DOCUMENT RESUME

ED 333 239 CE 058 345

TITLE	Recommended Evaluation Criteria for Vocational and Technical Education in Indiana.
INSTITUTION	Phi Delta Kappa, Bloomington, Ind.
SPONS AGENCY	Indiana State Commission on Vocational and Technical Education, Indianapolis.
REPORT NO	IN89RE01
PUB DATE	30 Jun 89
CONTRACT	7-89-4784
NOTE	67p.; For a related document, see CE 058 343.
PUB TYPE	Reports - Research/Technical (143)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	*Delivery Systems; *Evaluation Criteria; Evaluation Methods; Postsecondary Education; *Program Effectiveness; Program Evaluation; Secondary Education; State Agencies; State Programs; *Technical Education; *Vocational Education
IDENTIFIERS	*Indiana

ABSTRACT

Interest in evaluating vocational and technical education has increased with changes in the federally legislated evaluation requirements and the national interest in economic development. Recommendations have stressed mastery of basic academic skills and preparation for multiple jobs during the working years. Indiana's three-level system for delivering vocational education is comprehensive and facilitates program planning, delivery, and coordination. The coordinating body is the Indiana Commission on Vocational and Technical Education. The state-level administering agencies are the Commission on Higher Education, Department of Employment and Training Services, and Department of Education. Programs are conducted by 302 school corporations, 49 area vocational districts, 7 public postsecondary institutions, independent colleges and universities, private proprietary schools, community-based organizations, and other agencies. A study sponsored by the commission developed evaluation criteria, described the current evaluation system, and examined practices used to evaluate education in other states. The central focus of the recommended criteria is on program effectiveness. Process criteria can be used when assessing the extent to which effectiveness criteria have been attained. The goal has been to find the balance between minimal reporting for the agency and the information required to evaluate the programs. (Twenty-five references and an appendix--effectiveness and process criteria for evaluating Indiana Vocational and Technical Education--are included.) (NLA)

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Grant: 7-89-41784
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RECOMMENDED EVALUATION CRITERIA FOR VOCATIONAL AND TECHNICAL EDUCATION IN INDIANA

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Presented to:

Indiana Commission on Vocational and Technical Education

by

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Lowell C. Rose, Executive Director
June 30, 1989

CE 058345

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Phi Delta Kappa

THE PROFESSIONAL FRATERNITY IN EDUCATION

Dr. William E. Christopher
Commissioner
325 West Washington
Indianapolis, IN 46204

Dear Dr. Christopher:

Phi Delta Kappa is pleased to forward this recommended set of evaluation criteria for vocational and technical education in Indiana. Consistent with the commission's plan that calls for the evaluations to be outcomes oriented, these criteria are designed to be used in evaluating the effectiveness of Indiana's vocational and technical education delivery system. Phi Delta Kappa is pleased to have been involved in this effort, and we feel that this approach has national potential as a model process for evaluating these programs.

First, we extend our appreciation to the State Advisory Committee. Invaluable advice was provided in the consultations about membership on the National Advisory Committee. Even though this group did not have the opportunity to review the recommended criteria in detail, the State Advisory Committee did have the opportunity to discuss the criteria in an early stage of their development. As noted in the discussion on implementation in the report, the criteria would be field-tested and used on a demonstration basis before they are adopted and installed on a formal basis. The state group's level of involvement in this study may have been somewhat limited, but the recommended process assumes a heavy level of involvement at the program provider level as the criteria are being implemented.

We also wish to express our appreciation for the cooperation and assistance provided by the staff of the commission and the three state agencies with responsibilities in this area. Staff members were accessible and willing to provide information and respond to inquiries as well as clarify expectations. Staff members were consulted at various points during the study, and, even though the final product may include criteria that were questioned by some staff members, those comments were given consideration. Indiana's vocational and technical education delivery system is continuing to develop, and we are confident that staff members of the commission and the various state agencies are cognizant of the variety of interests and pressures that were considered during the course of this study.

Special appreciation is accorded to the National Advisory Committee; this broadly representative group brought a national perspective to the study. They provided assistance in finalizing the overall design of the study, but their greatest contribution was in developing the concept of effectiveness criteria as the cornerstone of this recommended evaluation system. In this manner, Indiana has the opportunity to provide national leadership in the evaluation of vocational and technical education programs.

This effort has been consistent with Phi Delta Kappa's goals of research, service, and leadership, and we hope that this report will be of value to the commission in its continuing efforts to improve vocational and technical education in Indiana.

Sincerely,

Lowell C. Rose

) well C. Rose
ecutive Director

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FOREWORD

This report's focus on the use of effectiveness criteria in evaluating vocational and technical education in Indiana is another step in Indiana's continuing efforts to be a national leader in vocational and technical education. The state has an historical commitment to developing and maintaining a responsive set of quality vocational and technical education programs to ensure the continued development of Indiana's diverse economy. Consistent with those historical goals, this recommended evaluation system has several distinctive features that are designed to reflect the values of the state and to ensure that continued attention will be given to development of the state's human, intellectual, and material resources. The forward-thinking distinctiveness of this report is evidenced in the continuing emphasis that is given to the following considerations.

Rather than adapting traditional evaluation models, this report's study design and the resulting evaluation system represent a departure from tradition. In this manner, they are consistent with two distinctive features of the Indiana setting:

a. Indiana has been a leader in the development of a human resource system for planning and delivering vocational and technical education; the state's framework was in place before the federal government took similar actions in reauthorizing the Perkins Vocational Education Act.

b. Indiana has made the decision to use outcome or effectiveness criteria in evaluating vocational and technical education. This performance-driven model has been adopted even though historical evaluation efforts have been input-oriented and fiscal allocations have been enrollment-driven. Under this system, programs are to be evaluated on the basis of the employability and work-success of those who complete the programs. The policy choice is irregular and may be incompatible with current management and funding practices, but it illustrates that productivity and employability are not necessarily enrollment-driven or academic goals.

Periodic changes have been, and may continue to be, made in Indiana's structural system for providing vocational and technical education; however, this report's evaluation system has been designed to focus on the efficacy of local vocational and technical education programs that likely will remain relatively stable.

Stability may be sought, but it is not always desirable. To increase the likelihood that the evaluation criteria will remain relevant and current, this report's evaluation system assumes frequent review and revision of the process and the criteria as well as adaptation to different situations. This continuing renewal process offers its own style of stability and distinctiveness.

This report's emphasis is consistent with recent professional literature. Much has been written about the criteria and the process of program evaluation, but little has been written about what should be done in consequence to the evaluation. This report stresses the importance of follow-up to the evaluation in the recommended implementation process. However, from a different perspective, the challenge for state-level leaders and program administrators may be to reconcile the emphasis on effectiveness criteria for a performance-driven program in a vocational and technical educational system whose structure and design assumes an enrollment-driven program.

By focusing on program effectiveness, the report's intent is that attention will be given to program imputs when low program performance suggests the need for program improvements. In designing this evaluation system, a high value was placed on minimal reporting requirements and the capacity to adapt the evaluation system to different situations.

EXECUTIVE SUMMARY

Interest in evaluating vocational and technical education has increased with changes in the federally legislated evaluation requirements and the national interest in economic development. Rather than suggesting that vocational and technical education focus more on acquisition of specific skills, recent reform recommendations have stressed mastery of basic academic skills and preparation for multiple jobs during the working years.

Indiana's three-level system for delivering vocational and technical education is comprehensive and should facilitate program planning, delivery, and coordination. The coordinating body is the Indiana Commission on Vocational and Technical Education. The state-level administering agencies are the Commission on Higher Education, Department of Employment and Training Services, and Department of Education. Programs are conducted by 302 school corporations, 49 area vocational districts, 7 public postsecondary institutions, independent colleges and universities, private proprietary schools, community-based organizations, and other agencies.

Within this context, the Indiana Commission on Vocational and Technical Education awarded Phi Delta Kappa International (PDK) a contract to develop evaluation criteria for vocational and technical education. PDK then contracted for a description of the current Indiana evaluation system, a review of the research on evaluation of vocational and technical education, and a study of practices used to evaluate vocational and technical education in other states. National and state advisory committees were appointed to assist in the project. Consistent with the current delivery system, criteria have been developed for the commission, state agencies, and local program providers.

To maximize local flexibility in conducting and evaluating programs and to recognize that different approaches can be used to achieve similar goals, the central focus of these recommended criteria for evaluating vocational and technical education in Indiana is on program effectiveness. The historical contention has been that program outcomes cannot be measured effectively because of a lack of agreement on goals and variations in inputs and practices. However, current evaluation practices assume that program inputs and processes can vary but that standard criteria can be used to measure program effectiveness and outcomes.

For each effectiveness criterion, process criteria have been identified that can then be used by agencies in their internal assessment of the extent to which effectiveness criteria have been attained. Additions or deletions in the process criteria may be necessary to ensure their applicability and relevance. In designing this evaluation process, the goal has been to find the balance between minimal reporting for the agency or program provider and the information required to evaluate the programs.

CONTENTS

EXECUTIVE SUMMARY v

PART I
Introduction 1
New Directions for Vocational and Technical Education 1
Evaluation of Vocational and Technical Education 2
Development of Evaluation Criteria 3
Premises and Assumptions 3
Vocational and Technical Education in Indiana 5

PART II
Criteria for Evaluating Indiana Vocational and Technical Education 7
Effectiveness Evaluation Criteria for Program Providers 7
Effectiveness Evaluation Criteria for State Agencies 10
System Effectiveness Evaluation Criteria 12

PART III
Validation Process 15

PART IV
Implementation Process 17
Implementation Plan 17
Program Census Information 21
Summary of Implementation Plan 21

PART V
Review of Current State Agency Evaluation Procedures 23

PART VI
Research on Evaluation of Vocational and Technical Education 25
Evaluation Framework 25
General Recommendations 25
Characteristics Recommended by Authorities 26
Summary 27

PART VII
Practices in Other States 29

REFERENCES 31

APPENDIX A-1
Evaluation Criteria for the Program Providers A-1
Evaluation Criteria for the State Agencies A-12
System Evaluation Criteria A-20

PART I
Introduction

Vocational and technical education in America's schools traces its history to 1917 with the passage of the federal legislation under the Smith-Hughes Act. As the nation entered a period of industrial expansion, emphasis was placed on the need for the worker to develop specific occupational skills. From this beginning, vocational and technical education has expanded into a multi-agency delivery system involving secondary schools, public and private postsecondary schools, job specific short-term training programs, and collegiate institutions. The current interest in the relationship between vocational and technical education and economic development and international competitiveness is a continuation of the historical rationale for these programs.

New Directions in Vocational and Technical Education

As with other aspects of education, social and economic changes and the forces of education reform are impacting on vocational and technical education. The dramatic changes in the workplace and the possibilities of multiple jobs in a person's lifetime have resulted in an acceptance of the premise that vocational and technical education should emphasize student attainment of broad transferable skills and the importance of relating vocational and general education (Kadamus, 1986). The assumption is that a common set of basic skills and work habits is needed for a person to function in today's and tomorrow's society (Lindeman, 1984; *Investing in Our Children*, 1985).

The need for vocational and technical education to be responsive to changing conditions has been noted from a variety of sources. In a summary of a series of conferences on trends and implications for educational leaders, vocational and technical education was admonished to project needs beyond additional funds (Clodi and Jacobson, 1989). Areas of concern included:

- development of alliances
- exploitation of successes
- greater use of technology in instruction
- reform of the teaching/learning process
- responsiveness to constituents
- adoption of strategic planning

Observers contend that vocational and technical education is facing the choice of adapting to changing economic conditions and societal expectations or entering into a period of decline. Kadamus and Daggett (1986) have identified six major changes that should be considered in planning for vocational and technical education programs:

- De-emphasis on specialized training and an increased emphasis on broad transferable job skills as well as job-specific skills.
- Shift from large expenditures on specialized equipment to funds for staff development and equipment that help students develop an understanding of concepts.
- Change in program emphasis from trades and industry to information and service-related occupations.

- New linkages with business and industry.
- Development of programs to raise the public's awareness of vocational opportunities.
- Closer relationships with general (academic) education to increase curricular and program coordination.

Different types of vocational and technical education programs are emerging in response to this desire to broaden the context of vocational and technical education. One example of the merger of general and vocational and technical education into an integrated program is illustrated by the 2 + 2 or 2 + 2 + 2 tech-prep programs found in California, Indiana, Michigan, New York, North Carolina, Ohio, and Virginia. In these programs, student outcomes are built around a cooperatively selected core of competencies specific to a selected occupational area. The 2 + 2 refers to a student being in a vocational and technical education program that begins during the last two years of secondary school and continues through two years in a postsecondary institution such as a vocational school or community college. Under the 2 + 2 + 2 plan, the program is extended for an additional two years into a baccalaureate institution and concludes with a bachelor's degree. Exit requirements for these programs include a mastery of job and academic employability skills (Walker, 1989).

Evaluation of Vocational and Technical Education

In the past two decades, the interest in evaluation of vocational and technical education programs has increased. With the enactment of the Education Amendments of 1976 by Congress, a vocational education data and reporting system was established. The justification was that the lack of comparable data across states made federal policy decision making an almost impossible task. However, the data reporting system did not become fully operational because the system failed to provide the desired quality or quantity of data. This earlier emphasis on comparable data was followed by an emphasis on educational outcome data when the legislation was reauthorized in 1984 as the Carl D. Perkins Vocational Education Act. Emphasis was placed on both occupational skills and academic foundations. A secondary reason for the interest in evaluation at the program provider level was that students seeking federal postsecondary student assistance had to be in a program accredited by either a voluntary accrediting agency or a state agency.

Evaluation also has been emphasized in job training programs funded through the U.S. Department of Labor. Emphasis has been placed on performance standards and program exit knowledge and skills. As with vocational and technical education programs, job placement data also have been an integral part of the information base for evaluation.

With the emphasis on outcomes, products, and effectiveness, the temptation has been to place increased emphasis on standardized test results for the measurement of student progress. Rather than relying on standardized tests that may not be relevant to the particular situation, a consortium of state educational agencies is developing task lists specific to occupations. These items then will be subjected to a task analysis and subsequently used as the basis for development of a computerized catalog of test items to be shared across states and local school districts (Gourley, 1989).

Even though the educational outcome focus has been in effect for almost five years, only a few states have developed evaluation systems for meeting the federal requirement. The principal issues are related to what is to be evaluated, what evaluation system or model should be used, and which level – state or local – should conduct the evaluation. State and local agencies also have been slow to respond because changing federal priorities have contributed to a variety of definitions, changes in program focus, and additional target populations.

The shift from traditional input/process evaluation to outcome evaluation has forced state-level decision makers to address the issues of the definition and purpose of vocational and technical education. Both state and local agencies are seeking ways to measure and report student progress and linkages between programs and on-the-job tasks. The principal trends appear to focus on transferable and specific occupational skills, reliance on individualized programs, evaluation as a local function,

development of state technical assistance programs, and an expanded base for types of programs and program participants.

