

Section V

LOCALLY DEVELOPED PERFORMANCE SAMPLES: MEASUREMENT AND PROCEDURAL CONCEPTS

Work samples make up one aspect of Level III assessment. Conceived most broadly, they may be more appropriately designated as performance samples since they can be constructed to represent any aspect of performance one wishes to assess. Whatever they are called, they may be purchased (see Table II in Appendix B for a list of commercially available work samples) or they may be locally developed. While commercially available work samples have the benefit of being ready to use with norms and other technical support information, they are also very expensive. Furthermore, the norms provided may not be useful for local situations and the necessary technical data (reliability and validity) may be sparse or lacking. For these reasons, it may be desirable to consider locally developed performance samples. To help in making this decision, Brodin (1976) suggested evaluating the commercially available systems by answering the following questions:

1. Does the system take into account expectancy to fail?
2. Does the system take into account academic limitations?
3. Does the system take into account verbal limitations?
4. Does the system take into account experience limitations?
5. Does the system allow for more than one trial on tasks?
6. Does the system allow for repeat instruction and check for comprehension?
7. Does the system have face validity? (i.e., Is the system an accurate assessment of the content presented?)
8. Does the system allow for appropriate conditions for testing? (i.e., Does the system offer pleasant surroundings, orderly administration, and considerations for fatigue of individuals?)
9. Is the system adequately normed on handicapped individuals and the workers who are doing the various types of tasks?

Once the decision is made to construct a performance sample,

it is useful to follow a set procedure to make sure that it will possess the necessary technical qualities (i.e., norms, reliability, and validity). In addition, procedures for administration and scoring will need to be developed. Sarkees and Scott (1985) have proposed the following seven basic steps to follow when creating a performance or work sample for use in vocational placement decisions:

1. Survey the local vocational curriculum to determine programs that will be available to students.
2. Based on the information collected, decide which courses are appropriate for work sample development.
3. Analyze the classroom environment and specific tasks to be simulated by the work sample. It is very important that the skills required for the class are the same as those represented in the work sample (i.e., measuring, figuring, etc.) If the skills are not the same, the work sample will not be valid.
4. Design the work sample by developing activities that simulate the tasks expected for a specific class. Keep in mind:
(a) prerequisite skills that may be necessary, (b) tools, equipment and materials used on the job, (c) working conditions and the work environment associated with the class, and (d) criteria for successfully completing the work sample.
5. Determine how the work sample will be explained and/or demonstrated to special needs learners. It is critical to have the sample reviewed by the classroom teacher who actually teaches the class before using it as an assessment tool. Vocational teachers should become actively involved in the work sample development when they realize that it is being used specifically for their class.
6. Establish scoring criteria. The vocational teacher should identify what will be expected of students who complete the work sample. Considerations in scoring may include: (a) desirable work habits, (b) quality and quantity of work produced, and (c) time required to complete the work sample.
7. Pre-test the work sample with special needs learners before using it as an evaluation tool in your program. This procedure will help to identify any problems that might arise while you are administering the work sample.

The process of collecting and analyzing data to provide for technical adequacy of locally developed measures should be incorporated into the last step in the Sarkees and Scott list. The following sub-sections provide a brief overview of the technical concepts and procedures necessary to develop norms, reliability, and validity data.

Measurement Concepts

Norms

Norms are standards against which the performance of all those being measured can be compared. In order to develop them it is necessary to collect a relatively large number of scores (30 or more) on any group for which norms are desirable. For example, norms for EMR or LD students or for successful trainees regardless of handicap or disadvantages may be what is desired. Whatever the norm group, it is necessary to administer the instrument under typical conditions and collect all of the raw scores as input to the norming process. From this point it is necessary to decide what form the norm will take. For example, norms can be developed using averages and a measure of variability for any meaningful sub-set of clients. Averages are typically represented by arithmetic means or medians and variability is described using frequency distributions, ranges or standard deviations. Two of the most typical scales for norms are percentiles and standard scores. Percentiles range from 1 to 99 and describe the proportion of individuals who score at or below a given score. Standard scores may be of many types (e.g., IQ measures use standard scores which typically have a mean (\bar{x}) of

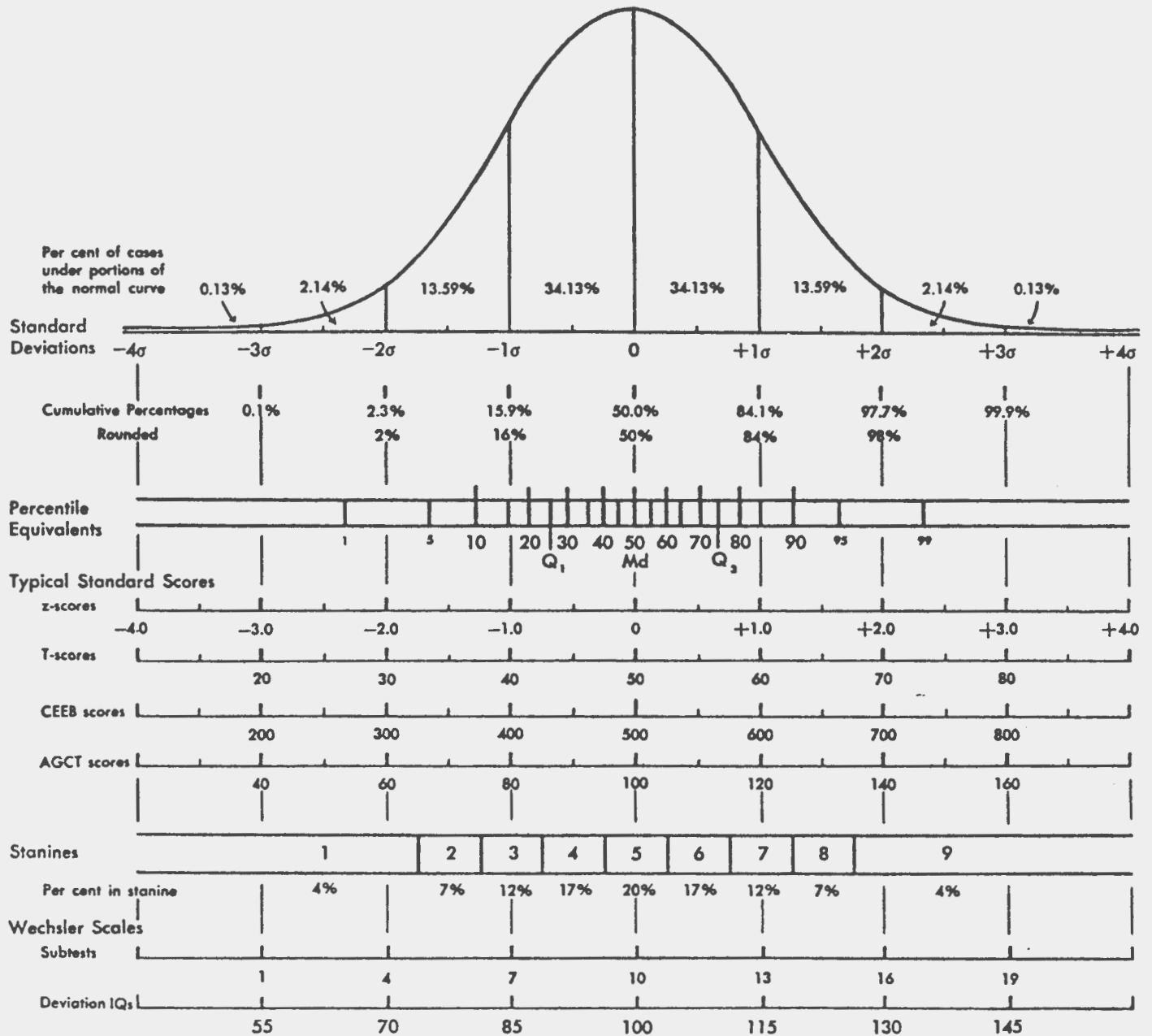
100 and a standard deviation (SD) of 15 or 16), and the most common are shown in Figure 1 along with their relationship to the normal curve and to percentile scores.

An even more useful form of providing norm information is through expectancy tables. In an expectancy table, obtained scores (raw, percentile or standard scores) are used as one dimension of a two way table and observed criterion behavior collected from the norm group is presented on the other dimension. One typical type of expectancy table compares obtained score to success criteria such as successful completion of a program or job placement. With this approach, it is possible to relate each score on the performance sample to a probability of obtaining the criterion behavior (e.g., for past clients who scored like this, three out of four completed the program).

Reliability

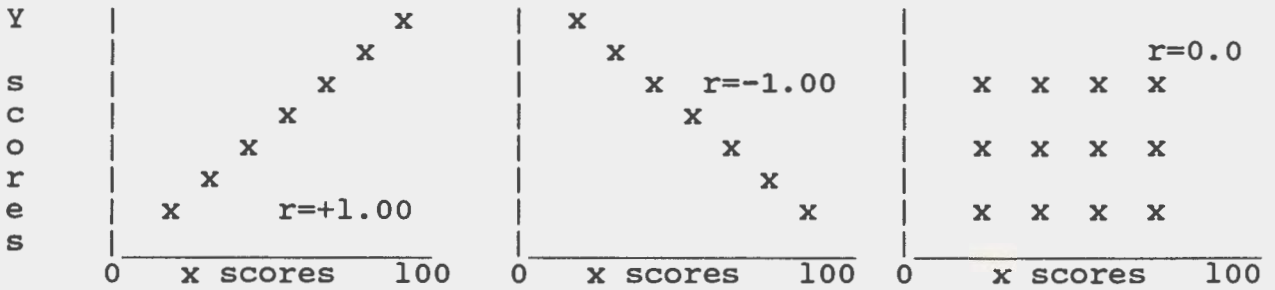
Reliability is the extent to which our measurement is consistent. The most straightforward measure of reliability is an assessment of whether we get the same information if we measure a characteristic twice. The primary tool for assessing reliability is the correlation coefficient which is an indices which ranges from +1.00 to -1.00 representing a perfect positive or negative relationship. A correlation of 0.0 represents no relationship, positive or negative. Visually, it is easy to see what a correlation (r is the symbol) looks like. The figures at the top of page V-6 depict a perfect positive and negative correlation, as well as a zero correlation.

TEST SERVICE BULLETIN



NOTE: This chart cannot be used to equate scores on one test to scores on another test. For example, both 600 on the CEEB and 120 on the AGCT are one standard deviation above their respective means, but they do not represent "equal" standings because the scores were obtained from different groups.

Figure 1. Percentile and standard scores as related to the normal curve.
(From Psychological Corporation: Test Service Bulletin).



For test-retest reliability purposes, the correlation between two sets of scores collected a short time apart should be positive and as close to 1.00 as possible, but between .70 and .90 is usually considered adequate. A second approach that uses only one administration of a test is internal consistency reliability. The KR-20 and KR-21 formulas are commonly used to compute this form of reliability. While the KR-21 is easier to compute it is an underestimate of what one would obtain using the KR-20 formula. Therefore, if the KR-21 coefficient is relatively high (i.e., above .70) the reliability is probably adequate. No matter which measure of reliability is used, the best method of increasing reliability is to add more items or observations to the instrument.

When working with performance samples, one of the most useful measures of consistency is inter-rater reliability. Using this approach the degree of consistency or agreement between two raters can be obtained by computing the correlation between two raters (or scorers) on the same performance sample. If different persons using the assessment device do not agree on the score(s) obtained, decisions based on the score will be capricious and more a function of who administered the assessment rather than what the individual assessed can do. The inter-rater approach to

reliability is also useful for all types of checklists and other behavioral observation instruments.

Validity

Validity is defined as the extent to which we are measuring what we intend to measure. The first type of validity to consider is content validity and with performance samples this is probably the most important type of validity. If one follows closely the first four steps in the Sarkees and Scott list, there is a reasonable probability that content validity can be achieved. Beyond this, it would be useful to obtain other evidence of validity of an empirical type. This can be done by using the correlation coefficient described above to relate scores on the performance sample to some external criteria (e.g., success in training or on the job). When attempting to gather criterion-related validity of this type it is important not to use the original performance sample scores for any placement decisions so that the natural relationship between the instrument and the criteria can be obtained. Typically validity coefficients are much lower than reliability coefficients with correlations rarely exceeding .50.

Resources and Examples

Resources

The measurement concepts described above can become quite complex and it is recommended that technical assistance be sought for those who do not have the training. Anastasi (1982) has authored an excellent text that provides a thorough description of these important measurement concepts. However, with the avail-

ability of statistical packages for microcomputers the actual computations are within easy reach of every teacher, counselor, and assessment specialist. A specially designed software package is provided with this handbook which will provide the needed descriptive statistics and other technical data. A complete description of this package and its capabilities is contained in Appendix C.

Examples

The performance sample itself need not be highly complex. Its major components are instructions for administration and for the client or student being assessed (including materials and equipment needed, and procedural steps) and a scoring sheet. Three examples of a locally developed performance sample are provided in the last part of this section. A Generic Performance Sample Rating Scale (GPSRS) is also included to be used with any of the three examples. In addition, a Book Stand Rating Scale (BSRS) is provided to be used specifically with the Book Stand Performance Sample. While the examples themselves are quite simple and do not represent substantial work related skills, they do provide a model for the more complex instruments that would be appropriate. Also, the rating scale that needs to accompany each performance sample should be specifically developed to assess the particular behaviors important to the job training under consideration (the BSRS is an example of a specific rating scale). As an exercise in developing norms and assessing reliability it may be beneficial to practice using the software provided to construct a norm table or compute inter-rater reliability using either the GPSRS or the BSRS.

