Careful design of assessment procedures to be used with disadvantaged students is especially important because these students are likely to have one or more characteristics and/or attitudes that place them at particular risk of dropping out (for example, poor self-concept, fear of failure, low level of aspiration, dependence on peer group affiliations, and a preference for unduly high- or low-risk life goals). The first step in planning a vocational assessment program entails reviewing local job opportunities, the training required for these jobs, student interest in these occupational areas, appropriate methods of providing the necessary instruction, and methods of monitoring and measuring student progress during training. Resolution of these issues provides a framework for designing an individualized vocational assessment model. The next step is assessing an individual's interests in relation to industry standards. A comprehensive vocational assessment must evaluate students in the following six areas: vocational skills and abilities, interest, basic skills, emotional and social tolerance, independence, and vocational readiness and habits. Depending on individual student needs and interests, resources, time, expertise of evaluators, and availability of jobs, counselors may choose any one of three evaluation strategies—screening, specific vocational assessment, or comprehensive vocational assessment. Whatever the approach chosen, vocational assessment is only useful to the degree to which it facilitates planning and instructional decisions. (MN)
The Carl P. Perkins Vocational Education Act strengthened the commitment of vocational education to serve disadvantaged and handicapped populations. The new law building upon past vocational education legislation and the Education for all Handicapped Children Act of 1975 (P.L. 94-142), assures equal access and funding for disadvantaged and handicapped students served in vocational education programs. Unlike past legislation this law specifies the type of services that will be delivered by local education agencies if funding is received. Local education services shall include assessment, special support services, guidance, counseling and career development and transitional counseling. Thus, a wide range of services are identified from early assessment, support services and counseling while in vocational programs and transitional counseling upon completion of a program. These services will prevent students from falling through the cracks of the educational system and will encourage systematic planning for all disadvantaged and handicapped students enrolled in vocational education. This paper will concentrate on the first assurance; vocational assessment for disadvantaged students.

Disadvantaged Students

Vocational students are classified as disadvantaged if they are not succeeding in a regular vocational program and there is documentation that the student is not likely to succeed without special help or support services. Common characteristics and attitudes which affect learning include the following:
Poor Self Concept

Disadvantaged students tend to feel unsuccessful, worthless, and unwanted, without any direction or goal. They envision themselves as failures. Some elements contributing to these feelings are discrimination, failure of parents and friends to succeed economically, and failure to achieve in school.

Fear of Failure

Disadvantaged students suffer from a strong feeling of failure. They are too insecure and defensive to respond to being "challenged." They will rarely volunteer in class for fear of responding incorrectly. Often they feel that they do nothing "right" in school.

Low Level of Aspiration

Parents with low occupational and educational achievements have low levels of aspiration for their children. Failure by students to perceive that value of education has greatly limited development of educational and personal goals. Students develop negative attitudes toward work because they recognize their limitations for economic advancement. Success and security are uncertain and therefore they are oriented more toward the present than the future. They need immediate rather than long term gratification. There may be few successfully employed work models at home or in their community to help students develop an understanding of career possibilities.

Anti-Intellectual/Anti-school Attitudes and Behaviors

Many students demonstrate behaviors and attitudes which are contrary to those expected of them in school. They may become frustrated easily because of limited abilities and experiences. The insecurities of daily living, a history of failure in school, and inner tensions caused by family conflicts may contribute to a hostile or apathetic attitude.
toward education. They may view school as irrelevant and feel alienated from the educational system. Survival may be their main goal.

Motivated by Extrinsic Needs

Disadvantaged people tend to be motivated by extrinsic needs more than intrinsic needs. Therefore, they often lack internal controls and rely on external forces for support and acknowledgement. They are more motivated by needs whose gratifications are primarily physical, material, or "other" oriented rather than by those needs which are internalized by the individual.

Need Structure and Order

Disadvantaged students generally feel a need for security which can be met through structure and routine.

