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ABSTRACT

This document, which is intended for individuals at the state and local levels with responsibility for school-to-work opportunities, focuses on recommended standard procedures for evaluating school-to-work transition programs. In the introduction, the role of evaluation as a critical element in an overall program management strategy is discussed along with the purposes, techniques, and interdependence of process and impact evaluations. Next, eight types of objectives that must be covered by comprehensive school-to-work transition programs are listed, and the use of goals and objectives in process and impact evaluations is discussed. The following aspects of process implementation are explained: implementation of the program model, general challenges to implementation, implementation challenges for school-to-work transition programs, design issues, context issues, strategies for data collection, and analysis and reporting. Examined in the section on impact evaluation are the following issues: outcomes and their measurement, comparisons, degree of implementation and student participation, data collection, and analysis and reporting. In the final section, the tasks entailed in evaluation management are described, and suggestions for evaluation managers are presented. Contains 14 references. (MN)

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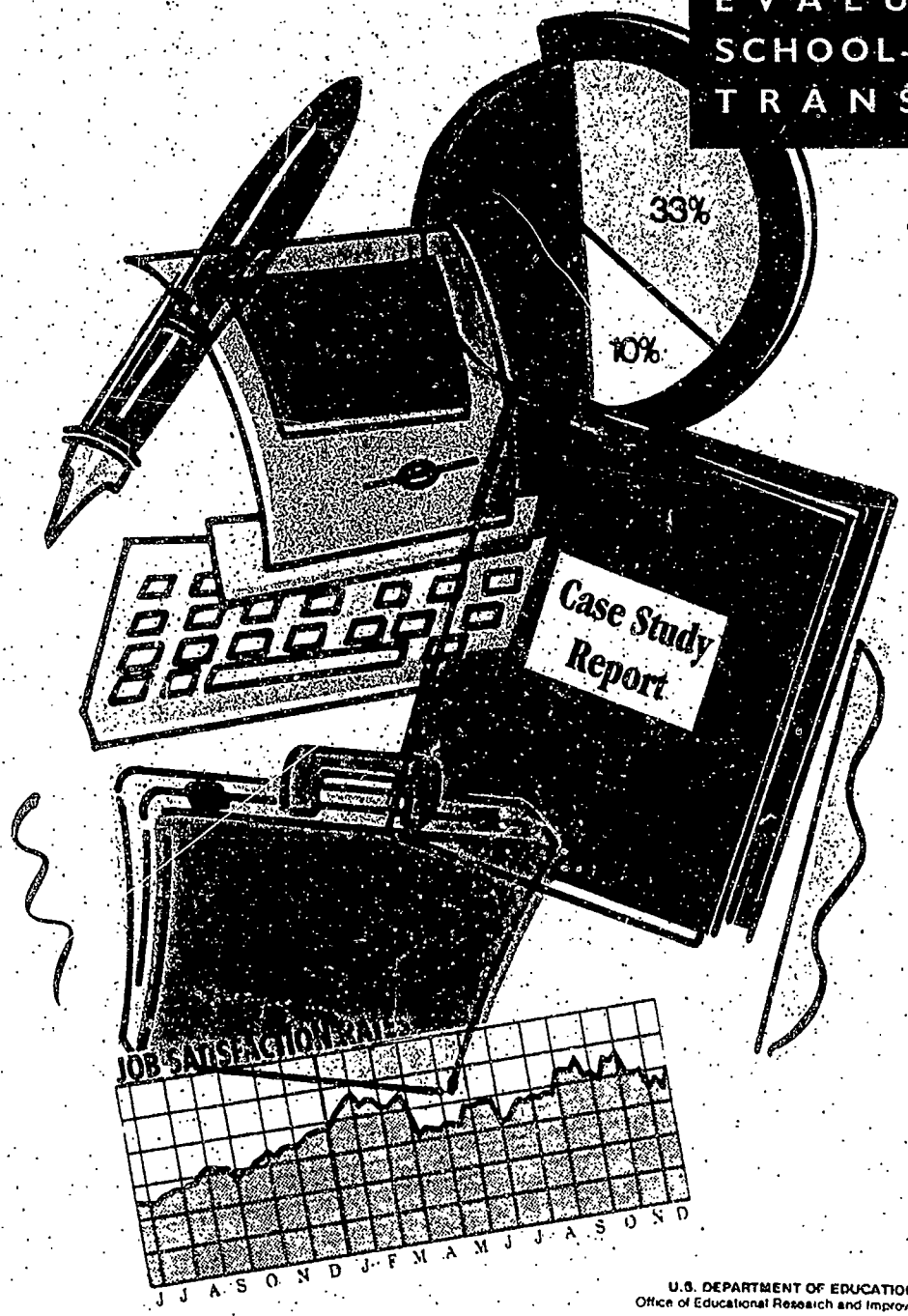
Education Reform and School-to-Work Transition Series

ED 381 668

EVALUATING SCHOOL-TO-WORK TRANSITION



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Evaluating School-to-Work Transition

by Margaret Terry Orr, PhD.

Prepared for

National Institute for Work and Learning
Academy for Educational Development

The Academy for Educational Development, founded in 1961, is an independent, nonprofit service organization committed to addressing human development needs in the United States and throughout the world. Under contracts and grants, the Academy operates programs in collaboration with policy leaders; nongovernmental and community-based organizations; governmental agencies; international multilateral and bilateral funders; and schools, colleges, and universities. In partnership with its clients, the Academy seeks to meet today's social, economic, and environmental challenges through education and human resource development; to apply state-of-the art education, training, research, technology, management, behavioral analysis, and social marketing techniques to solve problems; and to improve knowledge and skills throughout the world as the most effective means for stimulating growth, reducing poverty, and promoting democratic and humanitarian ideals.

The National Institute for Work and Learning, an institute of the Academy since 1988, seeks to bring the work, education, government, and community sectors together around the shared goal of working collaboratively to improve education–work relationships in the interests of individuals and society. Three areas of concentration define the Institute's activities: successful youth transition; work life education and adult literacy; and productive aging. The Institute accomplishes its mission in each of these areas through research, program documentation and evaluation, policy analysis, technical assistance and training, and information networking.

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Foreword

As we approach the twenty-first century, a large segment of our nation's young people are having a harder and harder time moving from school to work with any reasonable prospect for long-term productive employment. The lack of a comprehensive and effective school-to-work transition system not only frustrates many students but also has substantial costs to business and to our economy as a whole. A skill-deficient work force hampers our nation's economic growth, productivity, and ability to compete in an international economy. New modes of information and technology have forced a restructuring of the home, the school, and the workplace. As a result, there is a critical need to create systems that effectively serve the interests and potential of young people who are not planning to enter college directly after high school. These students need to leave school with the diverse skills, knowledge, abilities, and attitudes necessary for a rapidly changing world of work; community, social, family, and adult responsibilities; and lifelong learning.

The School-to-Work Opportunities Act of 1994 offers a chance to bring together partnerships of employers, educators, and others to build an effective school-to-work system that prepares young people for either high-quality jobs or further education and training. The new system must include the following basic program elements:

- work-based learning that provides a planned program of job training or experiences, paid work experience, workplace mentoring, and instruction in general workplace competencies
- school-based learning that provides career exploration and counseling, instruction in a career major, and a program of study that is based on high academic and occupational skill standards
- connecting activities that bring schools, students, and employers together to connect the worlds of school and work by matching students with work-based learning opportunities and by training teachers, mentors, and counselors

The challenge is to build and implement a new system that moves beyond business as usual for students who are not on the college path. Their transition process from school to work must become the coordinated responsibility of school, family, business, community, and government. No single institution can or should take sole responsibility for or be expected to provide all of the approaches to educating, training, guiding, preparing, and supporting our young people.

