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ABSTRACT

Intended for local educational administrators and practitioners, the technical assistance guide addresses student related and program related connections in providing vocational programs for handicapped students at the secondary level. Following an introductory section, section II looks at the structure of vocational systems by explaining the importance of connections (e.g., use of information about skills needed for employment to shape vocational assessment). Section III describes a vocational system which incorporates connections between the following components: (1) vocational assessment/career counseling, (2) career counseling/vocational training, (3) vocational training/placement, (4) placement/work experience/followup, (5) work experience/followup/placement, (6) placement/employment, (7) placement/continuing education/vocational training, and (8) employment/vocational training. Connections which were presented in section III are critiqued in section IV. The final section offers general guidelines that local education agency personnel can use to examine the connections in their vocational systems aimed at handicapped students. (SW)

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# SRI International

SEP Technical Assistance Guide (No. 2)

The Crucial Role of Connections In Vocational Systems For  
Serving The Handicapped: Guide For LEA Personnel

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## I INTRODUCTION

This technical assistance guide has been prepared to help local educational administrators and practitioners in examining a critical aspect of their vocational programs and practices aimed at handicapped students. By focusing attention on this aspect, the vocational "connection," we hope that this guide can lead to improvement of these programs and practices.

This document is one product of SRI International's Longitudinal Implementation Study of Public Law 94-142, funded by Special Education Programs in the U.S. Department of Education. This study, conducted primarily for federal policymakers, is entering its fourth year. It is built around ongoing case studies of 16 local education agencies (LEAs) with widely varying characteristics, in 9 states across the country.

Two factors prompted the development of this guide: (1) the legal mandates that require equal opportunities for the handicapped in vocational education and vocational training, and (2) findings from the SRI study. First, commitment by the federal government to equal opportunity for the handicapped in preparation for employment is reflected in four major legal mandates:

- Public Law 94-142, the Education for All Handicapped Children Act: One intent of Public Law 94-142 is that the handicapped receive vocational education. The law's regulations both define vocational education and stress that the handicapped should have equal access to LEA programs.\*

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\* Federal Register. Tuesday, August 23, 1977, Part II (Rules and regulations for amendments to Part B, Education for All Handicapped Children Act of 1975, PL 94-142, Education of handicapped children), pp. 42474-42518.

- Section 504 of the Rehabilitation Act of 1973: This section prohibits discrimination on the basis of handicap in preschool through adult programs, including vocational education programs.\*
- Public Law 94-482, the Vocational Education Act Amendments of 1976: These amendments further promote the accessibility of vocational education programs to the handicapped by requiring states to spend at least 10% of their total federal allotment in vocational education for the handicapped.\*\*
- Section 503 of the Rehabilitation Act of 1973: This section requires that employers holding sizeable contracts with the federal government take affirmative action to hire more handicapped individuals.\*\*\*

Second, the following key findings from the SRI implementation study also prompted the development of this guide:

- LEA personnel consider secondary-level programming for the handicapped to be a weak area in general.
- In particular, however, some progress in secondary-level programming for the handicapped is being made in the area of vocational education.
- This progress is due partly to emphasis on vocational goals for handicapped students.
- In spite of this progress, basic components of vocational systems are rarely linked systematically.

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\* Federal Register. Wednesday, May 4, 1977, Part IV (Rules and regulations for Section 504, Rehabilitation Act of 1973, PL 93-112, Nondiscrimination on basis of handicap), pp. 22676-22702.

\*\* Federal Register. Monday, October 3, 1977, Part VI (Rules and regulations for Education Amendments of 1976, PL 94-482, Vocational education, state programs and Commissioner's discretionary programs), pp. 53822-53891.

\*\*\* Federal Register. Friday, April 16, 1976, Part I (Rules and regulations for Section 503, Rehabilitation Act of 1973, PL 93-112, Affirmative action obligations of contractors and subcontractors for handicapped workers), pp. 16147-16155.

This guide addresses the issues raised by the SRI study and is divided into four major sections:

- . Structure of Vocational Systems (Section II)
- . Description of One Vocational System (Section III)
- . Critique of the Connections in a Vocational System (Section IV)
- . Implications for LEA Personnel (Section V).

## II STRUCTURE OF VOCATIONAL SYSTEMS

We conceive of a vocational system as having two aspects:

(1) vocational program components and (2) connections between these components. The components of a vocational system are defined as the stages of the system through which individual students pass. Examples of possible components include vocational assessment, career counseling, prevocational training, vocational education training, work experience, job placement, job follow-up, and employment. Of all the possible components, any LEA's vocational system will probably have only certain ones, which can be arranged in a certain order corresponding to the temporal sequence followed by an individual student who goes through the system.

