School-to-work transition helps at-risk youth secure and maintain employment and an adult life-style. Transition focuses on individual characteristics, training needs, and choices that result in the development of realistic long-range goals and selection of appropriate programs and services. Effective school-to-work transition necessitates a wide array of transition options, articulated services, systematic prescription procedures, and an information tracking system. The following program and service barriers compound the societal barriers faced by at-risk youth: lack of systematic service delivery, lack of case managers, lack of career exploration programs, lack of agency coordination, underuse of parents as resources, and shortage of adult service programs. The unemployment and underemployment problems of at-risk youth are significant enough to the nation's economy to merit mandating a systematized school-to-work transition process for all at-risk youth. Major policy concerns include lack of an advocated transition model, trained personnel, and longitudinal information about the outcomes of transition processes. Recommendations for improvement include identification and training of case managers, especially for youth with disabilities and limited English proficiency; integration of career development/exploration in middle schools; research on outcomes; funding for the development of a standardized and computerized management information system to improve decision making and provide outcome measures about the cost effectiveness of programs and services. (74 references) (SK)
SCHOOL-TO-WORK TRANSITION
FOR AT-RISK YOUTH

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ERIC Clearinghouse on Adult, Career, and Vocational Education
Center on Education and Training for Employment
The Ohio State University
1900 Kenny Road
Columbus, Ohio 43210-1090
1989
**FUNDING INFORMATION**

<table>
<thead>
<tr>
<th>Project Title:</th>
<th>ERIC Clearinghouse on Adult, Career, and Vocational Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract Number:</td>
<td>RI88062005</td>
</tr>
<tr>
<td>Act under Which Administered:</td>
<td>41 USC 252 (15) and P.L. 92-318</td>
</tr>
</tbody>
</table>
| Source of Contract: | Office of Educational Research and Improvement  
U.S. Department of Education  
Washington, DC 20208 |
| Contractor: | Center on Education and Training for Employment  
The Ohio State University  
Columbus, Ohio 43210-1090 |
| Executive Director: | Ray D. Ryan |
| Disclaimer: | This publication was prepared pursuant to a contract with the Office of Educational Research and Improvement, U.S. Department of Education. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official U.S. Department of Education position or policy. |
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FOREWORD

The Educational Resources Information Center Clearinghouse on Adult, Career, and Vocational Education (ERIC/ACVE) is 1 of 16 clearinghouses in a national information system that is funded by the Office of Educational Research and Improvement (OERI), U.S. Department of Education. This paper was developed to fulfill one of the functions of the clearinghouse—interpreting the literature in the ERIC database. This paper should be of interest to career and vocational education practitioners, administrators, policy makers, and teacher educators.

ERIC/ACVE would like to thank Sheila H. Feichtner for her work in the preparation of this paper. As president of FMW Associates, Dr. Feichtner conducts research, technical assistance, and product development activities intended to increase the productivity of workers with special needs. She has served as a senior research scientist at the American Institutes for Research and, for 8 years, as the associate director of the Center for Vocational Personnel Preparation, Indiana University of Pennsylvania. The founding editor of the Journal for Vocational Special Needs Education, she was named an Outstanding Woman Vocational Education Administrator by the American Vocational Association in 1986.

The following people are also acknowledged for their critical review of the manuscript prior to publication: Lynda West, Associate Professor, George Washington University; R. Brian Crab, Associate Professor, Colorado State University; Susan Klein, Clearinghouse Monitor, OERI; and Joan Friedenberg, Research Specialist 2, and Margo V. Izzo, Program Associate, the Center on Education and Training for Employment.

Publication development was coordinated by Mark Newton and Susan Imel. Sandra Kerka edited the manuscript, and Janet Ray served as word processor operator.

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EXECUTIVE SUMMARY

The purpose of school-to-work transition is to provide youth with experiences that will help them develop the skills and attitudes needed to secure and keep employment, to secure and maintain a meaningful adult life-style, and to develop positive social interactions. Transition is an ongoing process that focuses on individual characteristics, training needs, and options of the individual that result in the development of realistic long-range goals and in the selection of appropriate programs and services to meet those goals.

The school-to-work transition process is based on several models describing the services and programs needed by at-risk youth and how these programs and services can be organized for the most effective delivery. The models originated in the work of transition for persons with disabilities; with adaptations, these models are transferable to other categories of at-risk youth.

For the school-to-work transition process to be effective--

- a wide array of transition options must exist and be identified,
- the services must be articulated to avoid duplication and omission,
- systematic procedures must be in place for prescribing services and instruction appropriate to the individual, and
- a system must be available for tracking vast amounts of information.

The current school-to-work transition process has a number of program and service barriers that compound the societal barriers faced by at-risk youth. These include the following:

- Lack of a mandated systematic process for delivering school-to-work transition services, especially for students with disadvantages and limited English proficiency
- Lack of a case manager for students with disadvantages and limited English proficiency
- Lack of career exploration programs at the middle school level
- Lack of coordination between agencies that often results in competing and duplicative efforts
- Parent and consumer confusion about what programs and services are available
The underuse of parents as resources

A shortage of adult service programs, especially in rural areas

The absence of a system to manage the vast amount of information needed to make intelligent transition decisions and to evaluate participant outcomes and service costs

The school-to-work transition process is inexorably bound to keeping students in school and helping them develop the skills employers need. When the process breaks down, the result is unemployment or underemployment, poverty, and public assistance. The unemployment and underemployment problems of at-risk youth are significant enough to the nation's economy (a 1 percent increase in unemployment increases the federal outlay by 64 percent) to merit legislative consideration of mandating a systematized school-to-work transition process for all at-risk youth.

A number of major policy concerns arise from the study of the state of the art of transition from school to work for at-risk youth:

Lack of an advocated and systematic transition model for at-risk populations

Lack of mandated career exploration activities

Lack of local-level agency coordination

Lack of personnel trained to facilitate transition planning

Lack of longitudinal information about the outcomes of transition options for various at-risk populations

Case management personnel must be identified and trained to serve at-risk youth before and after they leave secondary school. The identification of case management personnel is especially critical for in-school youth with disabilities and limited English proficiency. The career development process for in-school youth needs to be examined and the integration of career exploration activities into the middle school advocated at the federal level. The study of the career development process should be coordinated with the study of middle school reform.

Little research exists on the outcomes of school-to-work transition. Enough theory and practice now exist on transition options for at-risk youth to begin outcome studies, including cost effectiveness of various options. Research should also be directed toward developing mechanisms for--

delivering career exploration programs or activities in mainstream education, through such methods as Parent Resource Centers and "Exploratoriums";
o delivering career exploration programs or activities to out-of-school youth and adults;
and

o expanding the transition options of in-school and out-of-school youth in rural areas.

Funds should be appropriated for the development of a standardized and computerized management information system for identifying local school-to-work transition programs and services and monitoring eligibility requirements for accessing the programs and services. The management information system should include a mechanism for using assessment and program placement information on individual students to improve individual decision making and for providing outcome measures for agency decision making about the cost effectiveness of programs and services.

Information on transition and at-risk youth may be found in the JIC system using the following descriptors: Adolescents, *Agency Cooperation, *Coordination, Curriculum Development, *Delivery Systems, Disabilities, Disadvantaged Youth, *Education Work Relationship, Federal Legislation, *High Risk Students, Individualized Education Programs, Job Training, Limited English Speaking, Secondary Education. Asterisks indicate descriptors that are particularly relevant.
INTRODUCTION

The composition of the labor force in this country is changing. The pool of 16- to 24-year-olds, the traditional source of new workers, will shrink for the rest of the century (Carnevale, Gainer, and Meltzer 1989). The new labor market entrants will be minorities, women, or immigrants; these groups will provide 80 percent of the 21 million new workers (Johnston and Packer 1987; Kutscher 1987). Thirty percent of all new workers in the year 2000 will be Blacks, Asians, and Hispanics (Wolfbein 1987). About 15 percent of all new workers will be physically or mentally handicapped, and a quarter of all new workers will not have completed high school ("Today's Numbers" 1984).

On the surface, the future for at-risk youth looks bright. However, the prediction of greater employment opportunities for at-risk youth does not ensure rewarding employment because of the following factors:

- The majority of new jobs will be in the service industry where pay is low.
- The new service industry jobs will demand much higher skill levels.
- The majority of new jobs will not be located in the central cities where workers of minority origin are concentrated (William T. Grant Foundation 1988a).

Two changes in intervention strategies will be necessary if at-risk youth are to take advantage of these greater employment opportunities: education must ensure that students remain in school and develop the skills employers need, and the school-to-work transition process must be systematized.

The purpose of this paper is to examine the current school-to-work transition process and how it has been shaped by legislation and practice. Omissions in practice are identified and policy and research recommendations are made to correct omissions.

Costs of Inadequate Intervention

Without systematized intervention, at-risk youth rarely achieve their potential. The traditional ways of preparing for and finding employment are not effective for at-risk youth because these youth often lack the basic and social skills required by the workplace, they do not have organized job networks, and they are faced with overt and covert discrimination in finding and securing employment (Feichtner 1990). All too often, these youth do not complete high school, which is becoming the minimum credential for securing meaningful employment.

Educational attainment is closely correlated with lifetime earnings, as the following facts demonstrate:
In 1986, 20- to 24-year-old males with less-than-high-school education earned 63 percent of the amount high school graduates earned (William T. Grant Foundation 1988a).

In 1986, high school graduates earned approximately the same as those with some college, but only 80 percent as much as those who graduated from college (ibid.).

In 1985, males over 25 with less-than-high-school education who worked full time earned 80 percent of the amount earned by high school graduates; high school graduates earned 73 percent of the amount earned by college graduates (ibid.).

High school dropouts have two times the unemployment rate of high school graduates and three times the rate of college graduates (Passmore 1989).

Nationally, over 25 percent of potential high school graduates drop out before graduation; in some major cities the rate exceeds 40 percent (Cameron 1989).

Young adults aged 18-23 with basic academic skills deficiencies (when compared to their peers) are 5.4 times more likely to be receiving public assistance, five times more likely to be at poverty level in income, and 3.6 times more likely to be neither working, nor in school, nor taking care of a child (William T. Grant Foundation 1988a).

When the at-risk youth is a member of a minority group, the problem of finding and sustaining employment is compounded:

Nonwhite youth have unemployment rates that are two to three times as high as those of white youth (Passmore 1989).

Nonwhite youth have less frequent employment (ibid.).

When a youth has a health impairment or disability, the picture becomes even more bleak:

Sixty-seven percent of all 16- to 64-year-old Americans with disabilities do not work. Of the 33 percent who do work, three-fourths work only part time (Phelps and Rusch 1987; Ryan 1988).

Youth with health impairments work about 14 fewer hours per week than youth not reporting health impairments (Passmore 1989).

Each year, approximately 350,000 young people with disabilities graduate or terminate eligibility in the nation's schools.

With inadequate intervention, the youth suffers, the economy suffers, and the cycle of poverty continues.

The percentage of 20- to 24-year-old males able to support a family of three above the poverty level dropped by a quarter from 1973 to 1986 (William T. Grant Foundation 1988a).

Poor 20- to 24-year-olds as a group never make up their lost financial ground (ibid.).

A 1 percent increase in the unemployment rate accounts for a 64 percent increase in annual federal outlays (Passmore 1989).
Preparing At-Risk Youth for Employment

The work force is changing, job requirements are changing, and working patterns will be different in the years to come. The average person will enter and exit training many times to upgrade and update job-related skills. The average person will also change occupations many times, and lifetime employment with one company will be the exception rather than the rule. The at-risk population will be especially vulnerable in the "musical chairs" employment arena for they often lack the skills employers seek.