Instructions For Administering
The Apple Peeling Performance Sample

This performance sample should be administered by someone trained or experienced with apple peeling. For increasing and assessing the reliability of the observations, it is recommended that more than one person observe and rate the performance. Either the Generic Performance Sample Rating Scale (GPSRS) or a rating scale constructed specifically for the Apple Peeling Performance Sample may be used.

Materials & Equipment Needed

- One large apple - ripe for eating or cooking.
- One paring knife.
- A bag for peelings.
- A board for cutting.
- A hand towel.

Procedure To Follow (To be read to the examinee in its entirety before starting.)

1. Pick up the apple and knife and cut the skin from the apple by holding the apple in one hand and the knife in the other.
2. Make the peeling approximately 1/2 inch wide and as long as possible. The ideal is to have one long peeling for the entire apple.
3. Remove only the peeling, cutting as little apple as possible.
4. Work as fast as you can.
5. Place the finished apple on the board and cut in half for eating. Place the peelings in the bag provided.

Instructions For Administering
The Paper Snowflake Performance Sample

This performance sample should be administered by someone trained or experienced with making paper snowflakes. For increasing and assessing the reliability of the observations, it is recommended that more than one person observe and rate the performance. Either the Generic Performance Sample Rating Scale (GPSRS) or a rating scale constructed specifically for the Paper Snowflake Performance Sample may be used.

Materials & Equipment Needed

Several sheets of 8 1/2 x 11 inch paper.
One pair of sharp scissors.
A 12 inch ruler.
A pencil.

Procedure To Follow (To be read to the examinee in its entirety before starting--also, demonstrate the correct procedure by making one snowflake.)

1. Fold the paper in half on the long side, measure center at the fold and mark.
2. Measure 1 inch in from each of the lower corners, mark and connect each mark with center point to form a triangle.
3. Fold each end on the line towards the center and crease hard.
4. Fold in half way from the flaps and crease hard.
5. Cut off folded ends away from point on a straight line.
6. Place mark on the fold at 1 1/2 inches from the point and draw a line to far corner.
7. Draw a line parallel with and 1/2 inch from the cut end.
8. Cut out inside triangle and cut off tip at 1/2 inch from point.
9. Unfold and press flat.

Instructions For Administering The Book Stand Performance Sample

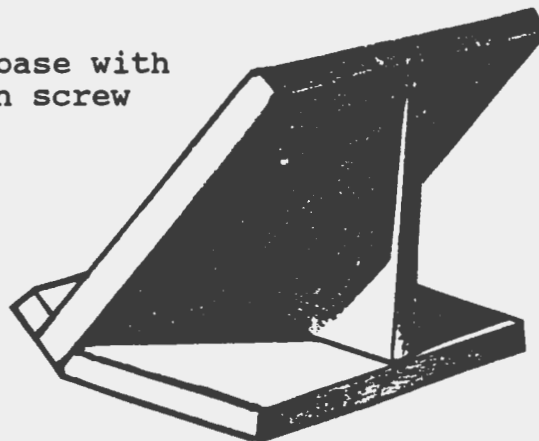
This performance sample should be administered by someone trained or experienced with assembling the book stand. For increasing and assessing the reliability of the observations, it is recommended that more than one person observe and rate the performance. Either the Generic Performance Sample Rating Scale (GPSRS) or the Book Stand Rating Scale (BSRS), specifically designed for use with this performance sample, may be used.

Materials & Equipment Needed

- Four wood pieces of book stand.
- Five screws of different lengths.
- Picture of finished book stand.
- Phillips Screwdriver.
- One book of average size.
- A stop watch.

Procedure To Follow (To be read to the examinee in its entirety before starting.)

1. This is a timed test so work as quickly as possible.
2. Study the picture of the book stand below to determine how it should look when finished.
3. Examine all materials before starting, work continuously after beginning.
4. Attach the ledge to the book stand face with two short screws (match letters A & B).
5. Attach triangle to book stand base with one short and one medium length screw (match letters C & D).
6. Attach base to face with one long screw.
7. Place book on stand so it can be read.



BOOK STAND RATING SCALE

Directions: While observing the performance sample, rate the examinee's behavior on the following items by circling the appropriate number. A 1 equals a low rating, and a 5 equals a high rating. One point should be subtracted from the top score of 5 for each error observed unless otherwise noted in the item. A score of 5 represents a perfect performance on the item.

	LOW				HIGH
1. Ledge attached to face correctly.	1	2	3	4	5
2. Triangle attached to base correctly.	1	2	3	4	5
3. Base attached to face correctly.	1	2	3	4	5
4. Book placed on stand upon completion in a usable way.	1	2	3	4	5
5. All instructions followed exactly as written.	1	2	3	4	5
6. Screws used correctly (inserted and tightened without a stop).	1	2	3	4	5
7. Safety of procedure (subtract one point for each time screwdriver slips from slot).	1	2	3	4	5
8. Continuous work pace. (Subtract one point for each stop of more than 5 seconds.)	1	2	3	4	5
9. Examinee expressed positive orientation towards task (subtract one point for each negative comment).	1	2	3	4	5
10. Time to complete task (5 = 2 min. or less; subtract 1 point for each additional 15 seconds).	1	2	3	4	5

GENERIC PERFORMANCE SAMPLE
RATING SCALE

Directions: While observing the performance sample, rate the examinee's behavior on the following items by circling the appropriate number. A rating of 1 equals strongly disagree, while a rating of 5 equals strongly agree. The greater the agreement the better the examinee has performed.

	STRONGLY DISAGREE					STRONGLY AGREE				
1. The instructions were followed correctly.	1	2	3	4	5					
2. The technique used was appropriate to the task.	1	2	3	4	5					
3. The time taken to perform the task was reasonable.	1	2	3	4	5					
4. The task was performed in a safe manner.	1	2	3	4	5					
5. The finished product was usable.	1	2	3	4	5					
6. The examinee avoided inappropriate behavior during performance of the task.	1	2	3	4	5					
7. The examinee was able to communicate an understanding of the task.	1	2	3	4	5					
8. The examinee appeared to be interested in the task.	1	2	3	4	5					
9. The examinee could probably make a living at this task.	1	2	3	4	5					
10. I would be willing to employ the examinee to perform this task if I had an appropriate job opening.	1	2	3	4	5					

REFERENCES

- Anastasi, A. (1982). Psychological testing. New York, NY: MacMillan
- Brolin, D. E. (1976). Vocational preparation for retarded citizens. Columbus, OH: Charles E. Merrill.
- Sarkees, M. D., & Scott, J. L. (1985). Vocational special needs (2nd ed.) Alsip, IL: American Technical Publishers.

Section VI

WRITING VOCATIONAL ASSESSMENT REPORTS

Introduction

The purpose of a vocational assessment is to identify individual characteristics, strengths and limitations, and education, training and placement needs. The results are used to set goals, develop programs, and make placement decisions. The assessment links the learner to all other remediation and accommodation activities. Vocational assessment reports are vital to maintaining the link between the special needs learner and appropriate services.

Report writing is one of the most important activities in the vocational assessment process because it provides a written document communicating vital vocational information about the student. The report provides a permanent record of significant vocational data that can be used in helping students achieve their vocational potential.

While verbal reports may sometimes suffice, the written report should also be completed so this valuable information is not lost. The process of writing helps the evaluator to organize observations, information, and data about the student into a logical and thorough conceptual framework. The evaluator should begin the evaluation process by looking at the referral questions, collecting data, developing hypotheses, and finally drawing conclusions.

Reports should be clear, concise, and relatively brief. Most individuals are primarily interested in the summary and recommen-

dation sections of the report. The objective is to convey all of the important information in these sections. Remember, a quality report is determined by its usefulness to others.

There are several types of reports which may be utilized in presenting vocational assessment information. However, all of these types should contain some basic information. Reports should have a section containing identification of the student including name, age, and date of birth. Depending on the needs of the school system, other pertinent information may be included such as social security number, race, sex, and address.

Another section should state the reason for the assessment. This section is important because it is the basis and perspective for the entire report.

Reports should contain background information about the student. It is important to note the student's academic performance, work experience and relevant social history. Pertinent medical information, such as medication, disability, and diagnoses may also be stated here.

Behavioral observations are included in a separate section. This allows the evaluator to describe the student's reaction to various tests and work tasks. It is helpful to include specific examples of behaviors so the reader can readily understand the situation and draw conclusions about the meaning of the behaviors.

The section on test results should give an interpretation of each test that was administered. Relative strengths and limitations should be pointed out as well as their effect on vocational goals.

The summary section should provide a clear, concise summary of all the information. Vocational strengths and limitations should be discussed, as well as vocational interests. Since this section is often the most used, it should convey all of the important vocational information about the student.

The final report section contains the vocational recommendations. Goals and objectives should be stated specifically. Outline those strategies, treatments and interventions which can be used in achieving the recommended goals.

A format for vocational assessment which contains the above information is presented on page VI-5. A vocational assessment report should contain all of these sections, but the order of the sections may vary based on preference and needs of the local school district.

Several types of reports for both Level II and III assessment are in common use. Examples of these are provided at the end of this section.

A computer report, such as that provided by the Apticom, is generated by the computer and requires little input from the evaluator after the test is administered. While it is convenient and time saving, it lacks the synthesis and interpretation provided by an evaluator.

A brief narrative report conveys the pertinent information in a brief fashion. While communicating the basic information, they lack the depth of interpretation provided by a full narrative report.

The full narrative report allows for presentation and

interpretation of all data collected including client interview, observations, and input from teachers. While this is a distinct advantage, there are also disadvantages. The quality of narrative reports depends on individual writing style and judgment. Reports may be lengthy, wordy, full of jargon, and reflect the bias of the writer.

Each school district and evaluator should decide which type of report best meets their needs. The most important factor is generating a written report after completing the vocational assessment so a permanent record of the results is available.

References

- Andrew, J. D., & Dickerson, L. R. (Eds.) (1974). Vocational evaluation: A resource manual. Menomonie, WI: University of Wisconsin-Stout.
- Esser, T. J. (1974). Effective report writing in vocational evaluation and work adjustment programs. Menomonie, WI: Materials Development Center.

Vocational Assessment Report Format

IDENTIFYING INFORMATION

Name:

Date of Birth:

Age:

Grade:

Date of Assessment:

Examiner:

REASON FOR REFERRAL

- Who referred the student
- Reason for assessment - Be specific

BACKGROUND INFORMATION

- Description of Student
- Education, social, work, medical information

BEHAVIORAL OBSERVATIONS

- Test Observations
- Classroom Observations

SOURCES OF INFORMATION

- List all tests/work samples
- Interviews with student/parent/teacher

TEST RESULTS

- Interpretation of each procedure used

SUMMARY

- Vocational Strengths
- Vocational Limitations
- Vocational Interests

RECOMMENDATIONS

- Vocational objectives and how they can be achieved
- Be specific.
- * Attach profiles or graphs that may assist others in understanding this report.

Vocational Assessment Computer Report - Level II Example

APTICOM A5

NAME: ID#: DATE: SEPT. 1986
FACILITY: HIGH SCHOOL
REMARKS:

REPORT OPTIONS SELECTED

BATTERIES INCLUDED:

APTITUDE TEST BATTERY
OCCUPATIONAL INTEREST INVENTORY

REPORT FORMAT:

COMPREHENSIVE SCORE REPORT

VOCATIONAL RECOMMENDATIONS:

WORK GROUPS WITH NARRATIVE AND JOB TITLES

LEGEND:

APTITUDE CODES
INTEREST AREAS
GENERAL EDUCATION DEVELOPMENT
SPECIFIC VOCATIONAL PREPARATION

DATA BASE:

APTITUDE TEST BATTERY, 9TH GRADE WITH SEM
OCCUPATIONAL INTEREST INVENTORY, PREVOCATIONAL

REPORTS INCLUDED

APTITUDE TEST BATTERY, COMPREHENSIVE SCORE REPORT
OCCUPATIONAL INTEREST INVENTORY, COMPREHENSIVE SCORE REPORT
VOCATIONAL RECOMMENDATIONS:
WORK GROUPS WITH NARRATIVE AND JOB TITLES

APTICOM A5

NAME:

ID#

DATE:

APTITUDE TEST BATTERY
COMPREHENSIVE SCORE REPORT

SECTION I. SUBTEST SCORES

The table below presents subtest raw scores, number of items attempted, and standard scores which correspond to raw scores. Raw scores report the number of correct answers on perceptual and cognitive tests or the number of cycles completed in the motor coordination or dexterity tests. Standard scores show how your raw scores compare to scores achieved by a group of adults who were given these tests. A standard score of 100 is exactly average. Scores from 80 to 120 can be thought of as "in the average range."