Dependent on Peer Group Affiliations

Disadvantaged youth are usually more dependent on peer group affiliations than on family to fill belongingness, love, and self-esteem needs.

Prefer High-or Low-Risks in Life Goals

Disadvantaged people tend to prefer either high-or low-risks in life goals to medium risks. The high-risk student may have the drive to succeed beyond expectations. The low risk student is unwilling to try anything and seems to have "dropped out" even while in school.

Vocational education teachers and support service providers need to identify students interests, abilities, attitudes and aptitudes. These may vary depending on age of student and situation, e.g. secondary, post-secondary, in-school or out of school placement.
Why Vocational Education for the Disadvantaged?

Vocational education provides a bridge for students from school to work. Vocational education programs tend to be more realistic, hands on and applied than academic disciplines. This type of education provides learning while doing, a hands on approach to learning abstract ideas. Disadvantaged students gain from this common sense approach to education. Competency based vocational education programs are an asset to students who need to see success and employability competencies immediately. Vocational education allows individuals to compete for skilled jobs and teaches cooperation and social skills necessary to get and keep a job. Thus, motivation to succeed is increased and the likelihood of dropping out is decreased when students see rewards and relevancy in education. Drop out prone youth need early identification and support to stay in school and pursue relevant training. Often, these students have been ignored in the traditional system (Lambert, 1979).

Within Colorado, completers of vocational programs earn an average of $15,000 a year. This is 78% higher than the earning of the average person entering the job market in a minimum wage job (Colorado State Occupational Information Coordinating Committee, 1986).

The review of the common characteristics of disadvantaged learners demonstrates the need for vocational education, preparation for the world of work and employability for disadvantaged learners. These students need career exploration and preparation as they begin their career to keep them in the mainstream of society. Adequate jobs, a decent living and challenging opportunities need to be made available to these students before they leave school. If these students are allowed to leave school without some kind of skill they are likely to be unemployed. The highest competition for jobs is at the unskilled level. This level also has the greatest job turnover and is
the lowest paid. It makes sense to train students to enter the job market at
the semi-skilled or skilled level where possible.

Quality Indicators for the Assessment Process

According to Johnson (1980), quality vocational assessment has not typically
been provided to special needs students. She states that "vocational
assessments are generally used for predictive rather than diagnostic
purposes. Thus, they tend to predict the probability of a student's success
in an occupation rather than identifying the skills the student must acquire
in order to learn to perform in the occupation. Furthermore, the purposes and
results of these assessments are not always fully understood by those who
administer them, interpret their results, or use them to define the most
appropriate alternatives for the individual." Clearly, vocational assessment
is appropriate to find out what a student's strength and interests are and for
appropriate vocational placement. An assessment of a student's needs,
abilities and interests must be completed before matching the student with
appropriate vocational programs and jobs.

The following indicators should be reviewed before establishing a
vocational assessment program for disadvantaged students.

1) What local job opportunities exist?
2) In which of these jobs is the individual most interested?
3) What skills of the jobs identified can the individual
currently perform?
4) What skills will require training or must be adapted to
match the student's needs.
5) What are appropriate methods for providing instruction to the individual or how can the job tasks be modified?

6) How is student progress monitored and measured while in training?

Responses to these questions are the framework for designing an individualized vocational assessment model. Persons performing the vocational assessment must first be aware of the local job market and labor market trends. The local job opportunities must be analyzed regarding the specific job skill requirements; related job requirements such as transportation, home preparation skills, and the social skills requirements. Many disadvantaged students do not leave their local communities. Therefore, it is essential to be aware of local jobs and be able to offer counseling services to students anticipating a move. The Department of Labor can be contacted for additional information regarding job prospects for the future.

The next step is an assessment of the individual's interest. Employment interests may be ascertained through guided discussions with the individual. Elements such as training requirements, work conditions, and salary should be discussed. Individuals being assessed might observe jobs or vocational classes which lead to employment in an effort to better understand available vocational opportunities.

