ABSTRACT
        The report presents the findings of a study conducted
to determine priority areas for research in vocational-technical
education in Maine for 1975-77 as perceived by practitioners. A list
of vocational education research areas was developed as a survey
questionnaire and administered to 244 professional staff members of
the seven postsecondary vocational-technical institutions in the
State. One hundred and forty-nine (61%) were returned. Responses were
analyzed question-by-question for each of five areas: needs for
vocational education, curriculum development, instructional learning
processes, student development and needs, and administration of
vocational education. The responses are first reported by question
according to institution, and following that, the highest priority
responses for each of the five areas are reported, reflecting the
following concerns: labor market requirements; assessment of
educational needs of 16-18 year olds; development of new programs
from emerging technologies; relating preparation competencies to job
entry; development of multimedia instructional approaches; vocational
counseling and followup; provision for advanced placement; and
exploration of the role of the vocational, technical, and adult
education system within postsecondary education. A sample
questionnaire is appended to the report. (Author/NJ)

RESEARCH PRIORITIES

FOR

VOCATIONAL-TECHNICAL EDUCATION IN MAINE

1975-1977

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RESEARCH PRIORITIES
FOR
VOCATIONAL-TECHNICAL EDUCATION IN MAINE
1975-1977

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FOREWORD

In this generation one word has caused anxiety and trepidation among members of the professional education group. Accountability, a word that conjures up visions of "outsiders" intruding in the domains of educational theory and practice to determine if we are both effective and efficient. We will not be able in the foreseeable future to avoid giving "account" to our many publics the best possible answers to a variety of questions. For example, "How effective are our instructional procedures?" "What skills do our graduates use most effectively in the work world?" and "Do we use our public funds in a cost efficient manner?" Answers to these questions must be acquired in a valid and believable procedure for our questioners.

This report provides a critical assessment by educators, engaged in delivering vocational-technical education, of their perceptions regarding research priorities. It was our intent to develop a priority list of needed research within the vocational-technical education system in Maine. The list of research items was presented to vocational-technical educators in Maine's post-secondary vocational-technical institutions. The results can be used by vocational educators in developing priorities for research within their particular institutions and within the Bureau of Vocational Education.

G.G.W. and C.W.R.

October, 1975

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CHAPTER I.

INTRODUCTION

The availability of both federal and state funds for conducting basic research in vocational education requires each state agency to plan for effective use of research and development monies. Under the Vocational Education Act, Amended 1968, each state receives research and development funds to initiate both applied and experimental research. The intent of these funds is to improve the quality and quantity of research efforts in each state via a planned, systematic research effort at the state department and local educational level.

To succeed in developing a sound program of research will require that we (1) identify persons competent to conduct research efforts; (2) identify priority areas for research with the state agency and local educational agency (L.E.A.); and (3) arrive at rational concensus on priority areas by polling those most involved in the delivery of vocational education. The purpose of this report is to present the findings of a study conducted in May-June, 1975 to determine priority areas for research in vocational-technical education in 1975-1977. The relevancy of the present study is well-fitted to an accountability model and provides important feedback from practitioners on areas of research concern. It is imperative that information be secured to help answer the following questions: How do we convince

legislators of our needs for additional funding? How do
we determine the efficiency and effectiveness of existing
vocational-technical programs? Rhetoric, without solid baseline
data will no longer suffice in this age of fiscal and program
accountability. The gap between valid evidence and conjecture
must be reduced by those involved in program review and development.

A brief review of research terminology and a definition
is essential for providing the readers with a common theoretical
background. A definition of Research as reported in Webster's
Third New International Dictionary defines it as follows:
"critical and exhaustive investigation or experimentation
having for its aim the discovery of new facts and their correct
interpretation, the revision of accepted conclusions, theories,
or laws in the light of newly discovered facts, or the
practical applications of such new or revised conclusions,
theories or laws." For vocational educators research as a
process may be referred to as the use of systematic problem-
solving strategies to discover solutions to specific problems.
It is a tool of the decision maker and instructional staff.
A variety of research methods, research designs, and statistical
procedures may be used in the investigation and solution of
educational problems. For example:

Applied Research: Applied research aims at finding the
solution to some practical problem in a localized situation.
What is needed is increased relevancy and utilization of research

through interaction and cooperation among the researchers and the practitioners using the team approach to identify the problems. The type of research depends upon the viewpoint or intent of the investigator and the nature of the problem to be solved. Applied researchers should be more conscious of the social utility of their work than basic researchers.

Many applied researchers reside within the vocational education establishment and are exposed to the problems of practitioners. The educator can be involved in the research process both as a consumer of research and/or as a producer of research. We anticipate that those who become involved in studies of their problems will be more likely to accept, diffuse, and utilize the results.

Research Problems: The identification of research problem areas and an adequate statement of research problems are two of the most important parts of research. Yet, under the present conditions of rapid change, researchers may have difficulty identifying the most crucial and most promising areas for study.

Vocational-technical education provides an almost unlimited field from which to select an appropriate problem. There are a number of lists of research problem areas and priorities which emanate from national, regional, and state levels. Very often, however, the most difficult task in planning a research project is to distinguish between a topic or research problem area and a researchable problem.

A problem area may be a very general problem which
exists in society or education which is broad in scope and,
therefore, too complex or poorly defined to study in one
relatively small research project. Problem areas must be
restricted to smaller, workable units. The variety of
implications, variables, and alternative ways of viewing a
problem demand a focused approach. Possible solutions are
more readily identified through a specific study. Eventually,
the research study must be delimited to a problem statement
which asks what relation exists between two or more variables.
The first question to be resolved is "what is the problem?"

This study was conducted in order to develop a
prioritized list of research problem areas or topics as
perceived by local vocational-technical educators in Maine.
Further development of research proposals and the design
for conducting a study is the responsibility of those
utilizing the report.

Research Priorities: A Research Coordinating Unit
must continuously examine its priorities in performing its
functions of stimulating, coordinating, facilitating; conducting
and disseminating research.

According to Webster's Third New International Dictionary,
one meaning of "priority" is the assignment of a preferential
rating to certain items according to a relative need for each;
or for its meriting attention prior to competing alternatives.