Research indicates that persons are unemployed or underemployed for three basic reasons: (1) lack of interpersonal skills or poor work habits, attitudes, and social communication skills; (2) lack of job-related academic skills; and (3) lack of specific vocational or occupational skills. Studies have found a strong relationship between job success and interpersonal factors (Mathews, Whang, and Fawcett 1980; Richards 1980) and job-related academic skills (National Center for Research in Vocational Education n.d.). In addition to the lack of skills employers want, problems facing at-risk populations in the transition from school to work include limited or unrealistic career expectations, lack of role models, and lack of diversity in work experience (Brill and Hartman 1986). Personal and social problems make everything more difficult, especially when they are compounded by system deficiencies that are not attuned to the problems at-risk youth face. The problems become intensified when an at-risk youth lives in a rural area that lacks transition options (Sarkees and Veir 1988; Schwartz 1987).
The current school-to-work transition movement for at-risk students started in the right to a free and appropriate public education for all children with disabilities. As youth with disabilities began to develop the skills needed for supported or competitive employment, the need for employment opportunities, a system to help youth find employment, and community services to support employment became evident. Advocates for persons with disabilities lobbied for a systematic and comprehensive delivery of programs and services to bridge the gap between the protective environment of the school and the challenging and open opportunities of employment and adult life (Will 1986).

Federal legislation promoted and directed the school-to-work transition movement (Brolin and Schatzman 1989; Cobb 1986; Sarkees and Scott 1985; Wehman et al. 1988). Significant federal laws and initiatives shaping the definition of the transition process include the following:

**Education for All Handicapped Children Act of 1975** (P.L. 94-142) guaranteed the right of all children with disabilities to receive a free and appropriate education. The **Education of the Handicapped Act's** (P.L. 89-313) **Amendments of 1983** (P.L. 93-112) and **Amendments of 1986** (P.L. 99-457) added "youth" as service recipients and added a full and fair evaluation and assessment of the student, an individualized education program stating precisely what kinds of special education and related services each individual would receive, and the inclusion of parents in every decision related to the child. The 1983 Amendments provided for transition services for 12- to 22-year-old youth with disabilities and authorized funding for development of transition techniques, transition demonstration models, and demographic studies of the services required by students with disabilities. The 1986 Amendments reauthorized the transition program and authorized funds to be used with out-of-school youth, for improvement of vocational and life skills, and for study of dropouts with disabilities.

**Rehabilitation Act of 1973** (P.L. 93-112) was directed toward recruiting, hiring, training, and promoting individuals with disabilities, and it encouraged employers to use local education agencies to train persons with disabilities to develop occupational skills. It prohibited discrimination on the basis of handicap in any private or public program receiving federal financial assistance. "Youth" were added as eligible recipients in 1983 along with a section addressing transition needs. The **Amendments of 1986** (P.L. 99-506) provided for supported employment for individuals with disabilities.

**Vocational Education Act of 1963** (P.L. 88-210), the **Amendments of 1968** (P.L. 90-576), the **Amendments of 1976** (P.L. 94-482), and the **Carl D. Perkins Vocational Education Act of 1984** (P.L. 98-524) were directed toward making vocational
education accessible to "persons who have academic, socio-economic, or other handicaps." The 1968 Amendments established that 10 percent of the basic state grant was to be used to provide programs and services for students with disabilities and 15 percent to provide programs and services for disadvantaged students. Students with disabilities and students with disadvantages were to be integrated into regular programs and the funds that were "set aside" were to be used to provide services that would allow the special needs student access to the regular programs (modified instruction, materials, equipment, and so forth). The 1976 Amendments reauthorized the amount to be used for services for persons with disabilities, increased to 20 percent the amount to be used for services for the disadvantaged, and required that the federal funds be matched on a 50-50 basis by state and local funds. The Carl D. Perkins Act extended the previous act and amendments to provide that 10 percent for students with disabilities and 22 percent for disadvantaged students be spent on the following:

- Equal access in recruitment, enrollment, and placement activities
- Equal access to the full range of vocational education programs available to individuals without disadvantages or disabilities
- Assessment of individual interests, abilities, and special needs with respect to successful completion of vocational education programs
- Special services, including adaptation of curriculum, instruction, equipment, and facilities designed to meet the special needs of these individuals
- Guidance, counseling, and career development activities conducted by professionally trained counselors
- Counseling services designed to facilitate the transition from school to employment or career opportunities
- Provision of information to students with disabilities and their parents about the opportunities available in vocational education at least 1 year before the student is eligible to enter vocational education program

The Perkins Act also defined activities for disadvantaged learners that could be cooperatively undertaken with a community-based organization (CBO), but funds were never appropriated by Congress and this section of the act was never implemented. Currently, the Carl D. Perkins Act is undergoing reauthorization.

Job Training Partnership Act (JTPA) of 1982 (P.L. 97-300) and Amendments of 1986 (P.L. 99-496) were designed to provide training for individuals who could not obtain productive work due to their lack of appropriate training. JTPA authorizes the establishment of programs to prepare out-of-school economically disadvantaged youth, youth with disabilities, and unskilled adults through a public-private sector partnership. Appropriate assessment of youth prior to training is also required. JTPA provides for the following services:

- Job search assistance
- Job counseling
- Remedial education and basic skills training
- Vocational exploration
This act replaced the Comprehensive Employment and Training Act (CETA) of 1973 (P.L. 93-203) and the 1978 Amendments (P.L. 95-524). Administrative responsibility under JTPA was shifted from the federal level to the state governors' offices and private industry councils (PIC). Currently, JTPA is undergoing reauthorization.

Other acts and priorities or initiatives have helped to define the scope of transition service delivery to students. These include the following:

The Developmental Disabilities Act of 1984 (P.L. 98-527) was tied to the Employment Initiative and gave birth to supported employment. It added "employment-related" activities as a priority service of the administering agency.

Transition of Youth with Disabilities Priority (1984)--U.S. Office of Special Education and Rehabilitative Services identified services to help individuals with disabilities achieve sustained employment. These services include an integrated, community-based, functional curriculum in high school, coordination among school and adult services providers, and a combination of work options.

Supported Employment Initiative (1984)--U.S. Office of Special Education and Rehabilitative Services defined the characteristics of supported employment. The initiative states that supported employment must include the continuing provision of training, supervision, and support services.

In summary, legislation and policy dictated a comprehensive school-to-work transition system for at-risk populations that would ensure--

Curriculum and Instruction Practices

Life skills developed through an integrated, community-based functional curriculum

Occupational skills developed in integrated, public vocational education programs wherever possible

Employment-related activities such as job counseling, job search assistance, job development, preapprenticeship training, and follow-up services
A variety of work options, including both supported and competitive employment

**Comprehensive Support System Practices**

- An individualized education program based on assessment

- Vocational exploration, guidance, counseling, and career development

- Special services such as remedial education and basic skills training, literacy and bilingual training

**Formalized Articulation and Communication Practices**

- Inclusion of parents throughout the process, including informing them about vocational education opportunities

- Interagency coordination of programs and services among school and adult service providers

Problems have emerged because school-to-work transition planning and service delivery cut across many agencies that take policy directions from different laws and directives. It is important, therefore, that educators assist legislators in looking at the entire "at-risk" population and their needs in attempting to coordinate legislative efforts. It is equally important that educators help legislators look at the "whole" youth and the needs of the "whole" youth. In all the legislation, too little attention has been paid to the two ends of the "school-to-work" continuum—the middle school and exit from secondary school.
Secondary and postsecondary students preparing to start work in the next decade are different from the students of recent years. Many students are immigrants or first generation Americans and/or they come from homes where English is not the primary language. More students with disabilities are becoming part of the mainstream educational system. Many students enter secondary school with deficiencies in the basic skills of reading, writing, spelling, and English usage. Each of these groups is expected to achieve sustained employment. In addition, all of these students are influenced in varying degrees by cultural factors, including drugs, crime, and changing mores. Depending on the particular background students bring to the classroom, many will need special assistance and instructional accommodations.

Students with Disabilities

Students with disabilities who may need special assistance and instructional accommodations to achieve sustained employment include the mentally disabled, the visually impaired, the hearing impaired, the learning disabled, the speech impaired, the health impaired, the physically disabled, and the multihandicapped. One concept that has governed the instructional accommodations of students with disabilities is that of the "least restrictive environment." The least restrictive environment (LRE) describes a continuum of educational situations that progresses from placement in a regular classroom with no special services, through a combination of regular classes with assistance in the classroom, assistance outside the regular classroom, and education in a separate setting in the regular school, to education in a separate school (Murphy and Hobbs 1986). Although there is conflict in the special education community about LRE because of the tendency to start student placement from the most restrictive end of the continuum rather than the least restrictive, most special educators are positive about the least restrictive environment concept if--

- students with disabilities are taught in the same school they would attend if they were not disabled,
- decisions about a student’s educational program are based on the needs of that individual student,
- placement selection results from an individualized education program, and
- special services are provided that supplement regular classroom instruction.

Students with Disadvantages

The term academically or educationally disadvantaged describes students who have scored below the 25th percentile on a
standardized achievement or aptitude test, whose secondary school grades are below 2.0 on a 4.0 scale, or who fail to attain minimal academic competencies (P.L. 98-524). Key indicators associated with the academically or educationally disadvantaged student include minority racial/ethnic group identity, living in a poor household, living in a single-parent family, having a poorly educated mother, and having a non-English language background (Pallas, Natriello, and McDill 1989). Academic or educational disadvantage may also result from poor basic skill development, undiagnosed learning disabilities, or educational systems and teachers who do not know how to accommodate a variety of learning styles. Academically or educationally disadvantaged students need special assistance in reading, writing, language, and/or mathematics.

The term economically disadvantaged refers to students from low-income families who require public financial assistance. The economically disadvantaged student may be a member of a family that is experiencing temporary poverty brought on by divorce, loss of a job by the head of household, or migration. Students experiencing temporary poverty often exhibit dysfunctional social and psychological behavior and often need counseling support.

Some students are both academically and economically disadvantaged. These multiply disadvantaged students are thought to have unique characteristics (Baker and Garfield-Scott 1981) that are a result of living in chronic poverty. The multiply disadvantaged student has been found to display a sensitivity to nonverbal behavior of others, difficulty in conceptualizing, faulty decision making, a poor self-concept, and role playing behavior. The multiply disadvantaged student needs a structured curriculum, sequenced learning experiences, and group experiences that promote self-acceptance.

**Students with Limited English Proficiency**

Limited-English-proficient (LEP) students are identified as those not born in the United States or whose native language is a language other than English, who come from environments where a language other than English is dominant, or who are American Indian and Alaskan native students who come from environments where a language other than English has had a significant impact on their level of English language proficiency (P.L. 98-524). These students are characterized as having sufficient difficulty in speaking, reading, writing, or understanding English that they cannot participate successfully in classrooms where the language of instruction is English. LEP students need assistance in language development, understanding of cultural differences in relation to the workplace, and development of self-concept.