A connection between two components is defined as the process of information transfer from one component for use by another. For example, consider a connection between vocational assessment and career counseling. Information about a student's skills in six areas (in the form of a skills matrix) might be mailed by the head of a vocational assessment center to a career counselor in a high school. The high school career counselor might use this information to help suggest possible careers to a student.

As one can see, in order to describe a connection fully, it is necessary to describe the following dimensions:

- The content of the information that is transferred (e.g., information about a student's skills in six areas).
- The form of the information transferred (e.g., skills matrix).
- ~~Who or what provides the information (e.g., the head of the vocational assessment center).~~
- The means by which the information is transferred (e.g., mail).
- To whom or what the information is given (e.g., the high school career counselor).
- How the information is used by the recipient (e.g., to suggest possible careers for a student).

Two types of connection are possible in a vocational system. The first, student-related connections, is illustrated by the previous example. These connections involve transferring information about students, so that they can experience program continuity as the information about them is used in subsequent stages of the vocational system. The second, program-related connections, involves transferring information to planners for use in vocational system development. For example, information about the skills needed for employment can be used to shape vocational assessment. The purpose of this type of connection is to make the program relevant to real-world conditions.

It is beyond the scope of this guide to present a model of exemplary vocational components. In particular, we cannot critique the quality of components, provide a description of exemplary components, or advocate an ideal sequencing of components. However, we believe that, regardless of the number or nature of the components in a vocational system, it is important to view critically the connections between them, since both continuity for students and program relevance are critical for a successful vocational system.

### III DESCRIPTION OF ONE VOCATIONAL SYSTEM

In this section, we present a detailed description of the vocational system in one LEA to illustrate how specific connections are made between the various vocational components. This LEA was selected for discussion because it illustrates both student-related and program-related connections.\*

The vocational system in this LEA is illustrated in Figure 1. The vocational components are shown by boxes; the connections are illustrated by the arrows between the boxes and are numbered for ease of discussion. For each connection between two components, we will briefly describe the nature of the first component and then detail the connection, considering the various dimensions of connections (e.g., content and form of the information, how the information is used) discussed earlier.

#### A. Student-Related Connections

##### 1. Vocational Assessment--Career Counseling

In this LEA, all handicapped ninth grade students participate in a formal vocational assessment at an assessment center located in an LEA school. The assessment, performed by an assessment counselor, tests students on attitudes, interests, and living skills. In addition, work samples are obtained. On the basis of the results, the assessment counselor assembles a document for each child, listing the results of observations, the strengths and weaknesses determined during the assessment, and recommendations concerning both academic and vocational options. This document, along with the IEP and other relevant information, is assembled into a "special education container" for each student. This is sent by

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\*The description of this LEA is illustrative only, and incorporates both existing practices and those in the process of being implemented.