The Academy for Educational Development's National Institute for Work and Learning has undertaken a Study of School-to-Work Transition Education Reform supported by the U.S. Department of Education, Office of Educational Research and Improvement. The study focuses on the planning and design, implementation, and impact of school-to-work transition reforminitiatives. By documenting the design and integrity of exemplary programs and by assessing program experiences and impacts, the study offers critical lessons for those interested in adapting or adopting programs that effectively link schools with the business community to improve the transition from school to work. As part of the study, a series of papers have been commissioned to identify critical issues facing practitioners and policy makers as they begin to design and implement new school-to-work transition systems.

The overall study has been guided by a National Advisory Panel, which has provided direction and advice on the issues to be explored and topics to be considered. The National Advisory Panel comprises the following individuals:

Paul Barton
Director
Policy Information Center
Educational Testing Service

Cynthia Brown
Director
Resource Center on Educational Equity
Council of Chief State School Officers

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This paper accomplishes the following:

- focuses on recommended standard procedures to evaluate school-to-work transition programs
- examines both process and impact evaluation
- places evaluation as a critical element in overall program management strategy
- offers evaluation objectives, program features to be measured, and recommended procedures for conducting and incorporating evaluation into the program development and operation cycle
- presents the following set of critical dimensions of process evaluation:
  - implementation of the program model
  - challenges to implementation
  - design issues
  - implementation processes
  - context issues
  - data collection, analysis, and reporting
- discusses the following dimensions of impact evaluation:
  - outcomes and their measurement
  - comparisons
  - degree of implementation and student participation
  - data collection, analysis, and reporting

School-to-work program models are used as examples throughout these discussions.

The issues and information provided in this paper are important for those at the state and local levels with responsibility for school-to-work opportunities. As the paper points out, evaluation, as an integral part of the project management cycle, is critical to successful implementation of a school-to-work system.

Ivan Charner
Vice President and Director
National Institute for Work and Learning
Academy for Educational Development

Introduction

Our existing school-to-work transition system has been severely criticized in recent years because of how poorly it serves our economic growth and development (by preparing insufficient numbers of adequately trained youth) and because of how poorly it serves a large portion of our adolescent and young adult population, particularly those with more limited economic and social resources. These problems are characterized by the increasing length of time several groups of youth require in making the transition to full-time primary employment. Many youth, particularly school dropouts and minorities, may flounder in the labor market throughout their twenties before they find stable employment. At the same time, business leaders and policy makers have become increasingly concerned about the availability of qualified young workers, particularly as demographic projections show that an increasing percentage of young people will come from poor and minority backgrounds (who historically have been less well educated and less prepared for employment).

The increased emphasis on new technology and the need for collaborative work styles increase the demand for even better-prepared young people for entry-level positions than projected by current demographic trends. The projected link between worker skill availability and future economic competitiveness and strength has made the improvement of school-to-work transition programs and services national and local priorities.

Developing a more effective school-to-work transition system requires changes in programmatic practice and the structure and delivery of curriculum and related services in our public schools. Kazis suggests two ways to pursue these changes:

- encouraging experimentation and learning from new models
- setting in place the building blocks for a system that focuses on performance and outcomes and can therefore accommodate diverse program models (1993:16)

New and existing models should be systematically evaluated in the following areas: their implementation, their outcomes, their relation to the intended objectives for improved economic preparedness, and their transition capability to employment for our young people.

High-quality, comprehensive school-to-work transition program models include career academies (Stern, Raby, and Dayton 1992), Tech Prep programs (Hull and Parnell 1991), youth apprenticeship programs (Jobs for the Future 1991), cooperative education, and career magnet schools, among others (Crain, Heebner, and Si 1992). While they

differ somewhat in their structure and targeted student population, these programs share the common goal of preparing high school students for meaningful employment and the successful progression from high school graduation to work (U.S. Government Accounting Office 1993). These programs share many core features:

- applied academic courses
- a focus on a selected business or industry (such as financial services, printing, or health care)
- career exposure and preparation
- preemployment preparation
- sequenced vocationally related skills training
- linkage between academic and work-based or vocational instruction
- work-based learning
- extensive business and industry involvement in program development and operations
- supportive services, including career counseling and job referrals

These are complex program models with diverse participation from various constituencies. First, they entail multiple partners, usually the school and one or more businesses. Depending upon the scope and purpose of a program, they can also include higher education institutions, labor, intermediary business agencies, and community-based organizations. Each agency can perform a range of functions within the program, such as development, oversight, provision of work experience for students, curriculum development, and staff training. Thus, a program exists through a collaboration, which in itself requires nurturing, management, and evaluation. Such programs are usually funded through a mixture of direct and indirect funds and in-kind contributions, further complicating their management and operations. Finally, these programs operate within the existing policies and procedures that define what is appropriate for a high school education (including the minimum standards that must be met) and the limits for youth employment (in terms of maximum weekly hours and type of work that can be performed).

Yet, only limited evaluations have been completed to demonstrate how best to implement these programs and show their significant contribution to facilitate students' transition to successful career-track jobs and continued training, particularly in contrast to more traditional classroom-based training. While several large-scale impact evaluations are currently under way for some program models, it will be several years before their results are available (Pauley et al. 1994).

This paper outlines recommended standard procedures to evaluate school-to-work transition programs specifically, either conducted by program staff (as an internal

evaluation) or by an independent agency (as an external evaluation). Ongoing assessment, feedback, and evaluation are as important as program design and management procedures. When incorporated into an overall management strategy, evaluation serves an important function in providing feedback on a program's implementation and its impact on targeted students, staff, school, and community, including participating employers. To serve this function effectively, however, evaluation feedback mechanisms must be incorporated into program design and operations; the results must be reviewed at relevant intervals; and the findings must become the basis for program modifications, improvement, expansions, public relations, and publicity, as relevant.

New federal legislation, the School-to-Work Opportunities Act of 1994, was designed to hasten state and local area development of school-to-work transition programs and systems. State and local areas will need to draw upon existing evidence of program effectiveness as they develop their own plans and will need to incorporate evaluation into their development efforts for assessment of their implementation and outcome results.

Evaluation encompasses several different activities and is conducted for a variety of purposes. The primary purpose of evaluation is to provide information on how well a program and its components are operating and whether these are yielding the intended outcomes. These two objectives represent process (or formative) evaluation and impact (or summative and outcome) evaluation, respectively. Process evaluation addresses how well a program model, as designed, has been implemented, what types of problems are related to implementation, and the factors that support implementation. Impact evaluation addresses how effectively a program achieves its goals and objectives for targeted students and the broader school and business communities to be served.