Other special population groups, identified in legislation as needing special services, include teenage parents, displaced homemakers, displaced workers, and incarcerated youth and adults. Whether these groups should be included in a discussion of at-risk youth is not yet clear. The Phi Delta Kappa study of 22,013 students in 276 schools has identified 45 factors or "strikes" that may put a student at risk (Frymier and Gansneder 1989). Students who have six or more "strikes" against them are found to be seriously at risk. From the employment statistics it is obvious that the people who have multiple "strikes" against them are persons with
disabilities, with limited English proficiency, and with educational and economic disadvantages. The combination of disability or disadvantage with a teenage pregnancy, displacement, or incarceration will put an individual seriously at risk. If teenage pregnancy, displacement, or incarceration is a single factor, individuals may not be at risk; they will need time-limited support services, but may not need a school-to-work transition plan.
The school-to-work transition process is a complex, multiagency delivery of instruction and services with an outcome of employment. The focus on employment does not mean that other aspects of successful adult life (social, leisure, personal) are unimportant. However, the focus on employment has been the most accepted objective measure of transition outcomes (Council for Exceptional Children 1987).

Ideally, if transition is to be effective, it must provide experiences that will enable at-risk youth to develop the skills and attitudes necessary to secure and keep employment, to secure and maintain an adult life-style, and to develop positive social relationships. Secondary outcomes include the following (Berkell and Gaylord-Ross 1989; National Association of Special Needs State Administrators 1987):

- Reducing the unemployment rate
- Lessening the federal financial burden created by unemployment
- Developing a strong work force to meet the needs of the marketplace
- Increasing the economic competitiveness of the nation

Many models describe aspects of school-to-work transition programs. The following discussion looks at models for curriculum content and instructional processes, support services, and articulation and communication. Many of these models focus on transition for one special population group or one educational track. The challenge of this paper is to synthesize these models into a systematic process that meets the transition needs of a diverse at-risk population.

Curriculum Content Models

Without the appropriate skills, students with disabilities and disadvantages experience difficulty in finding meaningful employment, receiving appropriate compensation, and being promoted to positions commensurate with their abilities. The content knowledge and skills needed to be employable include basic skills, interpersonal and social skills, employability skills, and occupational skills. More specifically, today's and tomorrow's workers need the ability to (Carnevale, Gainer, and Meltzer 1989):

- read and comprehend policy and instruction manuals as well as technical material;
- write sentences with correct sentence form, spelling, punctuation, and other matters of mechanics;
- perceive errors and rewrite;
- speak and explain ideas clearly;
answer and ask questions and follow verbal directions;

- work with fractions and decimals;

- measure and comprehend spatial relationships and use metric measurements;

- type with accuracy and speed;

- work accurately with computers and computerized programs;

- learn, be flexible, and respond to change quickly;

- deal with complexity;

- identify problems, perceive alternative approaches, and select the best approach;

- operate independently; and

- work cooperatively with people of different personalities, race, sex, and across different authority levels and organizational divisions.

Several models exist for the content knowledge and skill development to be provided. One such model is the Life-Centered Career Education (LCCE) model (Brolin 1986; Brolin and Schatzman 1989). LCCE is a curriculum for students with mild disabilities that is designed to develop the whole person. As depicted in figure 1, LCCE provides instruction in four major domains (academic skills, daily living skills, personal-social skills, and occupational skills) and can be infused into the traditional academic subject-matter curriculum.

Academic skills and/or basic skills (as defined by LCCE) include reading, writing, and computation. Daily living skills relate to both occupational functioning and independent living (for example, managing personal finances, caring for personal needs, managing a household). Personal-social skills refer to knowing oneself (for example, achieving self-awareness, achieving self-confidence) and interpersonal relationship skills (for example, communicating with others). Occupational guidance or preparation skills refer to identifying vocational interests, needs, capabilities, and abilities as well as obtaining specific occupational skills. In the segregated classroom, academic skills are embedded into daily living, personal-social, and occupational guidance or preparation skills. In the mainstream classroom, daily living and personal-social skills are embedded into academic or basic skills development; occupational guidance skills are not embedded into the academic curriculum and are therefore not taught or developed.

Brolin (1986) identified 102 functional skills needed by individuals to become productive, working adults. Functional, in this context, refers to the development of skills in a functional setting (the setting in which they are used, that is, the home, the school, or the community). Functional skills can be taught as part of the regular curriculum or they can be taught as a separate functional curriculum (Kearns and Boyer-Stephens 1988). Of significance to a generic at-risk population and to this paper, because they are often missing links in the transition process, are the 27 occupational guidance and preparation skills' in the following categories:

'The complete list of Brolin's functional skills can be found in Appendix A.
Figure 1. Content of school-to-work transition

o Know and explore occupational possibilities

o Select and plan occupational choices

o Exhibit appropriate work habits and behaviors

o Exhibit sufficient physical-manual skills

o Obtain a specific occupational skill

o Seek, secure, and maintain employment

Another model for the content knowledge needed by at-risk youth is Greenan's (1986) generalizable skills curriculum. Greenan identified and validated 28 mathematics skills, 27 communications skills, 20 interpersonal relations skills, and 40 reasoning skills that are basic to, necessary for success in, and transferable across vocational programs and occupations:

o Mathematics Skills
   -- Whole numbers
   -- Fractions
   -- Decimals
   -- Percent
   -- Mixed operations
   -- Measurement and calculation
   -- Estimation

o Communication Skills
   -- Words and meanings
   -- Reading
   -- Writing
   -- Speaking
   -- Listening

o Interpersonal Relations Skills
   -- Work behaviors
   -- Instructional and supervisory conversations
   -- Conversation

o Reasoning Skills
   -- Verbal reasoning
   -- Problem solving
   -- Planning

Greenan's 115 basic skills can be taught in general education, special education, compensatory education, or vocational education. Where they are taught is not as important as the assurance that the student has developed these skills by the time he or she leaves the educational system. The level of the skill development will be determined by the student's capacity and the occupation for which the student is preparing.

The occupational skills needed for employment are those required of incumbent workers. These skills have been identified for over 200 occupations through a systematic process that identifies worker tasks, tools and/or materials, and performance standards that are validated by workers in the occupation. Important to at-risk students is the occupational skills career ladder that identifies the jobs for which a person can prepare in an occupational area, arranged in a hierarchical order from least complex to most complex. Tasks that must be mastered at each skill level are identified. For example, students in masonry prepare for increasingly complex occupations from a.

2Greenan's complete list of generalizable skills can be found in Appendix B.

3A list of the 200 occupations can be found in Appendix C.
cementmason helper to a bricklayer helper, a stonemason helper, a cementmason, a stonemason, or a bricklayer construction worker (Sarkees and Scott 1985). All jobs in masonry require a person to be able to spread mortar and finish grading at a building site. However, only the bricklayer construction worker must be able to identify different views and their uses on a working drawing. Teaching occupational skills as part of a career ladder allows at-risk students to progress as far as their abilities allow. It also makes students aware of different occupational options for which they are competent.

Instructional Stages Models

Transition from school to work is a developmental process that occurs in stages. The process, known as career development, consists of four sequential steps (awareness, exploration, preparation, and implementation or placement). Career awareness refers to instruction and experiences that make youth more aware of themselves, of the world of work, and of what they might choose to become. This stage occurs primarily in grades K-6.

Career exploration refers to activities that assist the student in investigating areas of interest and capabilities. Career preparation refers to career planning and occupational and employability skill development activities, including work experience. Career placement or implementation refers to job placement and/or continuing education and training needed to become and remain a viable worker. Career awareness, exploration, preparation, and implementation are sequential activities that enable the learner to make intelligent choices about pathways from school to work.

Leconte (1987) proposed a model for school-to-work transition based on the stages of career development and vocational assessment theory and practice. (See figure 2.) The focus of this model is that job requirements and work patterns are ever changing and decisions about what at-risk populations need must be continuous and lifelong.

In this model, transition from school to work is viewed as a continuous and lifelong process. Multiple transition or decision points exist where an assessment of the learner’s progress or support needs is appropriate. The diagram narrows in the middle to indicate the gradual focusing of interests, abilities, and skill development as an occupational choice is made. The narrowing also denotes that the least amount of instructional support and preparation time are required at the job placement phase. One job placement, although a culminating event either during or after high school or postsecondary training, is not a terminating event. Job placement can mark the beginning of continued exploration, placement, and preparation. The diagram widens after the initial occupational choice to indicate the existence of options of which a person should become aware and about which a person should make decisions. Choices must be made at each transition decision point. Some of the transition options available at each transition decision point are identified in Appendix D. Not all options are appropriate for all populations.

In Leconte’s model, career exploration would occur simultaneously with prevocational training. However, prevocational training is not a curricular offering in schools. Academic teachers are concerned with their subject matter and vocational teachers identify with a specific
Career/Job Change, Expansion and Growth

Job Retention

Job Placement

Work Experience

Skill Development/Employability Skills Development

Prevocational Training/Exploration

Figure 2. Stages of school-to-work transition

A is an assessment/transition decision point

SOURCE: Leconte (1987)
occupational area. World-of-work knowledge is a content area without a home (Lotto 1986).

Support Services Models

One aspect of transition is the identification and provision of support services to negate the "strikes" the student has accumulated. Support services, in this context, are defined as planned activities designed to help meet specific academic, social-emotional, training, and daily living needs of the individual when the person needs assistance. These support services include, but are not limited to, medical treatment, transportation, child care, financial assistance, equipment purchase or adaptation, diagnosis, evaluation or assessment, counseling, referral, placement, protection, recreation, and language assistance.

The federal transition initiative, depicted in figure 3, established the basis for determining the degree and intensity of services that various youth may require to make a successful transition from school to work (Will 1986).

No special services indicates that transition can be accomplished by using generic student services available in the community. It builds on the premise that students can find their own employment if the school provides them with job seeking skills, such as resume writing and interviewing skills (West 1984). No special services does not preclude special accommodations in methods and materials, however. Time-limited services refer to specialized short-term services, such as halfway houses, vocational rehabilitation, postsecondary vocational education, or other job-training programs, that may be needed to secure employment, but that may be discontinued once employment is secured. Ongoing services refer to services that a youth may need over a lifetime, such as mental health support or "supported employment."

This model is continually being refined and expanded through practice and research. For example, Tilson and Neubert (1988) have found that students with mild disabilities who would ordinarily receive no special services actually need transition guidance. This indicates that a redefinition of no special services may be in order. In a similar manner, time-limited services may need to be redefined to include short-term services needed by individuals at the various transition points such as a change in job or career, that occur throughout life. The federal initiative definitions can be brought into better perspective by identifying services needed by regular students. All students will profit from assessment, guidance, counseling, career education, and instructional modification to accommodate learning styles. These may be the no special services in the federal initiative model, provided these services are available for all students. Some students need specialized services some of the time. These may be the time-limited services such as halfway houses or postsecondary vocational education. Some students will need assistance all of the time; these are the ongoing services.

Different at-risk groups need different specialized services. Figure 4 depicts a model for services for persons with disabilities (Rehabilitation Research and Training Center n.d.). A model of needed support services is the Bilingual Vocational Training (BVT) model. It identifies eight service modifications that should be provided for limited-English-speaking
Figure 3. Services needed for school-to-work transition

Employer and Community Support provides input on business needs, provides input on local support services, and provides access to training sites.

Vocational Rehabilitation Services provides funding for job related services (i.e., initial job site training), provides vocational evaluation information, facilitates job placement and follow-along services, and provides inservice and community education.

Mental Health/Mental Retardation Services provides funding for job related services (i.e., initial job site training), provides vocational evaluation information, facilitates job placement and follow-along services, provides inservice and community education.

Special Education Services provides systematic and longitudinal vocational, domestic, leisure/recreation, and community functioning training in the community, assists in the collection and analysis of evaluation data, coordinates transition planning services, and provides inservice and community education.

Parent and Family Support actively participates in selection of ITP goals, conducts home training, and advocates for full community integration of offspring.

Mental Health/Retardation Services provides information on medical and social security benefits, provides resources for counseling and follow-along support services, and provides inservice and community education.