SUBTEST	RAW SCORES	NUMBER OF ATTEMPTS	STANDARD SCORES
1 Object Identification	12	12	69
2 Abstract Shape Matching	20	20	109
3 Clerical Matching	6	6	61
4 Eye-Hand-Foot Coordination	48	48	105
5 Pattern Visualization	17	17	102
6 Computation	9	9	83
7 Finger Dexterity	20	20	94
8 Numerical Reasoning	7	7	70
9 Manual Dexterity	49	49	115
10 Word Meanings	5	5	54
11 Eye-Hand Coordination	54	54	66

APTICOM A5

NAME:

ID#

DATE:

APTITUDE TEST BATTERY
COMPREHENSIVE SCORE REPORT

SECTION II. INDIVIDUAL APTITUDE PROFILE

The profile reports and graphically presents your aptitudes as standard scores and as percentile scores. Both types of scores involve the comparison of your performance against the performance of 9th graders.

The aptitude codes, listed in the column on the far left, are defined in the legend at the end of the last report. Different groups of aptitudes are important in different jobs. Aptitude scores are created by combining and/or recomputing subtest scores. An aptitude score of 100 is exactly average. Scores from 80 to 120 can be thought of as "in the average range." The graph of your aptitude scores displays your relative strengths. Differences between these scores are important in career planning. Percentile scores report the percentage of people who score below you. (Adjusted scores, reported in the far right column, can be explained to you by your counselor.)

CODE	SCORE	BAV	AVG	AAV	% STANDINGS	(ADJUSTED) (SCORE)
G	89	. . . . .	..X.....	. . . . .	29	94
V	68	. . . . X.	. . . . .	. . . . .	6	73
N	95	. . . . .	...X.....	. . . . .	40	100
S	106	. . . . .	. . . . .X..	. . . . .	62	112
P	98	. . . . .	. . . . X....	. . . . .	46	104
Q	73	. . . . .X	. . . . .	. . . . .	9	83
K	81	. . . . .	.X.....	. . . . .	17	90
F	105	. . . . .	. . . . .X..	. . . . .	60	114
M	120	. . . . .	. . . . .X	. . . . .	84	128
E	105	. . . . .	. . . . .X..	. . . . .	60	116

APTICOM A5

NAME:

ID#

DATE:

OCCUPATIONAL INTEREST INVENTORY
COMPREHENSIVE SCORE REPORT

The U.S. Department of Labor divides all jobs into twelve groupings (Interest Areas) based on the kinds of activities workers do in each one (see legend for complete descriptions). This report shows how closely your interests match these activities to help you choose the kind of work you will most enjoy.

SECTION I. INTEREST AREA SCORES AND PERCENTILES

Your total number of "LIKE", "?", and "DISLIKE" answers for each Interest Area appears below. Percentile scores show the percentage of other people who gave fewer "LIKE" answers than you did in each area. A percentile score of 50 shows average interest; 70 or higher shows above average interest. Under M / F are percentiles comparing your answers to males (M) and females (F) separately. Under M / F you should focus on the percentile for your own sex.

INTEREST AREA	LIKE	?	DISLIKE	PERCENTILE (TOTAL)	PERCENTILE (M / F)
01 ARTISTIC	9	0	0	82	88/76
02 SCIENTIFIC	0	0	0	16	16/16
03 PLANTS/ANIMALS	5	0	0	79	80/78
04 PROTECTIVE	3	0	0	50	45/54
05 MECHANICAL	1	0	0	25	23/61
06 INDUSTRIAL	0	0	0	28	28/23
07 BUSINESS DETAIL	1	0	0	36	54/17
08 SELLING	0	0	0	18	23/13
09 ACCOMMODATING	0	0	0	13	17/ 9
10 HUMANITARIAN	0	0	0	15	23/ 6
11 LEAD/INFLUENCE	2	0	0	34	42/25
12 PHYS. PERFORMING	9	0	0	86	79/93

APTICOM A5

NAME:

ID#:

DATE:

OCCUPATIONAL INTEREST INVENTORY
COMPREHENSIVE SCORE REPORT

SECTION II. INDIVIDUAL INTEREST PROFILE

The profile below lets you see and compare your standard scores for the twelve Interest Areas. Like percentile scores, standard scores are based on a comparison of your totals of "LIKE" answers to other people's totals. An average standard score is anywhere from 91 to 110. An "X" under AVERAGE means you show about the same amount of interest in that Interest Area as most people. An "X" under High means that you show more than average interest in that area.

INTEREST AREA	SS	LOW	AVERAGE	HIGH
01 ARTISTIC	121	.....	. . . . .	..X.....
02 SCIENTIFIC	83	.....X.	. . . . .	.....
03 PLANTS/ANIMALS	115	.....	. . . . .	.X.....
04 PROTECTIVE	94	.....	X . . . .	.....
05 MECHANICAL	89	.....X	. . . . .	.....
06 INDUSTRIAL	88	.....X	. . . . .	.....
07 BUSINESS DETAIL	85	.....X.	. . . . .	.....
08 SELLING	83	.....X.	. . . . .	.....
09 ACCOMMODATING	78	.....X..	. . . . .	.....
10 HUMANITARIAN	81	.....X..	. . . . .	.....
11 LEAD/INFLUENCE	87	.....X	. . . . .	.....
12 PHYS. PERFORMING	125	.....	. . . . .	...X.....

SECTION III. INDIVIDUAL PROFILE ANALYSIS (IPA)

The IPA makes a comparison among your totals of LIKE answers for all twelve Interest Areas. The interest areas listed below are the ones that stand out above your own average level of interest.

HIGH INTEREST AREAS

- 01 ARTISTIC
- 03 PLANTS/ANIMALS
- 12 PHYS. PERFORMING

Look over your percentile scores, Standard Scores, and IPA. Explore your most consistently high Interest Areas further by reading in the Guide for Occupational Exploration (GOE) (U.S. Department of Labor, 1979). Work with your counselor to find job choices which combine your interests as much as possible and which match your abilities.

APTICOM A5

NAME:

ID#:

DATE:

VOCATIONAL RECOMMENDATIONS

The U.S. Department of Labor has divided jobs into sixty-six OAP's (Occupational Aptitude Patterns) based upon similarity of aptitude score requirements. The sixty-six OAP's are closely related to the Work Groups which are described in the Guide for Occupational Exploration (U.S. Department of Labor, 1979).

Each of the Work Groups listed below falls within your strongest Interest Areas, as assessed by the APTICOM Occupational Interest Inventory. These Interest Area titles are reported above the associated Work Groups for which you have qualified on the basis of your aptitude scores.

For each Work Group title listed below you will find the associated OAP number, with required critical aptitude scores, as well as the Work Group number (GOE XX.XX).

Listed beneath the general Work Group information are some representative job titles from the Work Group.

Listed to the right of each job title is the corresponding DOT (Dictionary of Occupational Titles) occupational code number, the General Educational Development (GED) requirements for math and language and a rating for the length of Specific Vocational Preparation (SVP) that is typically required. Your counselor will be able to tell you how to find a DOT number/job title and its corresponding job description in the Dictionary of Occupational Titles. GED and SVP rating definitions are reported in legends at the end of the vocational Recommendations Report.

APTICOM A5

INTEREST AREA 01 ARTISTIC

OAP 06 S 090 P 085 M 085
 GOE 01.06 CRAFT ARTS

Workers in this group apply artistic techniques, fabricate, decorate or repair a variety of products, and reproduce photographs and graphic or printed materials. They use engraving and etching precision equipment, knives and chisels, paint brushes and power tools to work wood, stone, clay, metal, and gemstones, or embellish objects made from all of these materials.

Refer to pages 28 to 31 in the Guide for Occupational Exploration.

Job Title	DOT #	GED Req		SVP Req
		M	L	
Gift Wrapper	299.364	2	1	3
Jeweler	700.281	3	3	7
Engraver Aprentce, Decrtiv	704.381	2	2	7
Engraver, Hand, Soft Metal	704.381	2	2	7
Enameler	740.684	2	2	4
Distresser	763.687	1	2	3
Painter, Sign	970.381	3	3	7
Painter Helper, Sign	970.664	2	3	5
Offset-Plate Maker	971.381	2	2	6
Process Stripper	972.281	2	2	7
Lithographic Plate Maker	972.381	3	3	8
Transferer	972.381	1	1	6
Photographer-Lithographic	972.382	2	3	7
Paste Up Copy Camera Oper	979.381	3	2	8
Sketch Maker	979.381	1	1	4
Engraver, Rubber	979.581	1	1	6
Roller Engraver, Hand	979.681	2	2	7
Engraver	979.684	1	1	6

Refer to pages 11 to 14 in Selected Characteristics of Occupations from the Dictionary of Occupational Titles (U.S. Department of Labor, 1981) for the complete listing of jobs within this Work Group.

APTICOM A5

NAME:

ID#:

DATE:

VOCATIONAL RECOMMENDATIONS
 BASED UPON
 ADJUSTED APTITUDE SCORES

Listed below are additional Work Groups which you may wish to consider. Although you do not "technically" qualify for these Work Groups there is the possibility that your attained scores underestimate your true aptitude. You must also recognize, however, that your adjusted scores may overestimate your true aptitude.

INTEREST AREA 03 PLANTS/ANIMALS

OAP 13 K 085 M 085
 GOE 03.03 ANIMAL TRAINING AND SERVICE

Workers in this group take care of animals of many kinds, and train them for a variety of purposes.

Refer to pages 57 to 58 in the Guide for Occupational Exploration.

Job Title	DOT #	GED Req		SVP Req
		M	L	
Exerciser, Horse	153.674	1	1	3
Animal Ride Attendant	349.674	1	2	2
Animal Caretaker	410.674	1	1	4
Stable Attendant	410.674	1	1	2
Animal Keeper	412.674	2	2	4
Horseshoer	418.381	2	2	6
Dog Groomer	418.674	2	3	4
Dog Bather	418.677	2	2	2
Aquarist	449.674	2	2	4

Refer to pages 31 to 31 in Selected Characteristics of Occupations from the Dictionary of Occupational Titles (U.S. Department of Labor, 1981) for the complete listing of jobs within this Work Group.

INTEREST AREA 03 PLANTS/ANIMALS

OAP 14 K 085 M 080
 GOE 03.04 ELEMENTAL WORK: PLANTS AND ANIMALS

Workers in this group perform active physical tasks, usually in an outdoor, nonindustrial setting. They work with their hands, use various kinds of tools and equipment, or operate machinery.

Refer to pages 59 to 63 in the Guide for Occupational Exploration.

APTICOM A5

Job Title	DOT #	GED Req		SVP Req
		M	L	
Yardworker	301.687	2	2	2
Farmworker, Rice	401.683	2	2	5
Farmworker, Vegetable I	402.663	2	3	4
Harvestworker, Vegetable	402.687	1	1	1
Vine Pruner	403.687	1	1	1
Plant Propagator	405.361	4	4	6
Grndskpr, Indstrl-Comrcl	406.684	1	2	3
Lawnservice Worker	408.684	2	2	4
Weeder-Thinner	409.687	1	1	1
Milker, Machine	410.685	1	1	2
Farmworker, Poultry	411.584	2	2	3
Chick Sexer	411.687	1	2	4
Laborer, Poultry Farm	411.687	1	2	2
Game-Farm Helper	412.684	2	2	3
Faller	454.384	1	2	6
Grader Tender	521.685	1	1	3
Sorter, Agric. Prod.	529.687	1	1	2

Refer to pages 33 to 36 in Selected Characteristics of Occupations from the Dictionary of Occupational Titles (U.S. Department of Labor, 1981) for the complete listing of jobs within this Work Group.

APTICOM A5

NAME:

ID#:
LEGENDS

DATE:

APTITUDE CODE:

- G - Intelligence; General Learning Ability (based upon a weighted combination of subtests 05, 08, and 10) - The ability to "catch on" or understand instructions and underlying principles; the ability to reason and make judgments. General Learning Ability is closely related to doing well in school.
- V - Verbal Aptitude (based upon subtest 10) - The ability to understand meanings of words and to use them effectively; the ability to comprehend language, to understand relationships between words and to understand meanings of whole sentences and paragraphs.
- N - Numerical Aptitude (based upon a weighted combination of subtests 06 and 08) - The ability to perform arithmetic operations quickly and accurately.
- S - Spatial Aptitude (based upon subtest 05) - Ability to think visually of geometric forms and to comprehend the two dimensional representation of three-dimensional objects; the ability to recognize the relationships resulting from the movement of objects in space.
- P - Form Perception (based upon a weighted combination of subtests 01 and 02) - Ability to perceive pertinent detail in objects or in pictorial or graphic material. Ability to make visual comparisons and discriminations and to see slight differences in shapes and shadings of figures and widths and lengths of lines.
- Q - Clerical Perception (based upon subtest 03) - Ability to perceive detail in verbal or tabular material. Ability to observe differences in copy, to proofread words and numbers, and to avoid perceptual errors in arithmetic computation.
- K - Motor Coordination (based upon subtest 11) - The ability to coordinate eyes and hands or fingers rapidly and accurately in making precise movements with speed. Ability to make movement response accurately and swiftly.
- F - Finger Dexterity (based upon subtest 07) - The ability to move fingers and manipulate small objects with fingers, rapidly and accurately.
- M - Manual Dexterity (based upon subtest 09) - Ability to move hands easily and skillfully. To work with hands in placing and turning motions.
- E - Eye-Hand-Foot Coordination (based upon subtest 04) - The ability to move the hand and foot coordinately with each other in accordance with visual stimuli.