The challenges in designing an evaluation system are to secure sufficient information to meet the demands for accountability from governmental agencies, employers, and the general public, but to refrain from gathering unnecessary information. Stated differently, in making decisions, "need to know" must be contrasted with "nice to know." However, evaluation has a function beyond providing state and federal agencies with monitoring data. The maximum contribution at the program delivery level is attained when the program evaluation process provides the information base for decisions about program focus, program improvement, and program changes. In this context, program evaluation information is the primary source for program policy decisions.

Development of Evaluation Criteria

Within the context of these national conditions, the Indiana Commission for Vocational and Technical Education (CVTE) is developing an evaluation system for vocational and technical education in Indiana. The commission has contracted with Phi Delta Kappa International (PDK) "to identify and validate evaluation criteria to be used to assess the overall effectiveness of vocational and technical education, including training and employment." Recognized national experts on vocational and technical education and the process of evaluation have been involved in the development of the evaluation criteria for Indiana. Sources have included the body of literature and research on evaluation as well as the practices in selected states.

The following section contains a set of premises and assumptions about the purposes and evaluation of vocational and technical education in Indiana; this material provided the conceptual framework for much of this report. Following the premises, a brief description is presented of the existing administrative structure for vocational and technical education in Indiana.

In response to the project contract, individual sets of effectiveness criteria are presented in part II for the program delivery sites, state administering agencies, and CVTE. (Process criteria and effectiveness criteria are listed in the appendix.) The process used for validating the criteria is discussed in part III. Recommendations for implementation may be found in part IV. The project agreement stipulated that PDK was to review and summarize current evaluation systems being used in Indiana; a summary of this report is presented in part V. (See accompanying research report no. 1 for the complete report.) The response to the requirement for a review of the research literature and related documents on evaluation of vocational and technical education is summarized in part VI; the complete report is in accompanying research reports nos. 2 and 2a. As stipulated by the project contract, a summary of the evaluation practices used in selected states is reported in part VII. (See accompanying research reports nos. 2 and 2a.)

Premises and Assumptions

CVTE's long-range plan and comments of the National Advisory Committee were the principal sources for the following premises and assumptions about vocational and technical education in Indiana. These statements guided the development of the criteria for evaluating the vocational and technical education delivery system.

Goals of Vocational and Technical Education.

The goals of vocational and technical education in Indiana are to

- provide a quality workforce by preparing citizens for both employment and further education; and
- provide citizens with employability skills and retraining capacities.

Functions of the Commission.
The functions of the commission are to

- promote the development of vocational and technical education delivery systems in Indiana that can cope with diversity and respond to economic and demographic changes;
- establish system and program evaluation as a process of continuous self-improvement that results in the enhancement of programs and services to respond to employment and training needs and stimulate economic development; and
- distinguish the job preparation mission of vocational and technical education from the general education mission of regular education and translate these differences into an action plan.

Partnerships.
The development of a comprehensive system of vocational and technical education for Indiana involves the creation and maintenance of partnership programs in which current and potential employers and traditional vocational and technical education delivery agencies work together with public and private agencies in joint utilization of resources to provide programs in both traditional and nontraditional settings.

Responsive Delivery System.
The maintenance of a responsive vocational and technical education delivery system in Indiana requires the periodic review of delivery agencies and adaptations as well as modifications in response to changing needs. The system should promote change, stimulate local commitment, improve program quality, and encourage the development and attainment of performance standards.

Evaluation System.
The recommended evaluation system for vocational and technical education in Indiana assumes a three-tier organizational structure and evaluation process. Effectiveness criteria and related process criteria will be used to evaluate the effectiveness of: (1) the services and programs being furnished by local program providers; (2) the operations of state agencies; and (3) the operations of the commission and the overall vocational and technical education delivery system in the state. Evaluation results from each level then can be reviewed to identify changes that might be made to improve programs and services at the program provider level and to identify implications for short and longterm state and local public-policy decisions about vocational and technical education.

Evaluation Criteria.
The primary focus of the effectiveness criteria is on the extent to which the program has been effective in meeting the state and local objectives for vocational and technical education. Related process criteria will provide information about the extent to which the goals or targets of the effectiveness criteria have been attained and serve as indicators of steps that might be taken to improve programs. These process criteria are viewed as illustrative, and additions or deletions to the process criteria may be necessary to ensure applicability and relevance.

Staff from the commission and state agencies should work with program providers to review and modify the process criteria and identify appropriate indicators and performance standards for each effectiveness criterion. This cooperative process for identifying and developing indicators and performance standards should improve the base of support for the evaluation process. The goal should be to adapt the evaluation process to individual situations. For example, an indicator might be applicable to the entire state, but the related relevant data and performance standards might vary by program, geographical area, or characteristics of the program participants.

Phased Implementation.
The evaluation program should be phased rather than immediately implemented. The commission and the state agencies should work with program providers to identify the indicators and performance standards for each criterion. Each agency should have the responsibility to develop an implementation plan for its evaluation program.

Vocational and Technical Education in Indiana

Under Indiana's administrative structure for vocational and technical education, CVTE functions as an oversight and leadership agency for vocational and technical education in Indiana. Contacts with those local school districts and other agencies and institutions that conduct programs are through three state-level agencies:

Indiana Commission for Higher Education (CHE)
Indiana Department of Education (DOE)
Indiana Department of Employment and Training Services (DETS)

CHE is the state-level agency for vocational and technical education programs conducted by the following service provider sites: Indiana Commission on Vocational and Technical Education, Vincennes University, Ball State University, Indiana State University, Indiana University, Purdue University, and the Southern Indiana Universities. DOE is the state-level agency for vocational and technical education programs conducted by the 302 local school corporations and 49 area vocational districts in Indiana. DETS is the state-level agency for specific job training programs; the actual programs are conducted by community-based organizations and other local entities, including some of the institutions under the jurisdiction of CHE and DOE.

In the following section, separate sets of effectiveness criteria have been developed for the program providers, state agencies, and commission. The developmental process has assumed that each set of criteria would include the statutory and programmatic responsibilities applicable to that institution or agency and that each set of criteria could be used independently of the other two. This has resulted in some criteria in one set being somewhat similar to those in another set, but an effort has been made to state each criterion in a manner that makes it specifically applicable to its level.

PART II
Criteria for Evaluating Indiana Vocational and Technical Education

The following effectiveness criteria for evaluating vocational and technical education in Indiana are presented in three groups – local program provider. state agency, and commission. One or more process criteria are presented for each effectiveness criterion in the appendix. Process criteria should be viewed as illustrative; the assumption is that deletions, additions, and adaptations will be made when appropriate. Program administrators would select process criteria that would be used to indicate the extent to which each of the effectiveness criteria had been attained.

Some effectiveness criteria appear in all three sets, but the emphasis varies depending on the organizational level's specific responsibilities. The commission has greater leadership and planning responsibilities. The state agencies have greater monitoring and technical assistance responsibilities, and program providers have greater delivery and evaluation responsibilities.

In this report, the term "commission's long-range plan" refers to *Education and Jobs for Indiana's Future*, the long-range plan for a comprehensive vocational program in Indiana, as approved by the commission on July 14, 1988. This plan, agency plans, and local plans are different from those required by the U.S. Department of Education to participate in federal programs.

Effectiveness Evaluation Criteria for Program Providers

The following list of effectiveness criteria for program providers was developed as a response to task 4 in the project contract. Program providers include the state's 302 school corporations, 49 area vocational districts, 7 public postsecondary institutions, independent colleges and universities, private proprietary schools, community-based organizations, and other agencies. Criteria for evaluation at this level have been developed from the material submitted by the various contractors. In this document, the criteria have been divided into the following areas:

1.0 Structure
2.0 Planning
3.0 Diagnostic Assessment
4.0 Program Design and Delivery
5.0 Participant Services
6.0 Partnerships
7.0 Facilities and Equipment
8.0 Participant Outcomes
9.0 Program Accountability
10.0 Fiscal Accountability
11.0 Cost-Effectiveness

These evaluation criteria are designed to facilitate tracking the progress of program delivery sites in implementing those strategies outlined in the state and local long-range plans and to permit refine-

ment of specific evaluation criteria as strategies are implemented. Process criteria for each effectiveness criterion are listed in the appendix of this report. They may be used by each program delivery site in assessing the extent to which an effectiveness criterion has been attained and in determining responses to identified problems.

1.0 Structure

Effectiveness Criterion

1.1 Philosophy and Organization – Program provider's philosophy statement and administrative organization are relevant to the immediate service area, reflect current conditions, and are consistent with and supportive of current programs and documents from the commission and the relevant state agency.

2.0 Planning

Effectiveness Criterion

2.1 Local Comprehensive Plan – Program provider's current and proposed programs are consistent with and supportive of the program provider's comprehensive long-range plan and long-range plans of the commission and the relevant state agency.

3.0 Diagnostic Assessment

Effectiveness Criterion

3.1 Diagnostic Assessment – Program participants and staff use diagnostic assessment information in making decisions about program offerings and individual program selections.

4.0 Program Design and Delivery

Effectiveness Criteria

4.1 Program Design Decisions – Delivery systems accommodate the special needs of program participants and provide for exposure to and participation in actual work settings.

4.2 Curriculum Decisions – Program provider administrators use a systematic and comprehensive approach in making curriculum decisions and use data related to the immediate service area, program participants, and the goals and functions of related agencies and institutions.

4.3 Instructional Decisions – Program components are designed to make participants aware of career opportunities, reinforce positive work attitudes, attain basic skills, develop employability skills, and learn specific occupational skills and good safety practices.

4.4 Staff Development – Program provider takes steps to ensure that the staff has and will continue to develop the qualifications and skills to provide the selected programs.

4.5 Funds – Required human and material resources are appropriately allocated within and among programs.

5.0 Participant Services

Effectiveness Criteria

5.1 Program Access – Broad access is provided to the handicapped, disadvantaged, and minorities.

5.2 Program Services – Program provider selects and provides services to address the needs of current and projected program participants.

5.3 Program Breadth – Program participants have access to different choices within the program provider's cycle of offerings.

6.0 Partnerships

Effectiveness Criteria

6.1 Partnership Programs – Program provider develops and maintains partnership programs between and among business, industry, labor, government, and education.

6.2 Technology Education Curriculum – Program provider involves business, industry, labor, government, and education in the design, development, and implementation of the technology education curriculum.

7.0 Facilities and Equipment

Effectiveness Criterion

7.1 Facilities and Equipment – The facilities and equipment meet acceptable standards of safety, adequacy, adaptability, accessibility, and public health.

8.0 Participant Outcomes

Effectiveness Criteria

8.1 Demonstrated Competency – Program completers can demonstrate the competencies that are the goals of the program and the expectations of employers.

8.2 Job-Related Tasks – Program completers apply their knowledge and skills in securing and keeping a job.

9.0 Program Accountability

Effectiveness Criteria

9.1 Enrollment/Completion Targets – Program participant enrollment levels and completion rates are at, or exceed, the established standard.

9.2 Related Employment – Program completers are employed in the jobs for which they were trained.

9.3 Gainful Employment – Program completers are employed in gainful occupations.

9.4 Salaries – Salaries paid to program completers working in a training-related job exceed those for persons who did not complete the training.

9.5 Job Stability – Program completers exhibit a specified level of employment stability.

9.6 Employee Satisfaction – Program completers indicate that they are satisfied with the content, experiences, and outcomes of the training program, and have job satisfaction.

9.7 Employer Satisfaction – Employers are satisfied with the on-the-job performance of the persons employed from the program.

9.8 Postprogram Education – Program provider has follow-up information to determine the number of program completers who complete high school and/or pursue additional formal education.

10.0 Fiscal Accountability

Effectiveness Criterion

10.1 Fiscal Audits – Financial audit reports indicate that fiscal procedures are in compliance with applicable local, state, and federal rules.

11.0 Cost-Effectiveness

Effectiveness Criterion

11.1 Cost-Effectiveness – Given the program objectives and compared to the cost of similar programs, cost data per program enrollee, completer, and placement indicate that the program is cost-effective.

Effectiveness Evaluation Criteria for State Agencies

The following list of effectiveness evaluation criteria for the state agencies has been developed as a response to task 4 in the project contract. The state-level administering agencies for vocational and technical education are the Commission on Higher Education, Department of Employment and Training Services, and Department of Education. The principal sources for these criteria were the commission's long-range plan, existing evaluation criteria, related statutes, and commissioned studies. The criteria have been divided into nine broad areas:

1.0 Structure
2.0 Long-Range Plan
3.0 Agency Leadership
4.0 Fiscal Accountability
5.0 Technical Assistance
6.0 Program Evaluation
7.0 Articulation
8.0 Professional Personnel Development
9.0 Partnerships

These evaluation criteria are designed to facilitate tracking the progress of state agencies in implementing those strategies outlined in the commission's long-range plan and to permit refinement of specific evaluation criteria as strategies are implemented. Process criteria for each effectiveness criterion are listed in the appendix of this report. They may be used by the agency in assessing the extent to which an effectiveness criterion has been attained and in determining responses to identified problems.

1.0 Structure

Effectiveness Criterion

1.1 Statement of Purpose and Administrative Organization – Agency's statement of purpose and administrative organization are relevant to the programs, reflect current conditions, and support local programs.

2.0 Long-Range Plan

Effectiveness Criteria

2.1 Consistency with Commission's Long-Range Plan - Agency decisions on delivery systems and programs for vocational and technical education are consistent with the detailed provisions of the commission's long-range plan.

2.2 Goal Relevancy – The goals in the agency's long-range plan for vocational and technical education are being used to guide policy decisions at the agency and local levels.

3.0 Agency Leadership

Effectiveness Criteria

3.1 Coordination – Agency works effectively with other state agencies, commissions, and organizations that supervise or administer vocational and technical education programs

in the development of plans or programs to improve the coordination of vocational and technical education in Indiana.

3.2 Communication – Persons in other state agencies with responsibilities related to the vocational and technical education are informed about agency's role, authority, and responsibilities.

3.3 Professional Relationships – Agency personnel work with program provider personnel to improve the administration and delivery of programs.

3.4 Program Guidelines – Agency provides program providers with broad guidelines, information, and resources for curriculum development and updating.

3.5 Program Provider Long-Range Plan Review – Agency provides program providers with feedback on their local long-range plans.

4.0 Fiscal Accountability

Effectiveness Criteria

4.1 Priorities and Goals – Agency allocates funds in a manner that encourages programmatic change, stimulates local investment, improves program quality, and fosters the development and attainment of performance standards.

4.2 Sufficient Funds – The level of funding for programs under the agency's jurisdiction is sufficient to provide adequate financial support for the necessary number and performance of programs to meet state goals.

4.3 Funds Allocation – Agency dispenses funds for vocational and technical education programs in a manner consistent with the statutory requirements of the Indiana General Assembly, federal regulations, and the commission's recommendations.

5.0 Technical Assistance

Effectiveness Criterion

5.1 State-Level Technical Assistance – Agency provides technical assistance on program planning, instruction, administration, and evaluation to local program providers.

6.0 Program Evaluation

Effectiveness Criteria

6.1 Program Evaluation – Agency uses a systematic and comprehensive approach in evaluating vocational and technical education programs.

6.2 Utilization of Data – Agency's data base is used in making both program and public-policy decisions about vocational and technical education at the agency and local program provider levels.

7.0 Articulation

Effectiveness Criterion

7.1 Institutional Transition – Program participants have only minimal redundancy, logistical, or program-planning problems making the transition among and between secondary and postsecondary vocational and technical education programs and college degree programs.