Financial support for research and development projects
in education and vocational-technical education has been
available for several years from multiple sources including
federal, regional, and state agencies. Each of these agencies
has its own set of guidelines to aid the researcher in deter-
mining the appropriateness of seeking funds from that particular
source. In addition to the above, research studies arise from
many different groups, e.g. administrators, faculty, students,
boards, agencies, institutions, and other groups and individuals.
Sufficient funds are seldom available to support all of the
project applications submitted. Hence, there is a need for
establishing priorities to facilitate more efficient use of
funds available and to support those projects where the
greatest need exists in terms of the anticipated impact.

Objectives: The objectives of this study were to:

1. Develop a list of vocational education research areas
   or topics for inclusion in a survey instrument.

2. Develop a prioritized list of vocational education
   research areas or topics based on perceptions of
   vocational education staff with various job titles in
   several areas of work.

3. Prepare a report of the findings for use in improved
   planning, review, and management of vocational education
   research in Maine.

These objectives were accomplished through various strategies,
activities, and procedures as indicated in the next chapter.

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CHAPTER II.

METHODOLOGY

The purpose of this study was to determine the research needs in Maine's vocational-technical educational institutions (VTAE) as perceived by practitioners. Input from administrators, instructional staff, and other staff members was essential in establishing a valid list of research and development priorities. A review of the Wisconsin report entitled Developing A State System of Managed Research and Development Activities, in Vocational Education provided further topics for the questionnaire and suggestions for improving efficiency of this effort. In May, 1975 project staff conducted a review of all items prior to printing the final form of the research questionnaire (see Appendix B).

Instrument Development

The questionnaire includes 45 structured items in five categories: (1) Needs for Vocational Education, (2) Curriculum Development, (3) Instructional Learning Processes, (4) Student Development and Needs, and (5) Administration of Vocational Education. The five point Likert-type scale permitted response ratings of "1 - No priority - research not needed," "2 - Low priority - little need for research," "3 - Average priority - research needed but not essential," "4 - High priority - research greatly needed" and "5 - Extremely high priority - critical need for research." Each category contained one open-ended

item labeled "other" which permitted the respondent to add personal comments.

The population was defined as all professional staff members employed as of May 1, 1975 in the seven post-secondary vocational-technical institutes operated by the State Board of Education and controlled by the Bureau of Vocational Education, SDECS. A total of 244 staff members were asked to respond. A disproportional sample was involved as the majority of the population were classified as teachers.

The questionnnaire was prepared at the College of Education, University of Maine, Orono and 300 copies mailed to the Directors of the seven post-secondary vocational-technical institutes (See Appendix A). A total of 149 completed questionnaires were returned to the Project Director prior to June 30, 1975. Data analysis involved key punching for use with the IBM 360 SPSS program. Computer printouts were returned and the project staff tabulated and analyzed the data for this report.

CHAPTER III.

ANALYSIS OF THE DATA

Responses to the _Priorities of Vocational Education Research Activities_ questionnnaire (PVERA) were analyzed question by question for each of the five areas:

A. Needs for Vocational Education - seven questions.

B. Curriculum Development - eight questions.

C. Instructional Learning Processes - five questions.

D. Students - eleven questions.

E. Administration of Vocational Education - fourteen questions.

Each section included an "other" question; however, responses did not indicate any trends and were, therefore, not included in the analysis.

The first three questions asked for demographic information on school position, and subject specialty of the respondents. That information is listed below. A total of 244 questionnaires were sent, of which 149 were returned and used in the analysis (61%).

Responses by Institution

Northern Maine VTI (NMVTI)	17
Eastern Maine VTI (EMVTI)	36
Washington County VTI (WCVTI)	11
Central Maine VTI (CMVTI)	22
Southern Maine VTI (SMVTI)	51
Southern Maine School of Practical Nursing (SMSPN)	5
State Department of Educational and Cultural Services (SDECS)	7
Total	149

Responses by Positions

Director	6
Assistant Director for Academic Affairs	1
Assistant Director for Student Affairs	2
Dean of Instruction	2
Dean of Admissions	1
Dean of Students	1
Director of Adult Education	4
Instructor	108
Other	24
Total	**149**

Responses by Subject Specialty

General Education	19
Agriculture	1
Business and Office Occupations	3
Distributive Education	2
Health Occupations	16
Home Economics	1
Trades and Industry	69
General Administration	11
Other	27
Total	**149**

Means and standard deviations were compiled for the entire sample and each of the seven institutions included in the study. The responses are first reported by question according to institution and following that, the highest priority responses for each of the five areas in the questionnaire are given. The final chapter of the report includes conclusions and recommendations.

Respondents were asked to mark their responses to each of the questions on a five-point scale, with 1 as "no priority" and 5 as "extremely high priority".

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A. NEEDS FOR VOCATIONAL EDUCATION

1. Labor Market Requirements

	Responses	
Group	Mean	Standard Deviation
Entire Sample	3.65	1.13
NMVTI	3.76	.75
EMVTI	3.58	1.32
WCVTI	3.73	.79
CMVTI	4.09	.75
SMVTI	3.76	.93
SMSPN	1.60	1.82
SDECS	2.86	1.46

All of the VTI instructional staff rated labor market requirements as a higher research priority than the remaining two groups. It is important for the VTI's to have accurate labor market data since they need to gear their staffing and course offerings to market conditions. For the entire sample, it was ranked above average.

2. General Societal Needs, e.g. Environment

	Responses	
Group	Mean	Standard Deviation
Entire Sample	2.83	1.19
NMVTI	2.59	1.18
EMVTI	2.50	1.18
WCVTI	2.91	1.14
CMVTI	2.36	1.25
SMVTI	3.29	.99
SMSPN	3.60	1.34
SDECS	2.57	1.51

Most of the VTI's rated general societal needs below the average priority rating while the SMSPN staff ranked it above the mean. For the entire sample, it was ranked below average.

3. Technological Assessment

	Responses	
Group	Mean	Standard Deviation
Entire Sample	2.96	1.19
NMVTI	3.00	1.22
EMVTI	2.79	1.24
WCVTI	2.73	.65
CMVTI	2.91	.97
SMVTI	3.33	1.11
SMSPN	1.60	1.34
SDECS	2.57	1.81

The VTI's as a group were consistent in their rating while the SMSPN staff rated this area of no priority. For the entire sample, it was rated below average.