APTICOM A5

NAME:

ID#:

DATE:

INTEREST AREAS:

- 01 Artistic - Expressing ideas in creative ways.
- 02 Scientific - Collecting and studying data from the natural world. Using results to solve problems in medicine, life sciences and natural sciences.
- 03 Plant/Animals - Working with plants and animals, most often outdoors.
- 04 Protective - Using authority to protect people and property.
- 05 Mechanical - Using mechanical laws to solve real-life, everyday problems.
- 06 Industrial - Repeating operations on physical objects in factory settings.
- 07 Business Detail - Clearly defined and ordered tasks that require attending to details correctly, mostly in office settings.
- 08 Selling - Using a sales approach to get others to take a point of view.
- 09 Accommodating - Meeting the needs and wishes of others on a one-to-one basis.
- 10 Humanitarian - Helping others with their mental, spiritual, social, physical or work related needs.
- 11 Lead / Influence - Leading others through activities requiring high level language and math skills.
- 12 Physical Performing - Athletic or daring feats done in front of an audience.

APTICOM A5

NAME:

ID#:

DATE:

SVP LEGEND:

LEVEL TIME

- 1 Short demonstration.
- 2 Anything beyond short demonstration up to 30 days.
- 3 Over 30 days and up to and including 3 months.
- 4 Over 3 months and up to and including 6 months.
- 5 Over 6 months and up to and including 1 year.
- 6 Over 1 year and up to and including 2 years.
- 7 Over 2 years and up to and including 4 years.
- 8 Over 4 years and up to and including 10 years.
- 9 Over 10 years.

APTICOM A5

NAME:
GED LEGEND:
LEVEL

ID#:

DATE:

LANGUAGE:

4 - Reading:

Read novels, poems, newspapers, periodicals, journals, manuals, dictionaries, thesauruses, and encyclopedias.

Writing:

Prepare business letters, expositions, summaries, and reports using prescribed format, and conforming to all rules of punctuation, grammar, diction and style.

MATH:

Algebra:

Deal with system of real numbers; linear, quadratic, rational exponential; logarithmic, angle, and circular functions and inverse functions; related algebraic solution of equations and inequalities; limits and continuity, and probability and statistical inference.

Geometry:

Deductive axiomatic geometry, plane and solid; and rectangular coordinates.

Shop Math:

Practical application of fractions, percentages, ratio and proportions.

LANGUAGE:

3 - Reading:

Read a variety of novels, magazines, atlases and encyclopedias. Read safety rules, instructions in the use and maintenance of shop tools and equipment, and methods and procedures in mechanical drawing and layout work.

Writing:

Write reports and essays with proper format, punctuation, spelling and grammar, using all parts of speech.

MATH:

Compute discount, interest, profit and loss; commission, markups and selling price; ratio and proportion and percentages. Calculate surfaces, volumes, weights and measures.

Algebra:

Calculate variables and formulas, monomials and polynomials; ratio and proportion variables; and square roots and radicals.

Geometry:

Calculate plane and solid figures, circumference, area and

APTICOM A5

volume. Understand kinds of angles, and properties of pairs and angles.

LANGUAGE:

2 - Reading:

Passive vocabulary of 5,000 - 6,000 words. Read at a rate of 190 - 215 words per minute. Read adventure stories and comic books, looking up unfamiliar words in the dictionary for meaning, spelling and pronunciation.

Read instructions for assembling model cars and airplanes.

Writing:

Write compound and complex sentences, using cursive style, proper end punctuation, and employing adjectives and adverbs.

MATH:

Add, subtract, multiply and divide all units of measure. Perform the four operations with like common and decimal fractions. Compute ratio, rate and percent. Draw and interpret bar graphs. Perform arithmetic operations involving all American monetary units.

LANGUAGE:

1 - Reading:

Recognize meaning of 2,500 (two or three syllable words). Read at a rate of 95-120 words per minute. Compare similarities and differences between words and between series of numbers.

Writing:

Print simple sentences containing subject, verb, and object, and series of numbers, names, and addresses.

MATH:

Add and subtract two digit numbers. Multiply and divide 10's and 100's by 2, 3, 4, 5. Perform the four basic arithmetic operations with coins as part of a dollar. Perform operations with units such as cup, pint and quart; inch, foot and yard; and ounce and pound.

*** END OF APTICOM A5 REPORT 14 PAGES PRINTED ***

Vocational Assessment Brief Narrative Report - Level II Example

NAME: Larry Student GRADE: 11th
DATE OF BIRTH: 4-6-68 DATE OF ASSESSMENT: 2-16-87
AGE: 18 yrs. 10 mos. EXAMINER: V. Evaluator

REFERRAL/BACKGROUND INFORMATION

Larry was referred for a vocational assessment by the ARD Committee to determine:
- vocational competency and potential
- vocational interests
- strategies to assist him in obtaining his vocational potential

SOURCES OF INFORMATION AND TEST RESULTS

<u>McCarron-Dial Work Evaluation System Instruments</u>	<u>T-Score*</u>
<u>Wechsler Adult Intelligence Scale-Revised (WAIS-R)</u>	
VERBAL I.Q. : <u>62</u>	
PERFORMANCE I.Q. : <u>63</u>	
FULL SCALE I.Q. : <u>60</u>	<u>56</u>
<u>Peabody Picture Vocabulary Test-Revised (PPVT-R)</u>	
STANDARD SCORE: <u>62</u>	<u>54</u>
<u>Bender Visual Motor Gestalt Test (BVMGT)</u>	
TOTAL ERRORS: <u>7</u>	<u>57</u>
<u>Haptic Visual Discrimination Test (HVDT)</u>	
RIGHT CORRECT: <u>28</u>	<u>56</u>
LEFT CORRECT: <u>27</u>	<u>55</u>
<u>McCarron Assessment of Neuromuscular Development (MAND)</u>	
FINE MOTOR : <u>338</u>	<u>56</u>
GROSS MOTOR: <u>277</u>	<u>64</u>
TOTAL MOTOR: <u>615</u>	<u>61</u>
<u>Observational Emotional Inventory (OEI)</u>	
TOTAL SCORE: <u>27</u>	<u>56</u>
<u>Dial Behavior Rating Scale (BRS)</u>	
RAW SCORE: <u>49</u>	<u>57</u>
<u>Street Survival Skills Questionnaire (SSSQ)</u>	
TOTAL CORRECT: <u>144</u>	<u>59</u>

* A T-Score of 50 is average for an adult mentally disabled population.

Wide Range Interest Opinion Test (WRIOT)

High interest areas: clerical, mechanical, biological
Low interest areas: drama, management, protective services

BEHAVIORAL OBSERVATIONS

Task attention for five minutes.
Attempted all tasks.
Stopped working when criticized.
Talked to others when should be working.

SUMMARY STATEMENTS

Verbal Cognitive: Mild range of mental retardation
Upper extended workshop

Sensory: Mild Dysfunctions
Upper extended workshop

Motor: FINE : Mild deficits, upper extended workshop
GROSS: Minimal deficits, transitional range
TOTAL: Minimal deficits, transitional range

Emotional: Moderate problems
Upper extended workshop

Integration Coping: Moderate deficits
Upper extended workshop

Vocational Competency Level:
CURRENT : Upper extended workshop
POTENTIAL: Transitional level

Vocational Strengths: Motor Skills
Basic Academic Skills
Ability to follow directions

Vocational Weaknesses: Attention to task
Slow productivity
Difficulty accepting criticism
Unable to cope with stress
Inappropriate interactions with others

RECOMMENDATIONS:

1. Six months to one year of work adjustment training (sheltered workshop placement) focusing on:
 - increasing work speed
 - ability to handle criticism and job stress
 - increasing attention to task
 - employability skills training
2. Consider job placement after work adjustment training as a plant nursery worker, farm hand, or lawn crew worker. Supported employment or job coach should ease transition to community employment.
3. Vocational and social counseling to:
 - develop realistic vocational goals
 - learn appropriate interaction skills

V. Evaluator, M.A.
Educational Diagnostician

Vocational Assessment Full Narrative Report - LEVEL III Example

IDENTIFYING INFORMATION

Name: Kay Grade: 12th
Date of Birth: 11-20-67 Date of Assessment: 6/16, 6/20, 6/27/86
Age: 18 years, 7 months Examiner: V. Evaluator

REASON FOR REFERRAL

Kay was referred by the ARD committee:

- to determine her present level of vocational competency
- to determine her vocational potential
- to determine strategies/treatment/training which will assist her in achieving her potential
- to determine Kay's vocational interests

BACKGROUND INFORMATION

Kay is an 18 year old white female who anticipates graduating from high school in May 1987. She currently resides at home with her mother. Kay has limited vocational experiences. She worked briefly at a local plant nursery last summer, but was requested to leave this program due to behavioral problems including refusal to complete certain work tasks, temper tantrums, and yelling at supervisors. Kay also worked last summer with the Meals on Wheels program. While behavior problems were not exhibited here, her supervisor reported she would not rehire Kay due to her inflexibility in completing tasks and difficulty in initiating tasks and working alone.

BEHAVIORAL OBSERVATIONS

Kay was generally pleasant and cooperative during the evaluation period. She exhibited some difficulty in following instructions, frequently requiring clarification or demonstrations. She appeared to lack confidence in her ability to complete some tasks as evidenced by such comments as "this is tricky" or I'm not sure about that." Kay's performance on most tasks was slow and she did not respond to requests to work more quickly. Kay began crying during one fine motor task on which she was having difficulty. She reported being upset about her boyfriend. After leaving the room to get a drink, she calmed down and returned to complete the task.

SOURCES OF INFORMATION

McCarron-Dial Work Evaluation System:

- Wechsler Adult Intelligence Scale - Revised (WAIS-R)
- Peabody Picture Vocabulary Test - Revised (PPVT-R)
- Bender Visual Motor Gestalt Test (BVMGT)
- Haptic Visual Discrimination Test (HVDT)
- McCarron Assessment of Neuromuscular Development (MAND)

Purdue Pegboard

Valpar Component Work Samples:

- Valpar 2 - Size Discrimination
- Valpar 3 - Numerical Sorting
- Valpar 7 - Multi-level Sorting
- Valpar 11 - Eye-Hand-Foot Coordination

Wide Range Interest Opinion Test (WRIOT)

TEST RESULTS

Verbal Cognitive

The Results of the WAIS-R (Full Scale IQ = 73) suggest Kay is currently functioning within the borderline range of intelligence. This places her at about the 4th percentile which means that 96% of Kay's peers would be expected to attain a higher score. Relative strengths were noted in reasoning ability and concept formation, while less ability is noted in mental arithmetic, basic math, and nonverbal organization. Visual motor speed appears slow suggesting a possible neurological problem. (Please review Kay's psychological report of 2/14/85 by Dr. Ph.D. Psychologist for complete results.)

Receptive vocabulary skills, as measured by the PPVT-R, reveal similar intellectual functioning (Standard score = 80). Kay correctly identified such words as confiding, emission, and constellation, but was unable to recognize fatigued, tranquil and exterior. These verbal cognitive scores fall within the transitional level of vocational competency on the McCarron-Dial profile. Kay appears able to communicate and understand complex relationships and concepts, but may have difficulty generalizing these concepts to new situations. She appears aware of her special needs and their impact on her life. Kay can probably follow simple verbal and written instructions. She can be expected to perform most previously learned tasks with little time needed for reorientation.

Sensory

Kay's scores on the HVDT and BVMGT suggest few problems in visual discrimination and fall within the community range of employment (T-score = 68). She can discriminate pattern, texture, shape, and position of objects with little difficulty. Kay demonstrates the necessary skills to attend to work tasks with little structuring of the physical environment. She would be expected to align, stack and position items without perceptual guides.

These scores represent Kay's highest scores on the McCarron-Dial profile, suggesting a relative strength in this area. This information should be utilized in vocational planning.

Motor

Kay's total motor T-score of 48 reveals moderate motor deficits which fall within the lower extended range of vocational competency. A significant discrepancy was noted between Kay's fine motor score of 58, which indicates mild deficits at the upper extended workshop range and her gross motor score of 40, suggesting severe deficits falling within the work activity range. These scores represent Kay's lowest factor area and a relative weakness on her profile.

Productivity on motor tasks will probably be quite low with frequent errors. Kay would be expected to acquire a wide variety of tasks that require less than ten to fifteen minutes to complete.

A factor analysis of the MAND reveals a relative weakness in kinesthetic integration, which involves the ability to maintain balance, equilibrium, and body position, and muscle power. Kay was unable to perform a heel-toe walk or stand on one foot for more than a few seconds. This, along with Kay's poor muscle power, suggests that she should have a job that does not require heavy lifting or balance.

Relative strengths were noted in bimanual dexterity, the ability to coordinate two hands in performing a task, and persistent control, the ability to focus attention and regulate arm-hand movement. While these scores represent relative strengths for Kay, they are significantly below the normal population.

Kay's scores on the Purdue Pegboard, a fine motor dexterity test, were significantly below that of industrial applicants. She will probably not perform well at tasks requiring fine motor coordination.

Predicted Vocational Competency and Productivity

The results of the McCarron-Dial evaluation suggest that Kay is currently functioning at the upper extended workshop range for vocational competency. Current earnings are expected to be at 44% of minimum wage, while predicted earnings after one year of training would be approximately 65% of minimum wage.

Emotional factors and integration coping skills would affect these predictions and should be considered in vocational planning. Kay's previous work history and school behavior suggest that these factors would probably lower predicted earnings.