8.0 Professional Personnel Development

Effectiveness Criteria

8.1 Teacher Certification – The agency guidelines for vocational teacher certification or recertification are consistent with the commission's recommendations.

8.2 Sufficient Staff – The number of qualified vocational and technical education teachers is sufficient to staff the programs in the state.

8.3 Teacher Skill Improvement – Agency works with program providers in implementing the commission's long-range plan for incorporating updated technological content and teaching skills into vocational and technical education programs.

8.4 Tax Incentives for Teachers – Where applicable, the agency makes legislative recommendations to the commission for a professional development credit system and tax incentives for teachers.

9.0 Partnerships

Effectiveness Criteria

9.1 Partnership Programs – Agency develops and maintains partnership programs between and among business, industry, labor, government, and education.

9.2 Technology Education Curriculum – Representation from business, industry, labor, government, and education assists in the design, development, and implementation of the technology education curriculum.

System Effectiveness Evaluation Criteria for Indiana Commission on Vocational and Technical Education

The following list of effectiveness evaluation criteria for the overall systems evaluation of the Indiana Commission on Vocational and Technical Education has been developed as a response to task 5 in the project contract. The Indiana Commission on Vocational and Technical Education is the state-level coordinating body for vocational and technical education. The principal sources for these criteria were the commission's long-range plan, related statutes, and commissioned studies. The criteria have been divided into nine broad areas:

1.0 Long-Range Plan
2.0 Duties of the Commission
3.0 Fiscal Resources
4.0 Program Delivery
5.0 Articulation
6.0 Professional Personnel Development
7.0 Partnerships
8.0 Technical Assistance
9.0 Vocational and Technical Education Evaluation Criteria

These evaluation criteria are designed to facilitate tracking the progress of the commission in implementing those strategies outlined in the commission's long-range plan and to permit refinement of specific evaluation criteria as strategies are implemented. Process criteria for each effectiveness criterion are listed in the appendix of this report. They may be used by the commission in assessing the extent to which an effectiveness criterion has been attained and in determining responses to identified problems.

1.0 Long-Range Plan

Effectiveness Criterion

1.1 Commission's Long-Range Plan – Commission adopts and updates a long-range plan for the provision and continuous improvement of vocational and technical education in Indiana.

2.0 Duties of the Commission

Effectiveness Criteria

2.1 Enactment of Recommendations – The Indiana General Assembly enacts the commission's recommendations concerning the development, duplication, and accessibility to employment training and vocational and technical education on a regional and statewide basis.

2.2 Coordination – Commission works effectively with state agencies, state commissions, and community-based organizations that supervise or administer vocational and technical education programs in the development of plans or programs to improve the coordination of vocational and technical education in Indiana.

2.3 Federal Funds – Commission receives and allocates the federal funds available for vocational and technical education.

2.4 Communication – Commission has systematic and purposeful communication channels with business, industry, and labor organizations that operate vocational and technical education programs.

3.0 Financial Resources/Responsibilities

Effectiveness Criteria

3.1 Priorities and Goals – Commission allocates funds in a manner that encourages programmatic change, stimulates local investment, improves program quality, and fosters the development and attainment of performance standards.

3.2 Funds Allocation – The Indiana General Assembly enacts the commission's recommendations for allocating funds for vocational and technical education programs.

3.3 Private-Sector Tax Incentives – The Indiana General Assembly enacts legislation to provide tax incentives and tax credits to encourage involvement of private-sector firms in vocational and technical education programs.

3.4 Foundation – Commission has established and maintains a nonprofit foundation for the improvement of vocational and technical education in Indiana.

3.5 Fiscal Audits – Financial audit reports indicate that fiscal procedures are in compliance with applicable local, state, and federal rules.

4.0 Program Delivery

Effectiveness Criteria

4.1 Program Provider Evaluation – Commission's evaluation and data system provides and uses information to improve the effectiveness of individual program providers.

4.2 Statewide Program Evaluation – Commission's evaluation and data system provides and utilizes statewide information on specific occupational training programs to improve the statewide effectiveness of these programs.

4.3 System Program Effectiveness – Commission's evaluation and data system provides and utilizes information to improve the effectiveness of the state's comprehensive vocational and technical education delivery system.

5.0 Articulation

Effectiveness Criterion

5.1 Institutional Transition – Commission has taken the necessary steps to ensure that program participants have only minimal redundancy, logistical, or program-planning prob-

lems making the transition among and between secondary and postsecondary vocational and technical education programs and college degree programs.

6.0 Professional Personnel Development

Effectiveness Criteria

6.1 Teacher Certification – State system for certifying or recertifying vocational teachers is consistent with the commission's recommendations.

6.2 Sufficient Staff – The number of qualified vocational and technical education teachers is sufficient to staff the programs in the state.

6.3 Teacher Skill Improvement – Program providers implement the commission's long-range plan for incorporating updated technological content and teaching skills into teaching programs.

6.4 Tax Incentives for Teachers – The Indiana General Assembly accepts the commission's recommendations for a professional development credit system and tax incentives for teachers.

7.0 Partnerships

Effectiveness Criteria

7.1 Partnership Programs – Commission develops and maintains partnership programs between and among business, industry, labor, government, and education agencies.

7.2 Technology Education Curriculum – Representation from business, industry, labor, government, and education provides assistance in the design, development, and implementation of the technology education curriculum.

8.0 Technical Assistance

Effectiveness Criterion

8.1 State-Level Technical Assistance – Local program providers receive technical assistance on program planning, instruction, administration, and evaluation.

9.0 Vocational and Technical Education Evaluation Criteria

Effectiveness Criteria

9.1 Program Evaluation – Commission uses a systematic and comprehensive approach in evaluating vocational and technical education programs.

9.2 Utilization of Data – Commission's comprehensive data base is used to make both program and public-policy decisions about vocational and technical education at the state and local levels.

PART III
Validation Process

The study design provided for the use of a jury to validate the criteria that are the products of this study. The criteria were not field-tested because of time and fiscal constraints. As noted in the discussion on implementation, the assumption is that field-testing will take place during implementation. A National Evaluation Project Advisory Committee served as the jury to validate these criteria. This seven-member committee consisted of three nationally recognized researchers in vocational and technical education, a state higher education administrator with responsibilities related to these areas, a director of vocational and technical education from an urban local school district, and two vocational school administrators.

Following the commission's acceptance of PDK's proposal, the National Advisory Committee met on four occasions. The first session was for orientation purposes. In the second meeting, the structure of vocational and technical education in Indiana was reviewed, a preliminary set of evaluation criteria was examined, and research project progress reports were reviewed.

The focus of the third meeting was on discussion of the summary of the research reports on evaluation of vocational and technical education and a brief report on current evaluation practices in Indiana and selected other states, format and type of evaluation criteria to be included in the report, and discussion of the content and outline of the final report. After considerable discussion at this meeting, the National Advisory Committee determined that the focus of the criteria should be on the effectiveness of the system for delivering vocational and technical education in Indiana. In the draft report, the focus was on effectiveness criteria. This approach assumes that the process criteria then would be used to provide evidence of attainment of a given effectiveness criterion or to identify the steps that might be taken to achieve that criterion.

Prior to the fourth meeting, the National Advisory Committee received a draft of the final report including effectiveness and process criteria for three levels – program providers, state agencies, and commission. The purpose of the fourth meeting of the National Advisory Committee was to serve as the jury to validate the criteria. The draft report included 23 effectiveness criteria for the program providers, 21 for the state agencies, and 21 for the commission, making a total of 65 criteria. The National Advisory Committee devoted most of its attention to a review and critique of the effectiveness criteria.

After the critique by the National Advisory Committee, the report included 26 effectiveness criteria for the program providers, 21 for the state agencies, and 23 for the commission, making a total of 70 criteria. The principal changes made by the National Advisory Committee were to

- include a separate section on partnerships in the set of criteria for program providers;
- add a new criterion for state agencies and the commission concerning the use of funds to support priorities and goals related to program innovation, cost-sharing, and program performance and improvement;
- add a new criterion for program providers related to breadth of offerings and student access to offerings;
- add a new criterion for the commission on the availability of statewide cumulative data for specific training programs;

- delete a narrow criterion and broaden the context of remaining criteria on fiscal accountability for the state agencies;
- strengthen the wording of various criteria so that they are more action oriented to ensure that the criteria have relevance to program improvement; and
- make the effectiveness criteria more specific.

Minor modifications were made in the process criteria to reduce redundancies among sets of criteria and to ensure that the effectiveness criteria and process criteria were appropriately related. However, the process criteria were not reviewed in detail because the evaluation format assumes that they are illustrative and will be deleted, supplemented, or modified to respond to differences in missions, programs, and conditions.

Members of the National Advisory Committee indicated acceptance of the effectiveness criteria as modified in this report. The group also strongly supported the format that used effectiveness criteria with supporting optional process criteria. This format was viewed as progress toward attaining the optimal balance between providing the information required to evaluate the program and minimizing reporting requirements.

PART IV
Implementation Process

This discussion of the implementation process has been adapted from "Recommended Steps for the Utilization of Criteria" prepared by the Evaluation Center at Western Michigan University. (See accompanying research reports nos. 2 and 2a.) In these steps, the assumption is that implementation of an evaluation program of this magnitude should be phased rather than immediate. For that reason, this proposed implementation process is presented for consideration by CVTE as it develops plans for implementing the evaluation process. Following the discussion of the implementation process, a list of data items that might be included in a program census is presented. In the last section, a summary of the implementation plan is provided to guide the commission in operationalizing the overall evaluation design.

These recommendations were developed from a review of the literature on change processes, product utilization, general evaluation frameworks, and specific evaluation processes that relate to vocational and technical education. The consensus appears to be that the first step in the evaluation process should be the development of a long-range plan. CVTE has developed a long-range plan for commission activities, and each state agency and program provider should develop a long-range plan related to its responsibilities and activities. These plans can then be used as guides in the development of respective implementation plans for the evaluation.

Implementation Plan

The focus of the following implementation plan is on activities at the program provider level. This choice was made because these delivery sites are the actual providers of vocational and technical education programs and services. CVTE and the state agencies have a supportive function; consequently, the steps in the plan are more related to program provider activities.

This section recommends six steps for integrating a new set of evaluation criteria into an existing evaluation plan:

1. Create an awareness of the proposed criteria
2. Demonstrate the application of the criteria
3. Test the criteria in program provider settings
4. Install the criteria
5. Institutionalize the criteria
6. Develop an evaluation follow-up system

To clarify the recommendation, a sample: description is provided for each step listed below.

1. Create an awareness of the proposed criteria.

Members of evaluation committees, teachers, administrators, governing board members, and other appropriate people need to learn about the potential use and implications of the criteria. They need a clear understanding of the proposed criteria and the role of the criteria in the evaluation process.

To accomplish this step, state-level agency officials should develop appropriate written materials and orientation and training activities to create widespread awareness of the criteria and the existing

evaluation plan among the various constituents. Using these materials and activities the state-level agency should

a. identify the various audiences and determine the level of their involvement in the criteria adoption process;
b. determine the level of awareness necessary to insure effective involvement;
c. conduct and evaluate the orientation and training activities;
d. revise the criteria and/or the evaluation plan based on the results of the orientation and training activities; and
e. inform the audiences about the revisions and the reasons for these revisions.

Example:
The state-level agency identifies key legislators, the state school board association, the state association of vocational educators, the state association of school administrators, and the state association of chambers of commerce as some of the awareness audiences. The agency informs these audiences about the proposed criteria and the existing evaluation plan. A 30-minute videotape presentation is developed, field-tested, revised, and presented to these audiences. Based on written evaluations of the video presentation, some criteria are revised to clarify their meaning. Copies of the revised video, with the reasons for these revisions, are mailed to each of the awareness participant agencies.

2. Demonstrate the application of the criteria.

Prior to field testing, a program is initiated to make constituents aware of how the criteria and the evaluation plan *might* work in actual practice. To take this step, the state-level agency should develop appropriate materials and demonstration activities designed to help the various constituents understand the criteria and the way that the evaluation plan might work in actual practice. Using these materials and activities, the state-level agency should

a. identify the audiences that should participate in demonstration activities;
b. determine the extent of demonstration required to insure effective involvement;
c. conduct and evaluate the demonstration activities;
d. revise the criteria and/or the evaluation plan based on the results of these demonstration activities; and
e. inform the awareness and demonstration audiences about the revisions and the reasons for these revisions.

Example:
The state-level agency develops a demonstration packet consisting of the awareness video from step 1 above, an hour-long documentary film demonstrating the use of the proposed criteria and existing evaluation plan in a selected area vocational school. The agency also develops a set of hands-on, small-group activities; the awareness video, film and attendant activities are used for demonstration presentations in every program provider site in Indiana. Local governing boards, administrators, teachers, and students participate in the presentation. Based on written evaluation, the demonstration activities are revised to encourage more active participant involvement. Each local program provider site receives a copy of the revised demonstration packet and a brief description of the reasons for the changes.

3. Test the proposed criteria.

Prior to installation of the criteria, the various audiences need further evidence that the criteria and evaluation plan *will* work in actual practice. To take this step, the state-level agency should develop appropriate materials and field test activities designed to help the audiences develop an understand-

ing of how the criteria and evaluation plan work in actual practice. Using these materials field test activities, the agency should

a. select the field test sites from a representative pool of advocates, neutrals, and detractors;
b. determine the nature and extent of field-testing required to insure effective future commitment;
c. conduct and evaluate the field test activities;
d. revise the criteria and/or the evaluation plan based on the results of field test activities; and
e. inform the awareness, demonstration, and field test audiences about the revisions and the reasons for these revisions.

If the field tests failed to maintain the advocates, coopt the neutrals, and sway some of the "detractors," it is critical to further field test the revised criteria and/or evaluation plan.

Example:
Based on the results of the demonstration activities, the state-level agency selects 12 local program provider sites for field test activities: 4 apparent advocates, 4 apparent neutrals, and 4 apparent detractors. The agency selects and assigns a full-time field test manager to each field site. The field test manager works for a year with local staff and agency staff to develop field test materials and activities. During and at the end of the second year of field-testing, materials and activities are revised as appropriate. Summative results of the field test are provided to the awareness and demonstration audiences.

4. Install the criteria.

Prior to accepting the criteria as part of their daily way of life, the various audiences need clear evidence that the widespread application of the criteria will produce results which are proper, useful, feasible, and accurate. Most state-level agencies recognize the need for awareness, demonstration, and field test activities prior to installation of innovations at the local level. However, too often, they view the installation step as the final step in implementing/adopting the innovation. Research indicates that the installation of an innovation requires a level of statewide effort and support that is far in excess of the effort and support expended in the awareness, demonstration, and field test activities. Without that level of effort, the innovation is more likely to join that vast pool of unused "good ideas" that never change actual practice in the schools.

To take this step, the state-level agency should develop appropriate materials and installation procedures designed to accomplish the installation of the criteria. Using these materials and procedures, the agency should

a. conduct and evaluate installation procedures in those field test sites where field test results indicate a relatively high probability of successful installation;
b. revise the criteria and/or evaluation plan based on the results of these initial installation procedures;
c. inform the various audiences about the revisions and the reasons for those revisions;
d. continue to broaden the installation audience and repeat the revision and installation activities detailed in 4b and 4c above; and
e. inform the various audiences about the final revisions and the reasons for these revisions.