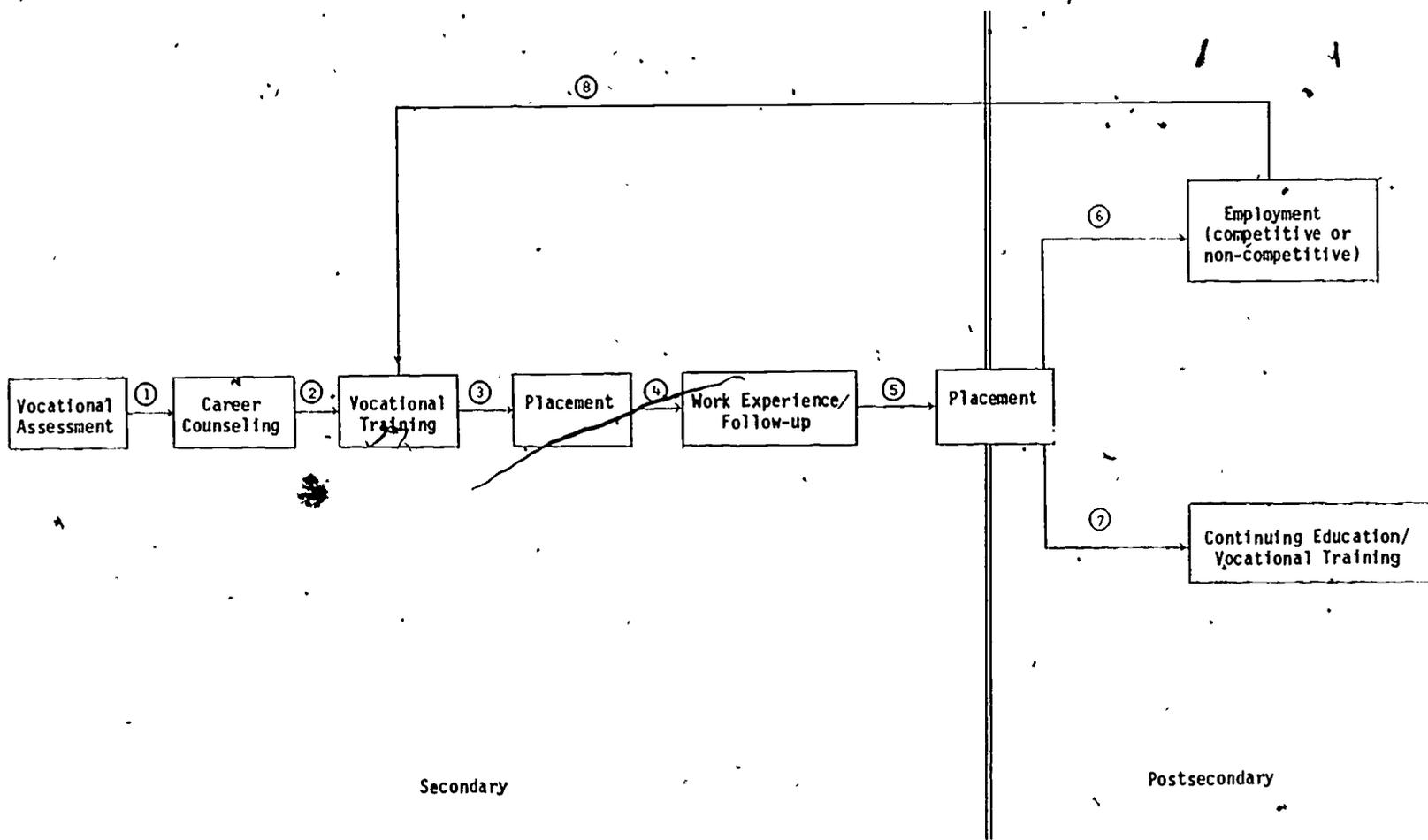


Figure 1 EXAMPLE OF A VOCATIONAL SYSTEM

inter-office mail to the district office and then forwarded to the special education teacher and a vocational rehabilitation counselor at the school where the student will be attending tenth grade. This information will be used later in the vocational process to assist these two individuals in giving students informed career counseling.

## 2. Career Counseling--Vocational Training

Career counseling for the handicapped can take place in several ways. First, each high school operates a Guidance Information Center with a career development counselor and a career aide on staff to help students in exploring careers and making decisions related to vocational training. Students can go through a unit on "The Vocational World," which includes a computer-assisted job search in their areas of interest. Information from this exploration can be given to the high school vocational rehabilitation counselor. This counselor also works with the special education teacher and individual students, interpreting the vocational assessment results and discussing both academic and vocational options. Although the final decision about which vocational option to pursue rests with the special education teacher, the rehabilitation counselor knows the requirements of the various options and plays an important role in matching the results from the vocational and occupational assessments to vocational training placements.

Once the decision is reached to enroll a student in a vocational class, the rehabilitation counselor transfers information about the student to the vocational training stage, as follows. The counselor first handles the paperwork for automatic enrollment of the student into the class; this is handled through the vocational education office. Second, the rehabilitation counselor sends some detailed information about the student to the vocational teacher via inter-office mail. This consists of a piece of paper listing information needed by the vocational teacher, such as the results of the vocational assessment, health information, and the like. This information helps the vocational teacher adapt instruction to the student.

### 3. Vocational Training--Placement

The vocational training in this LEA includes prevocational training and vocational education training. Prevocational training includes instruction in areas such as job application and resume preparation, income tax preparation, business etiquette, and the like. Vocational education training includes traditional industrial arts classes (e.g., woodshop, home economics), as well as specific skill training in areas such as housekeeping, food service, cabinetmaking, and the like. Student information that the vocational teacher received from the rehabilitation counselor is used to help pinpoint specific areas for training. Upon completion of the vocational program, each student receives a certificate, which lists on the back the skills that have been mastered. This list is compiled by each vocational education teacher. The vocational education teacher also meets with the high school vocational rehabilitation counselor, who then uses this list (as well as perhaps vocational assessment information) to assemble a checklist of job-readiness skills for each student. At this point, this checklist is passed on to a district placement counselor, who is responsible for placement of students into work-experience stations. The checklist, a single sheet of paper, is easily passed from the rehabilitation counselor to the placement counselor, since these counselors share an office and meet once a week. The information on the checklist will then influence decisions on work-experience placement.