Valpar Component Work Samples

Kay's performance on the work samples was significantly below that of entry level workers. She demonstrated a poor ability to perform work tasks requiring visual size discrimination, as both work speed and accuracy were below the entry level. Her accuracy on tasks requiring the use of numbers and numerical series was good, but time to complete the task ranged from 5% to 21% when compared to entry level performance. Kay's speed on sorting objects by color, color-number, color-letter, and color-letter-number was 30% of entry level worker performance, but accuracy was below 5%. She demonstrated a poor ability to perform tasks requiring eye-hand foot coordination, by sacrificing accuracy for speed.

These results suggest that Kay works significantly slower than an entry level worker. When she increases speed, Kay's work quality is lowered. In order to be employed in a community job, Kay will need to learn to perform quality work at a faster pace.

Interest Areas

The WRIOT was administered to determine Kay's vocational interests. Kay's highest interest areas were obtained in arts, sales, personal service, and athletics. Some art jobs in which Kay reports interest are clothing designer, interior decorator, and floral arrangement. Sales jobs include store clerk, tour guide and manicurist. Personal service would include such jobs as dishwasher, gardener, hotel maid, mail sorter, and housekeeper.

Areas of low interest were protective service, physical science, and mechanics. Kay would probably not enjoy such jobs as safety guard, draftsperson, bookbinder, or factory worker.

Kay would prefer to work at tasks indoors that involve some movement and activity, rather than sitting mainly in one place.

SUMMARY

Kay is an 18 year old white female who is a senior in high school. She appears to be currently functioning within the borderline range of intelligence. Verbal cognitive scores fall within the transitional level of vocational competency suggesting Kay can follow most simple verbal instructions.

A relative strength appears in Kay's sensory skills, which are similar to individuals employed in the community. She demonstrates mild deficits in fine motor skills and severe deficits in gross motor skills. Overall motor functioning falls within the lower extended workshop range. Kay will probably not perform well at tasks requiring balance, heavy

lfiting, or fine motor coordination.

Kay's vocational competency level falls within the upper extended workshop range. Earnings after one year of training should approximate 65% of minimum wage. This suggests that Kay would need work adjustment training prior to vocational placement.

Kay's performance on the Valpar Work Samples was significantly below that of an entry level worker. She performs work tasks accurately, but at a very slow speed. Increased speed results in poor work quality.

Kay demonstrates interest in the following areas: arts, sales, personal service, and athletics. Personal service probably represents a realistic and suitable area for Kay to pursue vocational training and job placement.

Vocational Strengths

- Ability to follow simple instructions
- Reading recognition
- Spelling
- Sensory skills

Vocational Limitations

- Fine motor skills
- Gross motor skills
- Mathematics
- Reading comprehension
- Emotional factors

RECOMMENDATIONS

1. Six months to one year of work adjustment training focusing on:
 - increasing work speed
 - ability to handle criticism and job stress
 - relating well with coworkers
 - increasing frustration tolerance
2. Consider job placement in the area of personal service after successful completion of work adjustment training. Shadow training might be used to help make a successful transition to community job placement.
3. Continue counseling to improve self concept, develop realistic vocational goals, and learn to relate appropriately with others.

V. Evaluator, M.Ed.
Educational Diagnostician

Section VII

INTERPRETING AND USING VOCATIONAL ASSESSMENT DATA

Introduction

Two pragmatic purposes of assessment are:

- (1) to identify and classify those learners with handicaps and/or disadvantages, and
- (2) to gather specific information helpful in planning instruction for a particular learner.

It is this second purpose that must be carefully considered so that the diagnostic potential of vocational assessment information will become meaningful to the teacher and other users.

Hunt (1975) reinforced the importance of assessment to guide teaching when he critically reported that assessment should tell a teacher what kinds of assignments and curricular materials a student can utilize to foster their psychological development and help them obtain the knowledge and skills needed to adapt to their culture. He felt that the form of psychological assessment most prevalent in education failed to do this. Vocational assessment must work together with all other assessments for a practical end--that of providing meaningful education and training in preparation for the successful transition from school to work.

The results of assessment should always give an indication of a student's strengths and limitations. Federal legislation actually calls for the assessment to determine "present levels of performance". What is most important is that teachers are able to use assessment information for planning 1) remediation, and/or 2) accommodation approaches to their instruction.

Remediation is the technique one uses to build skills or knowledge in deficit areas thereby correcting a response or behavior to bring about success for a given student.

Accommodation is the process by which the teacher or student modifies the task or environment, or uses special equipment to make a task more manageable. For example, a student's inability to add a series of two-digit numbers can be addressed through remediation by drill and practice sessions in addition. This same math deficit can be addressed through accommodation by teaching the student to use a calculator.

Accommodation and remediation are not mutually exclusive. It is sometimes the best tactic to give a student accommodation techniques or devices while continuing instruction for remediation of the deficit.

Brown (1982), at the University of Minnesota, developed a similar instructional model. His "3-C Model" consists of 1) correction, 2) compensation, and 3) circumvention. The first two components are synonymous with remediation and accommodation with the third being a strategy for avoiding a task altogether if the first two strategies are not successful.

In summary, the key to the most advantageous use of assessment information is to review the data, summarize it in a meaningful way, and apply the information gained to the classroom setting to achieve successful instruction.

Levels I and II Vocational Assessment

In order to facilitate this process the Student Vocational Assessment Module (SVAM) has been developed for use with Levels I

and II vocational assessment information. A description of each of the forms in the SVAM and their intended use follows. The reader may want to review the SVAM, which is included at the end of this section, before proceeding.

Level I Summary of Records (Form 1)

Because such a large volume of Level I assessment data is usually available, a one-page summary is provided to categorize the significant information for each student. Based upon this summary, it is possible to determine how each student's strengths or limitations relate to instruction. By analyzing the records in this manner, classroom techniques do not seem so far removed from assessment findings.

Level I Summary of Interviews (Form 5)

Interviews with the student, parents, and teachers are an integral part of Level I assessment. While the forms necessary to collect this information are often lengthy, the summary needs to be relatively brief and capture the most important information. For the interviews themselves Student Interview (Form 2), Parent Interview (Form 3), and Teacher Interview (Form 4) schedules are provided. Transcribing the information obtained from these interview schedules to the Level I Summary of Interviews (Form 5) should provide a concise compilation of the most relevant information.

Level II Aptitude and Interest Summary (Form 6)

The purpose of this form is to summarize the student's performance on one or more aptitude tests and interest inventories. The information recorded here is then reviewed to determine the

student's strengths or limitations based on aptitude information and realism of stated or inventoried interest.

Summary of Strengths and Limitations (Form 7)

This form is to be used for a synthesis of all previously identified strengths and/or limitations. After all such characteristics are listed, it is imperative to prioritize those which are most appropriate for remediation and/or accommodation. Certainly all limitations would be candidates for instruction, but those which impact upon a student entering vocational training, and eventual job placement, must be addressed at the earliest possible time.

Implications for Programming (Form 8)

The final form in the SVAM is to be used with those high priority limitation areas previously identified. The intention here is to provide an opportunity to make specific remediation and/or accommodation strategy recommendations as well as program placement decisions, thus tying assessment directly to instruction.

Level III Vocational Assessment

The majority of handicapped and disadvantaged students can be adequately assessed through Level I and II approaches. However, if interpretation of this information does not provide a sufficient basis for a placement decision, a Level III assessment may be necessary. The two primary categories of Level III assessment are exploratory experiences and work or performance samples. Students most likely to need assessment via work samples are those who are severely or multiply handicapped. These should be

administered by individuals with sufficient training and experience to make the information obtained reliable and valid. However, both handicapped and disadvantaged students could be assessed through the use of exploratory experiences. While this approach still takes practice, it can be done by teachers, counselors, and other local staff.

When Level III assessment is undertaken it is most likely to provide the needed information if a list of specific referral questions are developed. Forms 7 and 8 could be utilized for Level III assessment as well as a narrative report similar to the examples provided in Section VI. Lastly, it may be useful to develop a rating scale or checklist such as those described in Section V to use with locally developed performance samples or exploratory experiences.

In Summary

Although no educator needs more paperwork, the tools described here should make the job of relating the usually unwieldy, and often meaningless, data in a student's assessment folder to the all important decision of program placement and instruction both easier and more meaningful. Assessment and instruction are valuable components of an "appropriate education". It is the intent of this section to enhance the relationship between the two thereby improving students' vocational preparation.

References

- Brown, J. M., & Kayser, T. R. (1982). The transition of special needs learners into post-secondary vocational education. (68-72). Minneapolis, MN: Minnesota Research and Development Center for Vocational Education, University of Minnesota and the Vocational Technical Division of Minnesota State Department of Education.
- Hunt, E. (1975). Cognitive theory applied to individual differences. In W. K. Estes (Ed.), Handbook of learning and cognitive processes (Vol. 1). New York: Erlbaum.

Student Vocational Assessment Module

Forms Included:	Page
1. Level 1 Summary of Records	1
2. Student Interview	2
3. Parent Interview	4
4. Teacher Interview	5
5. Level 1 Summary of Interviews	8
6. Level 2 Aptitude and Interest Summary	9
7. Summary of Strengths and Limitations	10
8. Implications for Programming	11

Name of Student _____

Prepared By _____ Date _____

Additional Information By:

_____	Date	_____
_____	Date	_____
_____	Date	_____
_____	Date	_____
_____	Date	_____
_____	Date	_____

LEVEL 1 SUMMARY OF RECORDS

MATH

grade level _____ functioning level: below same above
 + one digit two digit
 - without regrouping with regrouping
 x knows facts 1-9 YES NO
 + one divisor multiple divisors

measurement

liquid YES NO
 linear YES NO
 temperature YES NO

fractions YES NO decimals YES NO percentages YES NO

money: counting YES NO
 transactions YES NO

READING

word attack grade level _____
 comprehension grade level _____
 functioning level: below same above

WRITTEN LANGUAGE

grade level _____
 functioning level: below same above

INTELLIGENCE

VERBAL: above avg. PERFORMANCE: above avg. FULL SCALE: above avg.
 avg. avg. avg.
 below avg. below avg. below avg.

ATTENDANCE Absent per semester 0 - 9 10 - more

MEDICAL DATA

Vision within normal limits YES NO
 Hearing within normal limits YES NO
 Physical handicaps/limitations YES NO
 if yes, describe _____

LEARNING STYLE

Adequately receives information: Auditorily YES NO
 Visually YES NO
 Hands On YES NO
 Multi-Sensory YES NO

BEST modality: _____

STRENGTH	LIMITATION

STUDENT INTERVIEW

SVAM Page 2 of 11

Name of Student _____ School _____

Date of Birth _____ Age _____ Date of Interview _____

1. What kinds of things do you like to in your spare time?
2. Do you have any hobbies?
3. Do you watch much television? What is your favorite show?
4. Do you have any chores at home? List Them.
5. How do you feel about doing these chores?
6. Do you usually do the chores without your parents reminding you to do them?
7. Are there jobs or types of work that you would like to do when you complete school?
8. Are there any jobs that you know you would not like?
9. What are your favorite classes in school, either now or in the past?
10. What are your least favorite classes?
11. Are there any courses you have not had, but would like to take?

- 12. Do you take part in any school activities? (For example: clubs, sports, office worker) Which ones?

- 13. In class/on the job, do you prefer working by yourself, with one other person, in a small group, or in a large group?

- 14. Would you rather have a job where you sat in one place most of the time or a job where you move around most of the time?

- 15. Would you rather work inside or outside?

- 16. Would you be willing to work when it is: (Write yes or no)
 - a. ___ cold
 - b. ___ hot
 - c. ___ wet
 - d. ___ dangerous
 - e. ___ dirty
 - f. ___ open space
 - g. ___ closed area

- 17. Do you have a job outside your home now? What is it?

- 18. Of any outside jobs or work you have done, what are your favorites?

- 19. What job/career would choose
now _____
in the future _____

Signature of Interviewer

PARENT INTERVIEW

Name of Student _____ School _____

1. Has your child ever done work for which he/she has been paid?
Please describe.
2. (Is) Was he/she successful in work situations?
3. What kind of occupation/job do you expect your child to have when he/she finishes school?
4. What skills does your child need to be successful in this job?
5. What type of career (job/occupation) does your child seem interested in at this time?
6. Are there particular vocational education courses you want your child to take to prepare for later employment?
7. What are your child's strengths?
8. What do you think the school can do to build on these strengths?
9. What are you child's limitations?
10. With which of these limitations do you think the school can help your child?
11. Does your child exhibit responsibility at home "usually"/ "sometimes"/ "rarely"?
12. Are you aware of any behaviors that might interfere with your child's getting and holding a job?
13. When do you expect your child to be financially independent?