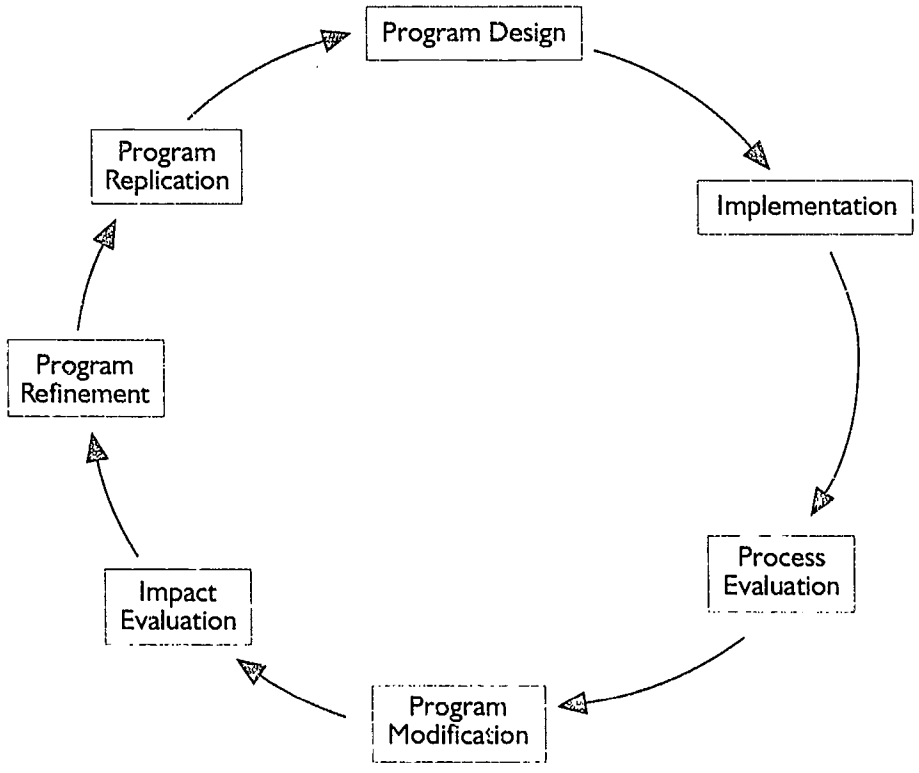
While process and impact evaluations are designed for separate purposes, they are necessarily interdependent. A program's impact cannot be effectively determined without first ascertaining whether and how well a program and its various components have been implemented and the degree to which environmental and contextual factors interfere with its operations and potential effectiveness. An impact evaluation needs to isolate the effects of a program on student outcomes, separate from other possible influences and reasons for the outcome or result. Ineffective implementation of a program would need to be corrected before a useful impact evaluation could be undertaken. Conversely, feedback on the outcomes of a program can be used, in turn, to investigate implementation and operational issues, particularly if the intended results are not attained. To some degree, process and impact evaluation processes can be charted as stages in a progression for program development, management, and subsequent replication or adaptation, as the diagram below shows.

Program Development and Evaluation Cycle

While process and impact evaluations are shown as a cycle in the following diagram, these stages may, in fact, feed back on themselves, depending on the operational problems encountered and the need for program modifications before continuing. All of these processes are closely linked to program management, which can make use of evaluation findings for the next steps in program modification, refinement, or redesign, as necessary to achieve the intended outcomes.

Below is a discussion of process and impact evaluation. Included are evaluation objectives and program features to be measured and recommended procedures for conducting an evaluation and incorporating it into program management. The first step in conducting either type of evaluation, however, requires clarification of a program's goals and objectives. These are the standards by which the degree of program implementation and impact are to be measured.

Program Development and Evaluation Cycle



Program Goals and Objectives

Determining what to evaluate in a program requires a substantive knowledge of a program's goals and objectives. Clearly stating goals and objectives for a program is an art, however. According to Rossi and Freeman, goals are generally abstract, idealized statements of desired outcomes (1993). For example, a school-to-work transition program's goal would be to improve the quality of the entry-level work force for growth industries.

Objectives, in turn, are the operationalized form of these goals. As Rossi and Freeman explain further, sound objectives spell out in detail the condition to be dealt with and one or more measurable criteria for a program's success. Good program objectives are specific, relevant, measurable, and attainable. Too frequently, however, program goals and objectives are described only in broad terms, such as their relation to larger social problems (e.g., the program will prepare youth for the technological challenges of the twenty-first century), rather than in terms of what the program will specifically accomplish (e.g., students will be trained for entry-level positions in computer repair, or students will develop problem-solving and group-process skills, as is increasingly required for entry-level employees).

Comprehensive school-to-work transition programs will need to cover at least some of the following types of objectives:

- to teach students about the content and field of a business or industry
- to improve students' academic skills, particularly as they relate to the needs of the targeted business or industry
- to develop students' employability skills
- to improve students' school attendance, academic achievement, and timely completion of high school
- to train students in specific job-related or vocational skills
- to train students to be comparable to or better than entry-level employees for a targeted business or industry
- to encourage graduates to pursue further education and employment in promising careers in the targeted business or industry
- to facilitate a successful and timely transition from high school to employment or further postsecondary training

A program's goals and objectives become the standards for assessing the effectiveness of a program's implementation and the adequacy of the outcomes yielded by the program. In terms of process evaluation, the goals and objectives will be used to determine whether a program's design is relevant and the degree to which program implementation will address these objectives. For impact evaluation, the outcomes should be framed and measured according to the intended objectives, and the results should be presented according to how well the program is attaining its objectives.

Process Evaluation

The first focus for evaluation of a program model is its implementation. There are two dimensions to process evaluation. The first dimension examines the program model and what happens to it during the implementation process and determines the adequacy of the program model, its operation, and the extent to which the program model has been altered through implementation and adaptation. Shipman (1989) recommends a generic framework used by the U.S. General Accounting Office (GAO) for process evaluation of a program model. The essential elements of a program model that GAO recommends be documented include the problem being addressed by the program; the program's purpose, goal, and objectives; program operations; administrative structure; funding; and participation levels.

The second dimension examines the implementation process itself, focusing on how the program's design relates to the organization's need, capacity, and understanding of the program's purpose; the organizational factors that support the change process (including readiness, resources, and the role of key actors in facilitating the change process); the organizational response to program operations through necessary restructuring and ongoing monitoring and problem solving; and finally, the organizational context for the program's implementation.

Implementation of the Program Model

Beginning with the first dimension, delineation of a program model is useful in identifying its essential features and how these (particularly program operations, administrative structure, and funding) operationalize its goals to address a specific social problem. In addition, an assessment of service delivery levels and use of each program feature may pinpoint the stronger and weaker elements of a program model.

Key Elements of the Program Model and Implementation Process to be Assessed in a Process Evaluation

Essential Elements	Program Mode	Implementation Process
Program Design	Essential program features	Needs being addressed
	Adequacy of the program model	Shared vision about the program's intent and purpose
		Scope of the change required
Organizational Characteristics		Organizational readiness
		Sufficiency of resources and time for the change process
		Role and supportiveness of key organizational officials and staff
Program Operations	Operational efficiency and effectiveness	Monitoring and problem coping
	Program fidelity	Organizational restructuring
	Program coverage in reaching intended audience	Ongoing staff development and resource assistance
Context	Relation to other programs	Organization's track record for change
		External resources
		Government initiatives

Extensive research has demonstrated that a program design can be dramatically altered in the transition from its proposed design to what is actually implemented (Fullan 1991). This problem is a lack of program fidelity, which Shipman defines as whether a program has been implemented and is operated as intended and in "conformance with accepted professional standards" (1989, p. 24). The degree of program fidelity should be measured as a dimension of program implementation.

Several problems and circumstances contribute to changes in a design during implementation and thus the program model's fidelity:

- difficulties with the design (such as ambiguous or unworkable components)
- difficulties with the setting (including the lack of resources or insufficient structure)

- staffing problems and limitations (lack of staff, insufficient training, and other staff preferences for the program)
- timing (constraints on when and within what time frames a program can be implemented)
- difficulty in serving a target population (recruitment challenges, competing opportunities)
- the method for implementing the program (in increments or all at once, number of sites in which it is implemented simultaneously)
- support and management of the implementation

Another operational dimension, the administrative efficiency of a program, should also be assessed. Shipman defined this as "the extent to which program resources are efficiently managed or expended" (1989, p. 24), including management and quality control procedures.