### 4. Placement--Work Experience/Follow-Up

The duties of the district placement counselor include finding appropriate job placements (work experience) for handicapped students. This counselor uses mainly informal networking to discover job placements in the local community. Job placement decisions are based on student skills and interests as determined by the vocational assessment and career counseling, as well as by the student skill checklist received from the vocational rehabilitation counselor. Before a student is sent to a job site, the

placement counselor synthesizes this information and conveys it to the potential employer in a meeting to help the employer make a final decision about the student. This information also helps employers deal with students once on the job.

#### 5. Work Experience/Follow-Up--Placement

Typically, students go to work for an employer during high school with the goal of being hired full-time by that employer following graduation. The work-experience program recently has been expanded, and now includes 16 new on-the-job training stations in areas such as home improvement and repair, hotel/motel services, and musical instrument repair. The district placement counselor is responsible for job follow-up as well as placement. Follow-up involves on-site visits, conducted as often as necessary. Notes about the student obtained from these visits are used by the placement counselor to help place students after graduation, either in the same job as their work experience or in other jobs.

#### 6. Placement--Employment

The placement counselor is also responsible for placing handicapped students in postsecondary employment. As described earlier, this counselor looks for appropriate jobs in the community. Job placement decisions are based on the follow-up information on performance in work experience, as well as on information about students, such as information on skills and interests, received from previous stages in the system. This information may be shared in meetings with potential employers, where it can help employers decide whether to hire the students, as well as help them deal with the students once hired.

#### 7. Placement--Continuing Education/Vocational Training

The placement counselor's duties also include the placement of handicapped students into continuing education or vocational training. As with job placements, this counselor investigates opportunities in the

community; for example, she has information on course requirements to assist mildly handicapped students wishing to continue their education at community colleges or postsecondary job training. Decisions about postsecondary options are based on follow-up information from work experience, as well as on other pertinent information from earlier stages in the system, such as vocational assessment. This information can be shared in meetings with representatives from the potential placements, to help them decide whether to accept the students or to help them deal with the students once accepted.

B. Program-Related Connection

8. Employment-Vocational Training

Vocational classes and curricula are guided by community employment opportunities in several ways. First, the job market has influenced the establishment of vocational classes. For example, when new classes were being planned last year, the special education department conducted a job market analysis. Vocational education teachers and district administrators interviewed professionals in the labor force to determine the types of jobs available in the community. This information was summarized during administrative meetings and given, via informal discussions, to the vocational education planners. Vocational classes were then set up to train special education students in the job areas most likely to offer future employment opportunities in the community (e.g., cabinetmaking, home improvement and repair, landscape maintenance, and musical instrument repair). Second, the job market has influenced the skills taught in the vocational classes. For example, representatives of trade unions have been invited into the vocational classes to determine the relevance of the skills being taught to skills needed on the job. These representatives have given suggestions to the vocational instructors regarding possible curricular changes. The information received from the local context is updated regularly, in order to keep the classes offered and skills taught relevant to jobs in the community.

#### IV CRITIQUE OF THE CONNECTIONS IN A VOCATIONAL SYSTEM

In this section, we will critique the connections in the vocational system of the LEA described in Section III. In order to critique the connections in a vocational system, one must look separately at (1) each individual connection and (2) all the connections as a unit. Below, we look first at connections individually and then at connections as a unit. In each subsection, we present general principles for critiquing connections and then apply these to the connections in the LEA discussed previously.

##### A. Individual Connections

It is beyond the scope of our study to advocate connections with particular characteristics. For example, we cannot determine whether a person or a computer is the best conduit of information. What works best depends heavily on the local context in an individual system. However, it is possible for LEA administrators and practitioners to examine each individual connection in their vocational system to see whether the connection fulfills its purpose (i.e., program continuity or program relevance). There are several guiding principles that increase the possibility that an individual connection will achieve its purpose:

- The information to be transferred must be in a form that is easy to access and transfer. In addition, this information should include all the information that is relevant to the next stage, but not so much information as to overload the system.
- The means by which information is transferred should be reliable; that is, no information should be lost in the transfer.
- Once the information is transferred, there should be a mechanism for its systematic use.