4. Assessment of Individual's Vocational, Technical, and Adult Education Needs

	Responses	
Group	Mean	Standard Deviation
Entire Sample	3.11	1.15
NMVTI	3.59	1.00
EMVTI	2.81	1.17
WCVTI	3.18	.75
CMVTI	2.95	1.29
SMVTI	3.33	1.01
SMSPN	2.20	1.64
SDECS	2.86	1.46

The VTI's scored this question around the average priority while the SMSPN staff rated it below average. For the entire sample, it was ranked slightly above average.

5. Educational Needs for 16-18 Year Olds

	Responses	
Group	Mean	Standard Deviation
Entire Sample	3.31	1.10
NMVTI	3.35	1.37
EMVTI	3.17	1.28
WCVTI	3.64	.67
CMVTI	3.23	.75
SMVTI	3.45	.97
SMSPN	2.60	1.52
SDECS	3.29	1.60

With the exception of SMSPN, all of the units rated this question as above-average priority. The entire sample reflected the above average rating for all but one of the units.

6. Educational Needs for the Incarcerated

	Responses	
Group	Mean	Standard Deviation
Entire Sample	3.09	1.20
NMVTI	2.82	1.33
EMVTI	3.19	1.21
WCVTI	3.27	1.10
CMVTI	3.27	1.12
SMVTI	3.10	1.04
SMSPN	2.40	1.34
SDECS	2.86	2.12

The mean for the entire sample reflected the clustering of responses for this area....an average priority.

7. <u>Educational Needs for Mid-Career Individuals</u>

	Responses	
Group	Mean	Standard Deviation
Entire Sample	2.77	1.33
NMVTI	3.06	1.64
EMVTI	2.86	1.27
WCVTI	2.73	1.35
CMVTI	2.45	1.30
SMVTI	2.88	1.23
SMSPN	1.60	1.34
SDECS	2.71	1.50

The clustering of responses to this area indicated low priority. Over the past few years much emphasis in the mass media and professional publications has been given to lifelong education. Given that emphasis, it is interesting to note that the respondents did not rank it at a higher priority. A prime factor in future enrollments will be adults seeking re-training for mid-career shifts and women re-entering the labor market.

B. <u>CURRICULUM DEVELOPMENT</u>

8. <u>Determining Course/Module Content</u>

	Responses	
Group	Mean	Standard Deviation
Entire Sample	3.17	1.21
NMVTI	3.41	1.00
EMVTI	2.81	1.33
WCVTI	3.36	.67
CMVTI	3.09	1.27
SMVTI	3.53	1.12
SMSPN	2.60	1.67
SDECS	2.29	1.11

Determining course/module content received an average priority rating for the entire sample.

9. Developing Learning Activities

	Responses	
Group	Mean	Standard Deviation
Entire Sample	3.00	1.09
NMVTI	3.47	.72
EMVTI	2.56	1.25
WCVTI	3.27	.90
CMVTI	3.00	1.15
SMVTI	3.08	1.02
SMSPN	2.80	1.09
SDECS	3.29	1.11

An average priority rating was assigned to this question by the entire sample.

10. Sequencing of Courses/Modules

	Responses	
Group	Mean	Standard Deviation
Entire Sample	2.89	1.11
NMVTI	3.53	1.07
EMVTI	2.56	1.30
WCVTI	3.00	.63
CMVTI	2.50	1.06
SMVTI	3.12	.89
SMSPN	1.80	1.64
SDECS	3.14	.90

A below average priority was assigned to this question by the entire sample with SMSPN rating it the lowest.

11. Determining Performance Levels of Competencies
For Job Entry

	Responses	
Group	Mean	Standard Deviation
Entire Sample	3.37	1.23
NMVTI	3.53	1.37
EMVTI	2.86	1.46
WCVTI	3.73	.90
CMVTI	3.18	1.26
SMVTI	3.59	1.00
SMSPN	3.00	1.22
SDECS	4.29	.49

Job entry performance levels received an above average

rating by the entire sample with SDECS rating it a high priority

level. Further research would be needed for assessing the

differing perception between SDECS and VTI staff.

12. Determining Performance Levels of Competencies
For Job Advancement

	Responses	
Group	Mean	Standard Deviation
Entire Sample	3.29	1.23
NMVTI	3.53	1.42
EMVTI	2.67	1.39
WCVTI	3.64	.92
CMVTI	3.18	1.30
SMVTI	3.57	.98
SMSPN	3.00	1.22
SDECS	4.00	.58

The responses to this question were similar to those

for question number 11. With the exception of EMVTI, all

groups rated it above average priority with SDECS rating it

the highest.

13. Secondary - Post-Secondary Curriculum Articulation

Group	Responses Mean	Standard Deviation
Entire Sample	3.24	1.35
NMVTI	3.71	1.57
EMVTI	2.81	1.53
WCVTI	3.36	1.43
CMVTI	3.04	1.59
SMVTI	3.37	1.02
SMSPN	3.40	1.14
SDECS	3.71	.76

This area was rated uniformly above average by the

entire sample.

14. Developing New Programs From Emerging Technologies

Group	Responses Mean	Standard Deviation
Entire Sample	3.53	1.09
NMVTI	3.76	1.09
EMVTI	3.50	1.18
WCVTI	3.36	1.12
CMVTI	3.27	1.16
SMVTI	3.74	1.00
SMSPN	2.80	1.09
SDECS	3.14	.69

This area was seen as an above average priority by the

respondents. All except SMSPN ranked it 3.0 or better.

15. Models for Core Program Development

| | Responses | |
Group	Mean	Standard Deviation
Entire Sample	2.83	1.23
NMVTI	3.47	1.12
EMVTI	2.39	1.27
WCVTI	3.27	1.35
CMVTI	2.45	1.40
SMVTI	3.04	.98
SMSPN	2.00	1.41
SDECS	3.14	.90

Responses indicated a below average priority for this question. Does this reflect a behavioral pattern among VTI staff to not experiment on a limited scale with new programs prior to seeking full implementation? Further study of this item would be warranted.