Once the individual has indicated some areas of interest, they should participate in a trial program. The trial may take place either in a vocational class which relates to their employment interest or in an actual job. This requires cooperation between various groups of people, including support service personnel, vocational educators, employers, job training and partnership counselors and families.

It is of particular importance to evaluate how the individual performs in relationship to industry standards. An analysis of the discrepancy between industry standards and the individual's level of skill performance
will indicate several factors. Is this a realistic vocational direction? What skills will need to be taught and are there adequate resources to provide the necessary support for this student. Student support services can design adaptations in three different areas (Falvey, 1986). These are:

1. Altering student characteristics, such as assisting the student with grooming and hygiene skills.

2. Adapting curricular or job tasks without changing the activity outcomes. Specific adaptations might include increasing the amount of directions, providing cues such as written reminders to initiate skill performance or altering the sequence of skills needed to perform job tasks.

3. Making changes in the job environment including effecting attitude changes in fellow students and co-workers. This might involve providing information to the students, peer modeling, respectful interactions with the disadvantaged student.

The decision as to which skills should be taught involves determining the frequency the skill is required on the job and whether teaching that skill will promote the student's independence by increasing his or her vocational potential.

Job skills may be taught in either a school setting or on the job. This decision is made by ascertaining whether or not the job requires specific vocational training, and if vocational training is indeed locally available. Vocational classes must be analyzed in terms of the specific requirements for successful completion. It is important to assess not only what job competencies are taught but also the study skills, basic academic skills, and physical tolerances required and methods of instruction used in both the laboratory and training setting. The student's learning style must be assessed in order to help the student identify optimal methods for learning.
Once training has been established, the student's progress should be evaluated. Results of this evaluation will have implications for changes in the overall placement as well as in the immediate program.

Answering each of the six quality indicators necessitates the individualization of the assessment to each particular student. Peterson (1985) identified three key principles of the assessment process as; instruction, relevant and realistic. Vocational assessment results must have a direct and obvious relationship to skills that are to be taught in the vocational education program or on the job.

Vocational Assessment Model

Vocational assessment is the process of gathering relevant information in order to help clients make career planning decisions (Cobb & Larkin, 1985). The scope of assessment may vary, but may include any or all of the areas shown in Table 1.

TABLE 1

<table>
<thead>
<tr>
<th>Vocational Skills and Abilities</th>
<th>Interest</th>
<th>Basic Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Physical Capacities</td>
<td>*Self Awareness</td>
<td>*Academic Skills</td>
</tr>
<tr>
<td>*Perceptual Skills</td>
<td>*Previous Experience</td>
<td>*Learning Style</td>
</tr>
<tr>
<td>*Job Performance</td>
<td>*Vocational Interest</td>
<td>*Study Skills</td>
</tr>
<tr>
<td>*Aptitude</td>
<td></td>
<td>*Generalizable Skills</td>
</tr>
<tr>
<td>*Motor Coordination</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vocational Readiness and Habits</th>
<th>Emotional and Social Tolerance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>*Job-Seeking</td>
<td>*Assertiveness</td>
<td></td>
</tr>
<tr>
<td>*Job-Keeping</td>
<td>*Social Behavior</td>
<td></td>
</tr>
<tr>
<td>*Job-Getting</td>
<td>*Stress</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Controls Emotions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Responsibility for Actions</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independence</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>*Self Help</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Consumer Skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Independent Living Skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Health Care</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Basic Skills</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>*Academic Skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Learning Style</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Study Skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Generalizable Skills</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
One must ask what kind of information is needed concerning the student in order to effectively make vocationally related decisions. It is important that characteristics, needs, and experiences of individuals be assessed when making program/placement decisions. Three strategies similar to those in the North Dakota model (1984) for implementing vocational assessment have been developed. They are screening, specific vocational assessment, and comprehensive vocational assessment.