Contribution of a school-to-work transition program will depend upon its administrative efficiency. Such programs are often developed through a mixture of funding and resources and through multiple collaborations between schools and businesses (and sometimes labor, higher education institutions, and community-based agencies). All vested parties will need assurance that their contributed time and resources are well used, creating pressure for efficient management and oversight practices. In addition, since such programs are often funded through multiple sources and in-kind contributions, these resources must be carefully managed to maximize their use and impact and to reinforce the effectiveness of these various investments.

A program's interrelationships with other programs should also be measured. Shipman defines this as "the nature and extent of relationships between this program and other programs and [the] constraints or advantages . . . [created] for the program" (1989, p. 24). School-to-work transition programs exist within the regular school environment and overlap with the existing courses and activities. Similarly, to the degree that these programs involve business and industry, they also overlap with ongoing business operations and other forms of business preparation in education. All these programs, operations, and services provide a context for the school-to-work transition program, determining the competing demands on school and business preparation, and, specifically, competing employment preparation programs, which may overlap or complement the school-to-work transition program.

General Challenges to Implementation

Implementation of a program entails some form of organizational change, which is inherently a social process. Much research has been directed to understanding how and why organizations, particularly schools, respond to program change and implementation, providing greater insight into potential problems and common challenges for successful implementation. The primary factors to be considered in the implementation process are the need being addressed, the scope of the change required, the readiness of the organization for change, the role and support of key persons within and among participating organizations (such as the staff, program director, school principal, district office officials, and collaborating business officials) in the implementation process, sufficiency of resources, the total time available for the change process, and the environment within which the change occurs.

Fullan also points to critical internal and external factors and themes for implementation. These terms are useful in identifying what may promote or inhibit implementation and why. Internal factors refer to the factors within the organization that motivate the change; the school and district's track record with changes; and the key actors' support, cooperation, and knowledge about the program being implemented. A school's or district's experience with school-to-work transition programs and services and the general degree to which the institution is experimental influence program implementation. The external factors refer primarily to the government mandates and external resources that may define how a program can be implemented or operated. In the case of a school-to-work transition program, these mandates can include child labor laws and high school graduation requirements.

The key themes as outlined for implementation by Fullan point to important processes in the development and support of a program's successful implementation:

- vision building (which is the degree to which the program philosophy and approach are well understood and shared by those in the program and in the school and district)
- evolutionary planning (using both top-down and bottom-up planning processes throughout a program's development and implementation)
- empowering program staff (the more latitude staff have to make decisions about a program and its implementation during the development and start-up process, the more successful its implementation is likely to be)
- developing staff and resource assistance (having sufficient resources and initial and ongoing staff development and technical assistance available improves chances of the program's success)

- monitoring and problem coping (systematic assessment and review of practices and mistakes helps to redesign a program to be more effective)
- restructuring (acknowledging that the new program may have an impact on the school's policies, roles, governance, and even finances and permitting time and planning to consider these types of impacts and how best to deal with them)

As part of a process evaluation, it is useful to examine how problems and roadblocks are handled by assessing the following:

- avoidance or successful resolution of implementation process-related problems that could undercut the program's effectiveness
- the capacity to overcome the limitations of the setting and other constraining circumstances that surround the program

Implementation Challenges for School-to-Work Transition Programs

In addition to the general implementation problems and challenges faced by any program new to a school or district, some implementation problems are typical to comprehensive school-to-work transition programs. These implementation challenges commonly center on the following:

- selection, development, and implementation of new curriculum, teaching methods, assessment strategies, and certification
- need for structural changes within the school—such as adding new courses, integrating academic and vocational instruction, adding work-based learning experiences, altering scheduling, and allowing off-site experiences—all of which challenge the school's and district's flexibility, support, and use of staff development
- business participation and involvement that entails the challenges of collaboration and varied roles in program governance, instruction, work site experiences, and resource sharing
- ways in which the program design may challenge state and local education regulations and, for workplace training, child labor laws
- issues of equity and access, addressing particularly the experiences and outcomes of selected subgroups such as minorities, young women, limited English-speaking students, and students with disabilities (Kazis and Niles 1992)

These implementation challenges and how they can be assessed are described below. Specifically, the process evaluation issues center on design, implementation, context, data collection, and analysis. The career academy model, as developed and supported by the National Academy Foundation, will be used as an example in clarifying these issues and challenges.

Design Issues

Rarely are programs implemented as a perfect replication of the original or intended model's design, which makes assessment of program fidelity an important analytic process. Some adaptations to local conditions are beneficial. Some adaptations may affect less important components of a model, thereby not undercutting its potential overall effectiveness; other forms of adaptation may severely alter the program so that it bears little resemblance to the original design and is unlikely to address its intended goals and objectives.

For example, the career academy model is typically a two-year program of coursework with a summer internship in between the two academic years. Career academies focus on a selected business or industry sector. Some districts have adapted the career academy model into a four-year program, providing high-risk students with preparatory coursework that will help them succeed in the core program courses and internship. Such a modification is consistent with the program model and extends its benefits to serving high-risk students. Some districts, however, have difficulty arranging for internships. Deleting the internship component would be an adaptation that would severely alter the program and make it unlikely to meet its intended objectives of preparing youth well for the workplace.

The characteristics of a program design and the way these are explained can have bearing on the fidelity of how a program model is implemented. Some features of a program's design can inhibit successful implementation of the model as intended because they are challenging or require special circumstances to be implemented. For example, some features may be too complicated to permit easy implementation, leading to adaptation of a feature or deletion of a component.

Sometimes program designs have broad goals and objectives that are ambiguous and can confuse program officials about the intended thrust of program implementation.

In addition, some features of a program model may not be well defined by the model's designers, leaving too much to program operators to decide and possibly misinterpret. For example, one program objective may be to integrate academic and work-based learning. This process entails many strategies, from exposure to work-related content to actual work-related skill development in academic coursework and

the reinforcement of specific academic skills at the workplace. Without specific clarity and guidelines, program operators could develop a program that gives only cursory attention to this integration of skills development.

Finally, some features may be controversial for the local school or setting, forcing program operators to drop or adapt them. For example, school staff may be reluctant to alter the school schedule to permit block programming for work-based training or to group students for a series of common courses.

Some program components are dependent upon appropriate local conditions. In particular, local districts should focus their school-to-work transition programs on growth industries, where training opportunities could best be developed and subsequent employment opportunities would most likely be for program graduates. For example, if a business or industry in a particular community is experiencing a downturn or excessive layoffs, such as occurred in the computing industry during the late 1980s and early 1990s, a career academy in computing should not be initiated in that community. Similarly, local conditions may make it impossible to implement a program model fully or with adaptations that are consistent with the goals and objectives. Rural school districts, for example, may not be able to arrange adequate work-based learning opportunities in targeted businesses and industries for a career academy program, forcing district officials to forgo this aspect of the program or to substitute other experiences, which may not sufficiently simulate actual work or the industry.

Evaluation of adherence to a program's design through implementation entails determining the core components of the model, the extent to which each component is actually implemented, the degree to which a program's students participate in all aspects of the program, and the consistency of adaptations with the program's purpose, goals, and objectives.

Implementation Processes

Even with a well-delineated model, programs can encounter problems because of how they are implemented. According to Fullan, there are three distinct phases to the change process—initiation (which includes the steps leading up to the decision to adopt a program or model), implementation (which entails the first efforts to put the program ideas into practice), and continuation (during which a program becomes institutionalized as part of the system or discarded). The change process, while including these three phases, is not necessarily linear, particularly as feedback or initial implementation efforts may lead to rethinking and modifying a program's design for a new round of implementation activity. The amount and source of initial support for the change process are critical during these trial periods of planning and initial use.