Example:
Working with local program provider sites and the 12 field test managers, the state-level agency develops a three-year installation plan. Using the revised field test materials and activities and the cadre of 12 field test managers, the state-level agency carries out the installation plan, revising the materials and activities as appropriate. Periodic newsletters report the progress of installation activities to the awareness, demonstration, field test, and installation audiences. Newsletters contain such items as: examples of criterion application, student case studies, and information on successful adaptations.

5. Institutionalize the criteria.

Contrary to popular opinion, the institutionalization decision rests not with the state, but rather with the individual student, teacher, program site, and the governing body. The state can, of course, require compliance with the criteria and require evidence of that compliance. However, whether or not the criteria become an integral part of the program depends on whether or not the criteria are seen as proper, useful, feasible, and accurate by those most directly impacted by these criteria.

To take this step, the state should

a. encourage and support local adaptations of the criteria and/or evaluation plan where these adaptations seem clearly in the best interests of all concerned;
b. evaluate the results of these adaptations;
c. incorporate successful adaptations; and
d. continue this adaptation/evaluation/incorporation process for the duration.

Example:

During and after the three-year installation process, the evaluation plan is revised, and a "final" evaluation plan is presented at a statewide meeting of vocational educators. The 12 field test managers continue as resource people for local program provider sites to assist in the local adaptation process and to ensure that these adaptations are appropriate. The newsletter continues to report the results of evaluation activities. Program provider sites with exemplary evaluations receive student scholarship awards, teacher incentive grants, and additional noncategorical vocational funding. Less exemplary but conforming program providers are offered financial incentives to continue to improve their evaluation activities. Nonconforming program providers are required to file a detailed plan for correction and are subject to on-site state monitoring of correction plan implementation. Nonconforming program providers which fail to submit an acceptable plan for conducting their evaluation abrogate their right to locally directed program evaluation and are subject to full evaluation by the state-level agency. (Note: The sample: sanctions for nonconforming program providers do not include a reduction in funding. Such reductions usually result in a lowering of program quality which, in turn, results in lowering the quality of education for youth.)

6. Develop an evaluation follow-up system.

Whether the evaluation process be formative or summative, the ultimate purposes of vocational and technical education program evaluation efforts are to determine the extent to which the goals of the program have been achieved, to improve the delivery of the program to the participants, and to improve the performance of the program participants. Acceptance of this premise assumes that the evaluation process continues beyond the completion and submission of the evaluation report. In this additional phase, program administrators use the evaluation results to guide their efforts to improve vocational and technical education programs by

a. reviewing the evaluation results to identify deficiencies or problem areas;
b. selecting areas for improvement;
c. developing a follow-up plan and schedule;
d. implementing the follow-up plan;
e. providing periodic progress reports to the staff, community, and state agency; and
f. using the information and experiences gained through each follow-up plan in the development of other follow-up activities and subsequent program development efforts.

Example:

During and after the installation of the evaluation process, the structure of the follow-up plan is revised, and program provider administrators discuss their experiences with follow-up plans at a statewide meeting of vocational educators. The 12 field test managers continue to work with local program provider sites in the design and implementation of follow-up activities. The newsletter continues to

report the results of evaluation activities. Program providers compare the evaluation results with goals in the long-range plan, analyze the evaluation results, and divide the deficiency or problem areas into three groups – correctable with minimal resources or effort, correctable with significant reallocated resources or effort, and only correctable with large resources or major restructuring. Program providers develop a follow-up plan with a schedule for addressing the selected areas for improvement. Program provider sites with exemplary follow-up activities receive financial support to implement meritorious recommendations in the follow-up plan. Program providers with less exemplary but conforming follow-up plans are offered financial incentives to design and implement their evaluation follow-up activities. If a program provider fails to develop follow-up plans, the program provider may be subject to state monitoring of efforts undertaken to correct deficiencies and possible full evaluation by the state-level agency.

With systematic and persistent attention to the implementation and institutionalization of the evaluation process, the state may look forward to forming cooperative relationships with local school districts, other program providers, and various stakeholders toward using evaluation to improve the quality of vocational/technical education for the state's citizens and economy.

Program Census Information

The development and maintenance of a data base about vocational and technical education at the local level is a critical element in the continuous process of evaluating the programs. Working with state agency and service provider personnel, the commission should develop a plan for gathering and analyzing program census information. Some might be gathered for all programs, and others might be gathered on a sample basis. By using a cooperative approach in identifying the data elements, the level of cooperation and validity of data should be enhanced.

The following items are illustrative of those that might be included in a state-level data base that in actuality is a collation of information from the program provider level integrated with statewide demographic and labor market data. Examples of items include:

- short- and long-term local and state job market projections
- types of programs – classification scheme
- student participation by program
- student completers by program
- number of students employed full/part-time
- number of students employed in training-related field
- student tenure on-the-job
- student salaries and promotions
- employer satisfaction on an individual employee basis
- student satisfaction with the program
- number of program completers enrolled in postsecondary institutions

Summary of Implementation Plan

The following six sequential steps for the proposed implementation plan for program providers have been summarized from the previous discussion to provide a summary presentation of the process.

1. Create an awareness of the proposed criteria
   a. Identify audience
   b. Determine necessary level of awareness
   c. Conduct and evaluate orientation and training
   d. Revise criteria and/or evaluation plan
   e. Inform audiences

2. Demonstrate application of criteria
   a. Identify audiences
   b. Determine extent of demonstration required
   c. Conduct and evaluate demonstration activities
   d. Revise criteria and/or evaluation plan
   e. Inform awareness and demonstration audiences
3. Test the proposed criteria
   a. Select field test sites
   b. Determine nature and extent of field-testing
   c. Conduct and evaluate field test activities
   d. Revise criteria and/or evaluation plan
   e. Inform awareness, demonstration, and field test audiences
4. Install the criteria
   a. Conduct and evaluate installation procedures
   b. Revise criteria and/or evaluation plan
   c. Inform various audiences
   d. Broaden installation audiences and repeat revision of installation activities
   e. Inform various audiences
5. Institutionalize the criteria
   a. Encourage and support local adaptations
   b. Evaluate results of adaptations
   c. Incorporate successful adaptations
   d. Continue adaptation/evaluation/incorporation process
6. Develop an evaluation follow-up system
   a. Review the evaluation results to identify deficiencies or problem areas
   b. Select areas for improvement
   c. Develop a follow-up plan and schedule
   d. Implement the follow-up plan
   e. Provide periodic progress reports to the staff, community, and state agency
   f. Use the information and experiences gained through each follow-up plan in the development of other follow-up activities and subsequent program development efforts.

PART V
Review of Current State Agency Evaluation Procedures

Indiana's administrative structure for vocational and technical education is different from that found in other states. CVTE functions as an oversight and leadership agency for vocational and technical education in Indiana, while other agencies have a direct relationship to program providers at the local level. One aspect of the project to develop an evaluation system for Indiana vocational and technical education was a review and summary of the current evaluation systems being used in Indiana. Special attention was given to the manner in which these systems related to state and federal regulations and statutes. The current evaluation systems of the following state agencies were reviewed:

Indiana Commission for Higher Education (CHE)
Indiana Department of Education (DOE)
Indiana Department of Employment and Training Services (DETS)

Each of these agencies is actively involved in vocational and technical education, but they have widely different functions. Great diversity exists in their perceived roles in administering and evaluating vocational and technical education programs.

The analysis of the current status of evaluation in the three state-level agencies was conducted in four phases. Phase I involved the review and analysis of state and federal statutes. The purpose was to gather information related to compliance and evaluation requirements. (The findings are shown in a matrix in accompanying Research Report No. 1.)

In phase II, documents from the three state agencies were analyzed. CVTE provided relevant documents from the commission's files. These documents were examined to secure information on current evaluation practices. Notations were made concerning compliance and evaluation requirements. In addition, an annotated bibliography was prepared for each reviewed document. (See accompanying Research Report No. 1.)

Phase III involved interviews with the state-level personnel. The intent was to clarify/verify information, correct conflicting information, and provide omitted information. Lists of minimal criteria for Carl D. Perkins Vocational Education Act, Job Training Partnership Act, findings, and document reviews are contained in Research Report No. 1.

Compliance and evaluation requirements were placed into a matrix in phase IV. The results were compared with the legislative compliance matrix referred to above. A discrepancy analysis was conducted to determine the degree to which Indiana was meeting the various state and federal mandates. Results of this analysis are discussed below.

For CHE, vocational and technical education is a relatively small part of the total operation of higher education in Indiana. Even though CHE does not view itself as a direct service provider, the agency is the state-level agency for vocational and technical education programs conducted by the Indiana Commission on Vocational and Technical Education, Vincennes University, Ball State University, Indiana State University, Indiana University, Purdue University, and the Southern Indiana Universities. CHE does not assume an active role in managing or monitoring programs and does not appear to have a comprehensive evaluation program for vocational and technical education.

DOE is the state-level agency for vocational and technical education programs conducted by the 302 local school corporations and 49 area vocational districts in Indiana. Vocational and technical education was treated separately in DOE for many years, but current efforts are directed toward integrating vocational and technical education into the overall school program. In the local school corporations, planning, evaluation, and delivery of vocational and technical education is not treated separately. Evaluation of vocational and technical education programs appears to take place within the context of the evaluation of regular education programs. With the area vocational districts, the situation is different because the entities are essentially separate single-purpose bodies.

DETS is the state-level agency for programs funded through the U.S. Department of Labor. Leadership and technical assistance are major responsibilities of the agency. In contrast to CHE and DOE, the community-based organizations that serve as the local-level program providers under DETS have limited functions. Program evaluation requirements from DETS appear to be more oriented toward data reporting and compliance with regulations rather than toward concerns about the quality of the program. This state agency's activities are greatly influenced by the federal legislation.

In view of the variations in tradition and perceived mission among the three state-level agencies, CVTE's challenge is to develop effective working relationships with each agency and to work toward development of an integrated cooperative and interactive support system to deliver vocational and technical education in Indiana. Currently, CVTE appears to have major planning and evaluation responsibilities for vocational and technical education, but authority for conducting the programs is spread among a variety of state and local agencies. The operational challenge is for CVTE to increase the commitment and involvement of CHE, DOE, and DETS in cooperative planning and evaluation to improve vocational and technical education in Indiana.

The contention of CHE leadership was that typical program concerns such as administration and curricular matters were institutional responsibilities rather than interests of CHE. The agency perceived its role to be more related to serving the legislature and the governor in strategic planning and policy analysis than to gathering and analyzing data or monitoring and evaluating programs in institutions. As with DOE, CHE appears to contend that vocational and technical education should be treated in the same manner as other programs in its constituent institutions. However, CHE does not appear to be assuming an active role in evaluating or monitoring higher education programs.

For DOE, the discrepancy analysis indicated that Indiana was meeting most of the compliance requirements of the federal vocational and technical education programs under the Perkins Act. The assessment was that DOE had gathered sufficient information to pass a compliance audit.

DETS appeared to be meeting or exceeding the external evaluation requirements from the federal level. One reason may be related to the prescriptiveness of the program outcome and evaluation criteria under the federal Job Training Partnership Act (JTPA); agencies have virtually no flexibility. Requirements are clear and concise. The unanswered issues are the extent to which the data gathering and evaluation systems used for the JTPA programs should remain intact under a more comprehensive system and the degree to which the current JTPA systems should be expanded to enhance the contribution that DETS makes to the development of a broad system of vocational and technical education and employment and training services for Indiana.

The findings from the review and analysis of the current evaluation activities and the existing administrative structure for vocational and technical education in Indiana suggest that any proposed evaluation system should use a tiered approach rather than a single set of criteria. CVTE has a planning and leadership mission; the agencies (CHE, DOE, and DETS) have an administrative and monitoring function; and the actual instruction or training is provided by the various local program providers. Statewide planning, statewide needs assessment, program development, and accountability are the major interests of CVTE. Program development, technical assistance, and compliance are major concerns of the state agencies. Program relevance and effectiveness are interests of the program providers.

PART VI
Research on Evaluation of Vocational and Technical Education

The task of reviewing the literature on evaluation of vocational and technical education was contracted to the Evaluation Research Center at Western Michigan University. (This group's complete report is contained in accompanying research reports nos. 2 and 2a.) In this summary, the results of the center's work have been organized around the following broad headings:

Evaluation Framework
General Recommendations
Characteristics Recommended by Authorities

Evaluation Framework

Stufflebeam's CIPP model was used as the organizing construct in the discussion of an evaluation framework. Elements in the model are context, input, process, and product. Rather than being a model that only provides summative evaluation information, the CIPP model also provides formative evaluation data that may be used to guide planning decisions, change program strategy choices, and guide the implementation of an activity. Traditional summative information also is provided through records of the process and the extent to which goals are attained (Madaus, Scriven, and Stufflebeam, 1983).

Given the data burden and the staff time requirements associated with traditional evaluation models used by the regional accrediting associations and professional organizations, the increased attention being given to outcomes evaluation is a natural evolution. Campbell and Panzano (1985) recommended that a set of indicators be used to assess the quality of a program; these indicators would then be used to measure the outcomes and assess the efficacy of vocational and technical education programs. Their recommendations are consistent with earlier work of Darcy (1979) that stressed a need for data on outcomes; this information was then to be used as the basis for an analysis, interpretation, and evaluation of particular programs.

General Recommendations

The appropriateness of using traditional evaluation models has been questioned by reports from the vocational and technical education community. The focus on quantitative inputs has been viewed as incompatible with the complexity of vocational and technical education delivery systems (Committee on Vocational Education Research and Development, 1976). Later work has emphasized the need for the use of critical evaluation as a mode of inquiry to recognize environmental constraints and interpret the impact of various conditions (Farley et al., 1985).

From an analysis of federal legislation, Grasso (1979) proposed an evaluation model that had three components: process, product/outcome, and product/impact. Process includes program rationale, program content, program deliverers, program recipients, and program environment. Product/out-

come refers to career and labor market information on program completers and leavers. Student competencies and proficiency are the focal points of product/impact data.

Brannon's (1985) analysis of the Perkins Act stressed the importance of evaluation being related to program effectiveness. He suggested the following measures of program effectiveness: occupations that relate to the labor market needs of the state, skill levels and competencies that will meet the hiring needs of employers, and the effects of these on handicapped persons seeking employment. Other program evaluation areas noted by Brannon included the relationship between vocational and technical education and economic development, the importance of addressing the needs of special populations, the need to provide an adequate level of student services, and the need to decrease sex role stereotyping.

Further direction for efforts to evaluate vocational and technical education can be found in the results of a survey of state directors of vocational and technical education by Wentling and Barnard (1982). In response to a request that they establish rankings of eight possible indicators of program quality, the state directors' responses in rank order were as follows: employer feedback, placement level, quality curriculum materials, job satisfaction, and a four-way tie of instructor performance, student test performance, condition of equipment, and school staff models. Of the eight indicators, four might be classified as effectiveness, outcome, or product criteria; two as process criteria, and two as input criteria.