The choice to use any one of these strategies is dependent on such factors as:

* Individual needs and interests
* Resources
* Time
* Expertise of evaluators
* Program needs
* Availability of jobs

A screening strategy is designed to provide a summary of information about a student's abilities, level of functioning, and other pertinent facts. This type of assessment requires data collection and interpretation rather than additional testing. Cumulative files will contain much of the screening data for disadvantaged students.

The key to success is to identify an individual who is responsible for collecting information about students who are having problems succeeding within their vocational program. This person is the "evaluator". In some cases, after gathering all existing information about special needs students, there is not sufficient data to make programming or placement decisions. A specific vocational assessment will be necessary at this point.

The objective of Strategy II assessment is to collect and interpret additional information about individuals' vocational interests, abilities and aptitudes, including vocational awareness and work related behaviors. Typically, special needs personnel, teachers, or other professionals, conduct the specific skill assessment.
Assessment activities, while focusing on individuals, may include a variety of methods. There are several tools and techniques available for designing these assessments. They include:

* Vocational interest inventories;
* Work samples;
* Experiential assessment (shadowing, situational assessment, job tryout);
* Learning styles questionnaires;
* Observation and recording;
* Interviewing;
* Checklists (informal).

These tools can be valuable resources if they are carefully selected, properly administered, and accurately interpreted. Selection involves matching the students' skills (e.g., learning style, reading level, math level) with appropriate tests, and checking instrument's reliability and validity. Some instruments are not valid and/or reliable for assessment of particular special needs populations. It is, therefore, important to use a variety of methods for collecting information including informal assessment techniques and strategies.

Strategy III, comprehensive vocational assessment, is conducted when the evaluator cannot identify long range goals, nor place students in vocational programs based on information gathered from the screenings or specific vocational assessment activities. Assessment at this level includes collection of data in five categories:

* Review of medical, psychological, educational, and social data;
* Formal assessment instruments;
* Work samples;
* Exploratory vocational course tryouts; and
* Observation of work behavior.

See Table II for a comparison of vocational assessment strategies. Selection of appropriate strategies will depend on two factors: school resources and kinds of information needed about individuals.
TABLE II
Comparison of Vocational Assessment Strategies

<table>
<thead>
<tr>
<th>Population</th>
<th>Strategy II</th>
<th>Strategy III</th>
</tr>
</thead>
<tbody>
<tr>
<td>All handicapped &amp; disadvantaged individuals</td>
<td>All handicapped &amp; disadvantaged individuals for whom more information is needed following Screening assessment</td>
<td>Handicapped and disadvantaged individuals for whom more information is needed following Strategy I or II assessments</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Method</th>
<th>Referral Information</th>
<th>Administer:</th>
<th>Refer for comprehensive vocational evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gather:</td>
<td>Referral Information</td>
<td>Administer:</td>
<td>Refer for comprehensive vocational evaluation</td>
</tr>
<tr>
<td>Special Education data</td>
<td>Vocational Interest Inventories</td>
<td>Vocational Interest Inventories</td>
<td>Refer for comprehensive vocational evaluation</td>
</tr>
<tr>
<td>Interviews with individuals, parents</td>
<td>Academic tests</td>
<td>Vocational Interest Inventories</td>
<td>Refer for comprehensive vocational evaluation</td>
</tr>
<tr>
<td>Existing test data</td>
<td>Work samples</td>
<td>Vocational Interest Inventories</td>
<td>Refer for comprehensive vocational evaluation</td>
</tr>
<tr>
<td>Info from significant others</td>
<td>Experiential assessment</td>
<td>Vocational Interest Inventories</td>
<td>Refer for comprehensive vocational evaluation</td>
</tr>
<tr>
<td>Cumulative records</td>
<td>Learning styles</td>
<td>Vocational Interest Inventories</td>
<td>Refer for comprehensive vocational evaluation</td>
</tr>
<tr>
<td>Record Observations</td>
<td>Questionnaires</td>
<td>Vocational Interest Inventories</td>
<td>Refer for comprehensive vocational evaluation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>Gathered prior to potential vocational programming</th>
<th>Administered prior to vocational programming</th>
<th>Refer prior to potential vocational programming</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ongoing</td>
<td></td>
<td>Ongoing</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Responsible Personnel</th>
<th>*Educational Diagnostician</th>
<th>*Counselor</th>
<th>*Certified Vocational Evaluators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*Special Education teacher</td>
<td>*Spec Ed Teacher</td>
<td>*Support Service Personnel</td>
</tr>
<tr>
<td></td>
<td>*Counselor</td>
<td>*Counselor</td>
<td>*Certified Vocational Evaluators</td>
</tr>
<tr>
<td></td>
<td>*Vocational</td>
<td>*Support Service Personnel</td>
<td>*Certified Vocational Evaluators</td>
</tr>
<tr>
<td></td>
<td>*Education teacher</td>
<td>*Support Service Personnel</td>
<td>*Certified Vocational Evaluators</td>
</tr>
</tbody>
</table>