Documentation of the implementation process should focus on all three phases, looking at the breadth, role, and support of those who participate; the training and assistance provided to staff before and during initial program implementation; and the time and resources allotted for each of these phases. There are several operational considerations in the implementation process, some that relate to any program implementation and some that exist because of the nature of school-to-work transition programs. Programs can be implemented in ways that maximize or undercut the potential for success.

Common implementation problems that undercut the program's potential include untimely delays in hiring appropriate staff and obtaining curricular materials and other resources; starting the program out of sequence with the school calendar so students cannot be recruited adequately; starting the program with only some components and staff in place; insufficient or delayed funding; difficulty in recruiting targeted participants; lack of cooperation from collaborating agencies or other school staff; and difficulty in engaging business and industry participation. These problems can lead to dramatic adaptations in the program's model and delivery process. It may later become challenging for program officials to convert the adapted program over to the intended design once operations are under way.

Context Issues

The characteristics of the school and community within which a program model is implemented can affect how the design is implemented and the effectiveness of the program in serving youth. The adequacy of resources (within the school district and among collaborating businesses) made available for a program and its implementation, the setting, institutional and financial support, the existence of competing or complementary school programs, and the existence of broader social and political problems can have bearing on how well a program is implemented and how it may be adapted.

For example, program staff and the school and district administration can be severely challenged if they must implement several new programs, policies, and procedures simultaneously. As well, a school district's fiscal crisis can restrict funds and staff time for appropriate planning and program support before and after a program is implemented, leaving insufficient resources to adequately implement the program. A city's economic downturn can upset the viability of targeting selected businesses or industries that are adversely affected, undercutting the effectiveness of preparing students for that business sector.

In examining the context-related issues to implementation, it is important to determine the degree to which these factors exist and may be altering the core components of the design or undercutting effective implementation. If this is occurring, then whether these adaptations are undercutting the program's effectiveness in achieving intended student outcomes or whether appropriate solutions have been devised to meet these challenges needs to be determined.

Strategies for Data Collection

Evaluation evidence of program implementation can be drawn from program records, archival materials, and interviews of key staff and participants. Such data collection can occur at key intervals throughout the initiation and implementation process. In anticipating a process evaluation, program officials and staff should design record-keeping procedures on the program's development and implementation as part of the program's management structure. All written information describing the purpose, structure, and operations of the program will become critical documentation. In addition, a management information system should be designed to track participants' experiences in program use through the application, participation, and completion phases. This information system can be used to document the number and types of participants, retention and completion rates, and service use changes over time. Finally, periodic interviews and focus group discussions with key staff and samples of participants can provide insights on early start-up problems and possible solutions and on subsequent implementation and program operations problems and solutions. The following records and archival materials should be maintained: proposal, mission statement, program objectives, program description, curriculum, staff development materials, staffing structure, minutes of and attendance for key meetings, participants' applications and enrollment forms, participant tracking and follow-up forms, and public relations materials and news coverage.

Using a career academy as an example, a prototypical process evaluation design would be as follows. First, the program's goals and objectives would be clarified and appropriate measures of student participation and success would be determined. In this case, the program includes eight core courses, a summer internship, and a college-level course. A management information system would be used to collect information on student participation and success in these courses and internship experience. Its core components would include documentation on student eligibility, coursework performance and completion, attendance, and feedback on internship performance. A rating form for internship supervisors would be used with a mechanism for timely and complete feedback on appropriate internship performance outcomes—employability

skills, entry-level knowledge and skills related to the industry, quality of appropriate academic skills, and problems with the intern and internship process.

Through periodic interviews during the initiation and implementation phases, program staff and key school and district administrators would be asked about their understanding of the program's goals, objectives, and mission; capacity to implement all core components; scheduling of courses and the use of core courses to meet high school graduation requirements; provision of space and resources to adequately operate the program; and staffing. In terms of the operations of the program, the interviews and review of program records would provide information on the recruiting process (and the degree to which the program is being adequately promoted and is recruiting targeted students), student orientation, staff training, and internship development. Interviews and observations can be used to determine whether the curriculum is being used as intended and whether internship experiences are providing students with adequate exposure to the industry and the world of work.

Analysis and Reporting

Program officials and staff should establish periodic benchmarks to collect implementation evaluation information and analyze the results to inform program operations and management practices within a specified time frame. The first step of analysis would be to draw up a case summary of the initial development and implementation processes. This step helps to integrate all phases and processes into a coherent picture. The summary is helpful in drawing out the ways in which the program design and structure have been adapted for implementation and pinpointing critical events that may have facilitated or hindered optimal implementation.

The second step is to analyze the implemented program model and processes according to key issues:

- adherence to the proposed model and ways in which it has been adapted
- adherence to recommended or ideal program features and ways in which it differs
- types of implementation problems, their causes and possible solutions

By establishing key benchmarks for the development and implementation processes, program management and staff can review problems systematically and develop early intervention strategies. Reflecting on the program as a whole and the relation between objectives and implemented program features is critical to thorough and effective problem solving. This allows for more inclusive solutions to be developed,

rather than just making incremental decisions as problems arise, and permits early intervention before these problems have become too entrenched or complicated to resolve.

Finally, in analyzing the problems and experiences of programs in the implementation process, it is valuable to compare the start-up and implementation experiences of the program with other similar programs and recommended or ideal program features. Such a comparison offers several benefits. First, it may reveal common problems in implementing the model, for which other programs may have found solutions. Second, such a comparison would help to determine whether implementation problems are a function of the model itself or the institutions and program setting involved.

In conclusion, process evaluation is a useful management mechanism to provide feedback on how well a program model is understood and the fidelity with which the program is implemented, to identify operational problems, and to determine whether unintended challenges exist that need attention and resolution. A process evaluation can become an ongoing management practice and need not be limited to a one-time event. Repeated use of process evaluation can help to determine whether a program is successfully implemented as intended and can identify when a program is incrementally drifting from its intended mission and design (as can occur during long-term operations).

Impact Evaluation

The ultimate objective for evaluation is to demonstrate a program's impact. It is critical to determine whether and to what degree a program is meeting its intended objectives and yielding the appropriate outcomes. In addition, documentation of a program's positive outcomes has several operational and management benefits for program staff and officials. These results can be used to further programs, aid in fundraising, advocate for program continuity, encourage participant recruitment, and generally provide positive public relations. Therefore, a program's continuation and operational success hinge on the successful demonstration of its effectiveness in meeting or exceeding its objectives. Program officials will want to demonstrate the short- and long-term benefits of a program. The quality of these outcome findings depends substantially on the appropriateness and effectiveness of the impact evaluation design and its administration.

Determining a program's impact requires clearly stated and measurable objectives or indicators of effectiveness and appropriate sources of comparison for these indicators to demonstrate the significance of the program's impact on its participants. Ideally, an impact evaluation design would incorporate multiple measures of effectiveness for each objective or claim, thereby strengthening the validity of the findings.

The following sections describe outcome measures, comparisons, data collection procedures and analysis, and reporting procedures for an impact evaluation of a typical school-to-work transition program.