Vocational Education Services locates vocational training sites, provides specific vocational skill training, assists in the collection and analysis of vocational education data.

Meaningful Employment and Community Functioning Outcomes actively participates in selection of ITP goals, conducts home training, and advocates for full community integration of offspring.

SOURCE: Rehabilitation Research and Training Center (n.d.), p. 7

Figure 4. Services for persons with disabilities.
persons (Bradley, Killian, and Friedenberg n.d.; Friedenberg 1987):

1. Targeting recruitment information by using the native language and by advertising in native language mass media

2. Adapting intake and assessment to measure English and native language proficiency and measuring vocational interest and aptitude in the native language

3. Adapting vocational instruction so that students do not have to master English before they can begin learning a trade

4. Providing vocational English-as-a-second-language (VESL) instruction

5. Adapting counseling and support services to take advantage of ethnic CBOs and using bilingual and culturally sensitive counselors

6. Providing job development and placement that is aware of cultural differences and how these differences will affect employment

7. Coordinating regular and VESL instruction

8. Providing bilingual academic and basic skills instruction when needed

Support services for students with disadvantages include (William T. Grant Foundation 1988b):

- aggressive outreach and recruitment, often by community-based groups with strong ties to, and credibility in, the youth's neighborhood;
- assessment of student abilities;
- remedial education, literacy training, and English-as-a-second-language (ESL) programs for students with weak basic academic skills;
- strong peer support and/or mentoring efforts to bolster self-esteem, provide positive role models, and offer substantive instructional assistance;
- individual counseling and life planning skills instruction to avoid or resolve personal and family crises;
- child care and basic medical insurance;
- flexible training options;
- combined work and training that provides income support; and
- vigorous job development and placement activities.

Articulation and Communication Models

Transition is a complex process that involves many organizations functioning at the national, state, and local levels. Tindall and Gugerty (1989) identified the roles and responsibilities of agencies at the national, state, and local levels involved in school-to-work transition for persons with disabilities. The role of agencies at the federal level is the identification and promotion of needed legislation and the development of regulations and guidelines for implementing the law. Agencies at the state level are responsible for initiating and facilitating collaboration whereas agencies at the local level are responsible for implementing the
collaboration that ultimately results in successful transition.

Wehman and others (1988) illustrate the complexity of delivering transition services in figure 5. The model describes the transition planning that takes place by the state-level interagency task force, the local-level interagency core teams, and the individual transition team. Each level in the model has designated roles and responsibilities. Although this model was developed for persons with disabilities, it is appropriate for all at-risk populations. The players will change depending on the specialized needs of the individual.
STATE LEVEL INTERAGENCY TASK FORCE
To study transition and evaluate state interagency agreements
Provides fiscal and legislative guidance

Department of Education
Department of Mental Health
Department of Mental Retardation
Department of Vocational Rehabilitation

LOCAL LEVEL INTERAGENCY CORE TEAMS
To assess, plan, and implement changes in existing systems, and to develop guidelines for transition planning for the LEA through the development of local interagency agreements

LEA
Local Mental Health Board
Local Parent Advocacy Group
Local Mental Retardation Board
Local Vocational Rehabilitation Agency

INDIVIDUAL TRANSITION TEAMS
To develop and implement individualized transition plans for targeted students within the LEA

Special Education Teacher
Vocational Education Teacher
Parent and Student
Case Manager
Vocational Rehabilitation Counselor


Figure 5. Organizing the delivery of transition services
SUCCESSFUL SCHOOL-TO-WORK TRANSITION PRACTICES

School-to-work transition planning is an ongoing process that focuses on the needs of the individual, the needs of the workplace, and the options available to match those needs. The programs and services needed to foster social and economic independence will vary by individual, locality, and occupation. For these reasons, effective transition planning depends in part on the availability of services and programs and procedures for prescribing the services and programs appropriate to the individual.

Transition is most effective when it is based on articulated programs and services. Articulation provides the skeletal structure for transition. Articulation involves linking instruction at all levels to permit students to move from one course or program to another between and within institutions without experiencing a delay or duplication or omission of learning. Articulation involves linking services between and within institutions to help students make the instructional and school-to-work transition more easily. The success of articulation depends on the linkages established by the people who provide the services at the different institutions and agencies.

Interagency Collaboration

State-level Interagency agreements are one mechanism used to initiate and facilitate collaboration. The Texas Interagency Agreement for the Provision of Statewide Transition Services (n.d.) is an example of how three state agencies formally agreed to work together to improve programs and services for youth with disabilities. The Texas Rehabilitation Commission, the Texas Education Agency, and the Texas Department of Mental Health and Mental Retardation agreed to the following:

- Jointly develop a strategic plan that includes the designation of personnel, funds, timelines, and evaluation criteria for transition services.
- Develop and implement a coordinated process for screening, identification and referral, nonduplicative diagnosis and evaluation, and coordinated staffing for developing an individual transition plan (ITP).
- Jointly develop a process for implementing an ITP as part of the Individualized Education Plan, the Individual Program Plan, and/or the Individual Written Rehabilitation Program.
- Develop, implement, and monitor a plan for interagency cost-sharing and joint funding.
- Develop and implement procedures to share information among the three agencies.
Develop a process and commit resources for the provision of inservice training to facilitate implementation of the agreement.

Develop local steering committees to include parents, consumers, business, industry, and other appropriate agencies. (pp. 4-5)

Another example of state-level interagency cooperation is the California Compact, which was developed by California employers (represented by the Business Roundtable and the Chamber of Commerce), the California Department of Education, the California Department of Employment Development, and the U.S. Department of Labor's Employment and Training Administration (William T. Grant Foundation 1988b). The California Compact seeks to facilitate the establishment of long-term public-private partnerships at the local level to assist disadvantaged youth. The Compact identified the following goals for local programs:

- Provide motivation, support, and information necessary for students to stay in school and earn graduation credits.
- Ensure that all high school graduates will possess the basic skills needed for transition to a postsecondary institution.
- Assure employers that graduates will have the basic skills and attitudes needed for success in employment.
- Provide financial aid, information, and scholarships to allow eligible students to attend postsecondary school.
- Build on the strengths of existing business-school-community partnerships.
- Provide school staff with training and support needed to meet program goals.

The state-level "compact" developed a planning guide to aid in the formation of local "compacts" and to assist in the development of a local plan.

The Boston Compact is another example of an effort to improve educational performance and opportunity for disadvantaged populations through interagency cooperation (William T. Grant Foundation 1988b). The Boston Compact is composed of representatives from the Boston School Department, the business community, local institutions of higher education, and the local private industry council (PIC). The original agreement laid out specific goals for each partner, of which the following are examples:

- Improve daily attendance by 5 percent (Boston School Department).
- Expand an existing work study program from 3 to 6 of the city's 17 high schools (business community).
- Expand counseling and other services to increase college enrollments by 25 percent (institutions of higher education).
- Work with counterparts from private businesses in 14 high schools to provide career counseling, screening, and employment referral service (local PIC).

Developing interagency agreements is complex. Intriligator (1985) describes a process involving 35 representatives of education, county government, adult service providers, employers, and parents in Montgomery County, Maryland. The group was charged with establishing "a
collaborative relationship among government, education, private agencies and employers to facilitate the development, implementation and evaluation of model transition services" (p. 1) for students with disabilities. The philosophy of the group was that all persons can perform meaningful work and that with supportive services most can work in the community. The group developed the following conceptual model to guide their subsequent work:

1. Transition from school to work includes school instruction, planning for the movement from school to work, and options for meaningful work.

2. School instruction includes a functional curriculum provided in an integrated school environment and augmented with community-based experiences.

3. Planning for the movement from school to work involves the student, the school, parents, adult community services, employers, and postsecondary training providers.

4. Work options include competitive employment, supervised work, specialized industrial contact in the community, sheltered workshops, and work carried out in home settings.

5. Time-limited or ongoing support services are provided on an individual basis.

6. The goal of the process is to provide meaningful work that provides adequate income, job satisfaction, opportunity for personal growth, and independence. If work is not a realistic option, then the goal is to provide for personal development and community acceptance.

Agreement on the concepts underlying an ideal program was followed by assessment of the state of transition services in Montgomery County. The group identified (1) the specific transition services of the county and where students encountered gaps in services or long waiting lists for services; (2) currently available possible solutions to specific transition problems; and (3) federal, state, and local laws and regulations that affected the delivery of coordinated transition services. Their work revealed a lack of coordination as a key problem. Services were available but they were not articulated. Some service delivery systems complemented each other while others were contradictory. Often, cooperative agreements were not sufficient to ensure coordinated services. In the process of studying the transition problem, the group discovered that cooperative agreements would work only if each participating organization had an equitable role in the decision-making process.

Four principles for service collaboration between agencies evolved from the work of the group:

1. Time must be devoted to establishing a common vocabulary describing the programs and/or services and procedures to ensure that each member organization understands the entire transition process.

2. Each organization's area of expertise must be identified early in the process as well as what each organization will get out of the arrangement and what resources each organization will contribute to the process.

3. Each organization needs to indicate how clients gain access to their
programs and/or services and the treatment clients can expect.

4. Service collaboration should be designed to alleviate responsibilities rather than imposing additional responsibilities.

Intra-Agency Cooperation

The purpose of intra-agency collaboration is to minimize duplication and identify omissions in services and instruction within a single agency, such as a school or a school district (Feichtner 1988). Duplication wastes time and money. Omission results in students not learning the information or processes that are the building blocks for later development. The identification of omissions in content and process is especially important for at-risk students, because they often have deficiencies in associative processes that are necessary for integration and abstraction (Farnham-Diggory 1972).

Intra-agency coordination of services enables various organizational units to develop a common conceptual framework that can be used to analyze what services students need. An example of intra-agency coordination of services is the Extended Opportunity Programs and Services (EOPS) at Hartnell College in California (Feichtner 1989). The EOPS was designed to recruit, retain, graduate, and/or facilitate transfer of educationally disadvantaged, low-income, and/or minority students. The goals of the program are to--

- improve early identification and outreach for potential EOPS students;
- provide transfer, career counseling, and placement for disadvantaged students; and
- ensure that the EOPS services are an integral part of all student services.

Students receive intensive assistance in the areas of admissions, registration, financial aid, curriculum planning, tutoring, counseling, peer counseling, and university transfer. When a student with language, social, or economic disadvantages matriculates at Hartnell, the student becomes the responsibility of the EOPS. The student’s academic needs are diagnosed through STARR (Success Through Assessment/Orientation, Advisement, and Registration) or at the secondary level through early STARR. STARR assesses students in the basic skills of reading, writing, and computation. The EOPS student is counseled to take courses at the appropriate reading level because Hartnell instructors have identified the reading skill level a student needs for success in each course.

Intra-agency coordination of programs also enables various disciplines to develop a common conceptual framework that can be used to analyze what the student needs to learn. Cassity and Boyer-Stephens (1987) describe an access skills analysis used to prepare a student to profit from vocational training. These "access skills" are the math skills, physical demands/working environment capabilities, aptitudes, temperament, and vocational skills that the student should possess prior to entering vocational education because they are not normally taught as part of the vocational curriculum.
Figure 6 illustrates some of the specific readiness skills needed for building maintenance/custodial vocational training identified through the Michigan Occupational Data Analysis System (ODAS) and validated by vocational education and special education instructors in Missouri.