C. INSTRUCTIONAL LEARNING PROCESSES

16. Applied Research On Student Learning Styles

| | Responses | |
Group	Mean	Standard Deviation
Entire Sample	2.92	1.20
NMVTI	3.12	.99
EMVTI	2.67	1.22
WCVTI	3.09	1.30
CMVTI	2.59	1.22
SMVTI	2.90	1.22
SMSPN	3.60	.89
SDECS	4.14	.69

The entire sample rated this question below average. One high priority group was noted...SDECS. The breadth and depth of teacher training received by VTI staff may be a critical variable in this response pattern.

17. <u>Applied Research in Teaching Styles</u>

	Responses	
Group	Mean	Standard Deviation
Entire Sample	2.99	1.24
NMVTI	3.18	1.13
EMVTI	2.58	1.27
WCVTI	3.00	1.09
CMVTI	2.91	1.51
SMVTI	3.08	1.15
SMSPN	3.40	1.14
SDECS	3.86	.90

The entire sample rated this question as an average priority, consistently clustering around 3.00.

18. <u>Teaching Methods</u>

	Responses	
Group	Mean	Standard Deviation
Entire Sample	2.99	1.22
NMVTI	3.23	1.15
EMVTI	2.39	1.22
WCVTI	3.54	.69
CMVTI	3.14	1.55
SMVTI	3.06	1.10
SMSPN	3.40	1.14
SDECS	3.43	.98

The entire sample rated this question consistently at an average priority level with only EMVTI rating it as a low priority.

19. Multi-Media Approaches

	Responses	
Group	Mean	Standard Deviation
Entire Sample	3.08	1.27
NMVTI	3.41	1.23
EMVTI	2.64	1.33
WCVTI	3.27	1.10
CMVTI	2.50	1.41
SMVTI	3.39	1.13
SMSPN	3.40	.89
SDECS	3.57	.98

Multi-media approaches was ranked as an average priority by the entire sample with EMVTI and CMVTI ranking it a low priority.

20. Learner Management of Instruction

	Responses	
Group	Mean	Standard Deviation
Entire Sample	2.70	1.22
NMVTI	2.94	1.20
EMVTI	2.50	1.23
WCVTI	3.09	.54
CMVTI	2.64	1.53
SMVTI	2.59	1.10
SMSPN	2.60	1.67
SDECS	3.71	1.11

The entire sample rated this question as low priority, with only WCVTI and SDECS rating it as average priority.

D. STUDENT DEVELOPMENT AND NEEDS

21. Barriers to Enrollment in Vocational-Technical
    Programs

	Responses	
Group	Mean	Standard Deviation
Entire Sample	2.75	1.23
NMVTI	3.23	.97
EMVTI	2.92	1.10
WCVTI	2.54	1.13
CMVTI	2.32	1.52
SMVTI	2.61	1.27
SMSPN	3.40	.55
SDECS	3.00	1.41

Surprisingly, this question received a low priority
rating from the entire sample. Identifying barriers to
enrollment and instituting changes would most naturally
result in additional students.

22. Advanced Placement/Standing

	Responses	
Group	Mean	Standard Deviation
Entire Sample	3.02	1.18
NMVTI	3.35	.93
EMVTI	3.25	1.20
WCVTI	2.64	1.12
CMVTI	2.41	1.14
SMVTI	3.12	1.21
SMSPN	3.40	.55
SDECS	2.57	1.27

The entire sample ranked Advanced Placement/Standing as
an average priority.

23. Appraising Student Achievement and Behavioral Change

	Responses	
Group	Mean	Standard Deviation
Entire Sample	2.87	1.22
NMVTI	3.06	1.25
EMVTI	2.53	1.34
WCVTI	3.18	1.40
CMVTI	2.45	1.10
SMVTI	3.08	1.05
SMSPN	3.80	.84
SDECS	2.86	1.46

— Most of the groups responded at or below-average priority. SMSPN, responded with a high priority ranking.

24. Student Attrition/Withdrawals

	Responses	
Group	Mean	Standard Deviation
Entire Sample	2.91	1.26
NMVTI	2.76	.97
EMVTI	3.06	1.19
WCVTI	2.73	1.27
CMVTI	2.41	1.37
SMVTI	3.02	1.32
SMSPN	3.80	.84
SDECS	2.86	1.57

Student Attrition/Withdrawals ranked as an average priority for all groups except SMSPN which gave it a high priority ranking.

25. Student Placement

Group	Responses Mean	Standard Deviation
Entire Sample	3.44	1.29
NMVTI	2.88	1.05
EMVTI	3.72	1.03
WCVTI	3.54	1.57
CMVTI	2.64	1.46
SMVTI	3.78	1.22
SMSPN	3.20	.84
SDECS	3.29	1.70

This area received a relatively high ranking and above
average priority status.

26. Student Follow-Up Procedures

Group	Responses Mean	Standard Deviation
Entire Sample	3.36	1.19
NMVTI	3.29	1.05
EMVTI	3.58	.97
WCVTI	3.64	1.36
CMVTI	2.77	1.27
SMVTI	3.41	1.25
SMSPN	3.60	.55
SDECS	3.14	1.68

Most groups ranked this question at or above-average.

27. Leisure, Athletic or Social Activities

	Responses	
Group	Mean	Standard Deviation
Entire Sample	2.42	1.16
NMVTI	2.41	1.00
EMVTI	2.61	1.22
WCVTI	2.82	1.17
CMVTI	2.23	1.31
SMVTI	2.37	1.08
SMSPN	2.60	1.14
SDECS	1.71	1.25

This area received a low priority ranking by all

groups. When compared with the responses for questions

#26 and #27, the priority is clearly for those activities

which will eventually assist students to secure employment.

28. Student Clubs, Student Government

	Responses	
Group	Mean	Standard Deviation
Entire Sample	2.34	1.14
NMVTI	2.76	1.25
EMVTI	2.47	1.13
WCVTI	2.36	1.21
CMVTI	2.00	1.19
SMVTI	2.31	1.04
SMSPN	2.40	1.14
SDECS	1.71	1.25

As with the previous question, this area ranked low.