Outcomes and Their Measurement

A school-to-work transition program can yield several types of outcomes, the most primary being to improve the employability of its youth participants, particularly in obtaining and retaining quality jobs with career-track potential in growth industries. School-to-work transition programs have basically three types of core outcomes for their youth participants:

- improving participants' knowledge and skills for entry-level jobs in a specific business or industry
- improving participants' ability to pursue postsecondary education in the same or a related career field
- improving participants' ability to obtain timely and promising career-track jobs in a specific business or industry

After appropriate outcomes for evaluation of a school-to-work transition program have been determined, relevant and sensitive measures will need to be identified. Selected measures should closely reflect the program's mission, design, and service delivery. As outlined earlier, three types of outcomes are to be measured: knowledge gained, improved ability to pursue postsecondary training, and improved ability to pursue career-track potential jobs. Measures of these outcomes must be tailored to the specific curriculum and activities of the program and the type of business or industry targeted. For example, if the program integrates academic skill development and specific business area (such as economics and financial services), an appropriate outcome would be knowledge gained about economics and its relation to financial services and could be measured through a specifically designed criterion-referenced test.

Measures of students' improved ability to pursue postsecondary training could include college acceptance and enrollment rates (particularly by more challenging postsecondary programs), as determined through a follow-up survey of graduates; participants' pre- and postprogram comparison of self-reported confidence about pursuing

and succeeding in postsecondary education; and comparison of teachers' pre- and postprogram ratings of the students' capability of being accepted in and successfully completing a postsecondary education program.

Finally, measures of the program's impact on students' subsequent employment in the targeted business or industry could be determined by a short-term follow-up survey (such as three to six months after program completion) that assesses their employment status (by area of employment) and type of position held, responsibilities of the position, benefits and other remuneration, length of time in seeking employment, and assistance used in job hunting. Other measures would be the participants' comparative sense of confidence (pre- and postprogram) in obtaining employment in the targeted industry. In addition, if participants have a work experience (like a summer internship or other form of work site training), supervisors' ratings of the participants' employability skills, applied academic skills, and job-related skills could be assessed in general and in comparison to other entry-level employees.

School-to-work transition programs can also yield several academic and attitudinal improvements:

- improving participants' academic achievement (as measured by course grades and grade point averages)
- improving participants' interest and engagement in school (as measured by their affinity for school, attendance, and lack of discipline referrals)
- increasing the likelihood that participants will remain in and complete high school in a timely fashion (as measured by their credit accumulation, retention and graduation rates)
- improving participants' confidence and sense of personal efficacy or general capability to succeed in their career pursuits and the world of work generally

These outcomes represent short-term benefits that result from applied academic and work-based skills development and from preparation for employment in a selected industry or business. These outcomes can be measured separately for participation in program-related courses and activities and for overall school performance and attitude.

Ideally, a school-to-work transition program should reinforce the Secretary's Commission on Achieving Necessary Skills' (SCANS) basic employability skills, which represent benchmark preparatory skills for success in the workplace. The SCANS competencies and three-part foundation for workers include the following:

Competencies

- resources: worker identifies, organizes, plans, and allocates resources (including time, money, materials and facilities, and human resources)
- interpersonal: employee works with others
- information: worker acquires and uses information
- systems: employee understands complex interrelationships
- technology: employee works with a variety of technology

Foundations

- basic skills: reading, writing, performing arithmetic and mathematical operations, listening, and speaking
- thinking skills: thinking creatively, making decisions, solving problems, visualizing, knowing how to learn, and reasoning
- personal qualities: displaying responsibility, self-esteem, sociability, self-management, and integrity and honesty

At a minimum, participating students should demonstrate improved competence in the various SCANS competencies and foundations. In using these competencies to evaluate a program's impact, however, a preliminary assessment is necessary to determine how much and to what extent the program emphasizes each skill area before ascertaining the degree to which students develop these skills.

The primary long-term outcome of a school-to-work transition program, however, is the participants' subsequent success in obtaining promising entry-level jobs in the training-related business or industry, success being that participants who successfully complete a program are able to find employment in their training-related field in a timely fashion and that the job holds promise of advancement and appropriate remuneration and benefits. Related to this outcome is the degree to which participants choose instead to pursue further postsecondary education or training in the same career field and are able to enroll and complete such a program before pursuing employment in the targeted business or industry.

School-to-work transition programs can yield secondary outcomes for the staff, schools, and businesses and industries involved in operating the program. These outcomes include improving school and business relations, teaching practices and quality curriculum at the school, and work-site training. This paper focuses primarily on participant-related outcomes, which are the priority for school-to-work transition programs.

Comparisons

The significance of improvement in the various participant outcome measures and the contribution of the school-to-work transition program to these gains can only be determined through comparisons with other types of groups' performance on these same outcomes. Two types of comparative analysis are recommended for the evaluation of a school-to-work transition program. The first is a within-program comparison, and the other is a comparison with other groups that did not participate in the program.

The first type of comparison is to determine the degree of program impact on the selected outcomes among different types of youth served. The comparative analysis would determine whether all types of youth served attain similar outcome results or if some types of youth perform less well than others. Possible types of comparisons would be by gender, race/ethnicity, and degree of being educationally and economically at risk. It is important to ascertain the degree to which the program is equally successful with various subgroups, particularly minority youth and young women, who often fare less well in the workplace than do other youth. This comparison is particularly significant if the related business or industry has historically underemployed specific subgroups of youth (such as young women and minorities).

The second type of outcome comparison to be conducted is between program participants and other groups that did not participate in the program. The objective of this comparison is to determine the degree to which the school-to-work transition program yields its intended outcomes (rather than have these outcomes occur because of other nonprogram-related factors) and whether the magnitude of these outcomes is greater than what other types of programs (or the lack of any program) can yield. There are three types of nonprogram youth to which program participants could be compared: (1) similar youth in an alternative type of school-to-work transition program, (2) similar youth in a less comprehensive school-to-work transition program, and (3) similar youth who are not in a school-to-work transition program.

The evaluation challenge is to ensure that any outcome differences yielded by these comparisons can be attributed primarily to the program's design, rather than other differences in the characteristics of comparison groups. The selection of comparison groups must be structured in such a way as to reduce the likelihood that the intended outcomes are attributable to other student-related characteristics. The most common characteristics to consider are personal demographic characteristics of the youth (such as age, gender, race/ethnicity, and poverty status), their prior academic success and likelihood of being at risk of dropping out (including their attendance, grade point average, credit accumulation, and disciplinary referral histories), and their motivation

to be in the program and the targeted business or industry and to pursue employment or more training after graduation in the same or a related career field. Dramatic initial differences between participants and comparison group youth in these characteristics could make it difficult to interpret whether subsequent outcome differences are attributable just to the program experience or result primarily from these initial differences.

Ideally, an experimental evaluation design should be used. Such design, however, requires that equally eligible students be randomly assigned to a program group or a comparison group, making the two groups identical in their initial characteristics, motivation, and interest in the program. This would require overrecruiting eligible youth for a program and randomly assigning them to a program or comparison group (which would be either an alternative, less intensive, school-to-work transition program or no program). Subsequently, relevant measures of the two groups' achievement, employment, and other appropriate outcomes would be gauged and compared to determine differences that can be attributed specifically to the school-to-work transition program's effects.

However, opportunities for randomly assigning students and making these comparisons rarely exist. Program officials are reluctant to withhold a program from interested youth, even if it is oversubscribed. It can also be politically challenging for schools and businesses to use a lottery system to assign applicant students to a program or a comparison alternative. Finally, it is often difficult to recruit sufficient numbers of youth to permit random assignment to two groups.

As a result, a quasi-experimental design that uses other means of assigning students to comparison groups is usually necessary. These various assignment procedures require compromising some of the control on initial group differences between participants and comparison students. This type of design, therefore, has some evaluative drawbacks because it is more difficult to separate out the influence of the program from the initial differences between participants and comparison students.