Development of these skills depends on intra-agency cooperation and coordination. An assessment of the student's needs, interests, and characteristics in relation to job characteristics and requirements guides the process. The results of the assessment help the counseling department guide the occupational decisions of the student. The analysis helps the math department identify and remediate basic skill deficiencies. The analysis helps prevocational departments (such as industrial arts) to plan appropriate learning experiences.

Because these access skills overlap in a number of educational disciplines, decisions must be made about which access skills are to be taught and by whom. The actual teaching of access skills can take place in the special education classroom, a prevocational classroom (such as industrial arts or home economics), in the community (exploratory work experience), and/or in the home. Where these skills are to be taught depends on the specific needs of the youth. Who will be responsible for monitoring the student's progress becomes an important team decision to be recorded on the Individualized Education Plan, Individual Written Rehabilitation Program, Individualized Transition Plan, or any other format being used.

Another example of intra-agency coordination is the assessment program in Mission Trails Regional Occupational Center (ROC) in Salinas, California. Assessment begins in junior high school with visits to the ROC "Exploratorium" where students investigate vocational areas through hands-on experience with equipment. Small groups of students work at the Exploratorium daily for a period of 3 hours. During this time the students have an opportunity to discuss the results of the vocational interest inventory that was administered at the junior high school. In addition, the students participate in practice interviews about their goals and interests. The junior high school students also tour the vocational classrooms and laboratories at the ROC. The ROC counselors prepare a written report that summarizes the student's capabilities and interests and makes vocational course recommendations that can be used while the student is still electing junior high school courses. In the ninth grade, the student is provided with a 4-year vocational plan. (A 6-year planning format that will encompass the 2 years at the community college is under development). The 4-year plan is produced with the aid of a computer software package that compares a student's vocational interest with the student's academic abilities (as measured by the California Test of Basic Skills). The resulting report details what the student needs to do to meet his or her occupational goals. Also produced is a teaching strategy report that can be used by a teacher to adapt or improve the student's vocational instruction. A preliminary Individualized Vocational Education Plan (IVEP) is generated for the student and shared with parents (figure 7) as part of the early information requirement of P.L. 98-524, the Carl Perkins Vocational Education Act (Sec. 204 b). Work samples and 9th- and 10th-grade vocational courses provide information with which to make appropriate vocational placement recommendations at the ROC. An Access Profile prepared for each student enrolled in 9th- and 10th-grade vocational
BUILDING MAINTENANCE/CUSTODIAL

SAMPLE OCCUPATIONAL AREAS

Janitor
Housekeeping

Maintenance Mechanic Helper

Math Skills
- Count two-place numbers
- Add two-place numbers
- Subtract two-place numbers
- Perform standing units of measurement, i.e., cup, pint, quart, inch, foot, yard, ounce, pound
- Use basic measuring instruments, i.e., rulers, scales

Physical Demands/Working Environment
- Lift 50 lbs. maximum with frequent lifting and/or carrying of objects, weighing up to 25 lbs. (medium work)
- Ascend or descend, i.e., ladders, stairs, scaffolding, using the feet and legs and/or hands and arms (climbing)
- Maintain body equilibrium to prevent falling when walking, standing, crouching, or running (balancing)
- Bend body downward and forward by bending the spine at the waist (stooping)
- Bend legs at the knees to come to rest on the knee or knees (kneeling)
- Bend body downward and forward by bending the legs and spine (crouching)
- Move about on the hands and knees or hands and feet (crawling)
- Extend the hands and arms in any direction (reaching)
- Seize, pinch, or otherwise work with the fingers (fingering)
- Perceive size, shape, temperature, or texture of objects and materials by using fingertips (feeling)
- Ability to work inside

Aptitudes--Indicates an ability to--
- move the hands easily and skillfully (manual dexterity)
- work with the hands in placing and turning motions (manual dexterity)

Temperament--Indicates an ability to adapt to--
- performing repetitive work, or performing continuously the same work, according to set procedures, sequences, or pace
- performing a variety of duties, often changing from one task to another of a different nature without loss of efficiency or composure

Vocational
- Identify basic hand tools and equipment
- Use basic hand tools and equipment
- Demonstrate knowledge of basic safety concepts

SOURCE: Cassity and Boyer-Stephens (1987), p. 32

Figure 6. Access skills for building maintenance/custodial training
Dear MR. & MRS. DOE,

JAMES L. has expressed an interest in Auto Mechanics. This report will give you an understanding of what academic strengths and weaknesses are known about JAMES L. in relation to the chosen job. This does not mean that JAMES L. is locked into a particular course of study, but is given to you so that you and the teachers will understand the level of achievement that is needed for successful entry into this occupation. It does not reflect the academic level of achievement needed to graduate from school and is only provided as a motivational tool.

When we compared JAMES L.'s academic test scores with the requirements needed for entry into Auto Mechanics we found the following:

Language  Needs additional help in language. Testing in this area will be required and further advancement in language will be necessary if this occupation is chosen. Further assessment and career exploration may be desired for the selection of another career choice.

Math      Progressing adequately in math and should meet the needed requirements for Auto Mechanics.

Reading   Needs further skill development in reading. Recommend additional help be provided for reading requirements in Auto Mechanics. Further testing in Auto Mechanics will be needed to identify specific skills necessary for success in Auto Mechanics. Career exploration and vocational assessment is recommended before future career choices are made.


Figure 7. An articulated assessment program that facilitates early notification to parents.
Auto Mechanics is an instructional program that prepares individuals to engage in the servicing and maintenance of all types of automobiles. This occupation generally requires at least a high school diploma or its equivalent for entry level. However, skills learned from vocational preparation are desired.

The following vocational programs are offered at ALISAL HIGH SCHOOL:

CLERK TYPIST
ACCOUNTING
CONSTRUCTION
ELECTRONICS
AUTOMOTIVE
AG. PRODUCTION
AG. WELDING/MECHANICS
FORESTRY/NATURAL RESOURCES
DENTAL ASSISTING
BUSINESS MARKETING
SECRETARIAL
DATA/WORD PROCESSING
DRAFTING
METAL TRADES
PLASTICS
ORN. HORTICULTURE
COSMETOLOGY
MEDICAL ASSISTING
HOME ECONOMICS
GRAPHIC ARTS

The vocational preparation for the occupational choice selected by JAMES L. may not be offered in our school district; however, every attempt will be made to place JAMES L. in a vocational program that has transferable skills similar to Auto Mechanics. For more information, contact the counseling office.

PROJECTED CLASS PLAN

The following vocational plan has been created with James L.’s specific vocational interest area in mind. Please note that this plan will be reviewed and/or revised as necessary:

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Note: An asterisk (*) indicates a required course.

This report is intended to give you a better understanding of how JAMES L. is progressing toward a successful entry into Auto Mechanics. If you would like more information please contact me through the counseling office.

Sincerely,

Figure 7--continued

32
education programs compares performance to the minimum requirements for the 11th- and 12th-grade ROC vocational courses.

Individualized Programs and Services

Transition is facilitated through the use of an Individualized Education Plan (IEP), Individualized Transition Plan (ITP), or Individualized Vocational Education Plan (IVEP). These written agreements are used to prescribe and document the transition program and process. The plan is developed by a team of individuals who are directly involved with providing assistance to the student. The team includes the student and parent and should include a case manager, vocational and special education teachers, a guidance counselor, an administrator, a vocational rehabilitation representative, employers, and community agency representatives (Pennsylvania Department of Education 1986). If the youth is academically disadvantaged or limited English proficient, the team might include a compensatory education specialist or a bilingual teacher. The following items are representative of the topics that must be considered in developing a plan:

- The occupational preference of the individual
- What occupational skill training the individual will need
- Where the individual will work
- Where the individual will live
- How the individual will get to and from work and other activities
- What medical needs will have to be met
- What long-term care will need to be provided
- What child care needs will have to be met
- What language problems the individual may have
- What basic skill deficiencies the student may have

Most ITPs and IVEPs use an IEP format. This format includes long- and short-term goals and a summary of planned services designed to meet the identified goals. No universal mechanism exists (for example, IEP, IWRP, ITP) for reporting the needs of youth with disadvantages, although some professionals use the IEP format and process because state agencies have requested it. A format for an ITP for all at-risk students, based on career development theory, is proposed in Appendix E.

Assessment

The ITP is based on an assessment of the special needs of the individual. Assessment for transition is not a screening device, but a method of providing individuals with information to help them make educated choices. Assessment for transition purposes focuses on identifying the abilities, aptitudes, achievements, interests, skills, and knowledge of the individual relative to various occupations and the instructional, counseling, and other support or supplemental services the individual needs to pursue occupational goals.

Assessment can be formal or informal. Greenan (1989) identified 13 ability, 11
achievement, 32 aptitude, 24 interest, 7 personality, and 5 social psychometric tests and 18 work samples that are available commercially for formal assessment purposes. A review of these assessment instruments can be found in DeStefano, Linn, and Markward (1987). Observation and curriculum-based vocational assessment of student progress (Albright and Cobb 1988) can be used to validate the results of formal assessment. Often, the best vocational assessment instruments, procedures, or activities are those that are developed collaboratively by vocational educators and vocational evaluators or by vocational evaluators who base development on available vocational education options or community jobs (Leconte and Neubert 1987).

Case Management

The IEP case manager is usually a member of the special education staff. The case manager is responsible for chairing the IEP transition team and for follow-up until the student exits from secondary school. After exit from secondary school, the parent, the student, or an adult service representative is responsible for follow-up. No formalized ITP case managers are identified for secondary students with disadvantages or limited English proficiency. Adults and out-of-school youth who receive bilingual vocational training or JTPA services have a case manager.

Transition Technicians

Prince George's County, Maryland, uses a transition technician as a modified case manager for students with disabilities who have left secondary school (Leney 1989). The Transition Technician has a caseload of five young adults and spends up to 5 hours per week helping the student make the transition to adult services.

Transition Planning Guides

Several states have developed transition planning guides to facilitate the school-to-work transition process (Kelker et al. 1986; Thompson 1988). Thompson describes a guide used with disabled students in Minnesota that is representative of guides used in other states. The Minnesota guide familiarizes the families and professionals working with the students with the variety of adult services available and provides a model for creating a systematic plan for transition from school to adult life. The first section considers the logistics of transition planning and includes a description of the planning team, issues to be addressed about transition and quality of life, and timelines involved in planning. The section on the individual student profile notes areas to be addressed in transition planning and preparing for a transition planning meeting. Also provided is a transition planning log that tracks needed services by timelines for actions, persons responsible, and periodic review.

Transition Assistance Centers

The establishment of a Transition Assistance Center is another method of facilitating school-to-work transition (Cameron 1989). The Transition Assistance Center is a single source (one-stop) or contact point for consumers, families, employers, and professionals seeking transition assistance. It is designed to provide consumers with information about a broad spectrum of public and private programs and services. In addition to providing information about the availability of
transition options and the criteria for eligibility, the assistance center provides a mechanism for developing interagency communication and coordination and a population analysis to identify needs for transition services, as well as assistance in the planning and development of future transition services.

Parents as Partners

Perhaps the most important and the least used strategy for improving the school-to-work transition for at-risk students is the parent as transition partner. Although it is mandated that the parent be involved in the IEP development for students with disabilities, the true value of the parent has yet to be explored. Parents are a vital link in the career development process and their influence in career decision making has been widely documented. In their follow-up study of youth with disabilities leaving high school, Hasazi, Gordon, and Roe (1985) found that family support and involvement contributed to successful employment status.