Signature of Parent

TEACHER INTERVIEW

Name of Student _____ Grade _____ Date _____

Teacher's Name _____ Subject / Course _____

I. JOB SKILLS**A. Quality**

- _____ work has to be done over often
 _____ work occasionally needs repeating
 _____ does a good job most of the time

Comments:

B. Quantity

- _____ completes appropriate amount of work within a given time period
 _____ leaves most of work unfinished
 _____ completes task most of time

Comments:

C. Supervision

- _____ cannot perform assigned task without supervision and encouragement
 _____ needs periodic prompting to see task through to completion
 _____ initiates appropriate independent action

Comments:

II. WORK BEHAVIOR**A. Appearance/Grooming**

- _____ acceptable appearance
 _____ unacceptable appearance

Comments:

B. Personal habits and manners

- _____ says "thank you" "please", etc. at appropriate times
 _____ does not interrupt others
 _____ often exhibits inappropriate behavior

Comments:

C. Effort

- _____ refuses to exert effort
 _____ average in effort
 _____ consistently works to best of ability

Comments:

D. Self Criticism

- _____ recognizes failures on poor work, attempts to correct
- _____ recognizes failures, responds only with frustration
- _____ satisfied with poor, inadequate work

Comments:

E. Response to Criticism from Others

- _____ belligerent
- _____ average accepting of criticism
- _____ very accepting of criticism

Comments:

III. TIMING

A. Punctuality

- _____ frequently late
- _____ occasionally late
- _____ rarely late

Comments:

B. Attendance

- _____ very frequently absent
- _____ occasionally absent
- _____ rarely absent

Comments:

IV. INTERPERSONAL SKILLS

A. Social-Personal

- _____ tends to withdraw or keep to self
- _____ appears ill at ease in the presence of others
- _____ pleasant, outgoing

Comments:

B. Peer Relationships

- _____ has social problem with most, while not having close relationship with any
- _____ mixes well with own select few; has open conflict with some
- _____ mixes well with own select few, does not bother other students
- _____ mixes well with whole group

Comments:

C. Cooperation/Attitude

- _____ refuses to cooperate
- _____ performs reluctantly
- _____ works eagerly
- _____ cooperation varies with nature of the problem or task

Comments:

D. General Activity Level

- _____ apathetic, slow, disinterested attitude
- _____ constantly moving, agitated, considerable fidgeting
- _____ appropriate activity level

Comments:

E. Reaction to Change

- _____ able to accept change
- _____ not able to accept change

Comments:

F. Attention

- _____ Attention span so short as to be negligible
- _____ will pay attention if importance is stressed
- _____ usually pays close attention
- _____ good attention span

Comments:

G. Comprehension

- _____ unable to comprehend oral instruction
- _____ unable to comprehend written instruction
- _____ able to comprehend both oral and written instruction

Comments:

H. Communication

- _____ can communicate adequately with peers and general public
- _____ often has difficulty communicating thoughts and ideas
- _____ unable to clearly communicate

Comments:

LEVEL 1 SUMMARY OF INTERVIEWS

Name of Student _____ School _____

PARENT INTERVIEW

EXPECTATIONS:

REGULAR VOC PROG.	SPECIAL VOC. PROG.	JOB ENTRY FOLLOWING HS GRAD.	TECHNICAL SCHOOL	COLLEGE
----------------------	-----------------------	---------------------------------	---------------------	---------

WORK EXPERIENCE: No Yes _____

BEHAVIOR : Usually exhibits acceptable behavior for situation Yes No

RESPONSIBILITY:

EXHIBITS INDEPENDENCE	NEEDS PERIODIC REMINDERS	NEEDS FREQUENT REMINDERS	DOES NOT SHOW RESPONSIBILITY WITHOUT DIRECT SUPERVISION
--------------------------	-----------------------------	-----------------------------	--

SPECIFIC JOB PARENTS FEEL SON/DAUGHTER MOST SUITED:

STUDENT INTERVIEW

EXPECTATIONS:

REGULAR VOC PROG.	SPECIAL VOC. PROG.	JOB ENTRY FOLLOWING HS GRAD.	TECHNICAL SCHOOL	COLLEGE
----------------------	-----------------------	---------------------------------	---------------------	---------

WORK EXPERIENCE: No Yes _____

INTERESTS: VOC. PROGRAM _____
JOB _____

JOB PREFERENCES:

Indoor	Outdoor
With others	Alone
People	Data Things

TEACHER INTERVIEW

BEHAVIOR : Usually exhibits acceptable behavior for situation No Yes

RESPONSIBILITY:

EXHIBITS INDEPENDENCE	NEEDS PERIODIC REMINDERS	NEEDS FREQUENT REMINDERS	DOES NOT SHOW RESPONSIBILITY WITHOUT DIRECT SUPERVISION
--------------------------	-----------------------------	-----------------------------	--

RESPONSE TO AUTHORITY: USUALLY POSITIVE YES NO
INTERPERSONAL SKILLS: USUALLY ACCEPTABLE YES NO
FOLLOWS DIRECTIONS: USUALLY SOMETIMES NEVER

LEVEL 2 APTITUDE AND INTEREST SUMMARY

APTITUDE

STANDARDIZED TEST: _____

Circle quality of student performance (Above Average, Average, or Below Average). Mark strengths and limitations only in areas measured by specific instrument/s administered.

				STRENGTH	LIMITATION
SPATIAL RELATIONS	ABOVE AVG.	AVG.	BELOW AVG.		
MECHANICAL REASONING	ABOVE AVG.	AVG.	BELOW AVG.		
FINE MOTOR COORDINATION	ABOVE AVG.	AVG.	BELOW AVG.		
GROSS MOTOR COORDINATION	ABOVE AVG.	AVG.	BELOW AVG.		
MANUAL DEXTERITY	ABOVE AVG.	AVG.	BELOW AVG.		
CLERICAL	ABOVE AVG.	AVG.	BELOW AVG.		
FORM PERCEPTION	ABOVE AVG.	AVG.	BELOW AVG.		
BALANCE	ABOVE AVG.	AVG.	BELOW AVG.		
MUSCLE POWER	ABOVE AVG.	AVG.	BELOW AVG.		
EYE-HAND COORDINATION	ABOVE AVG.	AVG.	BELOW AVG.		
MOTOR SPEED	ABOVE AVG.	AVG.	BELOW AVG.		
BILATERAL COORDINATION	ABOVE AVG.	AVG.	BELOW AVG.		

INTEREST

STATED INTEREST _____

STANDARDIZED INVENTORY: _____

HIGH _____

LOW _____

IS CHOICE REALISTIC BASED UPON STRENGTHS AND LIMITATIONS YES NO

IF NOT REALISTIC, WHAT OTHER OCCUPATION IS MORE IN HARMONY WITH STUDENTS STRENGTHS AND LIMITATIONS: _____

Name of Student _____

SUMMARY OF STRENGTHS AND LIMITATIONS

Highlight (circle or check) limitations for which recommendations for remediation and/or accommodations are to be written.

STRENGTHS

LIMITATIONS

STRENGTHS	LIMITATIONS

IMPLICATIONS FOR PROGRAMMING

LIMITATIONS

STRATEGIES FOR REMEDIATION AND ACCOMMODATION

Based upon strenghts and limitations, placement in the following vocational settings should be considered for this student

- _____ REG/NO SUPPORT REG/SUPPORT CVAE VEH VAC
- _____ REG/NO SUPPORT REG/SUPPORT CVAE VEH VAC
- _____ REG/NO SUPPORT REG/SUPPORT CVAE VEH VAC

Vocational Assessment Handbook (VAH)

Appendix A

- A-1 TEA Guidelines for Serving Special Education Students in Vocational Education.
- A-2 Letter from William Bennett.
- A-3 Overview of SCR 129.

VAH Appendix A-1

SERVING SPECIAL NEEDS
STUDENTS IN VOCATIONAL EDUCATION
(THE CARL D. PERKINS VOCATIONAL EDUCATION ACT PL 98-524)

Texas Education Agency
Austin, Texas 78701

August 1, 1985

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SERVING SPECIAL NEEDS STUDENTS IN VOCATIONAL EDUCATION

Of the funds available under Title II Part A of Public Law 98-524, The Carl D. Perkins Vocational Education Act, 10 percent is allocated for handicapped and 22 percent for disadvantaged individuals. The federal share of expenditures (50 percent) for handicapped and disadvantaged shall be used only for supplemental or additional staff, equipment, materials, and services which are not provided other individuals in vocational education but are essential for handicapped and disadvantaged individuals to participate in vocational education. If the conditions of these students require a separate program, federal funds may be used to pay 50% of the cost of the program's services and activities which exceed the eligible recipient's average per pupil expenditure for regular vocational services and activities. Regulations governing documentation of the proper expenditure of these funds require: proper identification of students with special needs, documentation of the services needed by individual students to benefit from vocational education, and a record of amounts of federal funds spent for these services.

Student Eligibility

Students who are eligible for these program activities and services include the following:

Handicapped students are those individuals who are mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, or other health impaired persons, or persons with specific learning disabilities, who by reason thereof require special education and related services, and who, because of their handicapping condition, cannot succeed in the regular vocational education program without special education assistance.

Educationally disadvantaged students are individuals who score below the 25th percentile on a standardized achievement or aptitude test, those whose secondary school grades are below a passing grade (below a C), or those who fail to attain minimal education competencies. Students who are found to be one or more years below grade level in achievement in three or more academic classes or have a composite score on standardized tests that is below grade level will be eligible for CVAE programs.

Economically disadvantaged students are members of economically disadvantaged families whose annual income is at or below the official poverty line and/or are eligible for free or reduced-price school lunch. To be eligible for work study, each student must have a vocational assessment which is administered under the supervision of certified counselors.

Limited English proficient (LEP) students are individuals who are members of a national origin minority and who do not speak and understand the English language in an instructional setting well enough to benefit from vocational studies to the same extent as a student whose primary language is English. These persons may include: (1) individuals who were not born in the U.S. or whose native tongue is a language other than English and (2) individuals who come from environments where a language other than English is dominant and thus have difficulties speaking and understanding

instruction in the English language. A person with "limited English proficiency" can be identified as a student participating in an English as a second language (ESL) or bilingual program or scoring low on an English proficiency test. Such students, because of their language deficiency, require special services to succeed in vocational programs.

Required Services and Activities

Local education agencies who request federal vocational funds for handicapped and/or disadvantaged students are required to provide the following services and activities for these students enrolling in vocational education programs:

- I. vocational interest and aptitude assessment prior to selecting a vocational program,
- II. provision of special services designed for individual students based on the special needs identified by the vocational assessment,
- III. guidance/counseling activities conducted by certified counselors including career development, vocational assessment, and services designed to facilitate the transition from school to post-school employment.

A vocational support system may be designed to provide the special services needed by identified students. The services should include but not be limited to: (1) vocational assessment including equipment materials and personnel, (2) support services including specialized equipment material and/or personnel, (3) guidance counseling activities including materials and personnel, and (4) services for limited English proficient (LEP) students. The support system may serve handicapped, disadvantaged, and LEP students. The funding for such a system should be prorated according to the number of students served in each category (handicapped, disadvantaged, and LEP).

I. Vocational Assessment

Vocational assessment is a comprehensive student-centered process conducted over a period of time involving a multidisciplinary team approach, with the purpose of identifying individual characteristics, strengths and weaknesses, and education, training, and placement needs. It is an ongoing process that occurs throughout the student's vocational programs. Vocational assessment is the collection of data which are used to make goal setting, programming, and placement decisions. This process of data collection provides the student with insight into his or her vocational potential and provides educators the basis for planning a student's vocational program. An overview of vocational assessment is provided in the table, "The Nature of Vocational Assessment," found on the following page.

Who Is Responsible

According to federal legislation, Carl D. Perkins Vocational Education Act, the local district has the responsibility of providing vocational aptitude and interest assessments for all handicapped, educationally disadvantaged, economically disadvantaged, and LEP students who participate in vocational education programs. Federal vocational funds may be used toward the cost of vocational assessment. Vocational education personnel should coordinate the purchase of vocational assessment instruments in consultation with special education personnel since some of the assessment instruments may serve both academically disadvantaged and handicapped students.

THE NATURE OF VOCATIONAL ASSESSMENT

VOCATIONAL ASSESSMENT WILL...		
Assess...	Using...	To Recommend...
<p>Vocational Interest</p>	<p>Interest tests Tour of vocational programs Work samples Job tryouts</p>	<p>Specific vocational training areas</p>
<p>Dexterity, coordination, and physical skills</p>	<p>Dexterity Physical ability tests Work samples Medical records</p>	<p>Vocational Program placement level (resource, disadvantaged, or regular vocational classroom)</p>
<p>Prevocational and functional life skills</p>	<p>School records Checklist of skills filled out by teacher Observation during testing Work samples Job/classroom tryouts</p>	<p>Job Placement</p> <p>Teaching techniques and curriculum modifications</p>
<p>Vocational learning style</p>	<p>Work samples Job/classroom tryouts</p>	<p>Training in prevocational and life skills</p>
<p>Basic education skills</p>	<p>Diagnostician's report Teacher checklists Work samples</p>	<p>Training in work adjustment skills (work behaviors, attitudes, habits)</p>
<p>Vocational aptitude and ability</p>	<p>Dexterity tests Pencil and paper aptitude tests Diagnostician's report Checklist of life skills Work samples Job/classroom tryouts</p>	<p>Additional community support services</p>

From: "A Handbook for Vocational Special Needs," unpublished, developed by the Occupational Curriculum Laboratory, East Texas State University, Commerce, Texas, under contract to the Department of Occupational Education and Technology, Texas Education Agency.

Administrators from each district must assign personnel the responsibility for vocational assessment of students with special needs. The qualifications and job responsibilities for professional personnel should be considered when making this assignment. Diagnosticians, counselors, and/or other personnel may be assigned to administer the vocational assessment. Vocational assessments for handicapped, disadvantaged, and LEP may be the responsibility of a single person or be assigned to different personnel as either a part-time or a full-time activity.