Multiple alternative comparison groups could be used to sort out these possible differences from the program's effects. The primary initial differences to control are demographic and relevant school performance indicators for students in the program and comparison groups. Three possible groups are as follows: one group could be drawn from participants in a comparable vocational education or school-to-work transition program that uses an alternative service delivery design (such as providing only classroom instruction in a vocational area); a second group could be youth who applied for but were not accepted into the school-to-work transition program because of the lack of space, not because of their initial eligibility, and who would therefore be similarly motivated to be in the program and have the same demographic profile as participants;

a third group could be youth of similar background (in terms of demographics and school performance) selected from the same or a similar school.

There are advantages to and limitations of each of these types of comparison groups. The first group permits a comparative analysis of two alternative school-to-work transition programs and services, with one being more intensive than the other. This analysis could help to demonstrate the additional benefit of the more intensive experience. Yet, there may be some differences between the two groups of students, in terms of their demographic characteristics and their initial interest and motivation, which may account for some of the outcome differences. The other two comparison groups permit an analysis of the benefits of being in the program in contrast to having no school-to-work transition program experience. Members of the first group would be most similar to those in the program because they were similarly motivated and would, theoretically, match the demographic profile of those who were accepted. Thus, initial differences between the two groups would be minimized. Yet, this comparison group is difficult to construct because programs often do not keep records on who is not enrolled, and programs often are not oversubscribed by sufficient numbers of equally eligible students to allow for the construction of a comparison group. Finally, the third type of comparison group would be easiest to construct, but would not permit ruling out initial differences in interest and motivation (which the participants might have) and would only allow comparison of the program's impact with a nonprogram experience.

Determining the program's impact on various outcome measures can be strengthened by using multiple types of comparisons. This includes using two or more locally constructed comparison groups, drawn from the above types. This also includes using other types of comparative benchmarks, such as district, state, or national level data or hypothetical standards based upon a rater's professional experience. For example, program participants' school retention and graduation rates can be compared with a similar group of students in a general education program, but also to the districtwide averages. Survey results from a nationally representative sample of students, such as those yielded from the National Educational Longitudinal Survey of 1988 and the subsequent follow-up surveys, permit calculation of student subgroup profiles on selected school-related attitudes and performance measures. These data could be used as a national comparison on the program's impact. Finally, relevant experts, such as program teachers and work-site supervisors, can rate program participants' performance on selected outcome measures in relation to other types of students or employees. For example, work-site supervisors could rate the participants' performance relative to the general performance level of other entry-level employees.

Degree of Implementation and Student Participation

A measure of the degree to which youth participate in the various program elements of a school-to-work transition program is necessary for analysis and interpretation of findings. Many school-to-work transition programs contain multiple features: academic courses, preemployment preparation, work experience or work-based learning, exposure to role models and mentors, and supportive services. Participant outcomes should be positively related to the length, the intensity of exposure to these components, and the number of components experienced. That is, the longer a youth participates and the more services he or she uses, the more positive the outcomes are likely to be. For example, career academy students who participate in the full two-year program and have an internship should have higher program outcomes than students who have only the two-year program, but not the internship, or students who participate in only one of the two program years.

This measure of students' participation in the program would be based upon participants' attendance and total use of all program services and components. It would be used in the analysis to differentiate participants (by degree of program usage and participation) and compare the outcome results. This analytic step will help to demonstrate the degree to which level and intensity of program participation contribute to the outcome results yielded.

Data Collection

Data for an impact evaluation can be obtained through qualitative and quantitative data collection techniques and procedures. The data collection strategies to be used depend upon the outcome measures selected, the availability of information for these measures, any existing constraints on data collection (which may limit the degree to which various data collection techniques can be used), timing, and available resources. A wide variety of data collection procedures exist and can be used singularly or jointly, depending upon the evaluation design. These procedures can include analysis of program documentation or participants' attendance, completion, and performance; observations of activities; interviews; and follow-up studies of subsequent employment and educational experiences. Since it is advisable to use multiple measures of each program outcome, it is likely that a variety of data collection procedures will be necessary for the impact evaluation.

Data on participants and comparison group youth must be collected in similar, systematic procedures for the same time intervals and according to the same schedule. Ideally, the evaluation design should be to collect school performance information on

both participant and comparison group students for their status prior to enrolling in the program and at regular intervals during and at the end of the program.

Some data collection can be excerpted from existing program record keeping. Conversely, some data can be collected by incorporating new categories into existing program record keeping and documenting procedure. Finally, some data collection will have to be undertaken specifically for the evaluation. In these cases, it is advisable that the timing of these collection activities be tailored to program operations and scheduling to facilitate ease in data collection and to increase the probability of obtaining valid and reliable information.

Some outcome measures can be documented as part of an existing management information system on service delivery and student participation. Through advance planning, data collection for an impact evaluation can be incorporated into the ongoing management practices of a program to permit easy and timely access of information and reporting. For example, enrollment applications could be used to collect preprogram measures of students' attitudes about school and work, their future career and educational plans, attitudes about themselves and their capacity to find successful employment, and their prior relevant experience. Other data, such as grades, attendance, disciplinary referrals, achievement test performance, and school completion, can be obtained through an existing school district management information system. A school district's management information system can also be used to collect information on participants' school-related performance prior to enrollment, their academic progress during program participation, and their academic achievement at the completion of the program, and similar information for comparison students.

The program's management information system could be used to document student participation (such as attendance, progress, and accomplishments) in the various program components. If comparison groups are used, a separate management information system may be necessary to track the academic progress and other similar program experiences of these youth if they are receiving other forms of employment preparation or vocational training.

Youths' participation in the program can be documented further through periodic observations of them in selected program activities. Through observations, an evaluator can document attendance patterns, student interest and engagement, student-teacher (or work-site supervisor) interaction, use of instructional materials, and the overall climate and tone of the program. At a minimum, a sample of classes and work sites should be observed at least once, but preferably twice or more at well-spaced intervals during program operations in a program year.

The benefits and influences of the students' program experiences can be ascertained more fully through individual and group interviews, particularly focus group interviews. According to Kreuger (1988), focus group interviews are useful in gaining insight, perceptions, and explanations of experiences from participants. Focus groups make use of the group environment to promote self-disclosure among participants. Focus groups are typically comprised of seven to ten people of similar backgrounds who are led through a small number of open-ended questions and related discussions by a group facilitator. The format allows for follow-up probes on answers. These in-depth interviews are useful in developing an understanding of a program from the participants' perspective and can provide more richness of information than is attainable from surveys. Other qualitative data collection procedures can include constructing case histories of a small sample of participants (based on a series of in-depth interviews) to learn how the program fits into their life experiences and future plans.

Surveys can be a useful data collection mechanism to collect standardized information on participants' attitudes, program experiences, future plans, and evaluation of their program experiences. To measure change in attitudes and expectations as a result of the program, pre- and postprogram surveys can be administered to participants and comparison group students. Several nationally developed surveys, such as the National Education Longitudinal Survey (sponsored by the U.S. Department of Education), can be a source of well-developed questionnaire items.

A follow-up survey of program graduates conducted at six months, twelve months, and forty-eight months after program completion and high school graduation can be used to measure the short- and long-term benefits of the program in preparing youth for employment and further postsecondary education and training. A similarly conducted survey of a comparison group can help to demonstrate the comparative benefits and gains of the program for its graduates.

Analysis and Reporting

The analysis and reporting of impact evaluation results should be undertaken according to the stated program objectives and intended outcomes. This will permit comparison of findings on individual outcomes across various sources of data and measures. Once these outcome-specific analyses have been conducted, a more general analysis across outcomes can be done to determine the program's overall effectiveness and to reflect on the relation between the results and the program design, and operational reasons for the program's success or lack of success can be taken into account.