One approach to using parents as partners is the development of a Parent Resource Center (Sarkees 1989). Parent Resource Centers can serve as information clearinghouses for parents or as counseling and support centers for parents in need of assistance. One possible use of the Parent Resource Center that should be investigated is the provision of career exploration activities for students, such as career information, mentoring, job shadowing, and individual counseling. Parents can also aid in securing individualized job placements (Lee and Tenpas 1987). The development of a Parent Resource Center will solve some of the problems associated with involving parents in transition decisions (Izzo 1987; Keul, Grossi, and Test 1987; Lehmann, Deniston, and Grebenc 1989; Tilson and Neubert 1988; Tindall and Gugerty 1985).

Management Information Systems

At-risk youth face a myriad of problems as they negotiate the transition process—legal, health, housing, financial, transportation, child care, employment. Because no one agency can provide all of these services, the problem facing transition case managers or specialists is the identification and categorization of service and program deliverers.

Services are available through national, state, and local government agencies; from community agencies (including schools); from business, industry, and labor unions; and from citizen and special interest groups. Service deliverers include departments of rehabilitation, mental health, mental retardation, developmental disabilities, welfare, social security, employment, and public health; offices of bilingual education; agencies for the blind; supported employment; independent living centers; drug and alcohol abuse centers; employers; Chambers of Commerce; parent organizations; private industry councils; ethnic community-based organizations; job placement agencies; secondary and postsecondary schools; and community volunteer groups, to mention only a few. Instructional programs are primarily located in the public secondary and postsecondary schools, but they can also be found in private schools, through community-based organizations, volunteers, and the workplace. Instructional programs can include academic or basic skills training, personal-social skills training, and employability and occupational skills training.
It is impossible to coordinate the information about a student's needs and to match those needs to available programs and services without a sophisticated database system. A management information system would also allow professionals to identify gaps and duplications in service, to provide cost-benefit analyses, and to conduct basic research on the transition process. Until a mechanism is developed for database management of information, transition processes will be fragmented and decision making unsystematic.
In theory and in practice, all the pieces of the puzzle of providing a systematic transition process for at-risk youth have been identified. They are summarized in this section.

Theory

The purpose of school-to-work transition is to provide youth with experiences that will help them develop the skills and attitudes needed to secure and keep employment, to secure and maintain an adult life-style, and to develop positive social relationships. It is an ongoing process that focuses on the characteristics, needs, and options of the individual and results in the development of realistic long-range goals and in the selection of appropriate programs and services needed to meet those goals.

Federal legislation has played an important part in the identification of programs and services to facilitate school-to-work transition for at-risk youth, including:

Curriculum and Instruction

- Life skills developed through an integrated community-based functional curriculum
- Occupational skills developed in integrated, public vocational education programs wherever possible

- Employment-related activities such as job counseling, job search assistance, job development, preapprenticeship training, and follow-up services
- A variety of work options, including both supported and competitive employment

Comprehensive Support Systems

- An individualized education program based on assessment
- Vocational exploration, guidance, counseling, and career development
- Special services such as remedial education and basic skills training, literacy and bilingual training

Formalized Articulation and Communication

- Inclusion of parents throughout the process, including informing them about vocational education opportunities
- Interagency and intra-agency coordination of programs and services among and within school and adult service providers

Several models are available that describe how these programs and services should be organized for most effective delivery. Most of the models were developed for
single at-risk populations, but are adaptable to other at-risk populations (Hayward and Orland 1986) if certain principles are observed (Jones n.d.):

- The process must be flexible enough to accommodate a variety of needs and population groups.
- The process must provide for expansion and change.
- The process must identify the individuals to be served and provide services based on an assessment of individual needs.
- Assessment must be ongoing and used to monitor progress.
- Existing services and programs must be coordinated.
- Social and interpersonal support systems must be established.
- Information must be coordinated and shared to eliminate gaps or duplication of service and instruction.
- Consistent terminology must be developed to foster mutual understanding.
- The roles and responsibilities of the key players must be defined.

Successful transition involves interagency and intra-agency cooperation, articulation of programs and services, and individualization of programs and services based on assessment of needs and goals. The local-level case manager emerges as a key element in the coordination of the complex transition process.

Transition planning depends on the availability of a wide array of transition options and the availability of systematic procedures for identifying and prescribing the services and programs appropriate to the individual. The availability of a standardized management information system to track services and programs is critical because of the number of consumers to be served, the increased number of service options available to consumers, and the complexity of the laws and regulations affecting service providers.

**Practice**

School-to-work transition has been developed primarily for students with disabilities. The process works relatively well where inter- and intra-agency coordination exists and until the youth leaves secondary school because the student has a case manager and identified transition options. School-to-work transition for secondary school youth with disadvantages or limited English proficiency is problematic. Although transition options are available, the lack of a designated case manager makes for haphazard use of the options. The responsibility for secondary school youth with disadvantages or limited English proficiency falls on the guidance counselor who may have a caseload of many hundreds of students (Lotto 1986).

The career development process for all students is ill defined in most school systems. Career exploration, a critical stage in career development, is no one's responsibility except for those students with disabilities who are enrolled in separate programs. For those students, career exploration is taught as part of the functional skills curriculum.
CONCLUSIONS

The purpose of the school-to-work transition process is to minimize the barriers at-risk youth face in preparing for and finding employment. For the process to work in the manner envisioned by theorists--

- a wide array of transition options must exist and be identified,
- the services must be articulated to avoid duplication and omission,
- systematic procedures must be in place for prescribing services and instruction appropriate to the individual, and
- a system must be available for tracking vast amounts of information.

The current school-to-work transition process, however, has a number of program and service barriers that compound the societal barriers faced by at-risk youth. The greatest barrier to effective school-to-work transition for at-risk students is the lack of a mandated systematic process for delivering school-to-work transition services. Because a universal transition model for at-risk students has not been advocated, a critical link is missing in most programs--career exploration/prevocational education. Other barriers to effective transition include the following:

- Lack of a case manager for out-of-school students with disabilities
- Lack of a case manager for in-school students with disadvantages and limited English proficiency
- Lack of coordination between agencies that often results in competing and duplicative efforts
- Parent and consumer confusion about what programs and services are available
- Underuse of parents as resources
- A shortage of adult service programs, especially in rural areas
- The absence of a system to manage the vast amount of information needed to make intelligent transition decisions and to evaluate participant outcomes and service costs

Public Policy Concerns

A number of major policy concerns arise from the study of the state of the art of transition from school to work for at-risk youth:

1. The lack of an advocated and systematic transition model for at-risk populations
2. The lack of local-level agency coordination
3. The lack of personnel trained to facilitate transition planning

4. The lack of longitudinal information about the outcomes of various transition options for various at-risk populations

Case management personnel must be identified and trained to serve at-risk youth before and after they leave secondary school. The identification of case management personnel is especially critical for in-school youth with disadvantages and limited English proficiency. The career development process for in-school youth needs to be examined and the integration of career exploration advocated at the federal level. The study of the career development process should be coordinated with the study of middle school reform (Carnegie Corporation of New York 1989).

Funds should be appropriated for the development of a standardized and computerized management information system that can be used to develop a local-level database of available programs and services that includes eligibility requirements for accessing the programs and services. The management information system should include a mechanism for using assessment and program placement information on individual students to improve individual decision making and to provide outcome measures for agency decision making about the cost effectiveness of programs and services.

Future Research Needs

Little research exists on the outcomes of school-to-work transition. Enough theory and practice now exist on transition options for various at-risk populations to begin outcome studies, including cost effectiveness of various options.

Research on mechanisms for delivering career exploration programs or activities in mainstream education should be conducted. Two possible mechanisms are Parent Resource Centers and "Exploratoriums." Research should also be conducted on new mechanisms for delivering career exploration programs to out-of-school youth and adults.

Research into expanding the transition options of youth in rural areas should be conducted. Methods for using a Parent Resource Center or a Transitional Assistance Center to identify and develop options should be explored.
Adult Service Providers are those agencies that have the responsibility for providing the special services needed by adults to enable them to enter or return to gainful employment, such as vocational rehabilitation, mental health, Job Training Partnership Act, or welfare.

Articulation is the coordination of instruction and services into a smooth continuum. It can be practiced between agencies (interagency) and within one agency (intra-agency). It can also be done between levels of programs and services (vertical articulation) and within one level of programs or services (horizontal articulation).

At-Risk Students are those students who present the school system with individual and unique challenges because they are in danger of leaving the school system as a result of academic, social, or emotional problems.

Basic Skills Education is the development of mathematics, communications, interpersonal relations, and reasoning skills that are necessary for success in and transferable across vocational programs and occupations.

Bilingual Vocational Training (BVT) is job training for persons of limited English proficiency who are unable to benefit from vocational training when it is provided only in English. A BVT program teaches both the job skills and the English that are needed in training and on the job.

Career Awareness is a stage in career education designed to inform a person (normally, but not necessarily, an elementary school student) of career options and of the responsibilities of being a contributing member of society. Career awareness is achieved by addressing three broad areas: (1) development of a knowledge base that provides information about a broad array of occupations; (2) development of attitudes that lay the foundation for work culture and interpersonal behaviors; and (3) development of self-understanding needed to make decisions about appropriate occupations.

Career Education is the infusion of concepts of career development and preparation into all subject areas and learning experiences of students at all grade levels. It is intended to provide students with coordinated learning experiences consisting of career awareness, exploration, preparation, and placement.

Career Exploration is the second stage in career education and is designed to provide a person with an understanding of the requirements of occupations in terms of physical demands, capabilities, temperament, working environment, and basic skills. During career exploration, the individual begins an assessment process designed to provide information about the person's ability to perform certain tasks.
occupations with or without modification to the work environment.

Community Adjustment Transition Model describes those programs and services needed for an individual to achieve social independence.

Employment Transition Model describes those programs and services needed for an individual to achieve economic independence.

Job Training is a systematic sequence of instruction or other planned learning experiences on an individual or group basis that is designed to impart skills, knowledge, or abilities required for defined employment or specific occupations or jobs. It differs from occupational education by the degree to which training may be concentrated and focused on specific jobs and by the fact that it is usually of much shorter duration and leads directly to employment rather than to advanced training.

Mainstream Programs are those educational programs that are provided for all students.

Occupational/Vocational Education is the planned sequence of instruction or other learning experiences that provide students with necessary skills, knowledge, and attitudes to attain entry-level employment, occupational advancement, job upgrading, or career change. Depending on the level of the occupational education program, it can lead directly to employment or to more advanced preparation.

Occupational/Vocational Preparation is the third stage in career education and is designed to provide (1) actual skill training in an occupation that prepares an individual for immediate job placement; (2) job-seeking skills; (3) preparation for the workplace environment; and (4) skills needed to remain flexible in an ever-changing work environment. Occupational preparation normally begins no earlier than the 10th grade. It continues throughout a person’s life in postsecondary public school, on the job, in proprietary schools, in adult programs, and through community, governmental, and professional agencies. The length of time for actual skill training may vary from a few weeks to many years; it may occur entirely in one institution (secondary school) or in a series of institutions (secondary, postsecondary, adult).

Full-out Programs are specialized classes that provide remediation or support for at-risk students to enable them to participate in mainstream programs, such as remedial mathematics or reading, or English pronunciation or vocabulary.

Separate Agency Programs are programs provided by agencies other than education for the purpose of preparing an individual for competitive or supported employment, such as vocational rehabilitation or sheltered workshops.

Social Skills Education is the development of personal-social skills that are needed for satisfactory community living or employment, including self-awareness, self-confidence, socially responsible behavior, good interpersonal relationships, and independence.

Special Populations/Special Needs refers to students with special training needs that occur as a result of disability or disadvantage.