When using federal vocational funds for vocational assessment, time and effort records must be maintained. The prorated time spent serving the handicapped, disadvantaged, and LEP students may be paid proportionately from these categories of federal funds.

It is suggested that small districts initiate cooperative arrangements, working with other districts and/or education service centers, to share the cost of providing vocational assessment and guidance activities for special needs students.

Who to Assess

All handicapped, disadvantaged, and LEP students planning to participate in vocational education programs must have an assessment of their vocational interests and aptitudes.

Handicapped - Students considered handicapped in vocational education must be provided a vocational assessment during the year prior to their entry into vocational education during grades 9-12.

Disadvantaged - Students identified as educationally disadvantaged, economically disadvantaged, or limited English proficient (LEP) who are interested in vocational education programs must have a vocational assessment.

When to Assess

Vocational assessment is a continuous process throughout a student's participation in vocational programs. Guidelines for determining when to conduct the vocational assessment include:

1. A student entering vocational programs during the seventh or eighth grades will have a basic vocational assessment during the first year of participation in the vocational program. During such courses as prevocational, occupational orientation, occupational investigation, CVAE or VEH, special needs students will be administered vocational interest and aptitude assessment by qualified personnel.
2. A student planning to enter a vocational program in high school will have a basic vocational assessment during the year prior to entry into a vocational program.
3. For those students who participate in vocational programs at the seventh and eighth grade level but do not enroll in vocational programs until the tenth or eleventh grade in high school, additional vocational assessment to update records may be necessary during the year prior to entry into vocational education at the high school level.

4. Further assessment occurs during participation in vocational programs as the vocational teacher observes student behaviors in the pre-employment laboratories.

What to Assess

To accomplish long-range planning and appropriate vocational placement and instruction, the student's strengths and weaknesses, interests, abilities, and aptitudes must be determined. Areas of assessment may include, but are not limited to, the following:

- . Basic skills: Reading comprehension, spelling, grammar, functional math, measurement, money handling
- . Sensory and motor skills: Dexterity, coordination, strength, mobility, range of motion, visual acuity, auditory acuity
- . Learning preferences: Receptive, expressive
- . Vocational skills and aptitudes: Use of tools, materials, and equipment, general potential for work
- . Career awareness and interest: Knowledge of jobs, expressed interests, observed interests, etc.
- . Behavior: Worker characteristics and habits, job seeking skills, job keeping skills

How to Assess

The following model for assessment for special needs students is designed to provide a logical sequence of data collection in two levels of assessment. The district may choose to use this model with suggested forms or may develop its own process for vocational assessment of students.

Basic Vocational Assessment (Level I)

Level I is designed to provide a summary of preexisting information about a student's abilities and level of functioning and other pertinent facts. This level of assessment requires data collection and interpretation rather than additional testing. Cumulative files and transcripts will contain much of the Level I data for disadvantaged and LEP students. Special education data is available from the student's eligibility folder.

1. Cumulative records and transcripts and/or other forms of permanent records should be reviewed to obtain the data to build a student profile. Cumulative records will usually provide grades, group achievement and/or other test data, attendance, discipline records, and medical/health records. Vocational education performance data for educationally disadvantaged and LEP students will be available from achievement test scores (e.g., math, reading, writing, composition). Scores for current year from Texas Assessment of Basic Skills (TABS) or in following years from Texas Educational Assessment of Minimum Skills (TEAMS) test should provide adequate data. Suggested forms for the student profile are in Appendix F.

2. Special education data. A handicapped student being considered for vocational placement must have had a comprehensive assessment to determine that student's eligibility and specific need for special education services.

Special education assessment data are found in the student's eligibility folder. The comprehensive assessment data which would be reviewed includes:

- a. assessment of language, pertinent medical information and physical, sociological emotional/behavioral, and intellectual factors, including assessment of adaptive behavior,
 - b. assessment of the student's educational, developmental, and/or behavioral performance,
 - c. assessment of the student's specific competencies in areas of educational needs and competencies related to vocational education, where appropriate, and
 - d. specific modifications of instructional content, setting, methods, or materials required by the student to achieve and maintain satisfactory progress, including those that can be provided only through special education services and those adaptations necessary for the student's progress in regular classes.
3. Interviews or other methods of gathering data may be used to obtain information from the student, parent, and teacher. Examples of forms which may be used for these interviews are provided in Appendices A, B, and C.

Informal interview with the student. The student should be interviewed to determine his or her interest in vocational education and social competence or adaptive behavior related to performance in vocational education. A teacher or counselor who has good rapport with the student may conduct this part of the assessment.

Informal conference or interview with the student's parents (if the student is under 18). The parents should be interviewed to determine their career expectations for the student and to discuss their perceptions of the student's social competence or adaptive behavior as it relates to performance in vocational education.

Teacher interview. Former teachers should be interviewed to collect information related to personal characteristics and interpersonal skills. (The teachers may be a vocational teacher at the junior high school level or may be any teacher familiar with the individual student.)

In addition to the above information, a review of student behaviors by teachers and/or counselors may be beneficial. In Appendix D, a "Vocational Behavior Checklist: Preliminary Screening for Placement in Vocational Training and Job Entry" is provided for your review and use.

Basic Vocational Assessment (Level II)

The Level II assessment will include the collection of data related to the individual student's vocational interests and aptitudes. The objective of this assessment is to collect and interpret additional information about a student's vocational interest, ability and aptitude, including vocational awareness and work-related behaviors. A representative list of assessment instruments is included in Appendix E. Obviously not all instruments should be administered to each student. If one test provides adequate information for planning purposes, that may be the only test administered.

1. Vocational interest assessment is a measure which assesses a student's preferences for activities or topics. Responses are analyzed by comparing them with the responses of people in a particular occupation. This type of test may require the student to look at pictures or it may be in a written format.
2. Vocational aptitude assessment is a measure of a student's ability to profit from training or experience in an occupation or skill. The test may be of the paper/pencil type or it may require performance tasks. Vocational aptitude information is essential in planning an appropriate vocational placement for special needs students. Aptitude will include such things as manual dexterity, special ability, eye-hand coordination, physical strength, perceptual abilities, and physical attributes.

Selection of Vocational Assessment Instruments

A representative list of assessment instruments for use with the handicapped, educationally disadvantaged, economically disadvantaged, and LEP students is provided (Appendix E). Some assessment instruments may be appropriate for single student populations and others for all student populations. Assessment instruments vary within the following groups: (1) interest inventories--either pencil/paper or picture (for nonreaders), (2) aptitude--either pencil/paper or performance, (3) combination aptitude and interest. Some assessment instruments have computer-generated tests and reports while other instruments must be hand scored and reports written by qualified personnel. Some assessment instruments must be given to individual students while others may be administered to groups of students. Qualifications and numbers of personnel and administration time must be considered when selecting vocational assessment instruments.

Student Populations and Instruments

Economically disadvantaged students who are not behind educationally may receive support in the form of a work study program. If these students have average reading skills, they will be able to handle pencil/paper assessments as well as

other types of assessments. Some of the following assessment instruments may be considered for these students:

Combination Interest and Aptitude: APTICOM, MESA, and OASIS.

Aptitude: CAPS

Interest Inventories: COPS, CASE, PIC

Educationally disadvantaged students typically have reading problems and other educationally related deficiencies. These students will need support in the form of program modifications, instructional support, remedial or tutorial services, and/or career guidance. Since reading skills are lacking, pencil/paper tests may not be appropriate for these students. Some of the following assessment instruments may be considered for the academically disadvantaged:

Combination Interest and Aptitude: APTICOM, MESA, AND OASIS (sixth grade reading level)

Aptitude: SAM

Interest Inventory: CASE, PIC

Limited English proficient students have communication problems. These students may need support in vocational programs in the form of a modified program, adapted curriculum, or special assistance such as interpreter and/or tutorial services. The assessment instruments should either be available to the LEP student in his/her native language, require no reading, or when necessary be administered with the assistance of bilingual school personnel or community members who will translate the instrument for the student.

Handicapped students have a variety of handicapping conditions and various methods of assessment may be used. A variety of vocational assessment instruments are available to vocationally assess handicapped students. Some of the following assessment instruments may be considered for use with the handicapped students:

Mildly Handicapped: Combination Interest and Aptitude: APTICOM, MESA, OASIS (sixth grade reading level)

Aptitude: SAM, CAPS

Interest Inventory: COPS, CASE, PIC

Moderately Handicapped with Low IQ:

Aptitude: McCarron-Dial

Interest Inventory: Becker Reading Free Vocational Interest

Additional Vocational Assessment (Level III)

Level III assessment, comprehensive vocational evaluation, is conducted when the school personnel cannot identify long-range goals or place a student in a vocational program based on the information gathered from the first two levels of assessment. Additional data is then needed to

make a decision regarding appropriate vocational planning for and/or placement of the student. The additional assessment may include observation of exploratory experiences in a series of vocational classroom and/or work samples.

1. Observation of exploratory experiences. A district may choose, as one method of assessment, observation through exploratory vocational experiences. This exploration may take place in a classroom, on campus, or at a training site in the community. Careful planning is necessary to design a process for observation of exploratory experiences and evaluation of the student's work behaviors. Several types of settings that may be used for these exploratory experiences are:
 - a. Special education vocational readiness training may be designed incorporating a simulated exploratory setting to allow implementation of assessment as an integral part of the instructing curriculum.
 - b. On-campus exploratory experiences may be designed to allow students to have job experience on a trial basis in a school setting. Close supervision and observation by special qualified education personnel to assist in the collection of data will be necessary when these experiences are to be used as part of a vocational assessment.
 - c. Vocational education classes at the junior high school level including Exploratory Industrial Arts and Occupational Investigation may be used for observation and evaluation in the classroom setting. The vocational teachers may provide information as part of teacher observation. In-depth observation and evaluation of student work habits, behaviors, and skills may be assessed by qualified special education personnel trained in observation evaluation techniques.
 - d. Vocational education facilities at the high school level may be used, with approval from vocational personnel, for observation and evaluation as a part of the total assessment process. The following requirements must be met in this cooperative effort between vocational education and special education personnel:
 - . Both vocational teacher and special education evaluation personnel must be present in the vocational laboratory.
 - . This observation and evaluation must be done at a time during which the laboratory is not in use, before or after school. Observation in a small class (less than 10 students) may be used only when such observation does not have a negative effect upon the established vocational program and does not affect the progress of other students in that vocational program (TAC Chapter 78.104). A vocational teacher may be assigned to assist in conducting this evaluation during a period when he or she has no teaching assignment.

- . Students must not be allowed to use the equipment unless they have passed the appropriate safety tests.
 - . A maximum of two weeks' time must be allowed for each student in this evaluation setting.
2. Work samples. The work sample method of evaluation uses a simulation of an occupational task, business operation, or a component of an occupational area. Work samples may be taken directly from a job and represent the actual work process, including the equipment and tools of the area and also the duties of the job. By using this method, the evaluator has the opportunity to test for particular capabilities while the student directly experiences some aspects of an occupation. Work sample systems may be purchased; some can be tailor-made to match the needs of individual schools. Some work samples are individually administered while others are available for small group administration. Work samples vary in the amount and type of training needed by school personnel who will administer them. Some constraints to be considered are space requirements, scheduling, staff assignments, and cost of equipment.

Locally developed work samples may be used which directly relate to vocational programs available in the district and employment opportunities in the community. Some constraints on locally developed work samples are the amount of time required to develop them, the lack of standardized administration and scoring techniques, and the validity of the newly developed assessment instrument.

A "Profile for Special Needs Students" is provided in Appendix F. The profile will allow the assemblage of data obtained during the basic assessment Level I and II to be organized in a single usable document. This student profile may be used when planning support services for special students.

Use of Data

Information obtained from vocational assessment may be used in the following ways:

- . to determine whether vocational program placement is appropriate
- . to determine the eligibility for special services available for disadvantaged and IEP students
- . to determine the remedial needs
- . to identify need for modified instructional materials
- . to identify the need for other support services including adaptations of curriculum, methods of instruction, equipment, and facilities
- . to provide a data base for guidance and counseling and career development activities for individual students.

The data provided through the vocational assessment should be reviewed by counseling and guidance personnel. Based on the data collected, recommendations for vocational placement should be made. Knowledge of each vocational training program will be beneficial in this decision making process. A "Comprehensive Analysis of a Vocational Training Program" is provided in Appendix G. This analysis provides information about essential program characteristics and skill requirements of the particular program. When completed by teachers in the district or local employers, this job analysis information may assist in matching individual vocational assessment data with vocational programs available in the district.

II. Vocational Support Services

A support center may be developed to house the equipment and materials and to provide the setting for vocational assessment and instruction for students with special needs. It should be developed to provide the special services needed by students with special needs to participate in vocational programs. A support center should have hardware and software to be used for remedial and/or repetitive instruction. The Center should also include personnel who function as support persons for handicapped and disadvantaged students.

The vocational support center should be located in close proximity to the vocational facilities but be separate from an actual vocational class. The support center may house the fixtures and equipment including but not limited to:

- . desks
- . study carousels
- . tape recorders
- . computers
- . software for repetitive instruction
- . individualized audiovisual equipment and software
- . vocational assessment equipment/materials
- . specialized instructional equipment/materials
- . calculators

Specialized equipment and materials should be available for use in remedial instruction. Although equipment and materials are necessary, additional personnel are essential and provide the key to provision of support to students in vocational programs.