Again, it can be compared with the responses for questions

#26 and #27. Perhaps, we need to assess the full range of

services provided students within the VTI's. A low ranking

may indicate a lack of knowledge because the area has

never been included.

29. Student Health Services

Group	Responses Mean	Standard Deviation
Entire Sample	2.78	1.23
NMVTI	2.88	1.22
EMVTI	3.06	1.26
WCVTI	2.54	1.04
CMVTI	2.14	1.12
SMVTI	3.02	1.19
SMSPN	3.00	.71
SDECS	1.71	1.25

Responses placed this question near the average priority, although there were two low priority rankings (CMVTI and SDECS).

30. Counseling Students

Group	Responses Mean	Standard Deviation
Entire Sample	3.43	1.25
NMVTI	3.35	1.06
EMVTI	3.44	1.08
WCVTI	3.36	1.43
CMVTI	2.77	1.41
SMVTI	3.74	1.13
SMSPN	4.20	.84
SDECS	2.86	2.03

The entire sample ranked this question as an above-average priority. What percentage of time do VTI instructors devote to counseling of students and were adequate office facilities available to assist this process?

31. Models for Comprehensive Student Services

	Responses	
Group	Mean	Standard Deviation
Entire Sample	2.62	1.31
NMVTI	2.53	1.12
EMVTI	2.61	1.50
WCVTI	2.82	1.40
CMVTI	2.09	1.31
SMVTI	2.88	1.15
SMSPN	2.80	.45
SDECS	2.14	1.57

This area was ranked uniformly low by all groups and may reflect the absence of a comprehensive student service model within the VTI structure...

E. ADMINISTRATION OF VOCATIONAL EDUCATION

32. Evaluation of Overall VTAE

	Responses	
Group	Mean	Standard Deviation
Entire Sample	3.01	1.23
NMVTI	3.53	.94
EMVTI	3.00	1.04
WCVTI	2.82	.87
CMVTI	2.50	1.63
SMVTI	3.23	1.14
SMSPN	2.40	1.34
SDECS	2.43	1.81

Responses for this area clustered around an average priority.

33. Evaluation of Post-Secondary Program and/or Components

	Responses	
Group	Mean	Standard Deviation
Entire Sample	3.14	1.12
NMVTI	3.29	1.31
EMVTI	3.03	1.03
WCVTI	3.18	1.33
CMVTI	2.64	1.40
SMVTI	3.41	.85
SMSPN	3.40	.89
SDECS	2.71	1.38

The entire sample indicated an average priority ranking.

34. Evaluation of Adult Programs and/or Components

	Responses	
Group	Mean	Standard Deviation
Entire Sample	3.16	1.30
NMVTI	3.35	.93
EMVTI	2.94	1.24
WCVTI	2.73	1.62
CMVTI	2.91	1.54
SMVTI	3.49	1.17
SMSPN	2.40	1.34
SDECS	3.43	1.62

This area was also ranked as an average priority by the entire sample.

35. External Validation of Mission, Goals, and Objectives

	Responses	
Group	Mean	Standard Deviation
Entire Sample	2.87	1.20
NMVTI	2.82	1.38
EMVTI	2.47	1.08
WCVTI	3.45	1.29
CMVTI	2.54	1.47
SMVTI	3.20	.92
SMSPN	2.60	1.52
SDECS	2.86	1.34

This area was ranked as a low priority by most of the respondent groups. WCVTI and SMVTI ranked it as an average priority. It may imply a resistance to external review of program goals and objectives by SDECS staff or accrediting agencies and should receive further study.

36. Evaluation of Institutional Organizational Structure and Administrative Processes

	Responses	
Group	Mean	Standard Deviation
Entire Sample	3.03	1.27
NMVTI	3.00	1.50
EMVTI	2.72	1.21
WCVTI	3.09	1.45
CMVTI	2.73	1.58
SMVTI	3.39	.98
SMSPN	2.80	.45
SDECS	3.14	1.68

The entire sample ranked this area as an average priority. All groups were clustered around this ranking.

37. Differentiated Staffing

Group	Responses Mean	Standard Deviation
Entire Sample	2.33	1.33
NMVTI	2.65	1.27
EMVTI	2.08	1.25
WCVTI	2.18	1.54
CMVTI	2.14	1.39
SMVTI	2.53	1.21
SMSPN	1.80	1.64
SDECS	2.57	1.99

The rankings for differentiated staffing were uniformly low for all groups with SMSPN ranking it as no priority.

38. Open Entry/Open Exit Education

Group	Responses Mean	Standard Deviation
Entire Sample	2.52	1.39
NMVTI	2.53	1.46
EMVTI	2.33	1.29
WCVTI	2.36	1.57
CMVTI	2.18	1.50
SMVTI	2.86	1.17
SMSPN	1.40	1.52
SDECS	3.00	2.08

This area was ranked as low priority by the entire sample; SDECS ranked it as an average priority.

39. Cost-Benefit Studies of VTAE Programs

	Responses	
Group	Mean	Standard Deviation
Entire Sample	2.78	1.28
NMVTI	3.12	1.62
EMVTI	2.61	1.20
WCVTI	2.54	1.04
CMVTI	2.64	1.40
SMVTI	2.98	1.12
SMSPN	2.40	1.34
SDECS	2.43	1.90

Cost-benefit studies was ranked as a low priority by the entire sample. Only one of the seven groups, NMVTI, gave it an average priority ranking and may reflect a reluctance to establish priority ratings for initiating or closing out non-productive programs.

40. Educational Programs, Activities and Services for Disadvantaged/Handicapped

	Responses	
Group	Mean	Standard Deviation
Entire Sample	2.98	1.29
NMVTI	3.00	1.37
EMVTI	2.89	1.21
WCVTI	3.27	1.27
CMVTI	2.36	1.29
SMVTI	3.29	1.08
SMSPN	3.00	1.87
SDECS	2.57	1.99

The entire sample ranked this question as an average priority.

