaureate programs at this time, do you contemplate offering such programs in the future?

Yes __________ No __________

If yes, when and what programs?

Program	Possible Target Date

14. What new ideas do you now have or forsee in the use of existing buildings at your institution or in the use of new facilities which may be forthcoming?

15. What use is made of your classroom, laboratories and other teaching areas during the evening hours or on Saturdays?

SURVEY OF
[illegible] HIGHER EDUCATION FACILITIES [illegible]
FOR
LESS THAN BACCALAUREATE PROGRAMS

1. Name of Institution Westbrook Regional Technical Vocational Center

2. Location 125 Stroudwater St., Westbrook, Maine 04092

Public X Private _____

3. Total Enrollment Westbrook High School & Vocational Tuition

Fall 1968 1098 +

Fall 1969 1115 +

Fall 1970 1123 +

4. Enrollment (by degrees and/or programs)

	Fall 1968	Fall 1969	Fall 1970
Graduate			
4-year			
2-year			
1-year			
Other (Please specify)			

N/A

5. Projected Enrollment (by degrees and/or programs)

	1971	1972	1975	1978	1980
Graduate					
4-year					
2-year					
1-year					
Other (please Specify)					

N/A

6. Are the present facilities now in use for classrooms, laboratories, specialized use buildings and dormitories adequate to serve your present total enrollment?

Yes _____ No X If no, explain Additional space needed in Home Economics, Business, and Trade & Industrial Programs

7. What percent of your present facilities are used for:

	During Day Percent	During Evening Percent
2-year Programs		
1-year Programs		
Other (please Specify)		

N/A

8. Please list all two year (or less) programs offered at your institution.

Two Year	One Year	Other
(All are secondary programs)		
Auto Mechanics		
Wood Trades		
Consumer & Homemaking		
Data Processing		
Drafting		
Electricity		
Food Service		
Office Occupations		

9. With present facilities, how many additional students could you serve in the future in:

	1971	1972	1975	1978	[illegible]
2-year Programs					
1-year Programs					
Other (please specify)					

10. Assuming you could serve additional students in less than baccalaureate programs with present facilities in the near future, what renovation, remodeling or other changes would be needed in the facilities?

At Present we are planning new Home Economics Facilities and are reviewing future needs.

11. If you now serve students in less than baccalaureate programs or [illegible] add such programs in the future, what new facilities will be needed your institution to accommodate additional students in these program Please be specific.

Classrooms Under consideration

Laboratory Space: Under Consideration

Shop Space: Auto Body - Agriculture - Maintenance Mechanics are being studied

Dormitories (if Applicable): N/A

Other facilities: Greenhouse

12. If you now offer less than baccalaureate programs, what new programs of this type do you plan to offer in the future, provided that facilities were available?

Under consideration But Horticulture, Small Engines Maintenance Mechanics, Child Care Aide, Auto Body, Computer Science, among others are possible

13. If you do not offer less than baccalaureate programs at this time. do you contemplate offering such programs in the future?

Yes _____ No _____

If yes, when and what programs?

Program	Possible Target Date

14. What new ideas do you now have or forsee in the use of existing buildings at your institution or in the use of new facilities which may be forthcoming?

More Adult and Out-Of-School - Youth Programs

15. What use is made of your classroom, laboratories and other teaching areas during the evening hours or on Saturdays?

Little

* PLEASE NOTE: This survey does not lend itself well to regional center. More complete detail available from State Department for Centers.