Even though a body of literature on program evaluation exists and many evaluation procedures appear to be applicable to education, questions have been raised about the extent to which these established evaluation concepts could be used to develop a usable evaluation system for vocational and technical education (Gourley, 1989). Issues in developing an evaluation system for vocational and technical education were noted by Leske and Persico (1984); their review of the literature suggested a lack of agreement about the goals of vocational and technical education and the existence of measurement problems for a dynamic enterprise. In a survey of local vocational directors in Illinois, differences in emphasis between secondary and postsecondary education and variations in employer expectations were noted by Wentling and Barnard (1982). Their findings supported the need to focus on student outcomes in vocational and technical education. However, problems related to inadequacies of data bases for assessing program effectiveness were noted in a Pennsylvania study (Buttram et al., 1987).

State-level evaluators supported the movement toward outcome or effectiveness evaluation in their responses to telephone interviews (Gourley, 1989). Outcomes or effectiveness evaluation approaches require that there be some agreement about desired outcomes and levels of attainment; Mitzel (1982) contended that no single criterion is likely to be satisfactory for evaluating vocational and technical education programs and that no national consensus exists on a limited set of outcomes that can serve as evaluation criteria. However, this issue can be resolved by setting goals for vocational and technical education within the environmental context of each service area (Silberman, 1983).

Movement toward an outcome or effectiveness emphasis has significant implications for data requirements. Starr (1986) proposed that data be collected in five groupings: employment context of the service area, vocational and technical education process, outputs, outcomes, and benefits. For the first three, consensus on data elements should be achieved quickly; for the fourth, some debate might be raised about appropriate outcome data; but for the fifth, issues will include acceptable indicators of benefits and the amount of time that must pass before the benefits can be determined.

Characteristics Recommended by Authorities

The principal concerns of authorities in the design of an evaluation system for vocational and technical education appear to be activities that are related to establishing, prioritizing, and assessing the attainment of goals. McCaslin and Lave (1976) identified five major tasks in the process: learner outcomes, instrumentation, sampling strategies, relationships between actual and desired achievement levels, and identification of priorities.

Several problem areas related to the evaluation of vocational and technical education were identified by Stevenson (1979); they can be grouped into the following categories:

- expansion and systematization of evaluation
- follow-through on evaluation
- services for special populations
- evaluation of the state delivery system
- cooperation with and follow-up data from employers
- use of evaluation information

A national study indicated that process and outcomes evaluation programs can help vocational and technical education address current evaluation problems (National Commission, 1984). This national commission identified such areas as agreement on goals, access, and equity; curricula and teaching practices; standards and measures of accountability; articulation between educational levels; criteria for leadership; partnerships with business, labor, and community interests; and evidence of field-based learnings.

Summary

The content of the various reports summarized from the review of the literature suggests the following observations:

- Federal legislation is a major influence behind the interest in the evaluation of vocational and technical education.
- Literature on evaluation of vocational and technical education and statutory requirements appear to focus on evaluation efforts as top down from the state level rather than bottom up from the site at which programs are delivered.
- Current emphasis in evaluation of vocational and technical education appears to be more on program effectiveness than on program inputs or the process of instruction.

PART VII
Practices in Other States

CVTE staff expressed an interest in certain practices used in specific states, and members of the National Advisory Committee indicated that information about practices in other specified states should be of value to the study. Following these directions, specific evaluation procedures were reviewed and analyzed in the following states – Colorado, Florida, Georgia, Illinois, North Carolina, and Wisconsin. Practices varied among the states, but several common elements have relevance to Indiana. Summary tables on the evaluation focus in the sample states and a more complete discussion of the practices in each state are presented in accompanying Research Report No. 2.

Colorado.

The evaluation program focuses on four separate activity areas – local review, program approval, compliance, and state services. The state's plan is referred to as the "Q Process," which involves a self-review followed by a validation process. Reports from the state indicated a heavy emphasis on process with limited attention to program outcomes. The process included three phases – review, validation, and technical assistance. Criteria checklists are used to evaluate

- the instructional program
- program facilities
- business and community resources
- vocational guidance and counseling
- student placement and follow-up
- administrative support

Following the self-review phase, an improvement plan is developed by the program faculty. Results of the self-review and the improvement plan are validated. The next phase is to prepare a local program action plan. The last phase would involve state technical assistance to continue the program improvement process.

Florida.

The primary purpose of the Florida evaluation program is to provide the state with accurate follow-up information on former secondary and postsecondary program participants. Then, such information is to be used in evaluating publicly financed training programs. Data for each student are maintained at the state level through the use of the participant's Social Security number.

Through Florida's comprehensive management information system, information is available on age, race, sex, programs taken during schooling, and current occupations. Actual jobs are matched with those in the Dictionary of Occupational Titles. These data permit an analysis of earnings and labor market trends for use in career guidance and counseling of students.

Georgia.

Considerable attention has been given to a five-year process of field testing the evaluation process in various sites around the state. The process involves 55 specific course content guides with selected

occupational skills. Vocational evaluation criteria have become infused into guides that local school districts use with all program participants.

Illinois.

This state's evaluation policy was an outgrowth of the state's long-range plan. The transition plan involves a three-stage computer-assisted evaluation program. Stages are basic indicator assessment, in-depth analysis, and program improvement planning. Basic indicators are placement, enrollment, employer satisfaction, student satisfaction, student performance, cost containment, and labor market justification. With this information, local personnel pose a series of questions to the computerized "expert system."

Program improvement planning utilizes the data and analysis from the first two stages. These interpretations contribute to the development of program improvement plan. Steps to be taken to improve the programs are noted, and the requests are submitted to the state for additional funds.

North Carolina.

A joint state and local planning effort is used to maximize the contribution made by agencies, groups, or individuals interested in vocational and technical education. Advisory committees are used to survey community job needs, advise on course content, review student placement data, make recommendations on facilities and equipment, identify potential teachers and community resources, review evaluation data, and advise on local plan development.

Wisconsin.

Rather than having a single state agency responsible for vocational and technical education, Wisconsin has one agency for secondary-level vocational and technical education and a separate postsecondary vocational and technical education system with an independent state board. Postsecondary programs and services are provided in 16 regional districts. Incentive grants are used to encourage the introduction of programs for special populations and upgrade existing programs. Programs are available for secondary, postsecondary, and adult participants.

For its evaluation system, Wisconsin focuses on five outcomes to assess results: employment of students after leaving school, secondary graduates in postsecondary education, satisfaction of students and employers with training, differences in satisfaction levels among types of participants, and differences between regular and special needs students. Program components are assessed on 17 criteria that include the existence of a philosophy, needs assessment, comprehensive curriculum, attention to equity, programs for emerging occupations, sufficient equipment and facilities, existence of an advisory committee and student organization, follow-up studies with graduates and employers, and implementation of the recommendations from prior evaluations.

Evaluation procedures varied among the selected states; the common element appeared to be the development of a state-level data base about local programs and/or program participants. Rather than relying on input criteria to indicate the existence of essential preconditions, evaluation in the selected states tended to focus on outcome, product, or effectiveness criteria.

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APPENDIX
Effectiveness and Process Criteria for Evaluating Indiana Vocational and Technical Education

The following effectiveness and process criteria for evaluating vocational and technical education in Indiana are presented in three groups – local program provider, state agency, and commission. One or more process criteria are presented for each effectiveness criterion in the appendix. Process criteria should be viewed as illustrative; the assumption is that deletions, additions, and adaptations will be made when appropriate. Program administrators would use process criteria to indicate the extent to which each of the effectiveness criteria have been attained in the local setting.

Some effectiveness criteria appear in all three sets, but the emphasis varies depending on the agency's specific responsibilities. The commission has greater leadership and planning responsibilities. The state agencies have greater monitoring and technical assistance responsibilities, and program providers have greater delivery and evaluation responsibilities.

In this report, the term "commission's long-range plan" refers to Education and Jobs for Indiana's Future, the long-range plan for a comprehensive vocational program in Indiana, as approved by the commission on July 14, 1988. This plan, agency plans, and local plans are different from those required by the U.S. Department of Education to participate in federal programs.

Effectiveness and Process Evaluation Criteria for Program Providers

The following list of effectiveness and process criteria for the program providers was developed as a response to task 4 in the project contract. Program providers include the state's 302 school corporations, 49 area vocational districts, 7 public postsecondary institutions, independent colleges and universities, private proprietary schools, community-based organizations, and other agencies. Criteria for evaluation at this level have been developed from the material submitted by the various contractors. In this document, the criteria have been divided into the following areas:

1.0 Structure
2.0 Planning
3.0 Diagnostic Assessment
4.0 Program Design and Delivery
5.0 Participant Services
6.0 Partnerships
7.0 Facilities and Equipment
8.0 Participant Outcomes
9.0 Program Accountability
10.0 Fiscal Accountability
11.0 Cost-Effectiveness

These evaluation criteria are designed to facilitate tracking the progress of program delivery sites in implementing those strategies outlined in the state and local long-range plans and to permit refinement of specific evaluation criteria as strategies are implemented. The process criteria may be used by each program delivery site in assessing the extent to which an effectiveness criterion has been attained and in determining responses to identified problems.

1.0 Structure

Effectiveness Criterion

1.1 Philosophy and Organization – Program provider's philosophy statement and administrative organization are relevant to the immediate service area, reflect current conditions, and are consistent with and supportive of current programs and documents from the commission and the relevant state agency.

Process Criteria

1.1.1 Philosophy and Goals – Program provider has a statement of philosophy with related goal statements that express the principles and concepts adhered to in planning and providing programs.

1.1.2 Organizational Arrangements – Program provider has a governance and administrative structure that promotes citizen access and involvement in planning, providing, and evaluating programs.

1.1.2a Defined Roles – Clearly states the roles, expectations, and levels of authority for vocational administrators.

1.1.2b Commitment – Indicates a continuing commitment to providing vocational education programs.

1.1.3 Legal Compliance – Program provider administrators assume responsibility for ensuring that programs meet statutory and regulatory requirements.

1.1.4 System Consistency – Program provider ensures that program philosophy, goals, and administrative organization are consistent with and supportive of the mission statements of the commission and relevant state agency.

2.0 Planning

Effectiveness Criterion

2.1 Local Comprehensive Plan – Program provider's current and proposed programs are consistent with and supportive of the program provider's comprehensive long-range plan and long-range plans of the commission and the relevant state agency.

Process Criteria

2.1.1 Planning System – Program provider utilizes a comprehensive planning system that provides opportunities for participation and interaction among relevant parties, relies upon and utilizes basic data, includes a comprehensive evaluation system, and utilizes information about current and potential programs, program participants, and employers.

2.1.2 Plan Consistency – Program provider's comprehensive long-range plan is consistent with and supportive of the mission statements and long-range plans of the commission and relevant state agency.

2.1.3 Stakeholder Involvement – The various parties affected by program changes are effectively involved in the planning process.

2.1.3a Current and Potential Employers – Involves an employer advisory group at various stages of program planning and evaluation.

2.1.3b Staff – Involves staff at various stages of program planning, implementation, and evaluation.

2.1.3c Program Participants – Involves program participants at various stages of program planning, implementation, and evaluation.

2.1.4 Linkages – Effective communication channels exist between the program provider and the immediate service area and between the program provider and program providers in other agencies and institutions.

2.1.5 Environmental Scanning – Program provider has an ongoing system for collecting, updating, analyzing, and integrating relevant information into the planning process.

2.1.5a World-of-Work/Labor Market Data – Uses current and projected information about the general world-of-work and the related specific employment needs in program planning.

2.1.5b Environmental Data – Uses current and projected employment, economic, and demographic data about the immediate and extended service areas in projecting specific employment needs.

2.1.5c Employee Characteristics – Uses world-of-work leadership profiles in the projection of desired employee characteristics.

2.1.5d Demographic Projections – Studies and analyzes projected population shifts for the immediate and extended service areas in terms of their effect on the potential pool of program participants.

2.1.5e Potential Staff – Gathers and analyzes data about the age and experience profiles of current staff and projections about the potential pool of new staff from traditional and nontraditional sources in terms of potential impact on staff availability.

2.1.5f Funding Levels – Maintains and uses current information on anticipated changes in state and federal funding levels and/or legislative reauthorizations in program planning.

2.1.6 Formative and Summative Evaluation – Program provider adopts and implements an evaluation system, and the resulting data are collected, updated, analyzed, and integrated into the planning process.

2.1.6a Program Improvement – Uses results of formative evaluations to guide program improvement during the course of a program.

2.1.6b Program Planning and Revision – Uses results of summative evaluation for accountability and reporting to revise current programs and plan new initiatives.

2.1.7 Program Participants – Program provider has an organized process for gathering information about program participants, and these data are collected, updated, analyzed, and integrated into the planning process.

2.1.7a Skills, Abilities, and Interests – Collects, updates, analyzes, and integrates information in a systematic manner regarding the skills and occupational and career preferences into the planning process.

2.1.7b Demographic Information – Collects, updates, analyzes, and integrates demographic information about program participants into the planning process. Data items include gender, limited-English-speaking, special needs, race, and ethnicity.

2.1.7c Curricula – Maintains a data base of curricular options that addresses course goals and program participant assessment data requirements.

2.1.7d Materials – Bases current instructional materials on course goals and program participant assessment data, and provides for the periodic review and updating of these materials.

2.1.8 Program – Program provider has an organized process for gathering information about the available programs and staff, and the data are updated, analyzed, and integrated into the planning process.

2.1.8a Staff – Collects and analyzes information about the professional and technical qualifications of the staff analyzed on a regular basis and integrates the data into the planning process.

2.1.8b Program Adaptability – Has and uses procedures for adapting programs and course content to the needs of program participants.

2.1.8c Facilities – Relates facility space and utilization to program content and program offerings.

2.1.9 Business and Community Resources – Data about local business, industry, and community characteristics are collected, updated, analyzed, and integrated into the planning process.

2.1.10 Annual Report – Program provider submits an annual report with an update of the strategic plan and a progress report on goal attainment to the appropriate agency.

3.0 Diagnostic Assessment

Effectiveness Criterion

3.1 Diagnostic Assessment – Program participants and staff use diagnostic assessment information in making decisions about program offerings and individual program selections.

Process Criterion

3.1.1 Assessment Process – Program provider has an organized process for program participant assessment and diagnosis, and the data are updated, analyzed, and integrated into the planning process.

3.1.1a Knowledge, Skills, Aptitudes, and Application of Skills – For each program, uses standardized and nonstandardized tests to measure a person's cognitive, affective, and psychomotor domains and to assess knowledge, skills, aptitudes, and capacity to apply skills for entry-level program participants.

3.1.1b Occupational Tests – When available, administers and uses results from standardized occupational or job-task criterion-referenced tests.

3.1.1c Special Needs – Uses procedures to identify and diagnose the special needs of program participants.

4.0 Program Design and Delivery

Effectiveness Criteria

4.1 Program Design Decisions – Delivery systems accommodate the special needs of program participants and provide for exposure to and participation in actual work settings.

Process Criteria

4.1.1 Program Content and Delivery – In making decisions about program content and delivery, emphasis is placed on field work-setting experiences, program adaptation and responsiveness to participant needs, career awareness on the part of program participants, and staff development.