Adapted from *Vocational Assessment of Students with Special Needs: An Implementation Manual*, Occupational Curriculum Lab, East Texas State University.
Vocational assessment is only useful to the degree to which it facilitates planning and instructional decisions. The end result of assessment should be the determination of compatibility between individuals, and jobs/vocational education programs (See Table III).

Table III:

Analyze Jobs:
- job/training requirements
- related job skills (transportation, social skills, problem solving, independent living)
- industry or classroom standards
- labor market trends (availability of the job)

PLUS

Analyze Students:
- interests
- learning style
- financial resources
- support system (in-school and out of school)
- job skills

EQUALS

Compare students current performance to vocational education program requirements/job standards to identify training and resources needed.
SUMMARY

Vocational assessment of disadvantaged students is essential for their recruitment and retention into vocational training programs. Student recruitment requires building a reputation for supporting and retaining similar students. But, student retention cannot be accomplished without a realistic assessment of the amount and types of support needed to assist that student in successfully completing their vocational program. The support needed could be in the form of additional training, curricular modifications or changes in attitudes. Vocational training leads to increased opportunities which in turn facilitate a positive commitment to society.

The model of assessment outlined in this paper promotes individualization and the ability of the student to make realistic vocational choices based upon the assessment outcomes. This model compares students with actual jobs/vocational programs and provides students an opportunity to explore the world of work. Support services are selected based upon a discrepancy analysis between the student and the desired vocational goal. Specific recommendations and future directions are on the following page:
Recommendations/New Directions

1) More extensive career exploration at both the secondary and post-secondary level.

2) Situational assessment model is a good strategy to utilize with disadvantaged students.

3) Early drop-out prevention programs need to be tied to curriculum and structural activities to improve self-concept.

4) Mechanism should be established for improving drop-out prone students transition through the vocational program (Weber, 1986). Students should be encouraged to enroll in vocational training programs not just exploration courses, i.e. home economics, industrial arts.

5) Career awareness activities need to begin before high school. Disadvantaged students need to see what is available in the community.

6) Work-study programs must be tied to curricular/school goals or relationship between school and work is lost. Work-study should not be utilized as the only "vocational education" option available to students.

7) Job tryouts should be utilized where appropriate to provide hands-on experience before placement into the vocational program.

8) Vehicles should be identified so that out of school youth may access vocational education. Ex. JTPA, Corrections, Youth Services.

9) Formal linkages should be developed with other agencies serving disadvantaged.
10) School districts should have a comprehensive plan for assessment, delivery of service and transitional counseling for disadvantaged youth.

11) Related job class is a strong reinforcement to vocational programs. Class should offer support and strive to increase self-confidence of individual before they go out on the job. Career development theory supports the notion of that how we see ourselves as related to the type of work we do.
REFERENCES


Colorado State Occupational Information Coordinating Committee, Denver, CO 1986


BIBLIOGRAPHY