41. Countering Sex Stereotyping of Occupational
    Education Programs

	Responses	
Group	Mean	Standard Deviation
Entire Sample	2.62	1.28
NMVTI	2.82	1.42
EMVTI	2.61	1.27
WCVTI	2.64	.92
CMVTI	2.14	1.42
SMVTI	2.80	1.20
SMSPN	2.80	.84
SDECS	2.29	1.80

All respondent groups ranked this area as a low priority.
This finding is not consistent with the national trend to
encourage females to enter non-traditional career roles.
Also, it would not be consistent with the need to attract
the best qualified student to each program, regardless
of sex.

42. Role of the VTAE System Within Post-Secondary Education

	Responses	
Group	Mean	Standard Deviation
Entire Sample	3.19	1.43
NMVTI	3.59	1.42
EMVTI	3.17	1.28
WCVTI	3.36	.92
CMVTI	2.82	1.62
SMVTI	3.47	1.43
SMSPN	2.20	1.30
SDECS	1.86	1.46

The entire sample ranked this area as an average priority.
Two groups, SMSPN and SDECS ranked it as a low priority. It
is essential that leadership be exercised in determining the
role and function of vocational-technical education in relation
to the total system of higher education available to our citizens.

For example, duplication of programs is not advisable
in view of the limited funds available to support the
total higher education mission.

43. Impact of Research on VTAE Staff

| Group | Responses | |
	Mean	Standard Deviation
Entire Sample	2.59	1.28
NMVTI	2.65	1.54
EMVTI	2.42	1.10
WCVTI	2.73	.79
CMVTI	2.27	1.35
SMVTI	2.84	1.29
SMSPN	2.40	1.52
SDECS	2.43	1.81

The entire sample ranked this area as a low priority with
all individual groups reflecting that ranking. This finding
implies that we are not concerned with using research results
in terms of changing behavior or modifying programs.

44. Evaluation of VTAE Professional Personnel

| Group | Responses | |
	Mean	Standard Deviation
Entire Sample	2.87	1.24
NMVTI	2.94	1.43
EMVTI	2.78	1.12
WCVTI	2.91	.70
CMVTI	2.68	1.46
SMVTI	3.04	1.20
SMSPN	2.80	1.09
SDECS	2.43	1.81

Although ranked as a low priority by the entire sample,
the means of the respondent groups clustered at the high
end of that category.

45. Determining Professional Development Needs

	Responses	
Group	Mean	Standard Deviation
Entire Sample	3.11	I.25
NMVTI	3.53	1.33
EMVTI	2.94	1.26
WCVTI	3.27	1.01
CMVTI	2.50	1.37
SMVTI	3.39	1.04
SMSPN	2.80	1.92
SDECS	2.86	1.46

This area received an average priority response ranking from the entire sample. Respondent groups reflected that ranking.

In order to provide a clearer picture of research priorities, the four highest ranked questions for each of the five areas are presented and discussed. Rank order within each of the areas was based on the average for the entire sample of 149 respondents.

A. NEEDS FOR VOCATIONAL EDUCATION

Rank		Mean
1.	Labor Market Requirements	3.65
2.	Educational Needs for 16-18 Year Olds	3.31
3.	Assessment of Individuals' Vocational Technical and Adult Education Needs	3.11
4.	Educational Needs for Incarcerated	3.09

The fact that Labor Market Requirements was ranked #1 in Group A should come as no surprise. The vocational-technical thrust has been to respond to the needs of the labor market by offering programs for those areas in constant need of manpower and to respond to new, developing needs in the labor market. The items ranked #2 and #3 reflect

more specific responses to #1. Somewhat surprising was
the fourth-ranked item, educational needs for the incarcerated.
It was ranked higher than "educational needs for mid-career
individuals," despite the attention given life-long education
in the professional and mass media publications.

B. CURRICULUM DEVELOPMENT

Rank		Mean
1.	Developing New Programs from Emerging Technologies	3.53
2.	Determining Performance Levels of Competencies for Job Entry	3.37
3.	Determining Performance Levels of Competencies for Job Advancement·	3.29
4.	Secondary-Post-Secondary Curriculum Articulation	3.24

Items which were ranked highest within the Curriculum
Development area appeared to be internally consistent.
That is, items ranked highest focused on the viability of
curricula from high school through the vocational-technical
program to the eventual goals of securing a job and
advancing within it.

C. INSTRUCTIONAL LEARNING PROCESSES

Rank	Mean
1. Multi-Media Approaches	3.08

One item only was ranked at an average priority (3).
The remaining four items were scored as low priority items (2)
and, therefore, not included. This area included the lowest
number of items which may have contributed to the relatively
low priorities assigned to it. It may reflect a rejection
of instructional alternatives to the traditional lecture system;
or a lack of knowledge of alternatives.

D. STUDENT DEVELOPMENT NEEDS

Rank   Mean

1. Student Placement   3.44
2. Counseling Students   3.42
3. Student Follow-Up Procedures   3.36
4. Advanced Placement/Standing   3.02

A total of eleven items were included in this section.
The four which were ranked highest focused on job placement
and those student development needs which would enhance
that goal. Counseling students was ranked second. When
viewed in the context of the other three items, the counseling
emphasis might be seen as vocationally oriented to help in
securing an entry level job.

E. ADMINISTRATION OF VOCATIONAL EDUCATION

Rank   Mean

1. Role of the VTAE System Within   3.19
    Post-Secondary Education
2. Evaluation of Adult Programs   3.16
    and/or Components
3. Evaluation of Specific Programs   3.14
    and/or Components
4. Determining Professional   3.11
    Development Needs

Each of the four highest ranked items centered on basic
components of the VTAE system. The highest ranked item
called for a clarification of the relationship of VTAE within
the total network of post-secondary opportunities in Maine.
The focus then shifted to evaluation of specific components
within the VTAE system. The last item, determining professional
development needs, would enhance items #2 and #3.

CHAPTER IV.

CONCLUSIONS & RECOMMENDATIONS

The need to identify and prioritize research directions
for the Bureau of Vocational Education and staff of the VTI's
was a primary factor in conducting the study. A variety of
professional staff members in the vocational-technical
institutes and consultants from the Bureau of Vocational
Education responded to a questionnaire. Of the 149 respondents,
108 were teachers; this may be a limiting factor in attempting
to establish broad-based research priorities. However, all
professional staff members in the vocational-technical
institutes and consultants from the Bureau of Vocational
Education were provided an opportunity to rank research
priorities from among 45 selected items. Over 300 questionnaires
were mailed to the Directors of each vocational-technical
institute with appropriate directions for distribution to the
faculty (See Appendix A). A total of 142 of the questionnaires
were returned from a possible pool of 244 staff members.
In addition, questionnaires were distributed to all consultants
within the Bureau of Vocational Education. A total of 7 were
returned. A total data pool of 149 (61%) completed question-
naires comprised the sample. From these tabulated and analyzed
results the following conclusions and recommendations
were generated.