4.1.2 Cooperative Education – Where applicable and feasible, the system for delivering instruction provides cooperative education opportunities for program participants.

4.1.3 Alternative Delivery Systems – The program delivery schedule includes opportunities for evening programs, exit and re-entry options, and observations and participation in applied settings.

4.2 Curriculum Decisions – Program provider administrators use a systematic and comprehensive approach in making curriculum decisions and use data related to the immediate service area, program participants, and the goals and functions of related agencies and institutions.

Process Criteria

4.2.1 Technology Education Curriculum – Program provider considers the technology education curriculum in making local curricular decisions.

4.2.2 Development – Program provider and community resources are used in the development of the structure of the overall curriculum.

4.2.3 Instructional Objectives – Written statements specify knowledge, competencies, and behaviors that program participants are to demonstrate under specified conditions.

4.2.4 Competency-Based Instruction – Program learnings, experiences, and evaluations are structured to provide information that the program participants possess the desired competencies.

4.2.5 Teaching Methods – Teaching methods and time on task vary depending on the needs of the program participants and the content.

4.2.6 Participant Feedback – Instructors seek and utilize participant evaluations and feedback in planning program delivery.

4.2.7 Revision – Program participant assessment results are used to diagnose curriculum revision needs.

4.2.8 Integration – Where applicable, the academic, general, basic skills, and vocational education course goals in the program provider institution are integrated into the total experiences of the program participant.

4.2.9 Transfer of Learnings – Emphasis is placed on the use of skills and knowledge in multiple settings.

4.2.10 Articulation – Program provider uses procedures for curriculum articulation within and among departments and institutions.

4.3 Instructional Decisions – Program components are designed to make participants aware of career opportunities, reinforce positive work attitudes, attain basic skills, develop employability skills, and learn specific occupational skills and good safety practices.

Process Criteria

4.3.1 Awareness, Orientation, and Exploration – Potential and current program participants are provided opportunities to secure information related to career awareness, career orientation, and career exploration.

4.3.2 Occupational Skills – Instructional programs focus on developing those occupational skills related to the entry-level goals of the specific occupation.

4.3.3 Safety – Programs emphasize the importance of safety procedures in both the school setting and the applied setting.

4.3.4 Safety Instructions – Verbal and written on-the-job and in-school safety rules and procedures are provided to program participants and enforced.

4.4 Staff Development – Program provider takes steps to ensure that the staff has and will continue to develop the qualifications and skills to provide the selected programs.

Process Criteria

4.4.1 Personnel Recruitment – Job opening information is unbiased, nonrestrictive, and designed to attract a talented group of employees.

4.4.2 Personnel Preparation – Personnel possess the specialized and general knowledge and relevant state license or certificate required for the job.

4.4.3 Personnel Selection – Equal employment opportunity and affirmative action procedures are observed in selection of applicants.

4.4.4 Staff Assessment – Staff development needs are developed after professional qualifications and skills of instructional and administrative staff are matched to program structure, program content, and program delivery.

4.4.5 Staff Evaluation – An organized staff evaluation program provides an assessment of job performance and feedback regarding strengths and areas of concern.

4.4.6 Inservice Programs – Staff development programs are being provided to respond to the identified needs of the staff.

4.5 Funds – Required human and material resources are appropriately allocated within and among programs.

Process Criteria

4.5.1 Budget – Annual budgets are prepared to ensure that the funding level for each program is sufficient to provide the required human and materials resources.

4.5.2 Fiscal Analysis – Expenditures are analyzed to determine if funds were expended for the intended purpose and if modifications should be made in the budget for the next budget cycle.

5.0 Participant Services

Effectiveness Criteria

5.1 Program Access – Broad access is provided to the handicapped, disadvantaged, and minorities.

Process Criteria

5.1.1 Access and Equity – Provisions are being made for all interested persons to have access to programs and to allow for equity to all groups in program enrollment and career guidance.

5.1.2 Basic Enrollment Data – Annual course and program enrollment data are classified and reported by race, sex, ethnicity, and other demographic characteristics. Data are updated, analyzed, and integrated into the planning process.

5.1.3 Special Needs Populations – Efforts are made to recruit program participants from the total population including special needs groups and underrepresented groups.

5.1.4 Special Population Data – Course and program enrollment data are categorized and analyzed by special needs and underrepresented groups and integrated into the planning process.

5.2 Program Ser. .ces – Program provider selects and provides services to address the needs of current and projected program participants.

Process Criteria

5.2.1 Program Participant Special Needs – Efforts are made to assess the special needs of program participants and to assess the feasibility of providing services to address those special needs.

5.2.2 Special Needs Clients – Where applicable, special needs program participants have an individualized vocational education plan (IVEP).

5.2.3 Career Development – Program participant organizations are encouraged and supported to facilitate leadership and career development, to supplement the program participants program, and to provide an extension and expansion of learning activities focused on career development.

5.2.4 Counseling Services – Special staff and procedures are available to provide personal, academic, and career counseling services.

5.2.5 Job Placement – Specific staff and procedures are available to assist program participants in job placement while they are in school and after they leave school.

5.3 Program Breadth – Program participants have access to different choices within the program provider's cycle of offerings.

Process Criteria

5.3.1 Program Participant Orientation – The orientation program provides participants with information and program offerings.

5.3.2 Program Schedule – Programs are scheduled at a time convenient to the primary target group.

5.3.3 Counseling Access – Program provider has a referral process for participants that provides participants with additional information and access to counselors upon request.

6.0 Partnerships

Effectiveness Criteria

6.1 Partnership Programs – Program provider develops and maintains partnership programs between and among business, industry, labor, government, and education.

Process Criteria:

6.1.1 Business Partnerships – Program provider has a governance, administrative, and advisory structure that promotes business, industry, and labor involvement in planning, providing, and evaluating programs.

6.1.2 Stronger Relationships – Program provider has a plan for strengthening existing partnerships with local business, industry, and labor groups.

6.2 Technology Education Curriculum – Program provider involves business, industry, labor, government, and education in the design, development, and implementation of the technology education curriculum.

Process Criteria

6.2.1 Cooperative Activities – Program provider holds regular meetings with persons from business, industry, labor, government, and education to secure their assistance in the design, development, and implementation of the technology education curriculum.

6.2.2 Implementation of Recommendations – Program provider keeps records of advisory committee input and recommendations on implementation of the technical education curriculum.

7.0 Facilities and Equipment

Effectiveness Criterion

7.1 Facilities and Equipment – The facilities and equipment meet acceptable standards of safety, adequacy, adaptability, accessibility, and public health.

Process Criteria

7.1.1 Equipment and Materials – Teaching and laboratory equipment, materials, and supplies are up-to-date, safe, and sufficient in quantity to support program offerings and services.

7.1.2 Instructional Technology – Facilities can accommodate the technology required to conduct a current program.

7.1.3 Accessibility – Structural features and layout of grounds and facilities enhance participation by regular and special program participants.

7.1.4 Adaptability – Design and layout of the grounds, buildings, and equipment are flexible and adaptable to meet changing demands for programs and services.

7.1.5 Safety and Security – Design and condition of grounds, facilities, and equipment are adequate to minimize the possibility of harm, injury, or loss.

7.1.6 Health – Periodic inspections are made to ensure that no health hazards exist in the facilities.

8.0 Participant Outcomes

Effectiveness Criteria

8.1 Demonstrated Competency – Program completers can demonstrate the competencies that are the goals of the program and the expectations of employers.

Process Criterion

8.1.1 Assessment Procedures – Program provider has established systematic assessment procedures and expected levels of performance to determine if program participants have attained the desired level of knowledge and skills. Assessment information may be developed from the results of teacher-developed tests, teacher observations, anecdotal records, activity logs, inventories, standardized tests, or other instruments approved by program providers. Knowledge and skill areas to be considered for assessment include the following:

Career Planning – Personal awareness and development of interests, abilities, and skills; personal awareness of occupational opportunities; and skills and knowledge needed to prepare for and become established in an occupation.

Work Habits – Skills and knowledge required to be a productive worker including knowledge of safety rules and procedures.

Career Exploration – Exploration of occupations in simulated or applied settings.

Employability Skills – Job readiness skills including resume writing or interview techniques.

Specific Occupational Skills – Skills and duties related to a specific job.

Basic Skills – Skills required to succeed in vocational education programs and on-the-job, i.e., communication, mathematics, and problem solving.

Human Relations Skills – Skills and knowledge needed to work cooperatively with others.

8.2 Job-Related Tasks – Program completers apply their knowledge and skills in securing and keeping a job.

Process Criterion

8.2.1 Data Base – Program provider has an organized process for gathering data to determine if program participants have attained the ability to apply knowledge and skills, and the data are updated, analyzed, and integrated into the planning process. Knowledge and skill areas to be considered for assessment include the following:

Employability Skills – Time and effort required to locate and secure employment in training-related job.

Basic Skills – Application of skills in written and oral communication and job-related problem solving.

Human Relations Skills – Interpersonal skills in working with peers, supervisors, or supervisees.

Occupational Skills – Skill expectations for specific job.

Work Habits – Self-discipline, self-reliance, punctuality, and observance of job rules and procedures.

9.0 Program Accountability

Effectiveness Criteria

9.1 Enrollment/Completion Targets – Program participant enrollment levels and completion rates are at, or exceed, the established standard.

Process Criteria

9.1.1 Data Base – Annual course and program enrollment data indicate the number of program participants who completed the training program in which they were enrolled.

9.1.2 Data Analysis – Program provider analyzes enrollment and program completion data to identify those factors associated with successful completion of the program.

9.2 Related Employment – Program completers are employed in the jobs for which they were trained.

Process Criterion

9.2.1 Use of Data on Training-Related Employment – Data are gathered, updated, and analyzed concerning the number of program completers who are employed in jobs that might be classified as either training-specific or training-related.

9.3 Gainful Employment – Program completers are employed in gainful occupations.

Process Criterion

9.3.1 Employment – Data are gathered, updated, and analyzed concerning the number of program completers who are placed in full- or part-time employment.

9.4 Salaries – Salaries paid to program completers working in a training-related job exceed those for persons who did not complete the training.

Process Criterion

9.4.1 Salary Survey – Program provider has an organized process for gathering data on salaries received by program completers, and the data are updated, analyzed, and integrated into the planning process.

9.5 Job Stability – Program completers exhibit a specified level of employment stability.

Process Criterion

9.5.1 Follow-Up Data – Program provider gathers follow-up data concerning the length of time that program completers spend in their job and compares this information with that of other persons in the same jobs.

9.6 Employee Satisfaction – Program completers indicate that they are satisfied with the content, experiences, and outcomes of the training program, and have job satisfaction.

Process Criterion

9.6.1 Satisfaction with Program – Program provider has an organized process for gathering data on program completers' attitudes toward the program and current job, and the data are updated, analyzed, and integrated into the planning process.

9.7 Employer Satisfaction – Employers are satisfied with the on-the-job performance of the persons employed from the program.

Process Criteria

9.7.1 Employer Surveys – Program provider conducts periodic surveys and interviews to secure evaluations of employer satisfaction with on-the-job performance of individual employees and program completers as a group.

9.7.2 Survey Analysis – Program provider collects, continually updates, periodically analyzes, and integrates survey data into the planning process.

9.8 Postprogram Education – Program provider has follow-up information to determine the number of program completers who complete high school and/or pursue additional formal education.

Process Criteria

9.8.1 Postprogram Follow-Up – Program provider has an organized process for gathering follow-up data on continuing education and/or employment for program leavers and completers, and the data are updated, analyzed, and integrated into the planning process.

9.8.2 High School Completion – Annual course and program enrollment data indicate the number of program participants who completed high school graduation requirements.

9.8.3 Continued Education – Data are gathered, updated, and analyzed concerning the number of program completers who enroll in postsecondary institutions.

10.0 Fiscal Accountability

Effectiveness Criterion

10.1 Fiscal Audits – Financial audit reports indicate that fiscal procedures are in compliance with applicable local, state, and federal rules.

Process Criteria

10.1.1 Periodic Audits – Fiscal accounting records are periodically reviewed by an independent auditor.

10.1.2 Audit Reports – Audit reports indicate minimal negative findings in the handling of funds.

10.1.3 Sufficient Records – Fiscal accounting, staffing, and program participant records are in sufficient detail to determine the program cost per enrollee, program completer, and program placement.

11.0 Cost-Effectiveness

Effectiveness Criterion

11.1 Cost-Effectiveness – Given the program objectives and compared to the cost of similar programs, cost data per program enrollee, completer, and placement indicate that the program is cost-effective.

Process Criteria

11.1.1 Data Base – Fiscal, participation, and performance data are maintained for program enrollees, completers, and placements.

11.1.2 Costs per Participant – On a periodic basis, program costs are compared and analyzed using similar data from comparable programs.

11.1.3 Attainment of Standards – Systematic procedures are used to determine if program placements' on-the-job performance levels are meeting or exceeding local, state, and national performance standards.

11.1.4 Cost-Benefit Analysis – Expenditure, performance, and completer data are compared to determine the effectiveness of the program.

Effectiveness and Process Evaluation Criteria for State Agencies

The following list of effectiveness and process evaluation criteria for the state agencies has been developed as a response to task 4 in the project contract. The state-level administering agencies for vocational and technical education are the Commission on Higher Education, Department of Employment and Training Services, and State Board of Education. The principal sources for these criteria were the commission's long-range plan, existing evaluation criteria, related statutes, and commissioned studies. The criteria have been divided into nine broad areas:

1.0 Structure
2.0 Long-Range Plan
3.0 Agency Leadership
4.0 Fiscal Accountability
5.0 Technical Assistance
6.0 Program Evaluation
7.0 Articulation
8.0 Professional Personnel Development
9.0 Partnerships

These evaluation criteria are designed to facilitate tracking the progress of state agencies in implementing those strategies outlined in the commission's long-range plan and to permit refinement of specific evaluation criteria as strategies are implemented. The process criteria may be used by the agency in assessing the extent to which an effectiveness criterion has been attained and in determining responses to identified problems.

1.0 Structure

Effectiveness Criterion

1.1 Statement of Purpose and Administrative Organization – Agency's statement of purpose and administrative organization are relevant to the programs, reflect current conditions, and support local programs.

Process Criteria

1.1.1 Statement of Purpose – Agency has a statement of purpose with related goal statements that express the principles and concepts adhered to in planning and providing programs.

1.1.2 Organizational Arrangements – Agency's governance and administrative structure promotes citizen access and involvement in planning, providing, and evaluating programs.

1.1.2a Defined Roles – States clearly the roles, expectations, and levels of authority for vocational administrators.

1.1.2b Commitment – Indicates a continuing commitment to providing relevant vocational education programs.

1.1.3 Business Partnerships – Agency's governance, administrative, and advisory structure promotes business, industry, and labor involvement in planning, providing, and evaluating programs.

1.1.4 Legal Compliance – Agency administrators assume responsibility for ensuring that programs meet statutory and regulatory requirements.

2.0 Long-Range Plan

Effectiveness Criteria

2.1 Consistency with Commission's Long-Range Plan – Agency decisions on delivery systems and programs for vocational and technical education are consistent with the detailed provisions of the commission's long-range plan.