Supported Employment is a term used to describe paid employment for persons with disabilities when competitive
employment at or above minimum wage is unlikely or when, because of the disability, an individual needs intensive ongoing support to maintain job performance. A discussion of supported employment can be found in Lagomarcino and Rusch (1987) and Goldberg and Urbain (1988).

Transition is the ongoing process designed to move a student through school to employment and community living.
APPENDICES
APPENDIX A

BROLIN'S FUNCTIONAL SKILLS CURRICULUM

Daily Living Skills

Managing Family Finances

- Identify money and make correct change
- Make wise expenditures
- Obtain and use bank and credit facilities
- Keep basic financial records
- Calculate and pay taxes

Selecting, Managing, and Maintaining a Home

- Select adequate housing
- Maintain a home
- Use basic appliances and tools
- Maintain home exterior

Caring for Personal Needs

- Dress appropriately
- Exhibit proper grooming and hygiene
- Demonstrate knowledge of physical fitness, nutrition, and weight control
- Demonstrate knowledge of common illness prevention and treatment

Raising Children, Enriching Family Living

- Prepare for adjustment to marriage
- Prepare for raising children (physical care)
- Prepare for raising children (psychological care)
- Practice family safety in the home

Buying and Preparing Food

- Demonstrate appropriate eating skills
- Plan balanced meals
- Purchase food
- Prepare meals

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Brolin's curriculum was developed for students with mild disabilities taught in a separate setting.

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Clean food preparation areas
Store food

**Buying and Caring for Clothing**

Wash clothing
Iron and store clothing
Perform simple mending
Purchase clothing

**Engaging in Civic Activities**

Generally understand local laws and government
Generally understand Federal Government
Understand citizenship rights and responsibilities
Understand registration and voting procedures
Understand Selective Service procedures
Understand civil rights and responsibilities when questioned by the law

**Utilizing Recreation and Leisure**

Participate actively in group activities
Know activities and available community resources
Understand recreational values
Use recreational facilities in the community
Plan and choose activities wisely
Plan vacations

**Getting around the Community (Mobility)**

Demonstrate knowledge of traffic rules and safety practices
Demonstrate knowledge and use of various means of transportation
Drive a car

**Personal-Social Skills**

**Achieving Self-Awareness**

Attain a sense of body
Identify interests and abilities
Identify emotions
Identify needs
Understand the physical self
Acquiring Self-Confidence

Express feelings of worth
Tell how others see him/her
Accept praise
Accept criticism
Develop confidence in self

Achieving Socially Responsible Behavior

Know character traits needed for acceptance
Know proper behavior in public places
Develop respect for the rights and properties of others
Recognize authority and follow instructions
Recognize personal roles

Maintaining Good Interpersonal Skills

Know how to listen and respond
Know how to make and maintain friendships
Establish appropriate heterosexual relationships
Know how to establish close relationships

Achieving Independence

Understand impact of behaviors upon others
Understand self-organization
Develop goal-seeking behavior
Strive toward self-actualization

Achieving Problem-Solving Skills

Differentiate bipolar concepts
Understand the needs for goals
Look at alternatives
Anticipate consequences
Know where to find good advice

Communicating Adequately with Others

Recognize emergency situations
Read at level needed for future goals
Write at the level needed for future goals
Speak adequately for understanding
Understand the subtleties of communication
Occupational Guidance and Preparation

Knowing and Exploring Occupational Possibilities

- Identify the personal values met through work
- Identify the societal values met through work
- Identify the remunerative aspects of work
- Understand classification of jobs into different occupational systems
- Identify occupational opportunities available locally
- Identify sources of occupational information

Selecting and Planning Occupational Choices

- Identify major occupational needs
- Identify major occupational interests
- Identify occupational aptitudes
- Identify requirements of appropriate and available jobs
- Make realistic occupational choices

Exhibiting Appropriate Work Habits and Behaviors

- Follow directions
- Work with others
- Work at a satisfactory rate
- Accept supervision
- Recognize the importance of attendance and punctuality
- Meet demands for quality work
- Demonstrate occupational safety

Exhibiting Sufficient Physical-Manual Skills

- Demonstrate satisfactory balance and coordination
- Demonstrate satisfactory manual dexterity
- Demonstrate satisfactory stamina and endurance
- Demonstrate satisfactory sensory discrimination

Obtaining a Specific Occupational Skill

See Appendix C

Seeking, Securing, and Maintaining Employment

- Search for a job
- Apply for a job
- Interview for a job
- Adjust to competitive standards
- Maintain postschool occupational adjustment
APPENDIX B

GREENAN'S GENERALIZABLE SKILLS CURRICULUM

Mathematics Skills

Whole Numbers

- Read, write, and count single and multiple digit whole numbers
- Add and subtract single and multiple digit whole numbers
- Multiply and divide single and multiple digit whole numbers
- Use addition, subtraction, multiplication, and division to solve word problems with single and multiple digit whole numbers
- Round off single and multiple digit whole numbers

Fractions

- Read and write common fractions
- Add and subtract common fractions
- Multiply and divide common fractions
- Solve word problems with common fractions

Decimals

- Carry out arithmetic computations involving dollars and cents
- Read and write decimals in one or more places
- Round off decimals to one or more places
- Multiply and divide decimals in one or more places
- Add and subtract decimals in one or more places
- Solve word problems with decimals in one or more places

Percent

- Read and write percents
- Compute percents

Mixed Operations

- Convert fractions to decimals, percents to fractions, fractions to percents, percents to decimals, decimals to percents, common fractions or mixed numbers to decimal fractions, and decimal fractions to common fractions or mixed numbers
- Solve word problems by selecting and using correct order of operations
- Perform written calculations quickly
- Compute averages
Measurement and Calculation

Read numbers of symbols from time, weight, distance, and volume measuring scales
Use a measuring device to determine an object's weight, distance, or volume in standard (English) units
Use a measuring device to determine an object's weight, distance, or volume in metric units
Perform basic metric conversions involving weight, distance, and volume
Solve problems involving time, weight, distance, and volume
Use a calculator to perform basic arithmetic operations to solve problems

Estimation

Determine if a solution to a mathematical problem is reasonable

Communication Skills

Words and Meanings

Use plural words appropriately in writing and speaking
Use appropriate contractions and shortened forms of words by using an apostrophe in writing and speaking
Use appropriate abbreviations of words in writing and speaking
Use words appropriately that mean the same as other words but are spelled differently
Use words correctly that sound the same as other words but that have different meanings and spellings
Use words appropriately that are opposite of one another
Use appropriate word choices in writing and speaking
Add appropriate beginnings and endings to words to change their meaning
Punctuate one's own correspondence, directives, or reports

Reading

Read, understand, and find information or gather data from books, manuals, directories, or other documents
Restate or paraphrase a reading passage to confirm one's own understanding of what was read
Read and understand forms
Read and understand short notes, memos, and letters
Read and understand graphs, charts, and tables to obtain factual information
Understand the meanings of words in sentences
Use a standard dictionary to obtain the meaning, pronunciation, and spelling of words
Use the telephone and look up names, telephone numbers, and other information in a telephone directory to make local and long distance calls
Writing

- Review and edit another's correspondence, directives, or reports
- Compose logical and understandable written correspondence, directives, memos, short notes, or reports
- Write logical and understandable statements, phrases, or sentences to fill out forms accurately

Speaking

- Speak fluently with individuals or groups
- Pronounce words correctly
- Speak effectively using appropriate behaviors such as eye contact, posture, and gestures

Listening

- Restate or paraphrase a conversation to confirm one's own understanding of what was said
- Ask appropriate questions to clarify another's written or oral communications
- Attend to nonverbal cues such as eye contact, posture, and gestures for meanings in other's conversations
- Take accurate notes that summarize the material presented from spoken conversations

Interpersonal Relations Skills

Work Behaviors

- Work effectively under different kinds of supervision
- Work without the need for close supervision
- Work cooperatively as a member of a team
- Get along and work effectively with people of different perspectives
- Show up regularly and on time for activities and appointments
- Work effectively when time, tension, or pressure are critical factors for successful performance
- See things from another's point of view
- Engage appropriately in social interaction and situations
- Take responsibility and be accountable for the effects of one's own judgments, decisions, and actions
- Plan, carry out, and complete activities at one's own initiation

Instructional and Supervisory Conversations

- Instruct or direct someone in the performance of a specific task
- Follow instructions or directions in the performance of a specific task
- Demonstrate to someone how to perform a specific task
- Assign others to carry out specific tasks
Speak with others in a relaxed and self-confident manner
Compliment and provide constructive feedback to others at appropriate times

Conversations

Be able to handle criticism, disagreement, or disappointment during a conversation
Initiate and maintain task-focused or friendly conversations with another individual
Initiate, maintain, and draw others into task-focused or friendly group conversations
Join in task-focused or friendly group conversations

Reasoning Skills

Verbal Reasoning

Generate or conceive of new or innovative ideas
Try out or consciously attempt to use previously learned knowledge and skills in a new situation
Understand and explain the main idea in another’s written or oral communication
Recall ideas, facts, theories, principles, and other information accurately from memory
Organize ideas and put them into words rapidly in oral and written conversations
Interpret feelings, ideas, or facts in terms of one’s own personal viewpoint or values
State one’s point of view, opinion, or position in written or oral communication
Defend one’s point of view, opinion, or position in written or oral communication
Distinguish between fact and opinion in one’s own and in others’ written and oral communication
Identify the conclusions in others’ written or oral communication
Identify the reasons offered by another and evaluate their relevance and strength of support for a conclusion
Compile one’s own notes taken on several written sources into a single report
Compile ideas, notes, and materials supplied by others into a single report
Carry out correctly written or oral instructions given by another
Observe another’s performance of a task to identify whether the performance is satisfactory or needs to be improved
Ask questions about another’s performance of a task to identify whether the performance is satisfactory or needs to be improved

Problem Solving

Recognize or identify the existence of a problem given a specific set of facts
Ask appropriate questions to identify or verify the existence of a problem
Enumerate the possible causes of a problem
Use efficient methods for eliminating the causes of a problem
Judge the credibility of a source of information
Identify important information needed to solve a problem
Identify others’ and one’s own assumptions relating to a problem
Generate or conceive of possible alternative solutions to a problem
Describe the application and likely consequences of alternative problem solutions and select a solution that represents the best course of action to pursue.

