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ABSTRACT

This document accompanies a narrative volume that reports a study of Pennsylvania's vocational education system. It contains the instrumentation, participant lists, and all other supporting documentation. Chapter 1 is a data analysis of the open-ended interviews and second Delphi questionnaire that were used to determine the strengths and weaknesses of vocational-technical education in Pennsylvania. Results of interviews with 179 individuals are included. The analyses are organized by the five general areas of concern that emerged: governance and administration; leadership; research, planning, evaluation, and professional development; program development; and curriculum. Data are provided in 44 tables. Chapter 2 provides comprehensive policy Delphi results. Chapter 3 contains information from other states, including nine tables with comparative data; a report on Illinois' movement to regional systems under the Education for Employment Title; a report on outcome-based education in Minnesota; and a report on an evolutionary approach in Ohio. Chapter 4 provides the interview questions, vocational education study questionnaire, and second-round policy Delphi questionnaire. Chapters 5 through 9 contain the mailing list for the Delphi surveys; list of interviewees; policy Delphi meeting minutes and participant list; external review panel meeting minutes; and calendar of activities. (YLB)

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The Pennsylvania Report:
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Vocational-Technical Education
Volume II: Data and Instrumentation

Final Report

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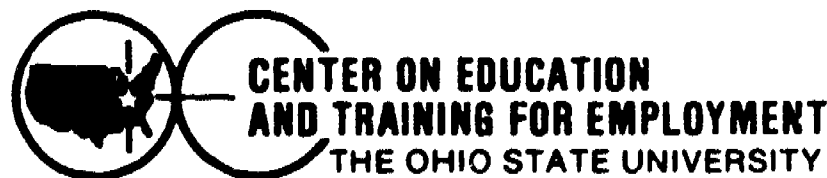
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- impact of changing technology in the workplace and on the delivery of education and training
- quality and outcomes of education and training for employment
- quality and nature of partnerships with education, business, industry, and labor
- opportunity for disadvantaged and special populations to succeed in education, training, and work environments
- short- and long-range planning for education and training agencies
- approaches to enhancing economic development and job creation

**The Pennsylvania Report:
A New Agenda for
Vocational-Technical Education
Volume II: Data and Instrumentation
Final Report**

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and
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**Center on Education and Training for Employment
The Ohio State University
1900 Kenny Road
Columbus, Ohio 43210-1090**

August 1989

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PREFACE

This report is developed as two documents. The first is Volume I, subtitled "Narrative" and includes the presentation of the logic and basic thrust of the report. It concludes with a set of sixteen recommendations for consideration by the educational leadership of Pennsylvania. The additional document, Volume II, provides additional documentation for the report and recommendations and contains the instrumentation participant lists and all other supporting documentation.

CHAPTER 1

DATA ANALYSIS

To determine the strength and weakness of vocational-technical education in Pennsylvania, open-ended interviews as well as written questionnaires were used to gather opinions. In analyzing the comments and responses, general areas of concern emerged. These provided the cores of the recommendations that were ultimately formulated. Presented below are results of the analysis of the interviews and second Delphi questionnaire.

One hundred seventy-nine individuals were interviewed. Table 1 presents the breakout by group, number, and percentage. The percentage adds to more than 100 because of rounding.

Governance and Administration

The methods by which an educational system is governed and administered profoundly affects what happens in the classroom, including who is in the classroom. Early in the open-ended interview process, the issue of local governance and administration of AVTSs was raised. Not surprisingly, AVTS and vocational directors were most aware of the problem, percentage-wise, followed by state-level staff.

TABLE 1

INTERVIEWEE CLASSIFICATIONS

<u>Group</u>	<u>Number</u>	<u>Percentage</u>
State-level staff	34	19.0
Teacher educators and 4-year college personnel	23	12.8
Community college, branch campus, and proprietary schools	27	15.1
AVTS and vocational directors	15	8.4
Employers, advisory councils/committees, business, and industry	18	10.1
Secondary school principals, superintendents, and supervisors	9	5.0
Intermediate unit personnel	3	1.7
Vocational teachers, supervisors, and central office staff	28	15.6
PIC staff	2	1.1
Economic development staff	2	1.1
Chamber of Commerce staff	3	1.7
Guidance counselors	4	2.2
Other	<u>11</u>	<u>6.1</u>
TOTALS	179	101.6

TABLE 2

INDIVIDUALS WHO IDENTIFIED A PROBLEM WITH LOCAL
GOVERNANCE OF VOCATIONAL-TECHNICAL EDUCATION

<u>Group</u>	<u>Number Indicating a Problem</u>	<u>Percentage Indicating a Problem</u>
State-level staff	26	76.5
Teacher educators and other 4-year college personnel	13	56.5
Community college, branch campus, and proprietary school personnel	13	48.1
AVTS and vocational directors	13	86.7
Employers, advisory councils/committees members, business, and industry personnel	2	11.1
Secondary school principals, superintendents, and supervisors	5	55.6
Intermediate unit personnel	3	100.0
Other	<u>8</u>	<u>72.7</u>
TOTALS	83	46.4

Questions regarding some aspects of local governance and administration were placed on the second-round Delphi questionnaire. Those questions and the summarized responses follow (tables 3-7).

TABLE 3

VOCATIONAL-TECHNICAL EDUCATION ADMINISTRATOR
QUALIFICATIONS

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
State and local vocational-technical education administrators should have in-depth knowledge of vocational-technical education acquired through a combination of formal preparation and experience.	97%	3%	1%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	78%	5%	17%

TABLE 4

LOCAL ADMINISTRATION

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
The area vocational-technical school should have its own elected school board which appoints its own chief school officer.	34%	39%	28%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	28%	34%	38%

TABLE 5

COORDINATION AND ARTICULATION

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
The state education agency should provide leadership and technical assistance for local public and proprietary education institutions to develop plans for coordinated and articulated vocational-technical education programs at all levels. Such plans would include individual and community needs assessment, specification of program offerers, and program scope and sequence.	88%	9%	3%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	76%	11%	14%

TABLE 6

AVTS FUNDING

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
Area vocational-technical school funding should be based on participating school enrollment regardless of the number of students the participating school sends to the area vocational-technical school.	48%	30%	22%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	38%	31%	31%

TABLE 7

STATE SUBSIDY FOR VOCATIONAL-TECHNICAL ENROLLMENTS

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
The state should provide double funding for secondary students attending an area vocational-technical school (i.e., if the subsidy for each secondary student is 1.2, then the subsidy for a student attending an area vocational-technical school should be 2.4).	55%	21%	24%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	43%	19%	38%

A second issue raised in interviews with regard to governance and administration was related to the position occupied by the state director for vocational-technical education. Over 44 percent of the interviewees mentioned this as a problem. The breakdown from the open-ended interviews is presented in table 8. The related question from the second-round Delphi questionnaire appears in table 9.

TABLE 8

INDIVIDUALS WHO IDENTIFIED A PROBLEM WITH THE
ADMINISTRATIVE POSITION OF THE STATE DIRECTOR
OF VOCATIONAL-TECHNICAL EDUCATION

<u>Group</u>	<u>Number Indicating a Problem</u>	<u>Percentage Indicating a Problem</u>
State-level staff	21	61.8
Teacher educators and other 4-year college personnel	15	65.2
Community college, branch campus, and proprietary school personnel	7	25.9
AVTS and vocational directors	15	100.0
Secondary school principals, superintendents, and supervisors	6	10.7
Intermediate unit personnel	2	66.7
Vocational teachers, supervisors, and central office staff	3	10.7
PIC staff	1	50.0
Economic development staff	1	50.0
Other	<u>8</u>	<u>72.8</u>
TOTALS	79	44.1

TABLE 9

COMMISSIONER OF VOCATIONAL-TECHNICAL EDUCATION

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
The position of chief administrator for vocational-technical education in the state education agency should be elevated to the level of commissioner.	41%	28%	32%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	42%	19%	39%

The functioning of the regional offices was the third issue raised under governance and administration. Although only 11.2 percent of those interviewed mentioned this aspect as a problem, it was obvious that the regional offices were not being used to their greatest advantage. Tables 10 and 11 present data from the interviews and the questionnaire.

TABLE 10

INDIVIDUALS WHO IDENTIFIED A PROBLEM WITH THE OPERATION/FUNCTION OF THE REGIONAL OFFICES

<u>Group</u>	<u>Number Indicating a Problem</u>	<u>Percentage Indicating a Problem</u>
State-level staff	6	26.5
Teacher educators and other 4-year college personnel	3	13.0
Community college, branch campus, and proprietary school personnel	2	7.4
AVTS and vocational directors	2	13.3
Secondary school principals, superintendents, and supervisors	1	11.1
Intermediate unit personnel	3	100.0
Vocational teachers, supervisors, and central office staff	1	3.6
Other	<u>2</u>	<u>18.1</u>
TOTALS	20	11.2

TABLE 11
CLOSING OF REGIONAL OFFICES

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
The regional vocational- technical education offices should be closed and current personnel placed in the inter- mediate units.	18%	52%	31%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	29%	36%	33%

Leadership

Leadership at the state level in Pennsylvania begins with the Secretary of Education and the State Board for Vocational and Technical Education. The State Board is a unique position in that it sets the pace for others to follow. Table 12 indicates the level of concern expressed by interviewees.

Other issues raised dealt with the communication of the purpose of vocational-technical education and strategic planning for facilities and equipment (tables 13-15) and relationships with business, industry, and labor (tables 16-18).

TABLE 12

INDIVIDUALS WHO IDENTIFIED A PROBLEM WITH THE LEVEL
OF ATTENTION AND SUPPORT OF THE STATE BOARD FOR
VOCATIONAL-TECHNICAL EDUCATION

<u>Group</u>	<u>Number Indicating a Problem</u>	<u>Percentage Indicating a Problem</u>
State-level staff	9	26.5
Teacher educators and other 4-year college personnel	6	26.1
Community college, branch campus, and proprietary school personnel	2	7.4
AVTS and vocational directors	5	33.3
Secondary school principals, superintendents, and supervisors	2	22.2
Other	<u>13</u>	<u>27.2</u>
TOTALS	27	15.1

TABLE 13

INDIVIDUALS WHO IDENTIFIED A PROBLEM WITH FACILITIES
AND EQUIPMENT AND THE PUBLIC'S AWARENESS OF
VOCATIONAL-TECHNICAL EDUCATION

<u>Group</u>	<u>Number Indicating a Problem</u>	<u>Percentage Indicating a Problem</u>
State-level staff	22	64.7
Teacher educators and other 4-year college personnel	3	13.0
Community college, branch campus, and proprietary school personnel	10	37.0
AVTS and vocational directors	14	93.3
Employers, advisory councils/committees members, business, and industry personnel	3	16.7
Secondary school principals, superintendents, and supervisors	7	77.8
Intermediate unit personnel	3	100.0
Vocational teachers, supervisors, and central office staff	2	7.1
Economic development agency staff	1	50.0
Chamber of Commerce staff	1	33.3
Guidance counselors	2	50.0
Other	<u>10</u>	<u>90.9</u>
TOTALS	78	43.6

TABLE 14

SYSTEMS FOR FUNDING NEW AND REPLACING OLD EQUIPMENT

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
The state should develop a system for vocational-technical education equipment replacement and a system for funding needed equipment.	92%	6%	4%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	69%	12%	19%

TABLE 15

INDIVIDUALS WHO IDENTIFIED A PROBLEM WITH THE LEVEL OF PUBLIC AWARENESS OF THE IMPLICATIONS OF VOCATIONAL-TECHNICAL EDUCATION ON THE EDUCATION OF INDIVIDUALS AND ON THE ECONOMY

<u>Group</u>	<u>Number Indicating a Problem</u>	<u>Percentage Indicating a Problem</u>
State-level staff	8	23.5
Teacher educators and other 4-year college personnel	4	17.4
Community college, branch campus, and proprietary school personnel	4	14.8
AVTS and vocational directors	10	66.7
Employers, advisory councils/committees members, business, and industry personnel	3	16.7
Secondary school principals, superintendents, and supervisors	2	22.2
Chamber of Commerce staff	1	33.3
Guidance counselors	1	25.0
Other	3	27.3
TOTALS	36	20.1

TABLE 16

DEVELOPMENT AND COMMUNICATION OF VISION
OF VOCATIONAL-TECHNICAL EDUCATION

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
The state education agency should provide leadership for and coordinate the development of a long-range vision of what vocational-technical education is and what it should be and communicate that vision to all publics.	97%	1%	3%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	79%	4%	16%

TABLE 17

INDIVIDUALS WHO IDENTIFIED A PROBLEM WITH THE
LEVEL OF INVOLVEMENT OF BUSINESS, INDUSTRY,
AND LABOR IN VOCATIONAL-TECHNICAL EDUCATION

<u>Group</u>	<u>Number Indicating a Problem</u>	<u>Percentage Indicating a Problem</u>
State-level staff	11	32.4
Teacher educators and other 4-year college personnel	4	17.4
Community college, branch campus, and proprietary school personnel	8	30.0
AVTS and vocational directors	7	46.7
Employers, advisory councils/committees members, business, and industry personnel	4	22.2
Secondary school principals, superintendents, and supervisors	2	22.2
Intermediate unit personnel	1	33.3
Vocational teachers, supervisors, and central office staff	1	3.6
Economic development staff	1	50.0
Chamber of Commerce staff	1	33.3
Other	<u>6</u>	<u>54.5</u>
TOTALS	46	25.7

TABLE 18

GUARANTEED PLACEMENT OF GRADUATES

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
Vocational educators should seek agreements with business and industry officials who would guarantee placement of vocational-technical education graduates.	82%	17%	2%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	48%	38%	14%

Although the desirability of guaranteed placement of vocational-technical graduates was high, the feasibility of such an event occurring was believed to be very low. Therefore, this was dropped from the recommendations.

Research, Planning, Evaluation, and Professional Development

During the interviews, a lack of systematic research, development, dissemination, and evaluation was indicated. Table 19 presents statistical results from the interviews.

The Delphi questionnaire responses show strong support for this issue. Tables 20 and 21 provide the relevant data.

TABLE 19

INDIVIDUALS WHO IDENTIFIED A PROBLEM WITH THE CURRENT
RESEARCH, DEVELOPMENT, AND DISSEMINATION ACTIVITIES
IN VOCATIONAL-TECHNICAL EDUCATION

<u>Group</u>	<u>Number Indicating a Problem</u>	<u>Percentage Indicating a Problem</u>
State-level staff	16	47.1
Teacher educators and other 4-year college personnel	6	26.1
Community college, branch campus, and proprietary school personnel	4	14.8
AVTS and vocational directors	8	53.3
Employers, advisory councils/committees members, business, and industry personnel	1	5.6
Secondary school principals, superintendents, and supervisors	3	33.3
Intermediate unit personnel	1	33.3
Other	<u>5</u>	<u>45.5</u>
TOTALS	44	24.6

TABLE 20

STATE LEADERSHIP FOR RESEARCH AND DEVELOPMENT

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
Leadership from the state education age / is needed to maintain a cutting-edge emphasis in vocational- technical education cur- riculum development, research, program planning, program evaluation, and personnel development.	91%	6%	4%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	74%	12%	16%

TABLE 21

RESEARCH AND DEVELOPMENT CENTER

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
The state should establish a research and development center with responsibility for planning and conducting statewide efforts for vocational-technical education in--	68%	19%	13%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	65%	16%	19%
o Curriculum Development			
o Innovative/Exemplary Programs			
o Personnel Development			
o Research			
o Program Planning			
o Program Evaluation			

Although a large number of interviews did not raise the issue of instructor preparation (see table 22), the issue was included on the second-round Delphi questionnaire because of its currency nationwide and the overall belief that secondary vocational-technical education in Pennsylvania is perceived as "second rate." Table 23 deals with the baccalaureate degree issue (where desirability and feasibility conflict) and table 24 presents opinions related to the update of technical skills.

TABLE 22

INDIVIDUALS WHO IDENTIFIED A PROBLEM WITH LEVEL OF
VOCATIONAL-TECHNICAL EDUCATION INSTRUCTOR PREPARATION

<u>Group</u>	<u>Number Indicating a Problem</u>	<u>Percentage Indicating a Problem</u>
State-level staff	4	11.8
Teacher educators and other 4-year college personnel	8	34.8
Community college, branch campus, and proprietary school personnel	1	3.7
Secondary school principals, superintendents, and supervisors	2	22.2
Guidance counselors	1	25.0
Other	<u>6</u>	<u>54.5</u>
TOTALS	22	12.3

TABLE 23

BACCALAUREATE DEGREE FOR VOCATIONAL-TECHNICAL TEACHERS

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
All beginning vocational- technical education teachers should have a baccalaureate degree.	60%	34%	6%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	31%	60%	10%

TABLE 24

TECHNICAL SKILL UPDATE

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
The state, in cooperation with business and industry, should develop training programs that use the facilities of business and industry to update the technical skills of vocational-technical education teachers.	93%	5%	2%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	76%	11%	13%

The lack of AVTS accreditation was not raised in the open-ended interviews as much of a problem (see table 25); however, the importance of accreditation arises when considering technical institute status for selected AVTSs and also when considering the status perception of secondary vocational-technical education.

TABLE 25

INDIVIDUALS WHO IDENTIFIED A PROBLEM
WITH LACK OF AVTS ACCREDITATION

<u>Group</u>	<u>Number Indicating a Problem</u>	<u>Percentage Indicating a Problem</u>
State-level staff	1	2.9
AVTS and vocational directors	<u>1</u>	<u>6.7</u>
TOTALS	2	1.1

A similar situation exists when considering the issue of labor-market data. Although this was not an issue raised to a significant degree in the open-ended interviews (table 26), it is necessary to have such information in order to conduct program planning.

TABLE 26

INDIVIDUALS WHO IDENTIFIED A PROBLEM WITH AVAILABILITY
OF COORDINATED LABOR-MARKET DATA

<u>Group</u>	<u>Number Indicating a Problem</u>	<u>Percentage Indicating a Problem</u>
State-level staff	7	20.6
Community college, branch campus, and proprietary school personnel	2	7.4
AVTS and vocational directors	2	13.3
Employers, advisory councils/committees members, business, and industry personnel	1	11.1
Other	<u>1</u>	<u>9.1</u>
TOTALS	13	7.3

Program Development

The issue of high technology centers was not frequently raised in the open-ended interviews (see table 27). Therefore, although the issue was considered by the study team to be one into which the Commonwealth should look, the issue did not become a recommendation.

TABLE 27

INDIVIDUALS WHO IDENTIFIED A PROBLEM WITH
AVAILABILITY OF HIGH TECHNOLOGY EDUCATION

<u>Group</u>	<u>Number Indicating a Problem</u>	<u>Percentage Indicating a Problem</u>
State-level staff	5	14.8
Community college, branch campus, and proprietary school personnel	3	11.1
Secondary school principals, superintendents, and supervisors	<u>1</u>	<u>11.1</u>
TOTALS	9	5.0

The most divisive issue raised during the interviews was that of technical institutes; over 32 percent of those interviewed indicated that access to publicly supported, postsecondary vocational-technical education was a problem (table 28). Tables 29-32 present the reactions to four related questions that appeared on the Delphi questionnaire.

TABLE 28

INDIVIDUALS WHO IDENTIFIED A PROBLEM WITH
ACCESS TO PUBLICLY SUPPORTED POSTSECONDARY
VOCATIONAL-TECHNICAL EDUCATION

<u>Group</u>	<u>Number Indicating a Problem</u>	<u>Percentage Indicating a Problem</u>
State-level staff	21	61.8
Teacher educators and other 4-year college personnel	8	34.8
Community college, branch campus, and proprietary school personnel	8	29.6
AVTS and vocational directors	10	66.7
Secondary school principals, superintendents, and supervisors	3	33.3
Intermediate unit personnel	2	66.7
Chamber of Commerce staff	1	33.3
Guidance counselors	1	25.0
Other	4	36.4
TOTALS	58	32.4

TABLE 29

AVTS TARGET AUDIENCE

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
Area vocational-technical education schools should place a major focus on adult vocational-technical education rather than secondary vocational- technical education.	23%	69%	8%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	33%	44%	24%

TABLE 30

PROGRAMS FOR NON-HIGH SCHOOL GRADUATES

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
Vocational-technical education needs to develop and offer special programs for those individuals who have dropped out of school.	86%	7%	7%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	69%	10%	21%

TABLE 31

FUNDING FORMULAS

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
The same funding formulas should be applied to community colleges and area vocational-technical schools.	39%	22%	39%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	37%	21%	43%

TABLE 32

AVTSS AS TECHNICAL INSTITUTES

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
All area vocational-technical schools should be designated as technical institutes.	41%	31%	28%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	44%	26%	31%

Curriculum

The curriculum offered to middle/junior and senior high school students is being examined in many states. New York, for example, has revised curriculum and Pittsburgh is eliminating the general education track. However, recommending that the general education track in the secondary schools be eliminated was judged by the study team to be outside the purview of this study. Table 33 presents information regarding this issue as raised in the open-ended interviews; tables 34-44 present results from the Delphi questionnaire.

TABLE 33

INDIVIDUALS WHO IDENTIFIED A PROBLEM WITH GENERAL
EDUCATION AT THE SECONDARY LEVEL

<u>Group</u>	<u>Number Indicating a Problem</u>	<u>Percentage Indicating a Problem</u>
State-level staff	2	5.9
Teacher educators and other 4-year college personnel	3	13.0
Community college, branch campus, and proprietary school personnel	1	3.7
AVTS and vocational directors	3	20.0
Employers, advisory councils/committees members, business, and industry personnel	2	11.1
Secondary school principals, superintendents, and supervisors	1	11.1
Other	<u>3</u>	<u>27.3</u>
TOTALS	15	8.4

TABLE 34

DISCONTINUANCE OF VOCATIONAL-TECHNICAL EDUCATION
AT SECONDARY LEVEL

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
Vocational-technical education programs should be discontinued at the secondary level and offered only at the postsecondary level.	15%	81%	29%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	22%	61%	17%

TABLE 35

INDIVIDUALS WHO IDENTIFIED A PROBLEM WITH SECONDARY STUDENTS'
AWARENESS OF EDUCATIONAL AND CAREER OPTIONS

<u>Group</u>	<u>Number Indicating a Problem</u>	<u>Percentage Indicating a Problem</u>
State-level staff	15	44.1
Teacher educators and other 4-year college personnel	9	39.1
Community college, branch campus, and proprietary school personnel	7	25.9
AVTS and vocational directors	8	53.3
Employers, advisory councils/committees members, business, and industry personnel	4	22.2
Secondary school principals, superintendents, and supervisors	7	77.8
Intermediate unit personnel	2	66.7
Economic development staff	1	50.0
Chamber of Commerce staff	1	33.3
Guidance counselors	3	75.0
Other	<u>7</u>	<u>63.6</u>
TOTALS	64	35.8

TABLE 36

CAREER AWARENESS PROGRAMS--SECONDARY LEVEL

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
A career awareness program should be implemented in all school systems.	100%	0%	0%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	84%	3%	13%

TABLE 37

HANDS-ON CAREER DEVELOPMENT COURSE REQUIREMENT

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
Vocational-technical education should be offered as clusters of occupations at the ninth grade and all students should be required to enroll for credit in these combination hands-on career development courses. Students would receive 1 credit for participating in 4 cluster areas that they would choose.	69%	18%	12%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	47%	32%	21%

TABLE 38

EXPLORATORY VOCATIONAL-TECHNICAL PROGRAMS

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
Exploratory vocational- technical education pro- gram should be offered at the middle/junior and senior high school levels.	89%	6%	6%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	71%	10%	19%

TABLE 39

INDIVIDUALS WHO IDENTIFIED A PROBLEM WITH CURRENT
VOCATIONAL-TECHNICAL CURRICULUM IN GRADES 11 AND 12

<u>Group</u>	<u>Number Indicating a Problem</u>	<u>Percentage Indicating a Problem</u>
State-level staff	12	35.3
Teacher educators and other 4-year college personnel	7	30.4
Community college, branch campus, and proprietary school personnel	4	14.9
AVTS and vocational directors	5	33.3
Employers, advisory councils/committees members, business, and industry personnel	1	5.6
Intermediate unit personnel	1	33.3
Guidance counselors	1	25.0
Other	<u>4</u>	<u>36.4</u>
TOTALS	35	19.6

TABLE 40

VOCATIONAL-TECHNICAL EDUCATION CLUSTER CURRICULUM

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
Secondary vocational- technical education should be a generalized offering reflecting core clusters and transferable technical knowledge and skills with emphasis on critical think- ing and enhancement of basic skills.	58%	29%	13%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	52%	18%	30%

TABLE 41

COMPETENCY-BASED VOCATIONAL-TECHNICAL EDUCATION

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
Vocational-technical edu- cation programs should be competency based with no requirements regarding the minimum number of hours to be completed.	62%	30%	8%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	54%	28%	18%

TABLE 42

INDIVIDUALS WHO IDENTIFIED A PROBLEM WITH
LACK OF COORDINATION OF VOCATIONAL-TECHNICAL
AND ACADEMIC SUBJECTS AT THE SECONDARY LEVEL

<u>Group</u>	<u>Number Indicating a Problem</u>	<u>Percentage Indicating a Problem</u>
State-level staff	15	44.1
Teacher educators and other 4-year college personnel	8	34.8
Community college, branch campus, and proprietary school personnel	7	25.9
AVTS and vocational directors	5	33.3
Employers, advisory councils/committees members, business, and industry personnel	2	11.1
Secondary school principals, superintendents, and supervisors	1	11.1
Intermediate unit personnel	1	33.3
Vocational teachers, supervisors, and central office staff	1	3.6
Economic development staff	2	100.0
Chamber of Commerce staff	2	66.7
Other	<u>5</u>	<u>45.5</u>
TOTALS	49	27.4

TABLE 43

INTEGRATION OF VOCATIONAL-TECHNICAL
AND ACADEMIC CURRICULUMS

<u>Question</u>	<u>Desirable or Very Desirable</u>	<u>Undesirable or Very Undesirable</u>	<u>No Comment</u>
The curriculum offering of the area vocational- technical school should be comprehensive, integrating vocational and academic education.	73%	17%	10%
	<u>Definitely or Possibly Feasible</u>	<u>Definitely or Possibly Unfeasible</u>	<u>No Comment</u>
	54%	28%	17%

TABLE 44

INDIVIDUALS WHO IDENTIFIED A PROBLEM WITH LACK OF
EDUCATION AND CAREER GOAL PLANNING

<u>Group</u>	<u>Number Indicating a Problem</u>	<u>Percentage Indicating a Problem</u>
State-level staff	8	23.5
Teacher educators and other 4-year college personnel	3	13.0
Community college, branch campus, and proprietary school personnel	4	14.8
AVTS and vocational directors	4	26.7
Employers, advisory councils/committees members, business, and industry personnel	2	11.1
Secondary school principals, superintendents, and supervisors	3	33.3
Intermediate unit personnel	3	100.0
Guidance counselors	1	25.0
Other	<u>2</u>	<u>18.2</u>
TOTALS	30	16.8

CHAPTER 2

COMPREHENSIVE POLICY DELPHI RESULTS

1. The state education agency should provide leadership for and coordinate the development of a long-range vision of what vocational-technical education is and what it should be and communicate that vision to all publics.	<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
	70%	27%	0%	1%	3%	0%
2. The state education agency should provide leadership and technical assistance for local public and proprietary education institutions to develop plans for coordinated and articulated vocational-technical education programs at all levels. Such plans would include individual and community needs assessment, specification of program offerers, and program scope and sequence.	<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
	46%	42%	7%	2%	3%	0%
3. Audits should be conducted by local providers of vocational-technical education programs to determine what happens to students after they leave vocational-technical education programs.	<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
	54%	41%	2%	1%	1%	1%
4. Leadership from the state education agency is needed to maintain a cutting-edge emphasis in vocational-technical education curriculum development, research, program planning, program evaluation, and personnel development.	<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
	59%	32%	5%	1%	4%	0%
	<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
	50%	29%	4%	0%	3%	13%
	<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
	40%	36%	10%	1%	2%	12%
	<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
	50%	34%	2%	1%	1%	13%
	<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
	36%	38%	12%	0%	3%	13%

*Percentages may not equal 100 due to rounding.

5. State and local vocational-technical education administrators should have in-depth knowledge of vocational-technical education acquired through a combination of formal preparation and experience.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
68%	29%	3%	0%	1%	0%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
50%	28%	5%	0%	4%	13%

6. The position of chief administrator for vocational-technical education in the state education agency should be elevated to the level of commissioner.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
21%	20%	19%	9%	29%	3%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
13%	29%	13%	6%	23%	16%

7. The state education agency needs to place more emphasis on and give more visibility to innovative/exemplary vocational-technical education programs.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
38%	47%	4%	3%	5%	3%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
38%	41%	0%	1%	4%	16%

8. State leadership and other resources should be provided to local institutions for enhancing the job placement programs and processes.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
37%	46%	7%	1%	8%	2%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
27%	38%	7%	1%	12%	15%

9. Vocational educators should seek agreements with business and industry officials who would guarantee placement of vocational-technical education graduates.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
33%	49%	13%	4%	0%	2%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
17%	31%	30%	8%	1%	13%

30

4.4

45

10. The state should develop a system for vocational-technical education equipment replacement and a system for funding needed equipment.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
63%	29%	3%	3%	4%	0%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
31%	38%	9%	3%	4%	15%

11. All beginning vocational-technical education teachers should have a baccalaureate degree.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
27%	33%	24%	10%	1%	5%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
12%	19%	41%	19%	1%	9%

12. The state should establish a research and development center with responsibility for planning and conducting statewide efforts for vocational-technical education in--

- o Curriculum Development
- o Innovative/Exemplary Programs
- o Personnel Development
- o Research
- o Program Planning
- o Program Evaluation

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
43%	25%	11%	8%	9%	4%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
29%	36%	12%	4%	6%	13%

13. The state, in cooperation with business and industry, should develop training programs that use the facilities of business and industry to update the technical skills of vocational-technical education teachers.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
55%	38%	4%	1%	0%	2%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
40%	36%	10%	1%	0%	13%

31

43

47

14. All vocational-technical education personnel should be required to attend an annual statewide conference that is designed to bring together <u>all</u> teachers, administrators, and others interested in and concerned about vocational-technical education for joint as well as concurrent sessions.	<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
	21%	35%	29%	10%	4%	2%
	<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
	8%	24%	32%	19%	5%	12%
15. All area vocational-technical schools should be designated as technical institutes.	<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
	19%	22%	18%	13%	24%	4%
	<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
	17%	27%	15%	11%	19%	12%
16. The area vocational-technical school should have its own elected school board which appoints its own chief school officer.	<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
	20%	14%	21%	18%	25%	3%
	<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
	15%	13%	20%	14%	21%	17%
17. The regional vocational-technical education offices should be closed and current personnel placed in the intermediate units.	<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
	8%	10%	21%	31%	29%	2%
	<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
	10%	19%	14%	22%	20%	13%
18. The same funding formulas should be applied to community colleges and area vocational-technical schools.	<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
	21%	18%	9%	13%	35%	4%
	<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
	18%	19%	9%	12%	31%	12%

19. Area vocational-technical school funding should be based on participating school enrollment regardless of the number of students the participating school sends to the area vocational-technical school.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
21%	27%	9%	21%	18%	4%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
20%	18%	13%	18%	16%	15%

20. The state should provide double funding for secondary students attending an area vocational-technical school (i.e., if the subsidy for each secondary student is 1.2, then the subsidy for a student attending an area vocational-technical school should be 2.4).

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
33%	22%	12%	9%	20%	4%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
20%	23%	12%	7%	17%	21%

21. A career awareness program should be implemented in all school systems.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
87%	13%	0%	0%	0%	0%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
63%	21%	2%	1%	0%	13%

22. Exploratory vocational-technical education programs should be offered at the middle/junior and senior high school levels.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
52%	37%	4%	2%	5%	1%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
38%	33%	10%	0%	4%	15%

23. Vocational-technical education should be offered as clusters of occupations at the ninth grade and all students should be required to enroll for credit in these combination hands-on career development courses. Students would receive 1 credit for participating in 4 cluster areas that they would choose.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
30%	39%	13%	5%	10%	2%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
18%	29%	27%	5%	8%	13%

33

51

24. The curriculum offering of the area vocational-technical school should be comprehensive, integrating vocational and academic education.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
33%	40%	13%	4%	6%	4%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
24%	30%	22%	6%	4%	13%

25. Where possible, apprenticeship programs should be established in conjunction with vocational-technical education programs.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
52%	41%	2%	0%	4%	1%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
34%	37%	7%	3%	5%	14%

26. Secondary vocational-technical education should be a generalized offering reflecting core clusters and transferable technical knowledge and skills with emphasis on critical thinking and enhancement of basic skills.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
31%	27%	20%	9%	13%	0%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
20%	32%	14%	4%	12%	18%

27. Vocational-technical education programs should be competency based with no requirements regarding the minimum number of hours to be completed.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
24%	38%	19%	11%	6%	2%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
23%	31%	21%	7%	6%	12%

28. Vocational-technical education programs should be discontinued at the secondary level and offered only at the postsecondary level.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
5%	10%	19%	62%	27%	2%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
9%	13%	24%	37%	4%	13%

34

52

53

29. Vocational-technical education needs to develop and offer special programs for those individuals who have dropped out of school.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
43%	43%	4%	3%	4%	3%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
33%	36%	7%	3%	4%	17%

30. Area vocational-technical education schools should place a major focus on adult vocational-technical education rather than secondary vocational-technical education.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
10%	13%	43%	26%	4%	4%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
13%	20%	33%	11%	6%	18%

31. The state should expand customized training programs and use the staff, facilities, and equipment of community colleges and area vocational-technical schools.

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>	<u>No Response</u>
35%	44%	4%	4%	13%	1%
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>	<u>No Response</u>
28%	40%	7%	1%	9%	15%

CHAPTER 3

INFORMATION FROM OTHER STATES

TABLE 1

POPULATION OF PENNSYLVANIA AND SELECTED STATES

State	1986	Ages 18-24 1986	Estimated Ages 18-24 2000
Pennsylvania	11,888,000	1,328,000	966,000
Illinois	11,552,000	1,317,000	1,081,000
Michigan	9,145,000	1,083,000	855,000
Minnesota	4,214,000	487,000	412,000
New York	17,772,000	2,034,000	1,594,000
Ohio	10,752,000	1,215,000	962,000

SOURCE: U.S. Bureau of the Census (1987)

TABLE 2

AGE DISTRIBUTION BY PERCENTAGE OF PENNSYLVANIA
AND SELECTED STATES

State	0-17	18-24	25-34	35+
Pennsylvania	23.9	10.8	16.8	48.5
Illinois	26.2	11.0	17.9	44.9
Michigan	26.7	11.5	17.8	43.9
Minnesota	26.2	11.1	18.4	44.4
New York	24.5	11.1	16.8	47.6
Ohio	26.3	11.0	17.3	45.5

SOURCE: The Chronicle of Higher Education Almanac (1988)

TABLE 3
POPULATION IN MSAs AND PMSAs OF PENNSYLVANIA
AND SELECTED STATES

State	Percentage in MSAs	Percentage in PMSAs
Pennsylvania	30.3	60.1
Illinois	29.7	63.9
Michigan	20.9	50.3
Minnesota	54.5	0.0
New York	16.8	70.7
Ohio	38.0	41.4

SOURCE: U.S. Bureau of the Census (1987)

TABLE 4
RACIAL/ETHNIC DISTRIBUTION BY PERCENTAGE
OF PENNSYLVANIA AND SELECTED STATES

State	American Indian	Asian	Black	White	Other and Unknown	Hispanic (may be any race)
Pennsylvania	0.1	0.6	8.8	89.9	0.6	1.3
Illinois	0.2	1.5	14.7	81.1	2.6	5.6
Michigan	0.5	0.7	12.9	85.2	0.7	1.8
Minnesota	0.9	0.8	1.3	96.7	0.3	0.8
New York	0.3	1.9	13.7	79.9	4.3	9.5
Ohio	0.1	0.5	10.0	89.0	0.4	1.1

SOURCE: The Chronicle of Higher Education Almanac (1988)

TABLE 5

**EDUCATIONAL ATTAINMENT OF ADULTS BY PERCENTAGE
OF PENNSYLVANIA AND SELECTED STATES**

State	4 Years High School	1-3 years College	4 Years College
Pennsylvania	64.7	24.3	13.6
Illinois	66.5	31.4	16.2
Michigan	68.0	30.0	14.3
Minnesota	73.1	34.5	17.4
New York	66.3	32.2	17.9
Ohio	67.0	26.5	13.7

SOURCE: The Chronicle of Higher Education Almanac (1988)

TABLE 6

INCOME OF PENNSYLVANIA AND SELECTED STATES

State	Median Family Income 1979	Percentage of Population Below Poverty Level 1979
Pennsylvania	19,995	10.5
Illinois	22,746	11.0
Michigan	22,107	10.4
Minnesota	21,185	9.5
New York	20,180	13.4
Ohio	20,909	10.3

SOURCE: U.S. Bureau of the Census (1987)

TABLE 7

EMPLOYMENT IN NONAGRICULTURAL ESTABLISHMENTS BY
PERCENTAGE OF PENNSYLVANIA AND SELECTED STATES

State	Population Age 18+ Working in Nonagricultural Establishments 1986	Population Age 18-64 1986
Pennsylvania	53.1	51.7
Illinois	56.3	61.5
Michigan	54.5	61.6
Minnesota	60.9	61.2
New York	59.0	62.5
Ohio	56.6	61.2

SOURCE: U.S. Bureau of the Census (1987)

TABLE 8

STATE AND LOCAL GOVERNMENT FINANCES
OF PENNSYLVANIA AND SELECTED STATES

State	General Revenue 1985		Outstanding Debt 1985		Direct General Expenditures 1985	
	Total	Per Capita	Total	Per Capita	Total	Per Capita
Pennsylvania	27,163,000	2,292	25,197,000	2,126	24,040,000	2,028
Illinois	27,399,000	2,375	21,709,000	1,882	25,067,000	2,173
Michigan	24,491,000	2,695	15,214,000	1,674	22,705,000	2,498
Minnesota	13,023,000	3,106	13,959,000	3,329	11,918,000	2,842
New York	64,568,000	3,631	62,454,000	3,512	59,455,000	3,343
Ohio	24,229,000	2,255	16,642,000	1,549	22,781,000	2,120

SOURCE: U.S. Bureau of the Census (1987)

TABLE 9

EDUCATIONAL EXPENDITURES OF PENNSYLVANIA
AND SELECTED STATES

State	Total Elementary and Secondary Education Expenditure 1987	Elementary and Secondary Education Expenditure per Student 1987	Public Institutions of Higher Education Appropriation per FTE 1987	Number of School District Govern- ments 1987
Pennsylvania	9,394,000	4,752	3,825	517
Illinois	7,653,000	3,980	3,567	1,029
Michigan	6,620,000	3,954	3,631	590
Minnesota	3,191,000	4,241	3,854	441
New York	15,464,000	6,299	5,852	722
Ohio	7,435,000	3,769	3,194	621

SOURCE: U.S. Bureau of the Census (1987)

Illinois Vocational Education:
A Movement to Regional Systems under
the Education for Employment Title

Setting/Factors Involved in Reorganization

Like other Midwest states, Illinois has suffered a tremendous loss of heavy manufacturing industry over the last decade. The state is highly diverse. Chicago is highly urbanized with a high-technology corridor developing rapidly around Interstate Highway 80. But, outside of Chicago, Illinois is largely rural with small pockets of population. It is difficult for one system to meet the needs of the population extremes. Prior to the Education for Employment policy adoption in 1984, 12 state consultants worked with 750 school districts, each with its own vocational education plan, and 39 community colleges. The state needed a system that could respond to diversity and maximize resources. The Education for Employment plan called for the state to organize in regional consortia, requiring school districts to function in a consortium to receive vocational education funds.

Purpose/Goals

Illinois' vocational education system, developed on an agricultural and industrial base, needed to be transformed for an information-processing base. Under the traditional system, aside from the vocational education being divided into 750 districts, teachers and programs were out of touch with industry needs or requirements, and equipment was outmoded. Improvements were aimed at making better use of human, financial, and capital resources at both the secondary and postsecondary levels.

of control formed under district joint education agreements. State guidelines for joint agreements identified broad areas to be covered (e.g., administration, decision-making process, financial operations, process for withdrawal and deposition of joint ownership) but specific details were left to the participating districts.

Articulation agreements between secondary and postsecondary institutions were required in each region as a condition for funding. In the third year of the planning process, each community college was given \$20,000 to use in forming articulation agreements. A Student Services Committee is required for each of the regions and is comprised of representatives from secondary guidance and counseling and special education; the special needs and student services coordinators from the postsecondary institutions; and state agency representatives from such entities as vocational education, vocational rehabilitation, and JTPA. In addition, each region is required to have a regional advisory committee.

Area Vocational Technical Centers comprise another secondary delivery concept to provide high-cost, low-incident programs to a number of cooperating school districts. Many of the programs in the AVTCs fell into trouble due to declining enrollments. In addition, the AVTCs had no revenue source independent of the participating districts. Employment for Education took a similar organizational concept--but without brick and mortar money--and blanketed the state with the 61 regional systems.

Funding

Illinois, at the time of the survey, was in the process of trying to get an income tax measure passed but to many, passage seemed doubtful. Prospects also seemed dim for increased federal funding for vocational education.

Funding for vocational education falls into five broad categories. Disadvantaged and handicapped, equipment, and sex equity thrusts are all funded from Carl C. Perkins monies; Quality Assistance Money comes from the state for staff development, and curriculum development; and administrative funds come from the state. Funds are distributed on a regional basis for enhanced programmatic activity rather than scattering them among the high schools as under the old system. Planning for the 61 regions was supported by \$3 million per year. Initially, the money continued to go to the schools, but in 1988 the money began flowing to the regions.

Faculty Credentialling/Professional Development

In 1988, Illinois was involved extensively in new qualifications for teacher endorsement (credentialling). The state traditionally required 24 semester hours in industrial instruction, 8 semester hours in a unit shop, and 2,000 hours of work experience in an occupational area for instructors. Instructors could be provisionally certified with 2,000 hours work experience in any occupational area, and 60 hours of coursework beyond a high school diploma. Temporary provisional certification required 8,000 hours work experience in any occupational area, no hours beyond the high

The first phase of a 3-year planning process was begun July 1, 1985, the end product being the organization of vocational education into regional systems. Regional organization would allow the system to be aware of and address both national and local market needs. The 750 districts and 39 community colleges were organized into 61 regional systems. Task lists were developed for stable and emerging occupations and were verified by industries/businesses and educators to determine skills needed for given occupations. The end goal was to educate students for occupations that will be available and with skills and attitudes and work habits that business and industry want. The task lists provided the basis for a competency-based instructional format.

Attitudes

Although vocational education is regarded as an important component of the educational system, there is still a stigma attached, particularly at the secondary level. For most students, going to college is still the American dream and there is a general feeling that vocational education is inferior to academic education--that comprehensive high schools should have vocational education, but for "other" people's children. Many parents lack information about vocational education and view it as a program for "can'ts" and "won'ts."

The idea that vocational education is for those who cannot go on to college is increasing as academic requirements for college entrance increase. Counselors advocate/advise that the college preparatory curriculum be tightly adhered to in order to ensure

that students meet the college entrance requirements upon graduation. Some college bound students take a few vocational education courses (e.g., computer keyboarding, accounting) to embellish their college prep skills (parents have not traditionally seen courses such as accounting and keyboarding/data processing as vocational). However, some students feel that vocational courses on the transcript might actually hurt their chances for acceptance into college.

Structure/Governance

The Illinois education system is operated with three boards. The State Board of Education is solely responsible for secondary vocational education, and funds the community colleges directly for their participation in secondary vocational education. The review process for community college participation in vocational education is the responsibility of the Community College Board, which operates under the Higher Education Board.

The Assistant Superintendent for Adult, Vocational, and Technical Education reports to the Associate Superintendent for Educational Programs who is responsible to the State Superintendent of Education. District participation in one of the 61 regional Education for Employment systems is required for receiving state funds. Each of nine regional vocational administrators are responsible for approving and evaluating regional programs over a given part of the state. In addition, each region is required to have a regional advisory committee. The regional systems themselves are managed by System Directors who report to local boards

school diploma to start, but 3 semester hours per year to maintain.

Many teachers are provisionally certified in Illinois in order to teach, and temporary and provisional certification have become big issues. With Education for Employment, credentialing requirements have become more stringent, and designed to coincide more specifically with program areas. For example, requirements in Agriculture are 9 semester hours in the occupational area, 12 hours of core content, plus a methods course.

System directors under the new system are required to have 2,000 hours of work experience plus administrative certification. Since there were only 61 system director positions to be filled under Education for Employment, the state adhered stringently to the formal requirements. A problem in finding highly qualified people from vocational education to fill the system director positions, however, was that they were offered no guarantees to fall back on in case their new positions did not work out.

For professional development, a state council comprised of representatives from nine university councils submit an annual plan to the state to respond to preservice and inservice needs of secondary and postsecondary instructors. Instruction is provided by the teacher education institutions, and some community colleges offer summer workshops. About \$3 million per year are distributed to the regions through the Quality Assistance Plan for curriculum renewal and staff development. Distribution is made through a noncompetitive application process based on the previous year's reimbursement from the state. In addition, the state legislature

appropriates money for the Vocational Instruction Practicum, a program that provides teachers up to \$2,000 for 6-8 weeks of time in private industry to update skills.

Instructional Process

Curriculum development under the Education for Employment plan began with the development of 125 task lists to conform with the 125 occupations taught in the system. The task lists were developed initially by the state using a DACUM process, drawing on a number of sources including information gathered from other states. Statewide task lists were disseminated to private sector employees in the occupational area and to teachers in the regions for verification. The detailed task lists were sold as a communication mechanism. Teachers were working together for the first time to look at tasks and where they were being taught. Teachers are currently being oriented in the new curricula.

A delivery matrix will be used as a tool for administrators to identify program delivery in the state. A Vocational Task Management System will help teachers account for and document the tasks students acquire in courses. It will also aid in secondary to postsecondary articulation.

The task lists are generally seen as helping the system move toward competency-based instruction. The state has also relaxed hour requirements to allow more flexibility in competency-based course approaches. The state maintained, however, its requirement for at least two credits at the junior-senior level in a program

sequence plus an orientation component at the freshman-sophomore level.

The Illinois Board of Higher Education mandated higher academic requirements for all freshmen entering universities in 1993. Counselors, afraid of facing liability, are counseling almost all students into college preparatory courses, and as a result vocational education has been facing declining enrollments. Illinois is experimenting with and now field testing the Applied Basics Curriculum developed by a consortium of states in Association with the Agency for Instructional Technology. The curriculum is taught variously by vocational education and academic instructors. Some schools are also experimenting with the Principles of Technology Curriculum developed by the Center for Occupational Research and Development (CORD).

Some respondents see the emphasis on articulation between secondary and postsecondary institutions as moving the high schools toward competency-based instruction. Community colleges, in arriving at articulation agreements with different schools, are faced with widely varying skill levels and competencies of incoming students. They, in turn, are reducing requirements for their courses to competence mastery. The problem at the high school level in moving to competency-based instruction is arriving at a funding formula.

Strengths and Weaknesses

There is wide agreement that vocational education in Illinois has benefitted by pulling the regions together in a systems approach. Strengths of the approach are identified as follows:

- o The community has come together in a closer working relationship--business and industry in particular are working more closely with education.
- o Both teacher and administrator barriers between secondary and postsecondary levels--created both by geographic distance and institutional focus--have been greatly reduced, resulting in greater communication and mutual support.
- o People involved have a better feel for the total educational process.
- o The curriculum is being updated and made more relevant--2+2 curricula are being adopted; more choices and options are being generated in program areas because of access to business/industry and other schools; movement toward a competency-based structure has been moved forward by identifying common course titles and common core curricula.
- o Equipment, though inadequate, can be better used through coordination.
- o Small schools are relieved of part of the administrative burden, and have less paper work.

There also seems to be fairly wide agreement on the major weaknesses in the reorganization. Those mentioned are as follows:

- o Incentives rather than mandated change might have been more effective. The moment changes became a requirement, some schools formed battle lines. Districts would have felt better if they had been drawn to change by incentives.
- o The state could have been less detailed in its directives, leaving more decisions to the local level. Too much time was spent in detailed meetings.

- o The communication process needed simplifying. A single message being communicated by 12 consultants to 61 regions across various layers of administration tended to become garbled before reaching its final destination.
- o Organization and mapping could have been simplified, and administrative costs decreased by making Education for Employment (vocational education) regions coincide with the community college districts--61 regions were created and there are 39 community college districts.
- o More long range planning appears to be needed. There have been some complaints that directives were often changed in midstream giving the impression that state staff "were flying by the seat of their pants."

Vocational Education Transition in Minnesota: Toward Outcome-Based Education

Attitudes Toward Vocational Education

Vocational education in Minnesota is widely seen as having a purpose, but there is no consensus on what vocational education's purpose is. Whereas most regard it as important, some see it as having a less important role in education than the academic curriculum. However, the public generally perceives a need for more career awareness and work readiness. Historically, vocational education has run the gamut in terms of commitment from "king of the hill" with lavish funding to the current point where the validity of vocational education in the schools is being questioned with an undertone among some that vocational education needs to "shape up or get out of the picture." Even where vocational education is well received, no one is out beating the drums for it as they are for such areas as programs for the gifted.

A wide variety of students are attracted to vocational education. Most are in the metropolitan area around Minneapolis-St. Paul, with some pockets of concentration among the Indian population. The overall majority are the children of blue-collar parents, a sprinkling of whom are college bound. Some will go on to the technical institutes for postsecondary education--but most are not seen as being motivated by academic curriculum. The stereotype is that vocational education is for the noncollege bound, although two-thirds of the 10th-12th graders take some vocational education. Certain occupations taught in vocational education are stereotyped by lower socioeconomic level and

academic ability, whereas other occupations tend to attract upper quartile students.

Purpose/Goals

In 1983, the Minnesota state legislature sent a message to the vocational system that it must change by cutting funds and asking for greater program justification. The signal was that there would be further cuts unless the vocational education system instituted reforms to make it more responsive to changing conditions. The task force is using the term transformation rather than reform to reflect that changes are being made not with the attitude that things were wrong in the old system, but rather that it was not suitable for the 21st century. The system has been characterized by a low dropout rate, but the question remains, are people learning?

The goal of the system is to move to a learner-centered, outcome-based system for K-12 by 1993. A task force member stated "6-1/2 billion dollars are spent on education, but nowhere is it written in all the legislation and statutes that people must learn." The long-term goal for vocational education is that it should not be looked at as one discipline in many, but that vocational education should make a contribution alongside science or other academic subjects to the overall K-12 experience. The goal of the whole educational system is to develop and demonstrate the knowledge and competence in students necessary to fulfill their lifelong pursuits.

Under the transformed system, there is recognition that all students are capable of learning, but at different rates and in different ways. The goal is personalized as distinguished from individualized education. To address the high Indian dropout rate, for example, the legislature is stressing more emphasis on culture.

The task force also recognizes that all K-12 students should be thinking about what they will do when they complete school. A system goal is to shift the emphasis from specific skill preparation to the secondary level and to focus attention on career exploration and work readiness for all K-12 students, including academic.

Another goal is to shift specific skill training to post-secondary institutions including the technical institutes because of concern that secondary schools will not be able to keep abreast of changing technology. The technical institutes, of all units, are most conscious of the need for moving toward a learner outcome-based system. The technical institutes serve many of the nontraditional students--adults in their 30s and 40s who desire work-related courses while raising families. The technical institutes are moving from 6-hour blocks of uniformly prescribed courses to more of a flexible, cafeteria-style approach, allowing students to choose courses based on specific career or work-related interests and needs.

Finally, some task force members see the system moving toward more mandatory articulation between secondary and postsecondary institutions. A current barrier that has been pointed to is that

secondary schools and technical institutes operate under two separate governing boards.

Structure/Governance

Vocational education in Minnesota is delivered through the local comprehensive high schools, 33 technical institutes, and 18 community colleges. The system operates with strong local control and the decision whether or not to offer vocational education is a local one. All three systems of institutions--the comprehensive high schools, the technical institutes, and the community colleges--operate under separate governing boards.

The Governor sits on the Education Commission of the States and has a strong interest in education. The Governor appoints the Commissioner of Education who directs the K-12 system and the K-12 Board. The Commissioner is accountable to the Governor, but the board operates independently (i.e., not in the line of authority under the Governor). Prior to the current Governor's term of office, the Commissioner of Education was appointed by the Board of Education. The State Vocational Education Director is appointed by and accountable to an Assistant Commissioner.

Nominally, technical institutes operate under a separate governing board although, in reality, most of their functions are governed by the local school district. The local districts approve programs and teacher salaries for the technical institutes and the governing board has little power except the allocation of funds. The technical institutes offer training and retraining for students who are beyond high school age, but three

of the campuses offer secondary courses. Competencies normally can be transferred from the high school to the technical institutes. Currently, the state is trying to improve the linkage so that students can continue their postsecondary education at the technical institutes rather than at a community college.

The 18 community colleges are all within close proximity to the technical institutes, and some technical institutes now have intersystem articulation agreements to allow students to work toward associate degrees.

The state also has an intermediate district concept that provides for levy authority to support vocational education and special education through Vocational Cooperative Centers. They can be supported with state aid, and if they (the co-op centers) meet a specified size criteria, can float levies independent of the local districts.

The Vocational Cooperative Centers (one of a variety of names by which they are known) are governed by a Center Board of Education made up of one member from each of the cooperating school districts. The directors of Vocational Cooperative Centers report to a designated supervising superintendent in the respective cooperative district in which they operate.

Complicating the picture further are new entities called Education Districts being established to take the place of Vocational Cooperative Centers. The Education Districts have a broader based program of work. Included among the private and public cooperating institutions are secondary and postsecondary schools covering academic and vocational education. Whereas the

Vocational Cooperative Centers must be recommended and approved by the State Board of Education, Education Districts do not require Board approval. They have legal authority to form, provided they meet certain legal criteria. A staff member in the Commissioner's office simply checks to see that the institutions, as a group, meet the criteria for authorization.

The secondary funding formula for vocational education uses an excess-cost formula, taking into account the cost of vocational education programs and subtracting the general education the students earn.

Faculty Credentialling and Development

There are two licensing authorities in Minnesota. The State Board of Teaching licenses secondary vocational teachers and all other teachers except postsecondary vocational teachers whose licensing was transferred to the State Vocational Board. For secondary vocational instructors, an average of about 4,000 hours of work experience for those with a degree and about 6,500 hours work experience for those without a degree are required. Some hours of work experience can be substituted with courses.

There have been some preliminary discussions about credentialling although not much has been concluded. A number of respondents see some movement toward encouraging academic and vocational skill integration for teachers. More dual academic-vocational certification has been suggested, requiring vocational teachers to become grounded in the basics rather than just "teaching shop." Some current license requirements would have to be

waived to accommodate teachers who would teach vocational education courses. A science instructor, for example, would not have the industrial technology license necessary to teach in an integrated setting even though he or she might have the knowledge or skills. Because of recent cuts to vocational education, it is felt that vocational teachers are much more likely to see the need for integration than are academic teachers.

It has also been suggested that flexibility could be increased by allowing people to teach at the local level without credentialing. The move would facilitate bringing people from industry without degrees to teach some segment of a class. Speculation is that the proposal would gain stiff opposition from teachers unions, but the legislature might introduce it anyhow.

The movement to an outcome-based system is also likely to force teacher education programs to an outcome-based model themselves (e.g., "Here's what teachers need to know to function in a given area"). A study supporting this view was completed in 1986, and is now being put into place. At least one Education District, recognizing changing requirements for functioning in an outcome-based system, is putting its teachers through district-sponsored staff development to accommodate the transition.

Instructional Processes

The state system is seen by some state task force members as moving eventually to some form of competency-based, open-entry/open exit classes. The terminology used is outcome-based or results-based instruction rather than competency-based, and the

vision is for the total system, academic and vocational. The plan emphasizes removing boundaries between systems to facilitate continuity in learning. In the outcome-based system, time will be looked at much differently. Students will have to acquire expected outcomes before moving on, subject matter or skills will be taught and retaught until mastery is achieved. It is envisioned that instruction will be much more rigorous with some talk of moving to a grading system that only recognizes A, B, and Incomplete. It will be necessary to state the outcomes in terms of courses for a period of time to ease interpretation of work to be transferred to 2- and 4-year institutions for credit.

Strengths/Weaknesses

There is a feeling that Minnesota has been successful historically in providing education from K-12 through the career stages. Until the last 5 years, most students had at least one vocational education course. Over the past few years, the secondary system has been weakened by increased demands for academic requirements and the reduced concomitant demand for vocational courses.

There is wide agreement that a major accomplishment was pulling together a task force to work on the vocational education reauthorization plan for a variety of interests with support from both the House and Senate. Over 250 educators (vocational and academic), administrators, legislators, and students were involved in the thinking process and, while there was strong direction, a consensus process was used allowing everyone's ideas to be considered in the plan's development.

They were also pleased with the product--a plan calling for an outcome-based system, the integration of academic and vocational education, secondary-postsecondary articulation, and equal access with legislative recommendations that rules be relaxed to achieve it.

At the same time, there is a great deal of apprehension over the enormity of the task and the pace at which changes are occurring. The time allotted to prepare the report was only 5 months. It took 3 months for the money to be allocated from the legislature, and the process of putting the report together had to start before the funds were in hand. Those circumstances limited the amount of participation from the field, causing apprehension about the perception of the degree of ownership by stakeholders. Some people see impending legislative changes of a fundamental nature with respect to vocational education and feel they do not know enough about it, and that the changes in the vocational system needed to be viewed, not piecemeal, but as a part of the total educational restructuring.

The question of how to train staff adequately and integrate across disciplines to implement the plan seems overwhelming. The plan calls for retraining 42,000 teachers within 5 years. Because of the enormity of the undertaking, the potential for big mistakes seems greater. Some feel that the proposed changes should be a matter of choice and not mandatory.

Ohio Vocational Education: An Evolutionary Approach to Change

Setting/Factors Shaping Vocational Education

Vocational administrators in Ohio see the state as having a relatively large portion of the population with baccalaureate degrees, a surplus of college graduates, and a shortage of technicians--a state that is generally undertraining for business and technology. Legislation is at a standstill in units funding. Ohio is one of the six highest states in teen pregnancy, and the problem is increasing among vocational students as well as among those in the system at large. The number of physically handicapped, especially those with multiple handicaps, are also increasing rapidly in vocational education.

Attitudes toward Vocational Education

Attitudes toward vocational education vary widely, depending on the level of familiarity of the observer and on the geographic location. The image of vocational education seems to be positive to the man-on-the-street. A recent poll conducted by the Institute for Policy Research in Cincinnati, Ohio, found that 75 percent of respondents who had children in school felt vocational courses would be appropriate for their children; 80 percent of respondents felt that vocational education was "extremely" to "very" important as a part of the high school program.

Business leaders, especially chief executive officers of large companies, express negative attitudes toward vocational education, but those attitudes seem to run counter to the hiring

preferences among production supervisors in the large companies. Vocational education is not mentioned prominently as an educational alternative among black leaders, although black students enrolled in vocational education are 17 percent compared to 14.2 percent in the overall school population. By the same token, vocational education seems to carry a generally higher image in the less densely populated blue-collar counties than in the most populous urban counties.

Goal/Purpose of Vocational Education

The Vocational Education Mission Statement in Ohio provides a threefold purpose: to increase basic skills, the core competencies necessary to prepare for entry-level job and for lifelong learning; to build employability skills--those skills and work habits essential for productivity; and to develop employment skills--the skills to perform occupationally-related tasks.

The Department of Education places heavier emphasis on secondary vocational education, although postsecondary vocational education is also emphasized. A number of reasons are cited by state administrators: free education ends at the 12th grade and a number of students will not have the means of advancing immediately to the postsecondary level; more federal dollars are invested in secondary public education than in postsecondary; and there is a need to catch students as early as possible in order to increase the amount and quality of training to which they will be exposed. Of the 300,000 students enrolled in degree granting institutions only 21,000 are in associate degree programs and the

vast majority never complete; the bulk of postsecondary education is retraining. The elected State Board of Education and the State Superintendent have established a goal of 40 percent enrollment of secondary students in vocational education, given the dollars available in the current state plan.

Structure/Governance

K-12 public education in Ohio is governed by an elected State Board of Education to whom the State Superintendent of Public Instruction reports. The State Director of the Division of Vocational and Career Education reports to one of five assistant superintendents.

Ohio's 614 school districts are divided among 103 Vocational Education Planning Districts (VEPD). Vocational education must be made available to every 11th and 12th grader. Some single city school systems comprise a VEPD, and some districts combine to form a Joint Vocational School District (JVSD). School districts and JVSDs levy taxes for local support. JVSDs are often more successful in passing levies; because they draw from a wider area, they can request lower millage.

Vocational education programs are delivered through comprehensive high schools, satellite career centers, in a single school district, and joint vocational schools. A major thrust of many of the JVSs is adult training--particularly direct training for industry. Twenty-one centers are full service adult centers with a wide variety of services such as intake, assessment remediation, and career counseling tailored to accommodate adult needs. They

are accredited by the North Central Accrediting Association and students are eligible for PELL grants. The Adult Centers are designed to provide business and industry cost-efficient training to upgrade the skills of their personnel. It is also projected that the new welfare reform legislation requirements will create massive adult programs putting intense pressure on the system to respond. Under the new rules, adult clients with no high school diploma must be enrolled in Adult Basic Education.

Funding

Postsecondary vocational education is funded with local, state, and federal funds. The state provides 53 percent and the local provides 47 percent from tax receipts gathered through levies. State funding is based on the Secondary Unit System. A unit is comprised of a teacher, students (15-25), and hours (22-1/2 per week). The state provides \$35,000 per unit per school district. Federal money comes from Carl Perkins funds.

JVSS hold somewhat of an advantage in funding. They are able to ask for smaller millage in tax levies because their taxes are drawn from a wider area than the local districts. Consequently, JVS levies are successful. Moreover, JVSS get higher state aid than the locals because they are able to beat them on average daily attendance. Whereas there is a great deal of competition for state and local funds, federal money is not a high concern.

The state equipment line item is \$5 million to cover up to 50 percent of a district's costs. Where the state shares the cost of equipment, it has to be tagged with a state tag and sold back

to the state after its use. There is some equipment sharing within school districts where secondary and postsecondary programs are run.

Faculty Credentialing/Development

Secondary vocational educators must be certified by the state. Instructors with a baccalaureate degree are required to have 3 years of work experience; those with no baccalaureate are required to have 5 years of work experience and must complete a 36-hour instructional program. Requirements were recently changed from 24 quarter hours to 36, and from 7 years to 5 years trade experience--more baccalaureate education and fewer years experience.

The state also runs its own inservice workshops for vocational education instructors. Five Regional Personnel Development Centers are operated at the state universities with vocational education cosponsorship. The personnel development centers train teachers newly recruited from business and industry and experienced teachers. In addition, they conduct research for vocational education. Local districts sometimes provide paid seminars and provide opportunities for instructors to spend time working in their area of instruction. They are encouraged to use their advisory committees as a means of updating their knowledge in the fields of instruction. They are also encouraged to take teacher education classes.

The state is now promoting dual certification--academic and vocational--for instructors. Many vocational teachers could teach mathematics and science because of requirements in their occupational areas. Vocational teachers can now be paid by the state to work on academic certification.

Currently the state does not check those coming from industry for basic skills. Employers are simply asked for verification of industry experience. It is likely that more entry-level testing will occur for vocational and academic skills.

Instructional Process

The Superintendent of Public Instruction in Ohio is calling for vocational education to push for program excellence. The push is resulting in a movement toward strengthened academics in vocational education to build in transferrable skills for anticipated job changes that students are likely to face in the work world.

The Ohio initiative for increased academic content in vocational education is Program Options. Where the vocational education teacher traditionally taught all vocationally related basic skills, under Program Options certified math, English, and science teachers are teaching the academic content. Coordination between the academic and vocational teachers is facilitated by state-sponsored preservice workshop for teachers, by a correlated outline for classes, and by a scheduled correlation time for the vocational and academic teachers to meet. The vocational teachers communicate to the academic teacher the kinds of tasks to be

performed and the academic teacher relates the principals involved.

The movement toward academic vocational integration is having an impact on academic courses as well. Mathematics specialists are now talking about increasing the amount of teaching via applications. There is now talk in Ohio of moving toward a two-track system in education--college preparatory or academic and vocational eliminating the general track. It is widely held that general education prepares the student for nothing.

State officials feel that Ohio will move toward competency-based instruction to reflect the competencies in various occupations, but movement toward open-entry/open-exit instruction is restricted by Carnegie units and time standards. In some cases, seniors in the second semester can go on early placement into the workplace. The adult education programs are largely competency based and open-entry/open-exit, reflecting the necessity to accommodate business and industry needs.

Some articulation agreements allow for early entry into postsecondary programs. Currently, articulation agreements are found at the local level in Ohio. However, the state recognizes it has a responsibility to take the leadership in forming articulation agreements and sees itself taking the initiative more over the next 3 years or so.

Strengths/Weaknesses

Ohio has taken more of an evolutionary than rapid approach to change in its vocational education program. There is a great deal

of comfort with the program as it is, but with a recognition that adjustments must be made here and there to meet changing conditions. Strengths pointed to in the program are the following:

- o Vocational education is accessible within very short driving time to every student in Ohio.
- o Placement rates are high--over 90 percent of students are placed; over 75 percent employed in fields related to training.
- o Vocational education has good relationships with the private sector and strong commitment on the part of employers.
- o Program Options is an exemplary program.

Areas suggested for attention were as follows:

- o Stronger career exploration for younger students
- o Greater coordination with public agencies for physical, social, and emotional support
- o A restructuring of boundaries between JVSs and high schools to reduce the competition--some high schools are within a few minutes of JVSs
- o Better public relations to improve vocational education's image
- o The need to keep pushing access, equity, and excellence

CHAPTER 4

INTERVIEW QUESTIONS AND QUESTIONNAIRES

I. KEY QUESTIONS

Code

- 1-00 A. Key Questions
- 1-40 1. What is the purpose of vocational education?
- 1-41 2. Is the current vocational education system in Pennsylvania accomplishing this purpose?
Strengths? Problems?
- 1-42 3. Describe the fundamental characteristics of the ideal way to prepare youth and adults for work in the year 2020?
- 1-43 4. In your opinion, what changes need to be made in Pennsylvania's voc-ed system to achieve the ideal system needs?
- 1-44 5. We are going to send a survey instrument to 300 individuals across Pennsylvania. We are seeking diverse opinions about vocational education in Pennsylvania. Who would you recommend for potential survey respondents?
(name, title, complete mailing address)
- 1-45
- 1-46
- 1-47
- 1-48

II. EDUCATION

Code

- 2-00 **A. Assumptions/Goals**
- 2-40 1. philosophy
- 2-41 2. goal determination
- 2-42 3. goal statements
- 2-43 4. level of student proficiency
- 2-44 5. holistic vs. skill preparation
- 2-45 6. rationale
- 3-00 **B. Governance**
- 3-40 1. structures
- 3-41 2. interrelationships
- 3-42 3. control
- 3-43 4. group interest
- 3-44 5. policy determination
- 4-00 **C. Organization**
- 4-40 1. administrative style
- 4-41 2. levels
- 4-42 3. delivery system
- 4-43 4. job assignment/all staff
- 4-44 5. timeframe/pattern
- 4-45 6. state/local organization

Code

- 5-00 D. Teacher Characteristics
- 5-40 1. gender
- 5-41 2. job experience
- 5-42 3. academic preparation
- 5-43 4. updates: technical and pedagogical
- 5-44 5. ethnic composition
- 5-45 6. age
- 6-00 E. Access
- 6-40 1. target group
- 6-41 2. scheduling of classes/students
- 6-42 3. facility/equipment modification
- 7-00 F. Effectiveness/Efficiency
- 7-40 1. evaluation processes - state - local level
- 7-41 2. indices/criteria
- 7-42 3. stakeholder involvement
- 8-00 G. Planning
- 8-40 1. processes
 - a. participation - stakeholders
 - b. follow-up
 - c. timeliness - frequency
 - d. information sources
 - e. implementation
- 8-41 2. future orientation

Code

- 9-00 H. Funding
- 9-40 1. sources - local taxes and state/federal categorical, entitlement, competitive
- 9-41 2. distribution/allocation
- 9-42 3. guidelines - rules and regulations
- 10-00 I. Facilities and Equipment
- 10-40 1. utilization
- 10-41 2. currency/usefulness
- 10-42 3. size and amount
- 10-43 4. location
- 10-44 5. relevance to program goals
- 11-00 J. Curriculum
- 11-40 1. objectives
- 11-41 2. programs offered
- 11-42 3. safety
- 11-43 4. scope and sequence
- 11-44 5. content
- 11-45 6. location of offerings
- 11-46 7. leadership development/youth and adults
- 11-47 8. career development

Code

- 12-00 K. Student
- 12-40 1. gender
- 12-41 2. numbers
- 12-42 3. class standing
- 12-43 4. enrollment by program
- 12-44 5. handicapped
- 12-45 6. disadvantaged
- 12-46 7. job placement
- 13-00 L. Rules and Regulations
- 13-40 1. minimum enrollment
- 13-41 2. definition of voc ed student
- 13-42 3. development processes
- 14-00 M. Instructional Processes
- 14-40 1. teaching/learning strategies
 - a. coop
 - b. team teaching
 - c. competency-based
 - d. open entry/open exit
 - e. individualized
- 14-41 2. youth club participation
- 14-42 3. time on task
- 14-43 4. teacher time (schedule)
- 14-44 5. student records

Code

- 15-00 N. Linkages
- 15-40 1. types
- 15-41 2. formal/informal
- 15-42 3. agencies, entities, organizations
- 16-00 O. Articulation
- 16-40 1. types of agreements
- 16-41 2. extent of participation
- 16-42 3. potential
- 17-00 P. Professional Personnel Development
- 17-40 1. providers
- 17-41 2. requirements - certification
- 17-42 3. rewards - credit, salary
- 17-43 4. delivery system - release time

III. COMMUNITY

Code

- 18-00 A. Ethnic composition
- 19-00 B. Attitudes and values
 - 19-40 1. image of education
 - 19-41 2. role of education
 - 19-42 3. role of voc ed
 - 19-43 4. per pupil expenditure
 - 19-44 5. Test of Essential (TELS)
 - 19-45 6. EQUA data
 - 19-46 7. participation in additional education
 - 19-47 8. state/federal/local mix of funds
 - 19-48 9. advisory committee participation
- 20-00 C. Stakeholder participation
- 21-00 D. Socio-economic factors
 - 21-40 1. trends and issues
 - 21-41 2. family income
 - 21-42 3. employment trends
 - 21-43 4. plant closings and start-up
 - 21-44 5. citizen mobility
 - 21-45 6. welfare participation
 - 21-46 7. characteristics of new jobs

IV. LABOR MARKET

Code

- 22-00 A. Number, kind, size of firms
- 23-00 B. Employer needs
 - 23-40 1. emerging occupations
 - 23-41 2. projections
 - 23-42 3. new industries
 - 23-43 4. state sources for information re: employment
needs
- 24-00 C. Employer attitudes

PENNSYLVANIA VOCATIONAL EDUCATION STUDY

Name _____

Please list the five major strengths and weaknesses/problems of the Pennsylvania vocational education system. Please be clear and concise.

STRENGTHS

(1)

(2)

(3)

(4)

(5)

WEAKNESSES/PROBLEMS

(1)

(2)

(3)

(4)

(5)

(6)

(Please go to next page)

PENNSYLVANIA VOCATIONAL EDUCATION STUDY

Please list suggestions for improving the delivery of a comprehensive, articulated program of vocational education in the Commonwealth of Pennsylvania. Your suggestions may cover areas such as state and local governance, program relevance, program planning, program evaluation, curriculum, instructional processes, program goals, coordination of program offerings by various agencies and institutions, staff development, program relationships with business/industry, and other areas you deem appropriate. Please be brief and concise.

(1)

(2)

(3)

(4)

(5)

PENNSYLVANIA VOCATIONAL EDUCATION STUDY

Second Round - Policy Delphi

Name _____

Office telephone number (_____) _____

(We are requesting a telephone number to use in the event that we need to further discuss your ideas.)

DIRECTIONS:

Please respond to the following issues, goals, and alternatives by placing an "x" in the box that indicates the levels of desirability and feasibility you would assign to each item. It is important that we understand the logic behind your ratings. Therefore, we are asking that you briefly and clearly describe why you rated each statement as you did.

1. The state education agency should provide leadership for and coordinate the development of a long-range vision of what vocational-technical education is and what it should be and communicate that vision to all publics.

Explanation:

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. The state education agency should provide leadership and technical assistance for local public and proprietary education institutions to develop plans for coordinated and articulated vocational-technical education programs at all levels. Such plans would include individual and community needs assessment, specification of program offerers, and program scope and sequence.

Explanation:

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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3. Audits should be conducted by local providers of vocational-technical education programs to determine what happens to students after they leave vocational-technical education programs.

Explanation:

Very <u>Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	Very <u>Undesirable</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Definitely <u>Feasible</u>	Possibly <u>Feasible</u>	Possibly <u>Unfeasible</u>	Definitely <u>Unfeasible</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Leadership from the state education agency is needed to maintain a cutting-edge emphasis in vocational-technical education curriculum development, research, program planning, program evaluation, and personnel development.

Explanation:

Very <u>Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	Very <u>Undesirable</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Definitely <u>Feasible</u>	Possibly <u>Feasible</u>	Possibly <u>Unfeasible</u>	Definitely <u>Unfeasible</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. State and local vocational-technical education administrators should have in-depth knowledge of vocational-technical education acquired through a combination of formal preparation and experience.

Explanation:

Very <u>Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	Very <u>Undesirable</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Definitely <u>Feasible</u>	Possibly <u>Feasible</u>	Possibly <u>Unfeasible</u>	Definitely <u>Unfeasible</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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6. The position of chief administrator for vocational-technical education in the state education agency should be elevated to the level of commissioner.

Explanation:

Very <u>Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	Very <u>Undesirable</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Definitely <u>Feasible</u>	Possibly <u>Feasible</u>	Possibly <u>Unfeasible</u>	Definitely <u>Unfeasible</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. The state education agency needs to place more emphasis on and give more visibility to innovative/exemplary vocational-technical education programs.

Explanation:

Very <u>Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	Very <u>Undesirable</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Definitely <u>Feasible</u>	Possibly <u>Feasible</u>	Possibly <u>Unfeasible</u>	Definitely <u>Unfeasible</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. State leadership and other resources should be provided to local institutions for enhancing the job placement programs and processes.

Explanation:

Very <u>Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	Very <u>Undesirable</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Definitely <u>Feasible</u>	Possibly <u>Feasible</u>	Possibly <u>Unfeasible</u>	Definitely <u>Unfeasible</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Vocational educators should seek agreements with business and industry officials who would guarantee placement of vocational-technical education graduates.

Explanation:

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. The state should develop a system for vocational-technical education equipment replacement and a system for funding needed equipment.

Explanation:

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. All beginning vocational-technical education teachers should have a baccalaureate degree.

Explanation:

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. The state should establish a research and development center with responsibility for planning and conducting statewide efforts for vocational-technical education in--

- o Curriculum Development
- o Innovative/Exemplary Programs
- o Personnel Development
- o Research
- o Program Planning
- o Program Evaluation

Explanation:

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. The state, in cooperation with business and industry, should develop training programs that use the facilities of business and industry to update the technical skills of vocational-technical education teachers.

Explanation:

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. All vocational-technical education personnel should be required to attend an annual statewide conference that is designed to bring together all teachers, administrators, and others interested in and concerned about vocational-technical education for joint as well as concurrent sessions.

Explanation:

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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15. All area vocational-technical schools should be designated as technical institutes.

Explanation:

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. The area vocational-technical school should have its own elected school board which appoints its own chief school officer.

Explanation:

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. The regional vocational-technical education offices should be closed and current personnel placed in the intermediate units.

Explanation:

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. The same funding rules should be applied to community colleges and area vocational-technical schools.

Explanation:

Very <u>Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	Very <u>Undesirable</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Definitely <u>Feasible</u>	Possibly <u>Feasible</u>	Possibly <u>Unfeasible</u>	Definitely <u>Unfeasible</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. Area vocational-technical school funding should be based on participating school enrollment regardless of the number of students the participating school sends to the area vocational-technical school.

Explanation:

Very <u>Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	Very <u>Undesirable</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Definitely <u>Feasible</u>	Possibly <u>Feasible</u>	Possibly <u>Unfeasible</u>	Definitely <u>Unfeasible</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

20. The state should provide double funding for secondary students attending an area vocational-technical school (i.e., if the subsidy for each secondary student is 1.2, then the subsidy for a student attending an area vocational-technical school should be 2.4).

Explanation:

Very <u>Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	Very <u>Undesirable</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Definitely <u>Feasible</u>	Possibly <u>Feasible</u>	Possibly <u>Unfeasible</u>	Definitely <u>Unfeasible</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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21. A career awareness program should be implemented in all school systems.

Explanation:

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22. Exploratory vocational-technical education programs should be offered at the middle/junior and senior high school levels.

Explanation:

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

23. Vocational-technical education should be offered as clusters of occupations at the ninth grade and all students should be required to enroll for credit in these combination hands-on career development courses. Students would receive 1 credit for participating in 4 cluster areas that they would choose.

Explanation:

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24. The curriculum offering of the area vocational-technical school should be comprehensive, integrating vocational and academic education.

Explanation:

Very <u>Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	Very <u>Undesirable</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Definitely <u>Feasible</u>	Possibly <u>Feasible</u>	Possibly <u>Unfeasible</u>	Definitely <u>Unfeasible</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

25. Where possible, apprenticeship programs should be established in conjunction with vocational-technical education programs.

Explanation:

Very <u>Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	Very <u>Undesirable</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Definitely <u>Feasible</u>	Possibly <u>Feasible</u>	Possibly <u>Unfeasible</u>	Definitely <u>Unfeasible</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

26. Secondary vocational-technical education should be a generalized offering reflecting core clusters and transferable technical knowledge and skills with emphasis on critical thinking and enhancement of basic skills.

Explanation:

Very <u>Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	Very <u>Undesirable</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Definitely <u>Feasible</u>	Possibly <u>Feasible</u>	Possibly <u>Unfeasible</u>	Definitely <u>Unfeasible</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

27. Vocational-technical education programs should be competency based with no requirements regarding the minimum number of hours to be completed.

Explanation:

Very <u>Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	Very <u>Undesirable</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Definitely <u>Feasible</u>	Possibly <u>Feasible</u>	Possibly <u>Unfeasible</u>	Definitely <u>Unfeasible</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

28. Vocational-technical education programs should be discontinued at the secondary level and offered only at the postsecondary level.

Explanation:

Very <u>Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	Very <u>Undesirable</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Definitely <u>Feasible</u>	Possibly <u>Feasible</u>	Possibly <u>Unfeasible</u>	Definitely <u>Unfeasible</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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29. Vocational-technical education needs to develop and offer special programs for those individuals who have dropped out of school.

Explanation:

Very <u>Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	Very <u>Undesirable</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Definitely <u>Feasible</u>	Possibly <u>Feasible</u>	Possibly <u>Unfeasible</u>	Definitely <u>Unfeasible</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

30. Area vocational-technical education schools should place a major focus on adult vocational-technical education rather than secondary vocational-technical education.

Explanation:

Very <u>Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	Very <u>Undesirable</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

31. The state should expand customized training programs and use the staff, facilities, and equipment of community colleges and area vocational-technical schools.

Explanation:

Very <u>Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	Very <u>Undesirable</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	No <u>Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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If you would like to add items you feel strongly about, please feel free to do so.

32.

Explanation:

Very <u>Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	Very <u>Undesirable</u>	No <u>Judgment</u>
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<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	No <u>Judgment</u>
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115

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33.

Explanation:

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>
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<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

34.

Explanation:

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>
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<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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35.

Explanation:

<u>Very Desirable</u>	<u>Desirable</u>	<u>Undesirable</u>	<u>Very Undesirable</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<u>Definitely Feasible</u>	<u>Possibly Feasible</u>	<u>Possibly Unfeasible</u>	<u>Definitely Unfeasible</u>	<u>No Judgment</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

THANK YOU!

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CHAPTER 5

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CHAPTER 7

POLICY DELPHI MEETING AND PARTICIPANT LIST

Fifty-two people were invited to the Policy Delphi meeting held in Harrisburg on February 10, 1989. Thirty individuals responded affirmatively and 28 of these actually attended the meeting. Representation was as appears in the table 1. The figures total more than 28 and 52 because some of the individuals represented more than 1 group.

Three criteria were used to select individuals invited to the Policy Delphi meeting: geographical spread, organizational representation, and innovativeness or thoughtfulness of responses on the second round of the Delphi questionnaire. The table 1 provides a breakdown by organizational affiliation of individuals invited to attend the meeting.

The individuals who attended the meeting were divided into three groups that rotated within and between the three project staff members. The duties of the project staff members were to initiate discussion, keep discussion on topic and moving, and take notes of what was discussed.

Following is a synthesis of comments made at the Policy Delphi meeting. The comments are organized by general topic.

Secondary Teachers

- o Secondary vocational-technical teachers are not prepared to reinforce basic skills. The 60 credit hours required of nonbaccalaureate teachers can't contain everything.

TABLE 1
GROUPS REPRESENTED AT POLICY DELPHI MEETING

Group	Number Attending	Number Invited
Postsecondary education teacher educators teacher center educators miscellaneous community and technical colleges	8	10
Secondary education AVTS directors/directors of vocational education high school principals intermediate unit directors large-city directors of vocational- technical education school board representatives teachers superintendents/assistant super- intendents guidance counselors miscellaneous high school personnel vocational advisory council	17	34
Economic development authorities	1	1
Professional associations	5	7
Business/industry/labor	2	5
Chamber of commerce	0	1
JTPA	0	2

The modules used don't provide adequate feedback; teachers need more pedagogical preparation. Vocational-technical teachers come from a different background and to force them through the same program may be unwise.

- o An occupational skill is easier to acquire than the ability to teach, especially to teach basic skills. The language of an occupation can be learned in a classroom. This is not to say that work experience is not important, but perhaps not as necessary as solid pedagogical skills.
- o Degrees are only as good as the programs they represent. The answer may be to improve the programs, both traditional and inservice.
- o Secondary vocational-technical education teachers also are not provided enough information/course work on how to understand and motivate youth or how to deal with "slow" students with low IQs.
- o Many secondary vocational-technical education teachers will retire in the near future. New teachers generally are in their mid-30s. Typically, secondary vocational-technical education teachers are older when they begin to teach. This can make obtaining a baccalaureate degree more difficult.

It is difficult to provide adequate supervision of new teachers at AVTSS because, due to tight budgeting, not enough administrative personnel is available.

- o New teachers need to have mentors. However, the guidelines for a mentoring program that was being used were constantly changing. The legislation mandating staff development was believed by some participants to be bad.
- o Universities are inflexible. Vocational technical teacher education must be flexible.
- o All vocational teachers must have an intimate knowledge of the industry. To help keep current, teachers should supervise co-op programs.
- o Perhaps vocational-technical education teachers should enroll in a traditional teacher education program with a heavy industrial emphasis, including structured internships.
- o Vocational-technical education teachers at the secondary level should be generalists who can teach across disciplines. However, the average T&I teacher begins teaching at age 40.
- o Industry could be offered tax incentives to induce them to allow some of their staff to teach short-term (1-3 months) in public secondary or postsecondary schools.
- o The leadership pool for vocational-technical education needs to be developed. If the baccalaureate degree is not required for T&I teachers, the leadership pool is greatly reduced.
- o The mentoring/cooperating teacher program used at Indiana University of Pennsylvania should occur all over the state.

- o Team teaching is great if the number of students is large enough and the schedules can be coordinated.

Economic Development

Educators and employers must work together more closely.

At the high school level, should teachers be educating youth or training adults? It's difficult to mix adults and youth in one class because the instruction comes from a different philosophical base. It's easier to mix adults with high school seniors than with younger students.

Trying to meet the needs of business and industry is frustrating. There is a conflict between what business and industry says it needs and what students can/should learn. What are reasonable expectations?

Job specific training is a strength at the secondary level; however, students find it difficult to choose an occupation with the amount of information they have been provided.

Career and Vocational Education Curriculum

The strongest programs involve a mix of academic and vocational teachers who work together for the common goal of educating students.

Vocational-technical education must have a broad, rather than specialized, curriculum at the secondary level. A database containing information on job market needs is lacking.

It is foolish to have students make a career decision in grade 9. Career education should begin in grade 1. Not all students are ready at the same age to choose a career.

General education at the secondary level should be dropped. Vocational education, as well as career education, should begin very early.

Counselors are gatekeepers who schedule the "best" students into academic courses and special needs students into vocational-technical education. Counselors must be knowledgeable about vocational-technical education.

All educational experiences should be related in an obvious, structured way.

Vocational-technical education curriculum should be competency based.

Students should be very familiar with AVTSs and their programs, before making a curriculum choice.

An integrated academic and vocational curriculum is the most desirable option, but it is difficult to achieve because each AVTS receives students from so many different sending schools.

Career education and hands-on technical orientation should be offered in grades 9, 10, and 11. In grade 12, students should be sent to AVTS and kept there for grades 13 and 14. Low interest loans should be available for students in grades 13 and 14. Using open-entry, open-exit makes more sense than clock hours to define a program. Some programs, in general, don't take as much time as others.

Career awareness is important. Students need to know what is available and the potential for career advancement, as well as how to move up.

The mentality that a student must be either vocational or academic is too narrow. Students should be able to take the courses they need/want.

The ability level, not the age level, should determine what a student is taught.

Only 13.6 percent of students in Pennsylvania actually receive college degrees. Yet, academic requirements are so heavy for secondary students that it's becoming increasingly difficult for them to complete vocational programs.

Leadership

State-level initiatives for curriculum or staff development have not been issued. People are constantly reinventing the wheel. The staff-level employees should provide staff development models, lists of resources, and curriculum. The state should not mandate curriculum, but should make good curriculum available.

The state should be providing an effective curriculum model that integrates academic and vocational subjects.

The lack of leadership stems from levels higher than the Bureau of Vocational and Adult Education.

The role of vocational-technical institutions has not been clearly defined by state leadership.

The state should set an agenda for vocational-technical education at all levels. Currently, there is too much political maneuvering with too little concern for education. The effects decisions have on education are not considered.

Vocational education does not prepare students to make career choices? The state must provide leadership and coordination in this area.

All graduate students in education should be required to take a specified number of hours or course(s) in vocational-technical education. Local leadership and potential state leadership should be familiar with the concept and workings of vocational-technical education.

The state should be very "loose" regarding structure and governance but very strict/specific regarding requirements.

The R&D center would help the state provide leadership by researching topics and innovative ideas and providing exemplary curriculum.

Leadership is not really an issue of local versus central control. It's an issue involving the consistent application of rules and regulations. Currently, rules and regulations are not consistently interpreted and applied across the three regions.

Either the general population doesn't understand vocational-technical education or thinks it is for someone else's children. The state should take a leadership role regarding the image of vocational-technical education at the secondary and postsecondary levels. The image must be improved. The public must become aware that vocational-technical education at the secondary level does not preclude postsecondary education.

Currently, the state is not doing a good job of identifying exemplary programs. The criteria for such a designation must be

improved. The research staff of the R&D center could develop exemplary programs in cooperation with field-based programs.

Salaries at the state level are too low to attract and keep the very best people. Titles, image, and salaries do matter.

The real key to support for vocational-technical education is the Secretary of Education. If the Secretary of Education was truly committed to vocational-technical education, a commissioner position for vocational-technical education would not be necessary. However, education goals have been subverted to political ends, and the Secretary is a political appointee.

Creating the position of commissioner of vocational-technical education might separate it further from other parts of education. The current structure isn't working, however, because it does not ensure coordination and cooperation. Could it be reformed?

What is the role of the head of the Bureau of Vocational and Adult Education if not to be an advocate for vocational-technical education?

The 27 regional office staff should be moved back to the main office in Harrisburg and their mission/duties should be redefined. Currently, the staff is "shuffling papers" when they could be providing technical assistance. The function is more important than the location; that is, it would be better to have this staff at the main office providing technical assistance than at the regional offices shuffling papers.

Funding

The state should provide more funding at the secondary vocational education level. Community colleges that offer technical programs receive \$1,000 more per student enrolled in those programs.

Giving taxing authority to AVTS structure will be met with great resistance.

The state should fund AVTSS directly. As the funding formula currently stands, the sending schools perceive sending students to an AVTS as a financial disincentive, even though the state pays all excess costs. Schools can restrict who goes to the AVTSS with scheduling manoeuvres, counseling, added requirements.

The facilities and equipment maintenance and update budgets should be increased at the secondary level. Except for Act 107, money for secondary schools comes from local sources, whereas community colleges are reimbursed 50 percent of equipment costs by the state.

When a community college offers AVTS adult evening programs, the programs generate FTEs for the community college. Hence, money goes to the community college rather than being equitably divided.

Governance

Institutions are resistant to working together. They don't trust each other and are busy defending their budgets. Institutions must play by the same set of rules and be treated equitably.

Cooperative local (regional) governance should be legislated and tied to funds. Housing a vocational-technical education person in the intermediate units won't work because (1) intermediate units are dedicated to working with secondary not post-secondary and (2) a state of paranoia exists regarding placing vocational-technical education staff in the intermediate units.

Every AVTS should become a technical institute and serve adults.

AVTSS should be governed by the intermediate unit (IU) structure.

Governance structure should promote secondary to postsecondary articulation.

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CHAPTER 8

EXTERNAL REVIEW PANEL MEETING

External Review Panel

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On February 11, 1989, the external review panel members met with project staff to discuss and critique the recommendations that had been developed. Panel members were sent a copy of the recommendations to review prior to the meeting. Dr. McKinney, as project director, chaired the meeting held in Harrisburg, Pennsylvania. Comments of the review panel follow:

- o Recommendations concerning economic development should be included.
- o Document the fact that vocational education students are not receiving adequate academic preparation.
- o Define, in 3-5 pages, the problems of vocational education at the secondary and postsecondary levels. State clearly and explicitly what the problems are.
- o Emphasize funding of and authority and responsibility for vocational education.
- o Use data to back up recommendations in the final report.

- o Take some major risks. Even if some stances/recommendations are not "popular," make them if, in your best judgment, they need to be made. The integrity of the study must be maintained through honesty.
- o The recommendations do not yet clearly define the roles of secondary and postsecondary education.
- o Quality vocational programs can't exist without a quality academic program. "General math doesn't cut it."
- o Employment as well as the ability to continue to learn should be the measures by which vocational education is evaluated. Redefine the vocational program of study.
- o Delete alternative recommendations.
- o Resequence recommendations so they "flow" more smoothly for the reader.
- o An R&D center can't make up for a weak state department.
- o Accountability and responsibility issues at the local level are not addressed.
- o Vocational education in any state needs a strong state director and a sense of direction.
- o The R&D center should be responsive to the state director.
- o Merge recommendations 4 and 13. (Establishment of an R&D center should incorporate functions of teacher education centers and regional offices.)
- o The funding currently going to the regional offices could be used to fund regional planning. Regional planning staff could be housed at a technical institute.
- o A mission statement for vocational-technical education should include (1) its purpose at the secondary as well as postsecondary levels, (2) a definition of a vocational concentrator, and (3) outcome standards to use for determining accountability.
- o Emphasize the academic inadequacy of general education at the secondary level to solve the academic deficiencies of vocational-technical education students. The "academic sector" must address these needs and contribute to their resolution.
- o Michigan offers math remediation courses at its AVTSS and is retraining vocational education teachers to teach math.

- o The recommendations are too "wordy" and should be more concise.
- o The strengths and weaknesses listed for each recommendation should be omitted.
- o The commonwealth should first decide on the image of vocational-technical education it wants to project and then market it.
- o Include adult vocational education in a more obvious way.
- o Pennsylvania should have a council for vocational-technical education that is made up of members from both basic education and higher education.
- o Technical institutes could comprise the 13th year of secondary vocational-technical education. Or, branch campuses could be housed at technical institutes to offer the academic courses for an associate degree.
- o AVTS districts should be created. The governing board for these districts should be composed either of representatives from the sending schools or individuals elected by the voters of that district. This board should have taxing authority and receive the funds directly.
- o Are AVTSs contributing to the economic development of Pennsylvania? Why or why not?
- o Michigan allotted a period of 8 years for all secondary vocational-technical education instructors to obtain baccalaureate degrees. "Grandfathering" did not occur.
- o The problems facing all of secondary education and all of postsecondary education should be discussed.
- o Speak to the current strengths of the system--incorporate them.
- o The academies in Philadelphia should be kept small and nurtured.
- o The delivery system should provide for equity and access, versatility and diversity.
- o The comments on articulation and coordination between secondary and postsecondary institutions should be expanded.
- o Secondary and postsecondary institutions should share facilities, equipment, and advisory councils.

CHAPTER 9

CALENDAR OF ACTIVITIES/EVENTS

October 3-15, 1988

Conducted interviews in Pennsylvania.

Floyd McKinney
Sally Sutter
Paula Kurth

October 13, 1988

Met with State Board of Education Task Force.

Floyd McKinney

November 7-11, 1988

Conducted Interviews in Pennsylvania.

Floyd McKinney
Paula Kurth

November 9, 1988

Met with Task Force.

Floyd McKinney

November 14-18, 1988

Met with Michigan Department of Education officials and principals and teachers.

Floyd McKinney

November 16-17, 1988

Conducted interviews in Pennsylvania.

Sally Sutter

December 6, 1988

Conducted interviews in Pennsylvania.

Sally Sutter

December 9, 1988

Sent out first-round Delphi survey

December 11-16, 1988

Gathered information from New York Department of Education officials and principals and teachers.

Paula Kurth

December 15, 1988

Met with Task Force.

Floyd McKinney

January 9-12, 1989

Floyd McKinney

Met with Task Force.
Conducted interviews in Pennsylvania.

January 20, 1989

Sent out second-round Delphi survey.

February 8-12, 1989

Floyd McKinney
Sally Sutter
Paula Kurth

Presented tentative recommendations to
Task Force.
Held Policy Delphi meeting.
Met with external review panel.

March 6-8, 1989

Floyd McKinney
Sally Sutter
Paula Kurth

Presented interim report to Task Force,
State Board of Education, and
Executive Committee of the
Pennsylvania Association of
Colleges and Universities.

April 13-14, 1989

Floyd McKinney

Critique in process draft of final report.

May 2-3, 1989

Floyd McKinney
Sally Sutter

Reviewed final draft of final report.