Process Criteria

2.1.1 Planning System – Agency utilizes a comprehensive planning system that provides opportunities for participation and interaction among relevant parties, relies on and utilizes basic data, includes a comprehensive evaluation system, and uses information about current and potential programs, program participants, and employers.

2.1.2 Stakeholder Involvement – The various parties affected by agency decisions are effectively involved in the planning process.

2.1.3 Linkages – Effective communication channels exist between the agency and the immediate service area and between the agency and other agencies and institutions.

2.1.4 Environmental Scanning – Agency has an ongoing system for collecting, updating, analyzing, and integrating relevant information into the planning process.

2.1.4a World-of-Work/Labor Market Data – Uses current and projected information about the general world-of-work and the related specific employment needs in program planning.

2.1.4b Environmental Data – Uses current and projected employment, economic, and demographic data about the immediate and extended service areas in the projection of specific employment needs.

2.1.4c Employee Characteristics – Uses world-of-work leadership profiles in the projection of desired employee characteristics.

2.1.4d Demographic Projections – Studies and analyzes projected population shifts in terms of their effect on the potential pool of program participants.

2.1.4e Potential Staff – Gathers and analyzes data about the age and experience profiles of program staff and projections about the potential pool of new staff from traditional and nontraditional sources in terms of potential impact on staff availability.

2.1.4f Funding Levels – Maintains and uses current information on anticipated changes in state and federal funding levels and/or legislative reauthorizations in program planning.

2.1.5 Specific Goals – Agency's plan contains specific goals for public vocational education at all levels that relate to the following:

Preparation of each graduate for both employment and further education.

Accessibility of vocational education to persons of all ages who desire to explore and learn for economic and personal growth.

Projected employment opportunities in various vocational and technical fields.

Supply and demand for a labor force skilled in particular vocational and technical areas.

Technological and economic change affecting Indiana.

Private vocational education opportunities in Indiana.

Recommendations for improvement in the state vocational education program.

Educational levels expected of programs to meet projected employment needs.

2.1.6 Implementation of Plan – Agency implements the long-range state plan for monitoring vocational education programs under its jurisdiction.

2.1.7 Periodic Updates – Agency updates the plan periodically.

2.1.8 Dissemination – Agency submits its plan to the commission.

2.1.9 Annual Report – Agency submits an annual report to the commission that includes a section on the contribution that the agency's programs are making to attainment of the goals in the state's long- range plan.

2.2 Goal Relevancy – The goals in the agency's long-range plan for vocational and technical education are being used to guide policy decisions at the agency and local levels.

Process Criteria

2.2.1 State Agencies – Before finalizing policy decisions, state agencies consult their plans to ensure consistency.

2.2.2 Program Providers – State agency personnel take steps to ensure that program providers consult the plans of relevant state agencies to determine if contemplated local policy decisions are consistent with those plans.

3.0 Agency Leadership

Effectiveness Criteria

3.1 Coordination – Agency works effectively with other state agencies, commissions, and organizations that supervise or administer vocational and technical education programs in the development of plans or programs to improve the coordination of vocational and technical education in Indiana.

Process Criterion

3.1.1 Consultation – Personnel in the agency are routinely consulted by other agencies in the administration and delivery of vocational education programs.

3.2 Communication – Persons in other state agencies with responsibilities related to the vocational and technical education are informed about the agency's role, authority, and responsibilities.

Process Criteria

3.2.1 Meetings – Periodic meetings are held with other agencies to discuss issues and problems.

3.2.2 Information – Agency has prepared materials that outline the agency's role, authority, and responsibilities.

3.3 Professional Relationships – Agency personnel work with program provider personnel to improve the administration and delivery of programs.

Process Criterion

3.3.1 Assistance – Agency develops effective working relationships with the bodies that report to the agency.

3.4 Program Guidelines – Agency provides program providers with broad guidelines, information, and resources for curriculum development and updating.

Process Criteria

3.4.1 Competency Based Instruction – Agency provides information on implementation of competency-based instruction.

3.4.2 Technology – Agency provides information on the use of technology and computers to achieve curricular goals.

3.4.3 Integration – Agency provides information on integration of basic and vocational skills across the curriculum.

3.5 Program Provider Long-Range Plan Review – Agency provides program providers with feedback on their local long-range plans.

Process Criteria

3.5.1 Plan Compatibility – Agency reviews program provider plan and checks for compatibility and consistency with state plan.

3.5.2 Legal Compliance – Agency reviews program provider plans to ensure compliance with state and federal requirements.

4.0 Fiscal Accountability

Effectiveness Criteria

4.1 Priorities and Goals – Agency allocates funds in a manner that encourages programmatic change, stimulates local investment, improves program quality, and fosters the development and attainment of performance standards.

Process Criteria

4.1.1 Incentive Programs – Agency develops incentive programs that provide special funding to foster innovation, program improvement, and development and attainment of performance standards.

4.1.2 Local Initiatives – Agency collects and analyzes information on program provider use of incentive funds.

4.2 Sufficient Funds – The level of funding for programs under the agency's jurisdiction is sufficient to provide adequate financial support for the necessary number and performance of programs to meet state goals.

Process Criteria

4.2.1 Current Programs – Agency consults on a regular basis with program providers to determine if the funding level is sufficient for current programs.

4.2.2 Proposed Programs – Agency requests reports from program providers on the funding level required for the introduction of proposed programs.

4.3 Funds Allocation – Agency dispenses funds for vocational and technical education programs in a manner consistent with the statutory requirements of the Indiana General Assembly, federal regulations, and the commission's recommendations.

Process Criteria

4.3.1 Budgetary Review – Agency prepares proposed summary budget from the requests from the program providers.

4.3.2 Budget Recommendations – Agency makes recommendations to the relevant state bodies concerning the appropriation of state funds and allocation of federal funds for vocational education.

4.3.3 Accountability for Federal Funds – Agency maintains accountability for all federal funds for vocational education under its jurisdiction, including the receipt and disbursement of funds.

4.3.4 Disbursement of Federal Funds – Agency expends and distributes only those federal funds that have been allocated to it by the commission and the Indiana General Assembly.

4.3.5 Internal Accounting Procedures – Agency has established internal fiscal control and accounting procedures.

4.3.6 Funds Disbursement – Disbursement procedures and records are consistent with state and federal requirements.

4.3.7 Fiscal Audits – Financial audit reports indicate that fiscal procedures are in compliance with applicable local, state, and federal rules.

5.0 Technical Assistance

Effectiveness Criterion

5.1 State-Level Technical Assistance – Agency provides technical assistance on program planning, instruction, administration, and evaluation to local program providers.

Process Criteria

5.1.1 Technical Assistance Plan – Agency develops and implements a plan for providing technical assistance to local providers of programs, services, activities, and special projects.

5.1.2 Technical Assistance Funds – Agency secures funding for staff and related expenses to provide technical assistance to local program providers.

6.0 Program Evaluation

Effectiveness Criteria

6.1 Program Evaluation – Agency uses a systematic and comprehensive approach in evaluating vocational and technical education programs.

Process Criteria

6.1.1 Evaluation Procedures – Agency develops procedures for evaluating vocational education programs, services, activities, and special projects.

6.1.2 Methodology – Agency's methodology for local program accountability is based on program completer outcomes and labor market requirements.

6.1.3 Outcome Measures – Agency develops a management information system to monitor program outcomes in the following target areas:

Program enrollment and completion

Demonstrated competency of program completers

Application of skills by program completers

Postprogram formal education

Gainful employment

Employment related to training

Income of program participants

Employment stability

Program completer satisfaction

Employer satisfaction with performance

6.1.4 Aggregate Effectiveness – Agency uses aggregate data from its management information system in evaluating the extent to which vocational education programs are contributing to attainment of the goals in the state's long-range plan for vocational and technical education.

6.2 Utilization of Data – Agency's data base is used in making both program and public-policy decisions about vocational and technical education at the agency and local program provider levels.

Process Criterion

6.2.1 Design of Information System – Agency designs and implements a compatible data system with other agencies that provides information about the performance of individual program providers and overall current educational delivery system.

7.0 Articulation

Effectiveness Criterion

7.1 Institutional Transition – Program participants have only minimal redundancy, logistical, or program-planning problems making the transition among and between secondary and post secondary vocational and technical education programs and college degree programs.

Process Criteria

7.1.1 Development of Transition Plan – Agency develops a plan for improving the program participants' and program content transition between secondary and postsecondary vocational education programs.

7.1.2 Implementation of Transition Plan – Agency implements a plan for improving the program participants' and program content transition between secondary and postsecondary vocational education programs.

7.1.2a Adult Education Task Force – Works with the task force to study the adult education continuum of technical education and training.

7.1.2b Recommendations for Adult Education – Makes recommendations concerning the adult education continuum of technical education and training and degree programs.

7.1.3 Assessment of Remedial Education – Where applicable, agency assesses the delivery of remedial education by postsecondary institutions.

8.0 Professional Personnel Development

Effectiveness Criteria

8.1 Teacher Certification – The agency guidelines for vocational teacher certification or recertification are consistent with the commission's recommendations.

Process Criterion

8.1.1 Professional Development – Where applicable, agency maintains a comprehensive professional development program.

8.1.1a Staffing Flexibility – Studies the extent to which demonstrated teaching competence should permit flexibility for experts outside the vocational and technical education structure to teach special classes.

8.1.1b Modifications of Certification – Solicits recommendations from outside the field of vocational/regular education about modifying vocational teacher certification or recertification.

8.2 Sufficient Staff – The number of qualified vocational and technical education teachers is sufficient to staff the programs in the state.

Process Criterion

8.2.1 Recruitment and Staff Development – Where applicable, agency maintains a teacher recruitment and staff development program to foster improvement in the vocational and technical education delivery system.

8.2.1a Personnel Policy – Adopts and implements a personnel policy to attract and retain highly qualified vocational teachers.

8.2.1b Salary Schedules – Encourages program providers to adopt salary schedules that recognize years of occupational experience, including time spent in business/industry partnerships, as well as teaching experience, expertise, and formal educational preparation.

8.2.1c Fellowships and Grants – Develops and implements a program of grants or fellowships to local institutions or individual teachers for the purpose of permitting professional updates through a variety of high-potential techniques.

8.2.1d Private Sector Incentives – Develops recommendations regarding incentives available to businesses and industries to encourage their collaboration in providing quality occupational internships for teachers.

8.2.1e Flexible Staffing Practices – Develops statewide guidelines for staffing policies and practices in vocational education that will increase the likelihood of teachers remaining current in their occupation and will encourage the hiring of qualified part-time instructors and/or required, regular, paid business/industry internships for teachers.

8.2.1f Staff Development – Develops statewide guidelines for the preparation of new teachers and upgrades existing faculty to enhance the instructional capabilities for the reinforcement of basic academic skills in vocational education.

8.3 Teacher Skill Improvement – Agency works with program providers in implementing the commission's long-range plan for incorporating updated technological content and teaching skills into vocational and technical education programs.

Process Criteria

8.3.1 Technological Update – Agency recommends that local program providers assess the need for technological update and develop a plan to address this need.

8.3.2 Strategy on Technology – Agency promotes a comprehensive strategy concerning technology and education.

8.3.2a Teacher Participation – Where applicable, develops and implements a plan to encourage teachers to participate in all phases of the process of technological update and to incorporate updated technological teaching skills into teaching programs.

8.3.2b Private Sector Participation – Develops and implements a plan to encourage private-sector participation in all phases of the process of technological update.

8.4 Tax Incentives for Teachers – Where applicable, the agency makes legislative recommendations to the commission for a professional development credit system and tax incentives for teachers.

Process Criterion

8.4.1 Professional Development Tax Incentive – Agency studies and makes recommendations concerning a professional development credit system and tax incentives for teachers.

9.0 Partnerships

Effectiveness Criteria

9.1 Partnership Programs – Agency develops and maintains partnership programs between and among business, industry, labor, government, and education.

Process Criteria

9.1.1 Stronger Relationships – Agency develops and implements a plan to strengthen relationships between and among those involved in education and employment training.

9.1.2 Expanded Partnerships – Agency expands partnerships between and among business, industry, labor, government, and education.

9.2 Technology Education Curriculum – Representation from business, industry, labor, government, and education assists in the design, development, and implementation of the technology education curriculum.

Process Criterion

9.2.1 Private/Public Participation – Agency participates in meetings for the purpose of working with representatives from business, industry, labor, government, and education to design, develop, and implement the technology preparation curriculum.

System Effectiveness and Process Evaluation Criteria for Indiana Commission on Vocational and Technical Education

The following list of effectiveness and process evaluation criteria for the overall systems evaluation of the Indiana Commission on Vocational and Technical Education has been developed as a response to task 5 in the project contract. The Indiana Commission on Vocational and Technical Education is the state-level coordinating body for vocational and technical education. The principal sources for these criteria were the commission's long-range plan, related statutes, and commissioned studies. The criteria have been divided into nine broad areas:

1.0 Long-Range Plan
2.0 Duties of the Commission
3.0 Fiscal Resources
4.0 Program Delivery
5.0 Articulation
6.0 Professional Personnel Development
7.0 Partnerships
8.0 Technical Assistance
9.0 Vocational and Technical Education Evaluation Criteria

These evaluation criteria are designed to facilitate tracking the progress of the commission in implementing those strategies outlined in the commission's long-range plan and to permit refinement of specific evaluation criteria as strategies are implemented. The process criteria may be used by the commission in assessing the extent to which an effectiveness criterion has been attained and in determining responses to identified problems.

1.0 Long-Range Plan

Effectiveness Criterion

1.1 Commission's Long-Range Plan – Commission adopts and updates a long-range plan for the provision and continuous improvement of vocational and technical education in Indiana.

Process Criteria

1.1.1 Development of Plan – Commission develops a long-range state plan for a comprehensive vocational education program.

1.1.2 Implementation of Plan – Commission implements a long-range state plan for a comprehensive vocational education program.

1.1.3 Periodic Updates – Commission updates the plan periodically.

1.1.4 Dissemination – Commission disseminates revisions of the plan to appropriate parties as prescribed in Indiana Public Law 217, sec. 10.a (1987).

1.1.5 Specific Goals – Commission's plan contains specific goals for public vocational education at all levels that relate to the following:

Preparation of each graduate for both employment and further education.

Accessibility of vocational education to persons of all ages who desire to explore and learn for economic and personal growth.

Projected employment opportunities in various vocational and technical fields.

Supply and demand for a labor force skilled in particular vocational and technical areas.

Technological and economic change affecting Indiana.

Private vocational education opportunities in Indiana.

Recommendations for improvement in the state vocational education program.

Educational levels expected of programs to meet projected employment needs.

1.1.6 Annual Report – Commission submits an annual report that includes a section on the contribution that vocational education is making to attaining the goals in the state's long-range plan.

2.0 Duties of the Commission

Effectiveness Criteria

2.1 Enactment of Recommendations – The Indiana General Assembly enacts the commission's recommendations concerning the development, duplication, and accessibility to employment training and vocational and technical education on a regional and statewide basis.

Process Criteria

2.1.1 Presentation of Recommendations – Commission makes recommendations to the Indiana General Assembly concerning the development, duplication, and accessibility of employment, training, and vocational education on both a regional intrastate and a statewide basis.