CONCLUSION #1

Each of the 45 items were ranked on a five-point Likert
scale, with 1 indicating no priority, and 5 indicating an
extremely high priority: For the entire sample, responses
to all items were either 2 or 3. There were no mean responses
in the 1, 4, or 5 categories for any of the items. In effect,
the entire sample considered all to be of low or average
priority. An analysis of individual responses to each of
the items indicated a range from one to five; but the
averaging process for the entire sample produced a relatively
narrow range of responses. The highest four average responses
for each of the five areas constituted the basis for the
establishment of research priorities in post-secondary
vocational-technical education for 1975-1977.

CONCLUSION #2

The items ranked highest within and across the five
areas indicated a marked consistency. With few exceptions,
the trend was centered on a pragmatic concern for eventual
job placement. Within the context of the present restricted
job market, a focus on job placement and related activities
is understandable. The job market for the period 1972-75,
has become increasingly depressed and prospects for the
next few years appear to be equally so. Therefore, research
priorities, as identified by the total sample, reflected
the need to focus on:

1. <u>Needs for vocational education</u> - labor market requirements ranked highest with concomitant concern for the educational needs of 16-18 year olds, and the assessment of the individual's VTAE needs; a more specific need in this area was for the educational development of the incarcerated as related to VTAE. In effect, determine general labor market requirements and then, assess the needs of the largest and most likely consumers.

2. <u>Curriculum development</u> - the major concern was to develop new programs from emerging technologies; associated with new or old programs was to determine performance levels or competencies for job entry and to do the same for job advancement; the final priority for curriculum development was increased attention to secondary - post-secondary curriculum articulation. In summary, it is important to research and develop new programs related to the job market and to relate preparation competencies to job entry and advancement with concern for articulation from secondary to post-secondary programs.

3. <u>Instructional learning processes</u> - multi-media approaches was the only item among five in this area ranked at an average priority. The others fell into the low priority category. It may have been viewed by the respondents as a low priority area in a time of economic stress. Perhaps, the reliance on traditional lecture and discussion procedures inhibits other instructional alternatives such as simulation

games, programmed learning; small group discussions, and
independent work.

4. <u>Student development and needs</u> - it was within this
area, consisting of twelve items (other included), that
the focus on securing a job was most evident. The four
highest ranked items related to placement in a job,
counseling students - presumably from a vocational standpoint,
follow-up procedures, and providing for advanced placement or
advanced standing.' Items which dealt with other student
personnel functions such as leisure, athletic or social
activities and student, clubs or student government were rated
considerably lower. The data appeared to reflect an anti-student
development bias in relation to leisure, affective education,
and establishing comprehensive student services. Research
to identify the exact needs of students for personnel services
would be essential. The paradigm for this area was: to
provide counseling help and opportunities for advanced standing
or placement with eventual placement and appropriate
follow-up activities.

5. <u>Administration of vocational education</u> - this area
consisted of fifteen items (other included) and was the
largest. The role of the VTAE system within post-secondary
education received first-ranked priority; which may indicate
uncertainty of the VTAE system in relation to the University
of Maine system. Although there is cooperation and communication
between the two systems, they are administered separately.

The next two items ranked were related to the evaluation of adult and specific programs. The last-ranked item concerned the determination of professional development needs. Specific professional development needs may be related to a number of those items included under the instructional learning processes section.

CONCLUSION #3

The rankings for each of the five areas provided valuable guidelines for those interested in and capable of research within the Vocational-Technical Institute system. More specifically, the results of this study will provide the Research Coordinating Unit, Bureau of Vocational Education with research priorities for the two-year period 1975-77. The areas covered and the items included within each area were sufficiently encompassing to elicit a wide range of research proposals, from descriptive and applied to quasi-experimental models.

RECOMMENDATIONS

1. The Research Coordinating Unit of the Bureau of Vocational Education should consider incorporating the priorities identified in this study with previously established categories for funded research over the next two-year period, 1975-77.

2. The results of this project should be disseminated within and without the VTI system so that those interested in and capable of research projects will have access to the identified priorities.

3. The top ranked priorities for each of the 5 areas need to be examined for assignments to specific consultants as a research item within their annual plan or program of work.

4. Specific items need to be identified for possible inclusion in the Maine State Plan for Vocational Education.

5. A Research Advisory Committee should be established by the Bureau of Vocational Education to serve as an advisory board. The membership should reflect both vocational-technical and university-based educators.

6. An annual report of research activities should be prepared for distribution to educators, legislators, school administrators and other interested personnel. All research activities should be reported in annotated form and include efforts both within local education agencies and the university (reports that relate to vocational education).

7. A percentage of total vocational education funds (not to exceed 15%) should be earmarked for specific research related activities.

8. A series of research and development seminars should be organized for presentation to vocational-technical institute staff by the Research Coordinating Unit, Bureau of Vocational Education.

REFERENCES

Smith, B.B. and Moss, Jerome, <u>Developing A State System of Managed Research and Development Activities in Vocational Education</u>. Minneapolis, Minn., Minnesota Research Coordinating Unit for Vocational Education, University of Minnesota, Minneapolis, Minn., Feb., 1972.

<u>Research Priorities in Post-Secondary Vocational,Technical and Adult Education in Wisconsin for 1975-1977</u>. Madison, Wisconsin: Wisconsin Research Coordinating Unit, Board of Vocational, Technical and Adult Education, Madison, Wisconsin, Feb., 1975.

APPENDIX A

A PROJECT TO ESTABLISH PRIORITIES
FOR VOCATIONAL EDUCATION RESEARCH ACTIVITIES
FOR MAINE 1975-1977

May, 1975

Dear Colleague:

We would appreciate your filling out the
attached questionnaire before you leave for vacation.
Please return the completed questionnaire to the
Director of your institution as soon as possible.
The Director will then mail them to us.