**Planning**

Sort objectives according to similar physical characteristics including shape, color, and size
Estimate weight of various objects of different shapes, sizes, and makeup
Estimate length, width, height, and distance between objects
Use the senses of touch, sight, smell, taste, and hearing
Set priorities or the order in which several tasks will be accomplished
Set the goals or standards for accomplishing a specific task
Enumerate a set of possible activities needed to accomplish a task
Determine how specific activities will assist in accomplishing a task
Select activities to accomplish a specific task
Determine the order of the activities or step-by-step process by which a specific task can be accomplished
Estimate the time required to perform activities needed to accomplish a specific task
Locate information about duties, methods, and procedures to perform the activities needed to accomplish a specific task
Locate information and select the materials, tools, equipment, or locate resources to perform the activities needed to accomplish a specific task
Revise or update periodically plans and activities for accomplishing a specific task
APPENDIX C

V-TECS OCCUPATIONAL SKILLS CURRICULA¹

Agriculture/Agriculture Business Occupations

Agricultural Equipment Parts Salesperson
Cattle Rancher
Chemical Sales/Chemical Applicator
Crop Production: Cotton Grower
Crop Production: Farmer, Cash Grain
Crop Production: Orchardist
Crop Production: Tobacco Grower
Crop Production: Vegetable Grower
Dairy Worker
Diesel Mechanic
Farm Business Manager
Farm Equipment Mechanic
Farm Equipment Operator
Farm Machine Set-up Mechanic
Floriculture Worker, Retail Flower Shop Salesperson, and Floral Designer
Garden Center Salesperson, Garden Center Worker, Landscape Worker, and Landscape Designer
Logger
Gardener/Groundskeeper
Nursery Worker
Ornamental Horticulture Production Operations
Poultry Farmer
Sheep Rancher
Small Engine Repair
Solar Heating Mechanic
Swine Farmer
Tractor Mechanic
Veterinary Assistant
Welder

¹V-TECS (Vocational-Technical Education Consortium of States) catalogues include worker tasks, tools and/or materials, how to perform the tasks, and the standards of competent task performance all validated by workers in the occupation. V-TECS guides include learning activities, performance evaluation procedures, and student information sheets.
Business and Office Education Occupations

Accounting Clerk
Banking Clerk/Related Occupations
Bank Teller
Bookkeeper
Business Machine Repairer
Cashier/Checker
Computer Equipment Repair
Computer Operator
Computer Programmer
Data Entry Operator
Duplicating Machine Operator
Executive Secretary
Industrial Traffic Manager
Information Processing Specialist
Legal Secretary and Court Reporter
Medical Clerical Worker
Medical Record Technician
Medical Secretary
Property Manager
Public Housing Management
Records Manager
Retail Credit Manager
Secretary
Shipping and Receiving Worker

Health Occupations

Community Health Aide
Dental Assistant
Dental Hygienist
Dental Laboratory Technician
Emergency Medical Technician
Hospital Ward Clerk
Licensed Practice Nurse
Medical Assistant
Medical Clerical Worker
Medical Lab Technician
Medical Record Technician
Medical Secretary
Nuclear Medicine Technologist
Nurses Aide/Orderly
Operating Room Technician Occupations
Optician
Radiographer
Radiologic Technology Occupations
Respiratory Therapist
Veterinary Assistant Occupations

Home Economics Occupations

Baker
Caterers
Child Care Worker
Clothing Alterationist
Commercial Cook
Cosmetologist
Custom Dressmaker
Fashion Salesperson
Food Management, Production and Services
Homemaker: Clothing and Textiles
Homemaker: Foods
Homemaker: Housing and Furnishing
Homemaker: Human Development
Homemaker: Management and Family Economics
Industrial Sewing Machine Operator
Meat Cutter
Parenting
Property Manager
Public Housing Management
Upholsterer
Waiter/Waitress

Marketing and Distributive Occupations

Advertising Artist
Auctioneer
Auto Parts Salesperson
Cashier/Checker
Fashion Salesperson
Hardware Salesperson
Hotel/Motel Desk Clerk
Industrial Traffic Manager
Real Estate Salesperson

Technical/Trade and Industrial Education Occupations

Appliance Repairer
Architectural Drafter
Audio-Visual Repairer
Auto Body Repairer
Auto Mechanic
Auto Mechanics: Suspension System, Brakes, and Steering

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Automobile Air Conditioning and Electrical System Technician
Automobile Engine Performance Technician
Automotive Engine and Drive Train Technician
Bindery Worker/Web Press Operator
Bricklayer
Building Repairer
Business Machine Repairer
Cabinetmaker
Carpenter
Computerized Numerical Control
Concrete Worker
Corrections Officer
Corrections Sergeant
Die Designer Jig and Fixture Designer
Electronics Mechanic
Environmental Control System Installer/Servicer
Fire Fighter
Heavy Equipment Mechanic
Home Furnishings Worker
House Electrician
Industrial Electrician
Industrial Maintenance Mechanic
Industrial Traffic Manager
Janitor
Land Survey/Field Technician
Laser System Technician
Loom Fixer
Machine Tool Operator
Machinist
Mechanical Drafting
Miner 1: General Underground Coal Mine Worker
Oil Field Technician
Patrolman
Photo Laboratory Technician
Plumber
Printing Occupations
Radio Communications Technician
Radio/Television Repairer
Railroad Track Layer
Refrigeration Mechanic
Robotics Technician
Roofers
Security Guard
Sheet Metal Worker
Ship Operations
Small Engine Repair
Still Photographer
Tractor Mechanic
Tractor-Trailer-Truck Driving
Underground Coal Mine Machine Maintenance
VCR and Related Equipment Repair
Warehouse Worker
Water/Wastewater Treatment Plant Operator
Welder
APPENDIX D
OPTIONS AVAILABLE AT TRANSITION DECISION POINTS

Prevocational Training/Exploration Options

Vocational Exploratory Classes
Industrial Arts/Home Economics Classes
Internships

Vocational Interviews
Vocational Interest Inventories
Basic Vocational Aptitude Testing
Psychometric Tests
Work Samples
Job Site Assessment

Structured Observation
Job Shadowing
Individual Career Plan Guides
Career Information Centers
Parents as Career Educators
Community Mentors
Individual Counseling
Group Guidance and Counseling
Peer Counseling

Skill Development/Employability Skill Development Options

Public Secondary Vocational Education
Public Postsecondary Vocational Education
Proprietary School Occupational Education
State and Local Youth Corps/Job Corps

1Descriptions of the various options can be found in Programs in Practice (Simpson, Huebner, and Roberts 1986), Opportunity Knocking (Goldberg and Urbain 1988), The Transition to Adulthood of Youth with Disabilities (Vandergoot, Gottlieb, and Martin 1988), Career Planning and Placement Strategies for Postsecondary Students with Disabilities (Brill and Hartman 1986), The Forgotten Half: Paths to Success for America’s Youth and Young Families (William T. Grant Foundation 1988b), Transition from School to Work (Wehman et al. 1988), and Resources, Strategies and Directions to Better Serve Disadvantaged Students in Career-Vocational Preparation (Nemko 1987).
JTPA Training Programs
Armed Forces Training Programs
Community-Based Organizations Programs
Rehabilitation Programs
Public Secondary Academic Education
Public Postsecondary Academic Education
Vocational Student Organizations
Job Clubs
Supported Employment with Job Coaches

Work Experience Options

Cooperative Education
Diversified Job Training
Rotation Job Training
Work-Study
Internships
Apprenticeships
Part-time Employment
Summer Employment
Youth-Operated Enterprises
Community and Neighborhood Service

Job Placement Options

Supported Employment
Rehabilitation Facilities and Agencies
Job Tryouts
Job Development
Competitive Employment
Armed Forces
Self-Employment

Job Advancement or Retention Options

Postsecondary and Continuing Education
On-the-Job Training

Career Job Change, Expansion, and Growth Options

Quality of Life Choices
  Work
    Full-Time Employment
    Self-Employment
    Job Sharing
    Temporary Employment
    Home-Based Employment
Cottage Industries
Leisure/Recreation
Location/Transportation
Health Care
Community and National Service
Community Living Arrangements
Public Institutions
Halfway Houses
Nursing Homes
Intermediate Care Facilities
Group/Retirement Homes
Supported Independent Living Environments
Independent Living Settings/Natural Family Home

The occupational transition model is an employment model. However, every individual is faced with community adjustment transition decisions; for some, community adjustment transition programs and services begin early and constitute a majority of the transition decisions.
APPENDIX E

PROPOSED INDIVIDUALIZED TRANSITION PLAN FOR AT-RISK YOUTH

Name: ______________________

Request Assessment of: (check appropriate boxes)

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- [ ] Basic Skills
  - [ ] Listening
  - [ ] Math
  - [ ] Reading
  - [ ] Speaking
  - [ ] Writing

- [ ] Learning Style
  - [ ] Physical
  - [ ] Hearing
  - [ ] Sight
  - [ ] Balance/Coordination
  - [ ] Manual Dexterity
  - [ ] Stamina/Endurance
  - [ ] Sensory Discrimination

- [ ] Interests

- [ ] Life Skills Development

- [ ] Personal/Social Skills Development

- [ ] Work Habits
  - [ ] Health
    - [ ] Physical
    - [ ] Emotional

Education Program (check):

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Reasons for requesting assessment:

Grade 7: ______________________

Grade 8: ______________________

Grade 9: ______________________

Grade 10: _____________________

Grade 11: _____________________

Grade 12: _____________________
Name: 

Support Services Requested:

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Assessment in Native Language

Native Language Instruction

Curriculum Modification

Equipment Modification

Instructional Modification

Tutoring

Other

School Counseling

Career

Family

Financial

Sex

Substance Abuse

Transportation

Other

Community Counseling

Financial

Medical

Physical

Psychological

Other

Community Counseling

Career

Family

Financial

Sex

Substance Abuse

Transportation

Other

Reasons for requesting support services or specific support service requested (if appropriate):

Grade 7:

Grade 8:

Grade 9:

Grade 10:

Grade 11:

Grade 12:
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**Skill Development**

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**Employability**

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**Physical/Manual**

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**Life Skills**

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**Work Experience**

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REFERENCES

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*Interagency Agreement for the Provision of Statewide Transition Services among the Texas Rehabilitation Commission, the Texas Education Agency, and the Texas Department of Mental Health and Mental Retardation,* Senate Concurrent Resolution 129, n.d.


Jones, Dee. *Iowa Transition Initiative.* Des Moines, IA: Drake University-MPRRC, n.d.


Rehabilitation Research and Training Center at Virginia Commonwealth University. "Vocational Transition: A Priority for the '80s." Project TIE 1, no. 1 (n.d.).


RECOMMENDED READING


West, Lynda L., ed. "Transition from School to Work." *Journal for Vocational Special Needs Education* 11, no. 1 (Fall 198...
Learning and Reality: Reflections on Trends in Adult Learning, by Robert A. Fellenz and Gary J. Conti.

The focus of the adult education field is shifting to adult learning. Among the trends Fellenz and Conti identify are changing conceptions of intelligence; assessment of learning style; types of learning strategies; learning in the social environment; and participatory research. They conclude that the current trends in adult learning research point to a new image of the adult learner as an empowered learner.


Learning disabilities (LD) among adults are more prevalent than was once thought. Ross-Gordon stresses that assessment of these adults should recognize their strengths and needs as adults, and she provides guidelines for the selection of appropriate diagnostic instruments. Recommendations for policy and research emphasize a comprehensive, holistic approach that abandons the "deficit" perspective and considers the adult with LD as a critical contributor to the resolution of the problem.

Adult Literacy Education: Program Evaluation and Learner Assessment, by Susan L. Lytle and Marcie Wolfe.

Lytle and Wolfe provide information to shape the design of adult literacy evaluation, beginning with considerations of adults as learners, concepts of literacy, and educational contexts. They identify resources for planning program evaluations and four types of approaches: standardized testing, materials-based assessment, competency-based assessment, and participatory assessment. Lytle and Wolfe present 10 critical features of a framework for program evaluation and learner assessment in adult literacy education.

School-to-Work Transition for At-Risk Youth, by Sheila H. Feichtner.

School-to-work transition helps at-risk youth develop the skills and attitudes needed to secure and maintain employment and an adult lifestyle. The transition process must include a wide range of articulated services and systematic procedures for prescribing appropriate individual assistance and for tracking information. Feichtner identifies a number of program and service barriers that compound the societal barriers faced by at-risk youth and addresses major policy concerns and research needs.

The Role of Vocational Education in the Development of Students' Academic Skills, by Sandra G. Fritz.

One response to recent educational reform movements has been the integration of academic skills and vocational skills. This paper includes a position statement of the National Association of State Directors of Vocational Education on vocational education's role in the acquisition of basic skills. Also included are guidelines for implementing the policies and principles of skills integration in vocational education programs.

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