2.1.1a Current Missions – Studies the current missions of all components of public education in Indiana and makes recommendations for changes where appropriate.

2.1.1b Private Services – Studies the impact of all private vocational education services and makes recommendations where appropriate.

2.1.1c Access – Develops and recommends policies to encourage increased participation of minority and other underrepresented groups in the state's vocational education system.

2.2 Coordination – Commission works effectively with state agencies, state commissions, and community-based organizations that supervise or administer vocational and technical education programs in the development of plans or programs to improve the coordination of vocational and technical education in Indiana.

Process Criteria

2.2.1 Consultation – Commission consults with all state agencies, commissions, or organizations that supervise or administer vocational education programs on ways to improve the coordination of vocational education in Indiana, including the following:

Department of Commerce

Job Training Coordinating Council

Department of Employment and Training Services

A private industry council (as defined in 29 USC 1501 et seq.)

Department of Labor

Commission on Proprietary Education

Commission for Higher Education

State Board of Education

2.2.2 Adult Basic Skills – Commission supports the Adult Basic Skills Oversight Committee regarding delivery of basic academic skills for adults.

2.2.3 Competency-Based Education – Commission provides guidelines for competency-based education.

2.2.4 Agency Plans – Commission develops a system to review and make recommendations concerning vocational education plans submitted by Department of Education, Commission for Higher Education, and Department of Employment and Training Services.

2.2.5 Review of Agency Recommendations – Commission implements a system to review and make recommendations concerning vocational education plans submitted by Department of Education, Commission for Higher Education, and Department of Employment and Training Services.

2.2.5a Consistency – Reviews and prepares reports on the plans of each agency to ensure that they are consistent with the commission's long-range plan for the state.

2.2.5b Compatibility – Reviews and prepares reports on the plans of each agency to ensure that they are compatible with each other.

2.2.5c Nonduplication – Reviews and prepares reports on the plans of each agency to ensure that adequate efforts are being made to avoid duplication in delivering services by the three agencies.

2.2.6 Reports to Legislature – Commission reports to the Indiana General Assembly on conclusions and recommendations concerning interagency cooperation, coordination, and articulation of vocational education and employment training.

2.2.6a Development of Strategy – Develops a strategy for intrastate regional communication, coordination, and cooperation.

2.2.6b Implementation of Strategy – Implements a strategy for intrastate regional communication, coordination, and cooperation.

2.2.6c Interagency Partnerships – Develops a plan to strengthen and expand partnerships with any state agency, commission, or organization that supervises or administers vocational education programs.

2.2.6d Expansion of Partnerships – Implements a plan to strengthen and expand partnerships with any state agency, commission, or organization that supervises or administers vocational education programs.

2.3 Federal Funds – Commission receives and allocates the federal funds available for vocational and technical education.

Process Criterion

2.3 1 Procedures for Agreements – Commission develops and utilizes procedures for entering into agreements with the federal government that are required as a condition of receiving funds under the Vocational Education Act.

2.4 Communication – Commission has systematic and purposeful communication channels with business, industry, and labor organizations that operate vocational and technical education programs.

Process Criterion

2.4.1 Intrastate Coordination – Commission establishes a regional into state planning and coordination system for vocational education and employment training.

2.4.1a Appointment of Advisory Councils – Appoints advisory councils as needed.

2.4.2b Implementation Contracts – Contracts for services as necessary to implement the planning and coordination system.

2.4.3c Private Programs – Provides information and advice on vocational education to business, industry, or labor organizations that operate a private-sector job training program.

3.0 Financial Resources/Responsibilities

Effectiveness Criteria

3.1 Priorities and Goals – Commission allocates funds in a manner that encourages programmatic change, stimulates local investment, improves program quality, and fosters the development and attainment of performance standards.

Process Criteria

3.1.1 Guidelines and Priorities – Commission establishes planning guidelines and priorities for incentive programs that will be used in the allocation of discretionary funds.

3.1.2 Local Initiatives – Commission collects and analyzes information on program provider use of incentive funds.

3.2 Funds Allocation – The Indiana General Assembly enacts the commission's recommendations for allocating funds for vocational and technical education programs.

Process Criteria

3.2.1 Finance Study – Commission conducts a comprehensive study of the financing of vocational and technical education that includes programs costs, levels, administration, support, and all related resources.

3.2.2 Finance Study Report – Commission prepares a report based on the comprehensive study of the financing of vocational and technical education.

3.2.3 Strategies and Resources – Commission presents a report to the Indiana General Assembly on the strategies and required resources for strengthening vocational and technical education in the state.

3.3 Private-Sector Tax Incentives – The Indiana General Assembly enacts legislation to provide tax incentives and tax credits to encourage involvement of private-sector firms in vocational and technical education programs.

Process Criteria

3.3.1 Tax Incentive Recommendations – Commission makes recommendations to the Indiana General Assembly concerning tax incentives and tax credits.

3.3.1a Coordination – Specifies ways to improve business coordination and investments in vocational/technical education.

3.3.1b Incentives – Identifies rewards that could be given to businesses and industries that provide the equipment necessary for current occupational technology.

3.3.1c Internships – States incentives that could be used to encourage businesses and industries to collaborate in providing quality internships for teachers.

3.3.1d Professionalization of Teachers – Indicates steps that could be taken to encourage teachers to participate in professional development activities.

3.3.2 Support for Partnerships – Commission disseminates information to agencies and program providers about the availability of financial incentives from federal, state, and other sources that provide support for partnerships.

3.4 Foundation – Commission has established and maintains a nonprofit foundation for the improvement of vocational and technical education in Indiana.

Process Criterion

3.4.1 Membership – Commission identifies interested citizens and businesses and takes the necessary legal and procedural steps to create a nonprofit foundation of the improvement of vocational and technical education in Indiana.

3.5 Fiscal Audits – Financial audit reports indicate that fiscal procedures are in compliance with applicable local, state, and federal rules.

Process Criteria

3.5.1 Budgetary Review – Commission reviews the legislative budget requests for vocational education prepared by Department of Education, Commission on Higher Education, and Department of Employment and Training Services.

3.5.2 Budget Recommendations – Commission makes recommendations to the budget committees of the Indiana General Assembly concerning the appropriation of state funds and allocation of federal funds for vocational education specifying minimum funding levels required by 20 USC 2301 and 29 USC 1533, categories of expenditures and the distribution plan or formula for secondary schools, and categories of expenditures for each state postsecondary institution.

3.5.3 Accountability for Federal Funds – Commission maintains accountability for all federal funds for vocational education under 20 USC 2301 and 29 USC 1533, including the receipt and disbursement of funds.

3.5.4 Disbursement of Federal Funds – Commission expends and distributes only those federal funds that have been allocated by the Indiana General Assembly.

3.5.5 Audit Reports – Audit reports indicate minimal negative findings in the handling of funds.

4.0 Program Delivery

Effectiveness Criteria

4.1 Program Provider Evaluation – Commission's evaluation and data system provides and uses information to improve the effectiveness of individual program providers.

Process Criteria

4.1.1 Design of Information System – Commission designs an evaluation and data information system that provides information about the performance of the individual program providers.

4.1.2 Implementation of Information System – Commission implements an evaluation and data system that provides information about the performance of the individual program providers.

4.2 Statewide Program Evaluation – Commission's evaluation and data system provides and utilizes statewide information on specific occupational training programs to improve the statewide effectiveness of these programs.

Process Criterion

4.2.1 Statewide Data Compilation – Commission compiles, reports, and analyzes data on statewide compilation of program information by specific occupational training programs.

4.3 System Program Effectiveness – Commission's evaluation and data system provides and utilizes information to improve the effectiveness of the state's comprehensive vocational and technical education delivery system.

Process Criteria

4.3.1 Compatible Data Systems – Commission develops and implements compatible data systems for the delivery of occupational information and career information to local delivery systems in a timely and cost-effective manner.

4.3.2 Trends in Remediation – Commission provides information and makes recommendations concerning trends related to the need for remediation of basic skills.

4.3.3 Counselor Preparation – Commission studies and reports areas of concern regarding counselor preparation, credentialing, and professional development.

4.3.4 Economics Education – Commission conducts a study and develops a strategy to determine when, where, and how to include in vocational education an understanding of economics and the economic system that reflects the state, national, and world economy.

4.3.5 Program Participant Services Plan – Commission develops and implements a plan to improve guidance, counseling, placement, and career development services.

4.3.6 Assessment of Remedial Education – Commission assesses the delivery of remedial education by postsecondary institutions.

4.3.7 Recognition Program – Commission recognizes and honors exemplary career programs and services on an annual basis.

5.0 Articulation

Effectiveness Criterion

5.1 Institutional Transition – Commission has taken necessary steps to ensure that program participants have only minimal redundancy, logistical, or program-planning problems making the transition among and between secondary and postsecondary vocational and technical education programs and college degree programs.

Process Criteria

5.1.1 Development of Transition Plan – Commission develops a plan for improving the transition of program participants and program content between secondary and postsecondary vocational education programs.

5.1.2 Implementation of Transition Plan – Commission implements a plan for improving the transition of program participants and program content between secondary and postsecondary vocational education programs.

5.1.2a Adult Education Task Force – Appoints a task force to study the adult education continuum of technical education and training.

5.1.2b Recommendations for Adult Education – Makes recommendations concerning the adult education continuum of technical education and training and degree programs.

6.0 Professional Personnel Development

Effectiveness Criteria

6.1 Teacher Certification – State system for certifying or recertifying vocational teachers is consistent with the commission's recommendations.

Process Criterion

6.1.1 Professional Development – Commission maintains a comprehensive professional development program and has adopted a recommended set of standards for certifying teachers.

6.1.1a Staffing Flexibility – Studies the extent to which demonstrated teaching competence should permit flexibility for experts outside the vocational and technical education structure to teach special classes.

6.1.1b Modifications of Certification – Solicits recommendations from outside the field of vocational/regular education about modifying vocational teacher certification or recertification.

6.2 Sufficient Staff – The number of qualified vocational and technical education teachers is sufficient to staff the programs in the state.

Process Criterion

6.2.1 Recruitment and Staff Development – Commission maintains a teacher recruitment and staff development program to foster improvement in the vocational and technical education delivery system.

6.2.1a Personnel Policy – Adopts and implements a personnel policy to attract and retain highly qualified vocational teachers.

6.2.1b Salary Schedules – Encourages local school districts to adopt salary schedules that recognize years of occupational experience, including time spent in business/industry partnerships, as well as teaching experience, expertise, and formal educational preparation.

6.2.1c Fellowships and Grants – Develops and implements a program of grants or fellowships to local institutions or individual teachers for the purpose of permitting professional updates through a variety of high-potential techniques.

6.2.1d Private Sector Incentives – Develops recommendations regarding incentives available to businesses and industries to encourage their collaboration in providing quality occupational internships for teachers.

6.2.1e Flexible Staffing Practices – Develops statewide guidelines for staffing policies and practices in vocational education that will increase the likelihood of teachers remaining current in their occupation and will en-

courage the hiring of qualified part- time instructors and/or required, regular, paid business/industry internships for teachers.

6.2.1f Staff Development – Develops statewide guidelines for the preparation of new teachers and provides for upgrading existing faculty to enhance the instructional capabilities for the reinforcement of basic academic skills in vocational education.

6.3 Teacher Skill Improvement – Program providers implement the commission's long-range plan for incorporating updated technological content and teaching skills into teaching programs.

Process Criteria

6.3.1 Technological Update – Commission recommends that local program providers assess the need for technological update and develop a plan to address this need.

6.3.2 Strategy on Technology – Commission promotes a comprehensive strategy concerning technology and education.

6.3.2a Teacher Participation – Develops and implements a plan to encourage teachers to participate in all phases of the process of technological update and to incorporate updated technological teaching skills into teaching programs.

6.3.2b Private Sector Participation – Develops and implements a plan to encourage private sector participation in all phases of the process of technological update.

6.4 Tax Incentives for Teachers – The Indiana General Assembly accepts the commission's recommendations for a professional development credit system and tax incentives for teachers.

Process Criterion

6.4.1 Professional Development Tax Incentive – Commission studies and makes recommendations to the Indiana General Assembly concerning a professional development credit system and tax incentives for teachers.

7.0 Partnerships

Effectiveness Criteria

7.1 Partnership Programs – Commission develops and maintains partnership programs between and among business, industry, labor, government, and education agencies.

Process Criteria

7.1.1 Stronger Relationships – Commission develops and implements a plan to strengthen relationships between and among those involved in education and employment training.

7.1.2 Expanded Partnerships – Commission expands partnerships between and among business, industry, labor, government, and education.

7.2 Technology Education Curriculum – Representation from business, industry, labor, government, and education provides assistance in the design, development, and implementation of the technology education curriculum.

Process Criterion

7.2.1 Private/Public Participation – Commission organizes meetings for the purpose of working with representatives from business, industry, labor, government, and education to design, develop, and implement the technology education curriculum.

8.0 Technical Assistance

Effectiveness Criterion

8.1 State-Level Technical Assistance – Local program providers receive technical assistance on program planning, instruction, administration, and evaluation.

Process Criteria

8.1.1 Technical Assistance Plan – Commission works with state agencies in the development of a plan to provide technical assistance to local providers of programs, services, activities, and special projects.

8.1.2 Technical Assistance Funds – Commission and agencies secure funding and implement the plan to provide technical assistance to local providers of programs, services, activities, and special projects.

9.0 Vocational and Technical Education Evaluation Criteria

Effectiveness Criteria

9.1 Program Evaluation – Commission uses a systematic and comprehensive approach in evaluating vocational and technical education programs.

Process Criterion

9.1.1 Evaluation Criteria – Commission establishes criteria for evaluating vocational education programs, services, activities, and special projects.

9.1.1a Evaluation Study – Conducts a study on evaluation of vocational education and makes recommendations concerning the following

Procedures for locally directed evaluations.

Methods to validate skill requirements.

Methods of data collection, storage, and analysis, including the feasibility of computer usage.

Procedures for coordinating data bases and program evaluation systems.

Criteria for evaluating programs and services.

Criteria for evaluating and analyzing the effectiveness of the evaluation systems being used.

9.1.1b Methodology for Accountability – Develops a methodology for local program accountability based on program participants outcomes and labor market requirements.

9.1.1c Outcome-Based Evaluations – Conducts a study and prepares report on the effectiveness of outcome-based program evaluations.

9.1.1d Counseling Programs – Makes recommendations concerning evaluative criteria concerning the effectiveness of counseling programs.

9.2 Utilization of Data – Commission's comprehensive data base is used to make both program and public-policy decisions about vocational and technical education at the state and local levels.

Process Criteria

9.2.1 Data Systems – Commission develops and constructs data systems for program evaluation and delivery of services.

9.2.2 Planning Data – Commission collects, analyzes, and makes appropriate data available for planning purposes.

9.2.3 Employment Opportunities – Commission prepares reports that project employment opportunities in various vocational and technical education fields.

9.2.4 Specific Employment Needs – Commission conducts a study and prepares reports on the supply and demand for a labor force skilled in particular vocational and technical areas.

9.2.5 Environmental Change Study – Commission conducts a study and prepares an analytical report on the technological, demographic, and economic changes affecting Indiana.