Four levels of analysis should be considered. The first level of analysis is to examine the relationship between the outcome results and the educational assumptions of the program model itself. This level of analysis is to examine the outcomes as they are relevant to the design and intentions of the program. If, for example, the program is designed to integrate work-based learning with academic instruction (such as having students learn about the financial services industry as part of an economics course in a career academy program), the degree to which students actually learn about the financial services industry as well as economics should be analyzed as part of the evaluation. A comparative analysis of student performance in a traditional economics course with the performance of participants in a work-based economics course should help to demonstrate whether this contextualized instructional approach, as the program design assumes, actually yields better outcomes.

The second level of analysis is to investigate the relationship between program impact and the degree of program implementation (particularly if the program is in multiple sites) and the degree to which participants are exposed to and use all aspects of the program. There should be a direct and positive relationship between the intensity and amount of program offered (and implemented) and used by students and the outcomes achieved.

This is actually two forms of analysis. The first part is to determine whether there is a relationship between degree of program implementation and outcomes. That is, if one or more program components was not implemented, then the analysis should not yield any significant results related to this component. For example, if a career academy program did not provide an internship experience for all participants, less positive employment-related outcomes may be expected. If a program model was implemented in multiple sites, the outcomes of the program should be compared among sites according to the degree to which the sites implemented the full program model. Sites with more fully (and well) implemented programs, in keeping with the intended model, should yield more significant outcomes than programs that are less well or less fully implemented.

In the same vein, individual student outcomes should vary according to the degree to which they participated in the full program. Therefore, an analysis of the outcome results should compare the outcome levels of students according to their degree of attendance and use of all program components. Students who had good attendance, participated in all components, and completed the whole program should have better performance-related outcomes than students who dropped out of the program early or who completed some components and not others. If such differences do not exist (and the lack of difference cannot be explained by other influences, such as differences

in student characteristics according to the degree of program use), the program model may not be effective. An underlying assumption of the program is that all components are necessary to yield the intended outcomes. If similar outcomes can be reached without full program use, the program design may need to be reexamined.

The third level of impact analysis would be to demonstrate the comparative benefit of the program over other alternatives by contrasting the experiences and outcomes of participants and of students in the comparison groups. This analysis would statistically compare the results of participants and one or more types of comparison students according to the intended program outcomes. The ways in which the two groups differ in their training and educational experiences should be reflected in the type and degree of outcome differences. For example, if career academy participants are compared with students who have only taken economics coursework and had no other employment exposure, the participants should show somewhat better knowledge of economics outcomes and even better employment readiness and ease in finding post-high school employment and in pursuing concrete postsecondary educational plans. This comparative analysis should show the statistically significant contribution the program made to the participants served. Thus, the degree to which the training and education experiences of the participant and comparison groups differ should be reflected in the outcomes.

The fourth level of analysis would be within the program to determine whether different subgroups of youth have equivalent experiences and outcomes. This type of analysis is important to determine whether groups that are traditionally underserved or who have limited access to the business or industry (such as young women, minorities, and at-risk youth) gain similar or even better outcomes than other program participants.

In analyzing the program outcomes, it is important to consider the degree to which the findings are influenced by other external factors. The primary objective of the outcome analysis is to determine the impact of the program, separate from other possible influences on student performance and subsequent postsecondary educational and employment experiences. The levels of analyses proposed above help to control some sources of influence on the outcomes, particularly degree of program implementation and degree of student use of the program. In addition, the more similiar students in a comparison group are to the participating students, the less likely it is that selected student-related characteristics can account for differences in outcomes (as opposed to the actual influence of the program itself). In examining the comparative outcome results, every effort should be made to consider other possible explanations for the differences (or lack of differences) yielded, to be certain that the program's impact is being well defined by the comparative outcome results.

The impact evaluation results can be presented and reported in different ways, depending on the intended audiences and purposes of the evaluation. A full report presenting the evaluation design, methodology, and results will be necessary but will be read by only a small number of interested program officials. Such a report is most useful as a resource or backup guide. Most audiences, such as program staff, board members, participants, and other interested parties, would benefit more from a brief, clearly written synopsis of the key findings that are related to the program's mission and design. A similar, possibly more focused brief highlighting key findings and significance of the program's design and impact can be shared with key funders and the press for public relations purposes.

In writing impact evaluation results, it is important to consider the interest and methodological expertise of the intended audiences. Program managers benefit greatly from descriptive information on who is served and the degree to which the participants make use of program services. Few audiences can make much use of high-level statistical analyses and presentations. While such analyses may be necessary to investigate and uncover a program's comparative impact, the simplest form of statistical presentation and method of interpreting results is most useful for the broadest range of audiences.

The results of an evaluation, either process or outcome, can be the basis for positive public relations within the program and externally for recruitment, fundraising, and dissemination. Good results should be shared among staff, participants, and other key constituencies, particularly the employers involved, to compliment their contributions and to reward their efforts and accomplishments.

Evaluation Management

Management of an evaluation entails assigning responsibility for its conduct and providing the necessary support and resources for valid and reliable data collection and analysis. An evaluation, however, should not interfere with program operations or overburden staff and participants unnecessarily. Therefore, every effort should be made to devise ways of tailoring evaluation data collection to existing management practices, program documentation procedures, and other related activities. Finally, program staff and officials should consider program evaluation to be an integral part of program management and should look to the evaluation design and its administration as a way of being informed about the appropriateness and effectiveness of the program model, its implementation, and its service delivery strategies.

Process and impact evaluations can be undertaken by program staff and administration as part of their ongoing responsibilities or be contracted out to an independent agency or individual. Deciding who conducts the evaluation depends upon program staff availability and capacity as well as the need for an independent, unbiased assessment of the program. Assigning program staff to conduct the evaluation has several advantages. First, it encourages staff to consider evaluation as part of program management, rather than an independent activity (which could be ignored). Second, it encourages staff to use the evaluation process and results in problem solving around program design, implementation, and operations.

However, an outside evaluator should be used when existing program staff lack the time and expertise to undertake the evaluation or when an unbiased evaluation is needed to demonstrate a program's effectiveness to a wider audience. The results will seem to be less potentially biased if determined by an independent, unaffiliated evaluator, than if prepared by program staff.

Besides determining who conducts the evaluation, a minimally intrusive process for conducting the evaluation needs to be designed. As noted above, evaluation data collection can be incorporated in several ways into existing program documentation procedures or, at a minimum, scheduled in a way that is least intrusive on the program. For example, pre- and postprogram surveys on participant attitudes and expectations could be part of enrollment and exit forms for program participation. If this is not feasible, participants can be surveyed during nonclass time that does not compete with other testing or special events.

The design of most school-to-work programs and the multiconstituency partnership that they entail add to the challenge of evaluation management. Most, like career academies and youth apprenticeship programs, deliver services through two or more institutions—the schools and the workplace. Each institution may have its own policies and procedures governing the conduct of evaluation (such as the need for parental consent, confidentiality of information and records) and the method for conducting various data collection activities. Thus, planning and managing the evaluation require addressing these questions with each participating institution and providing feedback on the evaluation's process to ensure full participation of each institutional stakeholder.

Finally, the evaluation should not be undertaken until all core program officials and staff understand the purpose of and need for the evaluation and consider ways in which it can be adapted to help them in their program operations and management. At the very least, all core program staff must support the evaluation to facilitate valid and reliable data collection and help collect necessary program documentation. In addition, program staff must be assured that the evaluation is not a punitive assessment

of their own roles and responsibility. Finally, the evaluation should be managed in such a way that it can be a creative and rewarding experience for staff and administration as they use the evaluation design and data collection to test some of their own questions and assumptions about how well the program is operating.

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