In the LEA described in Section III, each individual connection appears to achieve its purpose, because each is consistent with the principles just described. For example, the student-related connections (Numbers 1-7) result in the effective transfer of information about students to maintain program continuity, while the program-related connection (Number 8) ensures

program relevance. In general, the relevant information in this system is accessible and transferred reliably in each connection. The information then is used in each subsequent stage. For example, the relevant information from the vocational assessment is systematically transferred to the career counseling component for use in the counseling process.

#### B. The Connections as a Unit

It is also necessary to critique a vocational system by looking at the connections as a unit. There are several general principles that enable the group of connections to meet the goals of program continuity and relevance:

- It is important to have as many connections within the vocational system as possible.
- Each connection should build on preceding ones. That is, it is important that the information transferred early in the system be used later, in a cumulative manner.
- Consistency across connections, such as consistency in the mode of information transfer, seems to result in a better functioning system. For example, if one person or a number of people in close proximity to each other are involved in the information transfer in many places in the vocational system, there is less chance for the loss of information.
- From our work, it appears that it is particularly important to have program-related connections, such as that between the job world and vocational training.

In the LEA described in Section III, the connections as a unit appear to achieve their general goals. First, adding strength to the system is the presence of connections between many pairs of components. This LEA is also planning to establish additional connections. For example, there are now plans to have the job market influence the type of vocational assessment carried out, to further ensure program relevance.

Second, the connections in this LEA involve the use of information in a cumulative manner. For example, information from vocational assessment is used not only in career counseling (the next component), but also in later

stages, such as placement into work experience. LEA personnel report that the benefit of this type of system is that students experience program continuity.

Third, this LEA has achieved consistency in the people involved in the information transfer. The assessment counselor, the school vocational rehabilitation counselors, and the placement counselor share an office, and information transfer is facilitated by this proximity.

Finally, this LEA has an important program-related connection (Employment--Vocational Training) through which vocational programming is planned around community resources. LEA personnel believe that knowing what postsecondary community jobs exist for handicapped students allows them to build their vocational system around these available jobs, and thus to achieve their basic goal of preparing students for specific entry-level jobs.

## V IMPLICATIONS FOR LEA PERSONNEL

Our overall purpose in this section is to present general guidelines that LEA personnel can use to examine the connections in their vocational systems aimed at handicapped students. These guidelines are based on the principles presented in Section IV. We assume that in order to have a well-coordinated and comprehensive vocational system that is able to achieve locally determined goals for the handicapped, these key guidelines must be considered.

### A. Step One: Determine the Basic Structure of Your Vocational System

Determine the Components--Identify the components that are present in your vocational system. List them in the order corresponding to the sequence followed by students who go through the system.

Determine the Connections--Determine where connections exist between components. For each connection, note whether it is student-related or program-related. In addition, for each connection, note:

- The content of the information that is transferred (e.g., student work skills, grades).
- The form of the information transferred (e.g., checklist, impressions).
- Who or what provides the information (e.g., teacher, computer).
- The means by which the information is transferred (e.g., conversation, mail, computer line).
- To whom or what the information is given (e.g., counselor).
- How the information is used by the recipient (e.g., to help make a decision).

## B. Step Two: Critique the Connections in Your Vocational System

Critique the Individual Connections--For each individual connection, consider whether it meets its goal of program continuity or relevance. We cannot advocate connections with particular characteristics because these characteristics depend on the local context. However, you should address the following questions:

- . Is the information to be transferred in a form that is easy to access and transfer?
- . Does the information to be transferred include all relevant information, but not excessive information?
- . Is the mode of information transfer reliable?
- . Once information is transferred, is it used systematically?

Critique the Connections as a Unit--Consider whether the connections as a unit meet the goals of program continuity and relevance. You should address these specific questions:

- . Do connections exist wherever possible between components?
- . Does each connection build on preceding ones, i.e., is information used cumulatively?
- . Is there consistency across connections (e.g., is the mode of information transfer similar across connections)?
- . Do you have program-related connections (e.g., between the job world and vocational training)?

Apply Critique to Your Local System--On the basis of those questions to which you answered "No," you may wish to consider modifying your vocational system. For example, you might wish to add new connections or change the nature of existing connections.

It is important to consider the above guidelines in the context of your local goals for providing vocational services to the handicapped, as well as in the context of the constraints (personnel, funding, and the like) under which your system must operate. For example, it is important to consider the relative costs and benefits associated with changing your vocational system.