The nature of the project is to reassess research
priorities for vocational education in Maine. It
has been approximately two years since a study of
research problems and priorities was conducted. The
College of Education, University of Maine at Orono
has been contracted to conduct this survey and
report all findings to the Bureau of Vocational
Education.

Sincerely,

Gerald G. Work, Ph.D.
Project Director
         and
Charles W. Ryan, Ph.D.
Shibles Hall
University of Maine
at Orono
Orono, Maine 04473

APPENDIX B

A PROJECT TO ESTABLISH PRIORITIES
FOR VOCATIONAL EDUCATION RESEARCH ACTIVITIES
FOR MAINE 1975-1977

I. General Information:

A. Name of Institution_____

B. What is the title of your present position?

    _____ 1. Director
    _____ 2. Assistant Director for Academic Affairs
    _____ 3. Assistant Director for Student Affairs
    _____ 4. Business Manager
    _____ 5. Dean of Instruction
    _____ 6. Dean of Admissions
    _____ 7. Dean of Students
    _____ 8. Director of Adult Education
    _____ 9. Instructor
    _____ 10. Other (specify)_____

C. In which area do you do the greater part of your Voca-
    tional, Technical Adult Education (VTAE) work?

    _____ 1. General Education
    _____ 2. Agriculture
    _____ 3. Business and Office Occupations
    _____ 4. Distributive Education
    _____ 5. Health Occupations
    _____ 6. Home Economics
    _____ 7. Trades and Industry
    _____ 8. General Administration
    _____ 9. Other (specify)_____

II. Research Categories: Please place an "x" in the space 1 through 5 on each numbered item under categories "A" through "E" corresponding to your rating in terms of needed research over the next 2 years. Specify additional topics in blank spaces marked "Other".

Vocational Education Research Area/Topic	Ratings				
	No Priority – Research not needed	Low Priority – Little need for research	Average Priority – Research needed but not essential	High Priority – Research greatly needed	Extremely High Priority – Critical need for research
	1	2	3	4	5

A. NEEDS FOR VOCATIONAL EDUCATION

   1. Labor market requirements ___ ___ ___ ___ ___

   2. General societal needs, e.g., environment ___ ___ ___ ___ ___

   3. Technological assessment ___ ___ ___ ___ ___

   4. Assessment of individual's vocational, technical and adult education needs ___ ___ ___ ___ ___

   5. Educational needs for 16-18 year olds ___ ___ ___ ___ ___

   6. Educational needs for the incarcerated ___ ___ ___ ___ ___

   7. Educational needs for mid-career individuals ___ ___ ___ ___ ___

   8. Other:_____ ___ ___ ___ ___ ___

B. CURRICULUM DEVELOPMENT

   9. Determining course/module content ___ ___ ___ ___ ___

Vocational Education Research Area/Topic	Ratings				
	No Priority – Research not needed	Low Priority – Little need for research	Average Priority – Research needed but not essential	High Priority – Research greatly needed	Extremely High Priority – Critical need for research
	1	2	3	4	5
10. Developing learning activities	___	___	___	___	___
11. Sequencing of courses/ modules	___	___	___	___	___
12. Determining performance levels of competencies for job entry	___	___	___	___	___
13. Determining performance levels of competencies for job advancement	___	___	___	___	___
14. Secondary – post-secondary curriculum articulation	___	___	___	___	___
15. Developing new programs from emerging technologies	___	___	___	___	___
16. Models for core program development	___	___	___	___	___
17. Other: _____	___	___	___	___	___

C. INSTRUCTIONAL LEARNING PROCESSES

18. Applied research on student learning styles	___	___	___	___	___
19. Applied research on teaching styles	___	___	___	___	___
20. Teaching methods	___	___	___	___	___

Vocational Education Research Area/Topic	Ratings				
	No Priority - Research not needed	Low Priority - Little need for research	Average Priority - Research needed but not essential	High Priority - Research greatly needed	Extremely High Priority - Critical need for research
	1	2	3	4	5
21. Multi-media approaches	___	___	___	___	___
22. Learner management of instruction	___	___	___	___	___
23. Other: _____	___	___	___	___	___

D. STUDENT DEVELOPMENT AND NEEDS

	1	2	3	4	5
24. Barriers to enrollment in VTAE programs	___	___	___	___	___
25. Advanced placement/ standing	___	___	___	___	___
26. Appraising student achievement and behavioral change	___	___	___	___	___
27. Student attrition/ withdrawals, etc.	___	___	___	___	___
28. Student placement	___	___	___	___	___
29. Student follow-up procedures	___	___	___	___	___
30. Leisure, athletic or social activities	___	___	___	___	___
31. Student clubs, student gov't, etc.	___	___	___	___	___
32. Student health services	___	___	___	___	___

Vocational Education Research Area/Topic	No Priority - Research not needed. 1	Low Priority - Little need for research 2	Average Priority - Research needed but not essential 3	High Priority - Research greatly needed 4	Extremely High Priority - Critical need for research 5
33. Counseling students					
34. Models for providing comprehensive student services					
35. Other: _____					

E. ADMINISTRATION OF VOCATIONAL EDUCATION

36. Evaluation of total VTAE

37. Evaluation of specific programs and/or components

38. Evaluation of adult programs and/or components

39. External validation of mission, goals and objectives —

40. Evaluation of institutional organizational structure and administrative processes

41. Differentiated staffing

42. Open entry/open exit education

43. Cost-benefit studies of VTAE programs

Vocational Education Research Area/Topic	Ratings				
	No Priority - Research not needed	Low Priority - Little need for research	Average Priority - Research needed but not essential	High Priority - Research greatly needed	Extremely High Priority - Critical need for research
	1	2	3	4	5
44. Educational programs, activities and services for disadvantaged/handicapped					
45. Countering sex stereotyping of occupational education programs					
46. Role of the VTAE system within post-secondary education					
47. Impact of research on VTAE staff					
48. Evaluation of VTAE professional personnel					
49. Determining professional development needs					
50. Other:_____					

COMMENTS/SUGGESTIONS: