A Nationwide Survey of
Quality Indicators for Vocational Education

FINAL REPORT
(Draft Only)

Prepared for:
Maryland State Department of Education
Division of Vocational-Technical Education
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April 1980
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ACKNOWLEDGEMENTS

The project, A Nationwide Survey of Quality Indicators for Vocational Education, would not have been possible without the support and direction of Dr. Nancy Pinson, Research and Development, Maryland State Department of Education. The project also benefitted from the input of Dr. Rosemary Bengel, Dr. Robert Laird, and Dr. Theodore Rybka of the Department of Education.

I would also like to thank Mr. Bruce Snyder for serving as a consultant, and Dr. Lee J. Richmond, The Johns Hopkins Evening College, for her support in this project.
INTRODUCTION

Purpose

Any educator who takes his or her job seriously usually has in mind an image of what an ideal or exemplary educational program would look like. If we compared these images we would no doubt find many differences, yet we would also find a number of common themes. The purpose of this project was to see if we could obtain, through a nationwide survey, some consensus on those characteristics that define an exemplary program for vocational education.

Given that consensus can be obtained, the long-range goal of the project is to provide a basis for establishing statewide standards for vocational education programs in Maryland.

Definition

What we meant by "quality indicators" for vocational education are simply those characteristics of a program that most educators would agree are desirable or necessary to have an effective delivery system. An example of a quality indicator might be the existence of a student placement service. Quality indicators—actual characteristics of programs—are not to be confused with desirable outcomes (e.g., a high job placement rate). Although we feel that it is important to look at outcomes, the focus of this project was the examination of quality indicators. It is our feeling that many outcomes can be linked to the presence of several quality indicators. For example, a high placement rate can be traced to several factors, including the existence of a placement service. This issue is being addressed, however, in a later study.
SURVEY DESIGN

Data Collection

In September, 1979, a letter (see Appendix A) was sent to 50 State Directors of Vocational Education, asking them for their state's list of quality indicators. Letters were also sent to vocational education administrators in the District of Columbia, Guam, Puerto Rico, Saipan, Samoa, and the Virgin Islands.

Response Rate

By December, 1979, 42 of the U.S. states and territories (75%) had responded to the letter. Of those states responding, 30 (71%) sent at least one quality indicator. Seven states sent between one and nine quality indicators, and the remaining 30 states sent ten or more. Several states sent over 100 quality indicators.

The form in which the quality indicators was presented varied from state to state. Some states sent a simple list of standards or other codified, established set of quality indicators. Some states sent several volumes of pamphlets, texts, and papers which had to be explored for hours to locate individual quality indicators. Sometimes there were no program characteristics that met the above definition of a quality indicator. A few states sent a one-page letter that gave a short list of indicators or explained that the state had no quality indicators, or that their standards were being revised or developed, and were not available.

Appendix 2 summarizes the responses to our letter by state. It shows which states sent how many indicators, and provides information on those states who responded but sent no indicators.

In several instances, the cover letter accompanying the responses indicated that our respondents were very interested in this project, and would like to see a summary of the results.
DATA ANALYSIS

Considerations Guiding Identification of Indicators

Four considerations guided the initial compilation of quality indicators. First, as noted earlier, the indicator had to be a characteristic of the program itself, not an outcome.

Second, the indicator had to be general enough to encompass most delivery systems and areas of vocational education (agriculture, welding, home economics, etc.) If a potential quality indicator appeared to be applicable to only one or a few areas of vocational education, it was not recorded.

Third, although the quality indicators had to be general enough to include most program areas, they couldn't be so abstract or open-ended to make assessment difficult. For example, "adequate facilities" is too abstract. Similarly, "program is in accordance with provisions set forth in state report . . ." is not self-contained: it doesn't specify an indicator of quality because it requires reference to another document.

Finally, it became apparent during the data analysis that many of the state's standards dealt with legal issues such as child labor laws, sex discrimination, etc. It goes without saying that an acceptable program must conform to local, state, and federal laws. Standards that were obviously re-wordings or direct quotes from legal statutes were not included as quality indicators.

Sorting Procedure

By the middle of December, 1979, the last of the respondents had sent us their information. The next several weeks were spent simply reading through each state's letters, pamphlets, and documents to get a feel for the material. It was not long before I decided that I needed a scheme for organizing and reducing the information that was imbedded in the volumes of papers
with which I was confronted.

The seemingly overwhelming task of compiling the quality indicators was simplified by creating a sorting or categorizing system to identify subgroups of indicators. This idea suggested itself after I noticed that several states had their own categorizing schemes for identifying subgroups of quality indicators. Of the thirteen states who used a subgrouping system, Connecticut's scheme seemed to be the most comprehensive. Connecticut grouped its standards into 12 clusters:

1. Advisory Council/Committee
2. Administration and Supervision
3. Public Relations
4. Staffing
5. Facilities and Equipment
6. Student Recruitment and Selection
7. Counseling Services (actually, (6) & (7) were one cluster, but were split for this study)
8. Curriculum
9. Cooperative Work Education
10. Student Organizations
11. Placement and Followup

Connecticut's sorting scheme served as a model for the project; Appendix C shows that most of the other states who categorized their indicators used many of Connecticut's categories.

The process of compiling each state's indicators went something like this. I read each proposed indicator, made sure it was a program characteristic and not an outcome, and made sure it was fairly general without being
too abstract. If it dealt with legal or financial (budget) issues I did not record it, for there are existing rules to deal with these cases. If the proposed item passed all of these tests, I wrote it down and placed a number 1-12 next to it, to indicate to which category it belonged. Sometimes I edited the item to correct grammar or eliminate unnecessary wordiness. If I felt that the essence of the item was already covered by a previous indicator, I did not repeat the item. Eventually, I had 30 lists of quality indicators labeled by category.

The painstaking, laborious nature of this process cannot be described adequately in words. It was not easy to scan over what amounted to sometimes several hundred written pages for a single state, locate genuine quality indicators, and edit, record, and label them according to category. Since I was the only person recording this data, there is no doubt that a few errors of omission were made. I did check myself once by going back to a state and re-recording its indicators after I had scored fifteen other states. Even though I proceeded very rapidly the second time, I identified at least 95% of the indicators in the initial list (which I might add was one of the longest lists in the study).

The final procedure was the creation of summary lists showing the amount of agreement among states on what constituted a quality indicator within each category. The most difficult part of this task was determining whether a quality indicator proposed by one state said essentially the same thing as a quality indicator proposed by another state. Although some subjectivity was involved, these subjective judgments were relatively easy to make in most of the cases. The exact wording of the final quality indicator was chosen by combining the clearest and most comprehensive wordings from one or more of the states' proposed indicators.
Interpreting the Summary Lists

The summary lists immediately follow the main text of this report. The indicators are grouped according to the 12 subgroup topics. The first part of each list describes each quality indicator and notes how many states endorsed a version of the indicator. The second part of each list shows the actual states endorsing these indicators.

Given the room for error in the initial recording of the quality indicators, and the subjectivity in summarizing this information, one can rightfully ask how much valid information can be found in these results. My answer to this question is that these lists cover essentially all of the categories of quality indicators that appeared more than once in the survey, and it provides a rough estimate of the percentage of respondents endorsing the indicators. Thus, for example, all or nearly all of the quality indicators dealing with the vocational staff can be stated in one of the nine listed quality indicators, and the most frequently given indicator was teacher certification (roughly 65% of the respondents gave this indicator).

The summary lists are not intended to be precise reflections of indicators given by specific states. It is possible that many states will read an indicator and find that they are not listed as one of the states endorsing it, yet feel that "somewhere" they have a standard that deals with that area. Perhaps so, but the indicator might have been worded vaguely or buried in an obscure portion of a voluminous text and was therefore overlooked. The other side of the coin may occur when a state reads that it endorsed an indicator but feels that they never said that in their standards. Perhaps not, but they said something close enough to the indicator to be included on the list of endorsers. Let me repeat myself:
the lists provide a rough estimate on the amount of agreement on essentially all of the indicators that recurred; it does not accurately reflect the quality indicators or standards of specific states.

Two final points should be made about these summary lists. First, although Connecticut was chosen as having the most comprehensive system of categorizing, this does not imply that it had the "best" list of actual quality indicators.

Second, it was pointed out to me that the heading "Advisory Council/Craft Committee" was ambiguous; it could refer to either a state committee that served all the programs in the state, a local committee that served the school's overall program, or specific committees for each topical area within the program. After reviewing each state's material, I found that most states did not make these distinctions; a notable exception was Pennsylvania.

The decision on which of the following indicators are endorsed by a given state rests ultimately, as it does in Maryland, with that state's vocational education leadership. It is hoped that this report will be helpful in that it shows the proportion of states endorsing the indicators—a rough index of each indicator's national acceptance.
I. Advisory Council and Craft Committees

1. General. An advisory council and/or craft committees exist to assist the vocational program in different ways such as: evaluating the relevance of program content to what is required in actual occupations, publicizing and promoting the program in the community, developing occupational opportunities, and assisting in the application for state and federal funds. (24 states)

2. Composition. The advisory council and craft committees have representatives from business, industry, labor, education, and government. The council and committees include both sexes and an appropriate representation of the racial and ethnic minorities found in the area served by the school system. (12 states)

3. Meetings. The advisory council/craft committees meet regularly, i.e., one to four times per year. (9 states)

4. Communication. Minutes of advisory council/craft committee meetings are kept on file and are distributed to the vocational education staff. (4 states)

5. Guidelines. The advisory council/craft committees function under written guidelines which specify the length of a member's term, responsibilities, and operational procedures. (2 states)

States endorsing these quality indicators.


4. Arkansas, Indiana, Maine, West Virginia.

5. Michigan, North Dakota.
II. Administration

1. Program Policy. The administration keeps on file written program policies and plans for vocational education. These policies and plans are reviewed periodically. (12 states)

2. Elimination of Sex Bias. The administration has disseminated a policy for the elimination of sex bias and stereotyping to staff, students, parents, and employers. (3 states)

3. Support. The administration supports the advisory council and instructional staff in program maintenance and improvement. (3 states)

4. Evaluation. The administration regularly evaluates the instructional staff. (1 state)

States endorsing these quality indicators.


3. Arkansas, Florida (advisory council); Oklahoma (instructional staff).

III. Public Relations

1. **Public Relations Plan or Program.** A written plan has been developed and implemented for establishing and maintaining positive community relations and for keeping the community well-informed of vocational programs and services available. (12 states)

2. **Written Material.** A handbook or pamphlet outlining purposes, policies, and program information is available to the public. (5 states)

3. **Information Media.** Informational materials are made available to the public in a variety of ways (e.g., radio, TV, news stories, presentations, meetings, periodic reports, service organizations, school functions). (3 states)

States endorsing these quality indicators.


3. Arkansas, North Dakota, Oklahoma.
IV. Staff

1. **Certification.** All instructors are certified. (19 states)

2. **Work Experience.** Instructors have had non-teaching work experience relevant to their instructional areas. (9 states)

3. **Professional Meetings.** Funds are provided for teachers to travel and participate in inservice programs and professional meetings. (11 states)

4. **Professional Development.** The school has a plan for professional development, including, but not limited to understanding and eliminating sex bias and occupational stereotyping, updating technical skills, and improving skills related to administration, counseling, curriculum development, and teaching methods. (10 states)

5. **Cooperative Relations.** Vocational teachers maintain cooperative working relations with leaders in related industries, organizations, and agencies. (7 states)

6. **Professional Organizations.** Teachers are actively involved in appropriate professional organizations (teaching and vocational). (8 states)

7. **Advisors.** Teachers serve as advisors to student organizations. (7 states)

8. **Orientation.** New teachers and teachers returning after an extended absence attend special orientation workshops. (3 states)

9. **Verifying Instructional Content.** Teachers visit prospective employers to verify the relevancy of instructional content. (3 states)

States endorsing these quality indicators:


V. Facilities and Equipment


1. Replication of Work Situation. All job operations, tools and equipment replicate as nearly as possible those found in the actual work situation. (18 states)

2. Maintenance. Equipment is maintained, repaired, updated, and replaced as necessary. Acquisition, maintenance, and service records are kept on file. (15 states)

3. Inventory. A complete inventory of all equipment is made annually. (4 states)

4. Safety. Equipment safety devices are used, and emergency equipment (fire extinguishers, first aid supplies, safety showers, etc.) is clearly marked, easily accessible, and in proper working order. (14 states)

5. Facility Accessibility. Facilities are accessible to handicapped students. (7 states)

6. Equipment Modification. Tools and equipment are modified as necessary for handicapped students enrolled in the program. (2 states)

7. Displays. Display and exhibit space is available. (2 states)

8. Room Layout. Layout of rooms is such that distraction and interference among different classes and activities are non-existent. (2 states)

States endorsing these quality indicators.


7. Maine, North Dakota.

8. Indiana, Maine.
V. Facilities and Equipment

B. Instructional Materials

1. **Supplementary Instructional Aids.** A variety of supplementary instructional and study equipment (e.g., demonstration stands, display cases, mock-ups, audiovisual equipment, listening laboratories, etc.) is available. (7 states)

2. **Library Resources.** Library facilities supply information not normally found in textbooks (e.g., trade, technical, and professional periodicals and journals; industrial pamphlets; technical abstracts and catalogs; occupational monographs; copies of pertinent local, state, and federal regulations). (5 states)

3. **Bulletin and Chalkboards.** All classrooms, laboratories, and shops contain chalkboards and bulletin boards. (5 states)

States endorsing these quality indicators.


3. Arkansas, District of Columbia, Maine, North Dakota, Texas.
VI. Student Recruitment and Selection

1. Guidelines. There are published guidelines for the selection of students. (5 states)

2. Outreach. Pamphlets, brochures, and other materials describing the available vocational/technical education opportunities are widely disseminated to all potential students, including junior and senior high students, out-of-school youth, private and parochial school students, and minority and disadvantaged groups. (4 states)

3. Minority Enrollment. When programs are underrepresented by one of the sexes, minority groups, or disadvantaged (both academic and economic), an active recruitment program has been implemented to increase enrollment. (6 states)

4. Informed Decision. Before entering the program, students are provided with enough information to make an informed decision about whether to enroll. This information includes: goals and objectives of the program, potential for employment after graduation, and the physical demands, beginning salary, possibilities for advancement, economic and working conditions, and hazards that may be encountered upon employment. (7 states)

5. Testing. Students are selected on the basis of scores received on aptitude, interest, and ability tests administered prior to entering the program. (4 states)

6. Advanced Standing. Students may obtain advanced standing on the basis of previous experience. (2 states)

7. Staff Responsibilities. Vocational teachers and guidance staff share the responsibility for student recruitment. (2 states)

8. Employment Opportunities. Student enrollment is limited to be consistent with employment opportunities of graduates. (1 state)

9. Remedial Help. Applicants unable to meet particular program requirements are given help in remedying deficiencies or in selecting other programs appropriate to their preparation and career objectives. (1 state)

States endorsing these quality indicators:

5. Arizona, New Hampshire, Oklahoma, West Virginia.
6. Indiana, Maine.
VII. Counseling Services

1. **Career Planning.** Provisions are made for assisting students in determining their vocational interests, aptitudes, and abilities and in selecting the training program in keeping with these interests, aptitudes, and abilities. The counselor develops a written comprehensive plan for each student; the plan includes, but is not limited to (1) specific career objectives, (2) specific courses and activities directly correlated with these objectives, and (3) evaluation procedures. (19 states)

2. **Staff Responsibilities.** Instructors and guidance/counseling staff coordinate their efforts to meet student needs. (5 states)

3. **Availability.** Counseling is offered upon entrance to the program, at periodic intervals, upon student request, immediately before program completion, and after the student has left the program. (2 states)

4. **Career Exploration.** Career exploration courses are available for students to learn about the diversity of careers, levels of employment, and occupational roles available. (2 states)

5. **Job Seeking Skills.** Students are taught how to seek, secure, and keep a job. (3 states)

6. **Occupational Information.** Counselors provide students with information on requirements for occupational entry, opportunities for employment, and other information on occupations. (2 states)

7. **Pupil-Counselor Ratio.** The pupil-counselor ratio is not more than 500:1. (3 states)

8. **Assessing Needs.** There is a plan for assessing student guidance and counseling needs. (1 state)

States endorsing these quality indicators.


5. Arkansas, Indiana, Maine.


7. Alabama, Indiana, Kentucky.

8. Alabama
VIII. Curriculum

1. **Program Offerings.** Occupational programs offered are determined by assessment of employment opportunities, success in placing students, and student demand. The curriculum is prepared with the advice of instructors, related instructors, students, former students, and leaders in the occupation. (16 states)

2. **Competency-Based Curriculum.** Course goals and activities are based on competencies identified by a current task analysis of the occupations represented in the program; this list of competencies is updated periodically. Objectives are stated in measurable terms. (15 states)

3. **Social and Personal Development.** The curriculum is designed to relay not only technical skills and knowledge, but also (a) positive work habits, (b) the ability to work with others, (c) knowledge of industrial personnel organizations, (d) the ability to accept responsibility, and (e) an appreciation of the social and economic significance of work. (7 states)

4. **Instructional Methods.** A variety of instructional methods are used, including lectures, laboratory work, demonstrations, independent study, audiovisual presentation, group projects, and field visits. (6 states)

5. **Individualized Instruction.** The curriculum has special provisions for individuals with various ability levels and learning speeds, including handicapped and disadvantaged students. (8 states)

6. **Mainstreaming.** Students who are disadvantaged, handicapped, or have limited proficiency in English are mainstreamed if they show evidence of probable success. (2 states)

7. **Remedial Courses.** Remedial courses are available. (3 states)

8. **Outside Resources.** Outside speakers and community resources, facilities, and industries are used to enhance and enrich the quality of the vocational program. (9 states)

9. **Safety Instruction.** Safety instruction is provided in advance of any shop or laboratory work. (13 states)

10. **Course Information.** Available for student examination are: a list of performance objectives, a course outline, a detailed course of study or syllabus, instructional materials used in the course, and a list of references and resource materials. (5 states)

11. **Flexible Entry/Exit.** The curriculum allows flexible entry and exit from the overall program, and from one program to another. (6 states)

12. **Supervisory Experience.** Opportunities for management and supervisory activities are available to students. (3 states)

13. **Pretests.** Students are pretested on performance objectives. (2 states)

14. **New Methods.** Experimentation with new instructional media and methods is being conducted. (1 state)
VIII. Curriculum (con't, page 2)

States endorsing these quality indicators.


IX. Work Experience

1. **General.** Hands-on experience (cooperative education, supervised work experience, or in-class simulation) is available to students as a part of the curriculum. The work experience is supervised by teachers and/or employers. (18 states)

2. **Evaluation.** Evaluations of students' performances in cooperative vocational education programs are kept on file. (6 states)

3. **Training Plan.** A training plan for each student is developed jointly by the employer and teacher/coordinator. (5 states)

4. **Teacher Release Time.** Teacher/Coordinators are allowed release time to provide guidance and supervision at the job site. (1 state)

States endorsing these quality indicators.


X. Student Organizations

1. **General.** Students are provided with the opportunity to develop leadership qualities through participation in student organizations. (24 states)

2. **Involvement.** Student organizations are active at the local, state, regional, and national levels. (6 states)

3. **Participation.** A major portion of students belong to a student organization. (3 states)

States endorsing these quality indicators.


XI. Placement and Followup

1. Placement Services. Job and educational placement services are provided to all program completers and early leavers. (22 states)

2. Responsibility for Placement. Administrators, teachers, and counselors are all involved in placement. (7 states)

3. Followup. Teachers and counselors follow up on placed students for at least one year. Records are kept of graduates' occupational and educational status. (15 states)

States endorsing these quality indicators.


XII. Evaluation

1. **Program Evaluation.** The effectiveness of each vocational program is evaluated at least once a year. There is evidence that action has been taken on recommendations following evaluation. (18 states)

2. **Graduate Performance.** The effectiveness of the vocational programs is determined in part through employer surveys and graduate follow-ups. (6 states)

3. **Student Feedback.** Recommendations from students and graduates are solicited to improve the program. (4 states)

States endorsing these quality indicators.


ADDITIONAL RESEARCH

What the present study has shown, in essence, is the consensus of a group of education experts on what constitutes the key indicators of quality in a vocational education program. In the introduction of this report I alluded to some additional research that will explore the links between the proposed program quality indicators and desirable outcomes (e.g., high placement rate, student and employer satisfaction with vocational training, etc.) This section of the report briefly describes this ongoing research.

Analysis of 1979 Program Evaluation Data

For the past several years, the Maryland State Department of Education's Vocational-Technical Division has been developing, with the help of the Educational Testing Service, a program evaluation questionnaire. The questionnaire, which is completed by local personnel, students, and members of a visiting team, asks questions about teacher certification, instructional objectives, performance standards, community relations, counseling services, and so forth. In fact, the questionnaire covers to some degree each of the 12 categories of proposed quality indicators.

For a subsample of the schools completing the program evaluation questionnaire, information is available on a number of program outcomes: student satisfaction with their program, rate of placement into a job related to training, employer satisfaction with graduates, etc. I am now in the process of devising a computer program to score the evaluation data according to the 12 categories, match these scores with the outcome measures, and test for statistical association. The tests will be repeated for each sex separately and again for different races. If associations between the 12 quality scores and outcomes are found, this will lend a measure of objective validity to the proposed quality indicators.
Quality Indicators and Alternative Delivery Systems

A related project whose execution is concurrent with the above study is an inquiry into the relationship between quality indicators and outcomes in four alternative systems for delivering vocational education: Industrial Training, the Cooperative Approach, CETA programs, and Apprenticeship programs. The first stage of this project entails compiling descriptions of each approach and highlighting the unique characteristics of each. The second stage includes a survey of program graduates' reactions to their training, and employer ratings of the graduates. This will give us some indication of the programs' relative effectiveness, both for graduates in general and for women, minorities, disadvantaged, and other subgroups of interest.

Finally, through a survey of administrators and program directors, I will get information about program characteristics as they relate to the 12 proposed categories of quality indicators. In this last stage, we will discover whether the 12 categories proposed for comprehensive and vocational-technical high schools are equally applicable to alternative delivery systems, and if any indicator-outcome relationships can be found in these settings.
September 18, 1979

(Name and Address, Each State and ESJ Director)

Dear ____________ 

The Maryland State Department of Education's Division of Vocational-Technical Education, through Research funds available from P.L. 94-482, Title II, Subpart 3, is conducting a study that could benefit immeasurably from your input.

Specifically, we are attempting to identify key indicators of vocational program quality for purposes of both program improvement and program development. With this letter, we are requesting any lists of program standards or indicators of quality proposed or already issued to (your) local agencies.

After this data is received and compiled, we intend to hold one or more conferences with Maryland directors to share the program standards/indicators of quality received. Our objective is to determine the applicability of these nationally derived items to our 24 local agencies, our 17 community colleges, and our Division of Corrections (considered our 25th school system).

It is our hope that your interest in the findings of such applied research will spur your participation and quick response. Please send your lists of program standards/quality indicators to

Dr. Nancy M. Pinson
Research and Development Specialist
Maryland State Department of Education
Box 8717, BWI Airport
Baltimore, Maryland 21240

as soon as possible, but no later than November 1, 1979. We will continue to be in touch as the study progresses.

You have my warmest thanks for your cooperation and my best personal regards.

Sincerely,

Addison S. Hobbs
Assistant State Superintendent
Vocational-Technical Education
## APPENDIX 2

### RESPONSES

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<tr>
<th>States Responding</th>
<th>States Not Responding</th>
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<tr>
<td>More than 10</td>
<td>1 to 9</td>
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<tr>
<td>Quality Indicators</td>
<td>Quality Indicators</td>
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<td>Alabama</td>
<td>Georgia</td>
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<td>Arizona</td>
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<td>Arkansas</td>
<td>Iowa</td>
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<td>Connecticut</td>
<td>Minnesota</td>
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<td>District of Columbia (Jones)</td>
<td>New Mexico</td>
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<td>Florida</td>
<td>Oregon</td>
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<td>Idaho</td>
<td>Texas</td>
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<td>Indiana</td>
<td>Total: 7</td>
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<td>Kentucky</td>
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<td>Maine</td>
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<td>New Hampshire</td>
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<td>Pennsylvania</td>
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<td>Vermont</td>
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<td>Virginia</td>
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<td>Washington</td>
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<td>West Virginia</td>
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<td>Total: 23</td>
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<td>(54.8% of responders, 41.1% of total)</td>
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<tr>
<td>Total sending indicators: 30 (71.1% of responders; 53.6% of total)</td>
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<tr>
<td>Total responders: 42 (75.0%)</td>
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<tr>
<td>Information on responders who sent no quality indicators</td>
<td></td>
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<tr>
<td>California - Haven't established standards yet</td>
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<tr>
<td>Colorado - Standards vary with program</td>
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<tr>
<td>Delaware - No quality indicators in the information they sent</td>
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<tr>
<td>Hawaii - No quality indicators in the information they sent</td>
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<tr>
<td>Missouri - In process of developing standards</td>
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<tr>
<td>Montana - Standards being revised; not available</td>
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<tr>
<td>Nebraska - No single set of quality indicators</td>
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<td>Ohio - No quality indicators in the information they sent</td>
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<tr>
<td>Puerto Rico - In process of developing standards</td>
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<td>South Carolina - No quality indicators in the information they sent</td>
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<td>Tennessee - Have no quality indicators</td>
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<td>Wisconsin - No quality indicators in the information they sent</td>
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<td>Category</td>
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<td>1.</td>
<td>Administration &amp; Supervision</td>
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<td>Public Relations</td>
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<td>Staffing</td>
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<td>Student Recruitment &amp; Enrollment</td>
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APPENDIX 4

IMPLICATIONS OF FINDINGS FOR INSTRUCTIONAL PROGRAMS

The twelve categories of quality indicators, with their related component parts, were submitted to the Assistant State Superintendent of Vocational-Technical Education and to the Branch Chief of Instructional Programs. This latter individual immediately saw the value of applying this data to the improved standardization of program area, course, and unit specifications in Vocational Education. These specifications would serve not only as guidelines for local agencies in their submission of annual and long range plans, but would greatly simplify data analysis and reporting at both state and local levels. It was further envisioned that the quality indicators would constitute the substance of a State Board resolution; a resolution that would attach time and resource parameters to the documented presence of these indicators in every Maryland Vocational program.

Subsequent to these deliberations, a joint presentation by the Program Improvement and Instructional Programs Branches was made to the local directors. Both the study's findings and their recommended application were well received by this group. Following is the draft outline presently being used by the Instructional Programs Branch as they attempt to align specifications for program areas and courses to the 12 overarching categories of quality.
Outline of Proposed Program Standards of Quality

I. Advisory Council and Craft Committees
   1. General
   2. Composition
   3. Meetings
   4. Communication
   5. Guidelines

II. Administration
   1. Program Policy
   2. Support

III. Public Relations
   1. Public Relations Plan or Program
   2. Written Material
   3. Information Media

IV. Staff
   1. Certification
   2. Professional Meetings
   3. Professional Development
   4. Cooperative Relations
   5. Professional Organizations

V. Facilities and Equipment
   1. Replication of Work Situation
   2. Maintenance
   3. Inventory
   4. Safety
   5. Facility Accessibility
VI. Student Recruitment and Selection
   1. Guidelines
   2. Outreach
   3. Minority Enrollment

VII. Counseling Services
   1. Career Planning
   2. Staff Responsibilities

VIII. Curriculum
   1. Program Offerings
   2. Competency-Based Curriculum
   3. Social and Personal Development
   4. Instructional Methods

IX. Cooperative Component
   1. General
   2. Evaluation
   3. Training Plan

X. Student Organizations
   1. General
   2. Involvement

XI. Placement and Followup
   1. Placement Services
   2. Responsibility for Placement
   3. Followup

XII. Evaluation
   1. Program Evaluation
   2. Graduate Performance
   3. Student Feedback
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<td>Student/Teacher Ratio</td>
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<tr>
<td>Time Requirements</td>
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<td>Teacher Certification</td>
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</table>
SPECIFICATIONS FOR VOCATIONAL-TECHNICAL PROGRAMS

Program Title                                      O.E. Code

Program Description

(Source: O.E. Catalogs)

Content Outline

(Source: 1. V-TECS duties, if appropriate
2. Other quality lists based on job analysis
3. Locally developed)

Facilities

(Source: Custis lists)

Size of facilities
Square feet per student
Ceiling clearance height

Student/Teacher Ratio

Time Requirements

Courses Included in the Program

(Note: Use this section as needed. Probably not necessary in Trade and Industrial. Probably necessary in Office Occupations).

Primary Occupations Addressed by This Program

(Source: NOICC Occupational and Education Code Crosswalk)
APPENDIX 5

A Nationwide Survey of Quality Indicators for Vocational Education

Project Abstract

In September, 1979, the Maryland State Department of Education sent a letter to 50 State Directors of Vocational Education and to vocational education administrators in the District of Columbia and five U.S. territories, asking them for their list of program quality indicators for vocational education. By December, 1979, 42 of the states and territories (75%) had responded to the letter; of those responding, 30 (71%) sent at least one quality indicator. Examination of the lists of indicators showed 12 common themes or categories of program quality. Briefly, these were: (1) active advisory council and craft committees; (2) effective administration of program policies; (3) written plan for public relations; (4) certified staff; (5) adequate facilities and equipment; (6) recruitment program with equal access; (7) guidance and counseling services; (8) realistic, competency-based curricula; (9) cooperative education and supervised work experience; (10) student organizations; (11) placement and followup services; (12) program evaluation. Each category of program quality contained 3 to 14 subcomponents; the report describes these subcomponents and indicates the number of respondents endorsing them.

The results of this study form a data base for two further Maryland State Department of Education activities. The first is the creation of a set of overall program standards for vocational education in the State of Maryland. This set of overall standards, with an additional set of area and program specifications, will provide the basis for local program operation and accountability. The second activity is a research study to investigate the impact of the 12 quality indicators on outcomes (e.g., placement, student/employer satisfaction, etc.) for all students and certain subgroups (e.g., women, minorities, handicapped, etc.).