Teachers and/or teacher aides may be assigned to act as support persons to handicapped, disadvantaged, and LEP students. Services provided by these support teachers will include but not be limited to:

- . administration of all or part of the vocational assessments
- . remedial instruction in basic skills
- . tutorial instruction in vocational competencies
- . team teaching with vocational teacher
- . individualized instruction to handicapped, disadvantaged, and/or LEP students in the vocational classroom

- . instruction in career awareness and job readiness areas under the supervision of qualified counseling and guidance personnel
- . remedial or supplementary instruction indicated as a result of the vocational assessment

Individual vocational assessment reports will identify the necessary support services needed by a student to allow his/her participation in a vocational program. Suggested forms are included in Appendices H, I, and J for use in identifying the vocational support services needed with handicapped, disadvantaged, and LEP students.

Provision of vocational support services for the students with limited English proficiency (LEP) are essential when these students participate in vocational programs. Services to provide for the unique needs of the LEP will include but not be limited to: assessment of proficiency in English for eligibility purposes, vocational interest and aptitude assessment, supplemental support services, and special bilingual and/or English as a second language (ESL) materials.

The assessment to determine the English oral language proficiency and the English reading and writing proficiency of students is the responsibility of the school district. Those students who are determined to be eligible for bilingual or ESL programs will be eligible to receive vocational support services as an LEP student in vocational programs.

Model programs of supplemental services for LEP students in vocational have been identified, Friedenbergl and Bradley, 1984. Bilingual job skills instructions may be provided for LEP students whether or not the instructor is bilingual. The following are suggested models:

Concurrent language approach--The concurrent language approach requires the vocational instructor to use two or more languages, switching from one to another. Ideally, the vocational instructor switches languages to clarify instruction. If the vocational instructor knows little of the LEP students' native language(s), she or he can still learn to provide positive reinforcement in the other language(s). Although limited, this use of the students' native languages is worthwhile and can be supplemented by bilingual teacher aides or peer tutors.

Bilingual aide approach--In the bilingual aide approach, an English-speaking vocational instructor is assisted by a paid or volunteer paraprofessional or community member who helps to assess the LEP students' native language, translate instructional materials, tutor LEP students individually, and evaluate student progress.

Peer tutor approach--The peer tutor approach is similar to the bilingual aide approach, but the "aide" is another student whose role is limited to clarifying instruction. It should be emphasized that peer tutors do not evaluate other students.

Resource center approach--The resource center approach involves having LEP students leave the vocational classroom and receive tutoring in their native languages in a resource center. Resource centers are typically used when there are too few LEP students in each class to warrant in-class bilingual instruction, or when there are too many different language backgrounds in each class to make bilingual instruction practical. In the latter case, all of the native language tutors are available at one common resource center.

Bilingual instructional materials approach--The bilingual instructional materials approach is used when there are no bilingual personnel available in the vocational education center. In this case, a consultant, a volunteer from the community, an aide, a colleague, or an experienced student provides written or taped translations of the instructional materials so that LEP students can work independently. It should be kept in mind that both commercially produced and imported bilingual instructional materials are available.

The Vocational Special Needs Library at Texas A&M University, (512) 845-2444, has materials available for use with the LEP student. Also see Appendix K for sample resources.

III. Guidance and Counseling Activities

Guidance, counseling, and career development activities should be an integral part of the support system for students with special needs. Guidance functions may require specialized skills and training for personnel involved inasmuch as recipients are exceptional by nature.

Counseling and guidance personnel may be assigned to work part time or full time with handicapped, disadvantaged, and LEP students. Services provided by guidance personnel will include but not be limited to:

- . administration and/or supervision of the administration of vocational assessment of the handicapped, disadvantaged, and LEP
- . interpretation of the results of the vocational assessment and making recommendations for support services needed by the handicapped, disadvantaged, and LEP
- . provision and/or supervision of the provision of guidance counseling and career development activities for handicapped, disadvantaged, and LEP students which are designed to facilitate the transition from school to post-secondary training or to post-school employment and career opportunities
- . reviewing vocational assessment data for handicapped students and in cooperation with special education personnel recommending appropriate vocational program placement for handicapped students
- . in cooperation with special education personnel, identifying and recommending to the Admission, Review and Dismissal (ARD) committee support services which will be needed by individual handicapped students
- . participating as a member of the ARD committee when placing the handicapped student into a vocational education program and developing the Individual Education Plan (IEP)
- . coordination of all vocational activities and services with special education, compensatory education, bilingual or ESL programs to provide support services needed by vocational students who are also served by these service providers

Coordination of Services with the Job Training Partnership Act (JTPA)

This document has described the vocational assessment, support services, and guidance activities requirements of the Carl D. Perkins Vocational Education Act under the Criteria for Services and Activities for the Handicapped and for the Disadvantaged, Section 204. Similar services are fundable through the Job Training Partnership Act (JTPA). Local districts are encouraged to contact service delivery areas (SDAs) to identify resources which may be available for serving economically disadvantaged students.

Section 123 of the Job Training Partnership Act (JTPA) provides funding for joint programs between JTPA and educational entities, including vocational education. Career exploration, occupational specific skills, job counseling, job search assistance, on-the-job training, literacy and bilingual training, pre-apprentice programs, and supportive services are examples of the kind of training activities that may be offered under JTPA. The JTPA allows 100% funding of these similar services for the economically disadvantaged students. With prior planning and collaboration with the JTPA service delivery areas (SDAs), the local district may jointly fund vocational assessment, support services, and guidance for economically disadvantaged students.

Specific considerations for planning this joint funding include: (1) federal vocational funds must be matched with 50% local or state funds, (2) JTPA funds may be used to pay 100% of the support services for economically disadvantaged, LEP, and handicapped students age 16 through 21, (3) a tracking system must be developed to identify use of JTPA, federal vocational, and state or local funds, (4) joint criteria for eligibility of economically disadvantaged based on income must be established which satisfy criteria in both acts.

The Texas Education Agency and the Texas Department of Community Affairs (the state agency which oversees the SDAs) are now developing guidelines for statewide dissemination to assist districts in serving the special populations in vocational education through cooperative and non-duplicative funding of services allowable through the Carl D. Perkins Vocational Education Act and the JTPA. Districts are encouraged to contact their local Private Industry Council for specific information about local JTPA programs.

Reference

Friedenberg, Joan, and Bradley, Curtis, "Bilingual Voc Ed," 1984. (Available from The National Center for Research in Vocational Education, Columbus, Ohio 43210)

Texas Education Agency, "Guidelines for Vocational Assessment of the Handicapped," 1980.

Texas Education Agency, "Vocational Assessment for the Handicapped Students," 1980. (Project conducted by Region XX Education Service Center, San Antonio.)

Texas Education Agency, "Vocational Assessment of Students with Special Needs: An Implementation Manual," 1982. (Available from Occupational Curriculum Laboratory, East Texas State University, Commerce, Texas 75428.)

Appendix A

STUDENT INTERVIEW
VOCATIONAL ASSESSMENT

DATE: _____

NAME _____ SCHOOL _____

AGE _____ GRADE _____ BIRTHDATE _____

INTERESTS AND ACTIVITIES:

1. What do you like to do most when you are not working or going to school?

SPORTS? _____ CLUBS, ORGANIZATIONS? _____ HOBBIES? _____

2. Do you have any jobs at home? _____ What? _____

3. What job(s) do you think you would like to do and be good at doing?

_____ Why? _____

EDUCATIONAL INTERESTS:

4. Would you like to enroll in a vocational program? _____ Which one? _____

5. Have you had any previous work training? _____ What? _____

6. What do you plan to do after high school?

College _____ Employment-Type of Job? _____
Military Service _____
Trade School _____ Other _____

OCCUPATIONAL AND CAREER AWARENESS:

7. What do employers look for when they hire someone?

8. What are some reasons people get fired from jobs?

9. What would an employer like about you? _____

_____ Not like? _____

STUDENT'S ATTITUDE AND SELF-KNOWLEDGE: Check the ones that best describe you.

MOST OF THE TIME	SOMETIMES	NEVER

- DEPENDABLE
- PUNCTUAL
- PATIENT
- EVEN-TEMPERED
- COMPLETES TASKS
- WELL-GROOMED
- LIKES TO WORK WITH OTHERS
- LIKES TO WORK ALONE
- LIKES TO LEARN SOMETHING NEW
- DOES DAILY CHORES/HANDLES RESPONSIBILITIES AT HOME

STUDENT'S PREFERRED WORKING CONDITIONS: Think carefully about the following work conditions. Each group lists conditions that are very different. Check the condition in each group that you prefer.

- | | | |
|---------------------------------|--------------------------------------|------------------------------|
| 1. <u> </u> INDOORS | <u> </u> OUTDOORS | <u> </u> BOTH |
| 2. <u> </u> WITH PEOPLE | <u> </u> WITH THINGS | <u> </u> WITH IDEAS |
| 3. <u> </u> MOVING AROUND | <u> </u> SITTING/STANDING STILL | <u> </u> BOTH |
| 4. <u> </u> BUSY PLACE | <u> </u> QUIET PLACE | <u> </u> BOTH |
| 5. <u> </u> WEAR UNIFORM | <u> </u> DRESS CLOTHES | <u> </u> CASUAL CLOTHES |
| 6. <u> </u> SAME TASK | <u> </u> DIFFERENT TASKS | <u> </u> BOTH |
| 7. <u> </u> UNSKILLED | <u> </u> SEMI-SKILLED | <u> </u> SKILLED |
| 8. <u> </u> SUPERVISED | <u> </u> UNSUPERVISED | <u> </u> BOTH |
| 9. <u> </u> DIRTY | <u> </u> NEAT AND CLEAN | <u> </u> BOTH |
| 10. <u> </u> ONE PLACE | <u> </u> TRAVEL | <u> </u> BOTH |
| 11. <u> </u> DAYTIME | <u> </u> NIGHTTIME | <u> </u> BOTH |
| 12. <u> </u> AROUND DANGER | <u> </u> SAFE PLACE | <u> </u> BOTH |

COMMENTS:

INTERVIEW: _____

Appendix B
PARENT INTERVIEW
VOCATIONAL ASSESSMENT

NAME OF STUDENT _____ SCHOOL _____
DATE _____ GRADE _____ BIRTHDATE _____ TEACHER _____
FATHER'S OCCUPATION _____
MOTHER'S OCCUPATION _____
NAME OF PARENT(S) _____
ADDRESS _____

I. EXPECTATIONS:

1. What do you see your child doing after high school? (Circle answer)

College _____ Employment-Type of Job? _____
Military Service _____
Trade School _____ Other _____

2. What kind of job or work does your child seem interested in at this time?

3. Has your child had any previous work training? (Training under parent, relative, friend)

4. What job skills would you like your child to learn in school?

5. What does your child like to do most when he/she is not working or going to school?

6. Are there vocational education courses you want your child to take while he/she is in school?

7. Are you aware of any behaviors that might interfere with your child's getting and holding a job?

II. STUDENT'S ATTITUDE: Check the ones that describe your child best.

MOST OF THE TIME	SOMETIMES	NEVER

- Dependable
- On time for appointments
- Patient
- Even-tempered
- Completes tasks
- Well-groomed
- Likes to work with others
- Likes to work alone
- Likes to learn something new
- Does daily chores/handles responsibilities at home

COMMENTS:

Appendix C

TEACHER INTERVIEW
VOCATIONAL ASSESSMENT

STUDENT'S NAME _____ SCHOOL _____
 TEACHER _____ DATE _____
 TAUGHT STUDENT _____ IN GRADE _____
 (Subject)

Most of the
Time
Some of the
Time
Never

I. PERSONAL CHARACTERISTICS - Related to work attitudes

- A. Appearance - Cleanliness of body, clothing, shoes; appropriate grooming--hair, make-up, shave, etc.
- B. Personal Habits and Manners - Appropriate use of manners. Does not interrupt others. Does not use loud or profane language.
- C. Attitude - Shows interest and enthusiasm for an assigned task. Accepts direction. Demonstrates a sense of loyalty.
- D. Industriousness - Demonstrates interest and initiative and enthusiasm. Stays on task.
- E. Effort - Works to the best of ability. Applies self to task at hand. Is cooperative, interested.
- F. Self-criticism - Realistically views own ability to do task; can see own shortcomings makes effort to improve.
- G. Criticism from Others - Accepts realistic criticism from peers and supervisors; attempts to improve. Wants to improve on required tasks.
- H. Self-concept - Feels good about self. Is realistic about personal strengths and weaknesses. Is self-confident; does not dwell on disabilities but tries to maximize strengths.
- I. Punctuality - Arrives on time for class and from breaks. Is on time for appointments.
- J. Attendance - Has appropriate attendance record.

	Most of the Time	Some of the Time	Never

II. INTERPERSONAL - Skills

- A. Social Skills-Personal - Pleasant, outgoing, friendly; has characteristics which help the student to be more acceptable to fellow workers/ students.
- B. Worker-Relationships - Ability to get along, fraternize, converse, integrate with teacher/ supervisor on a respectful plane.
- C. Cooperation-Attitude - Ability to work with others. Recognizes necessity of cooperation.
- D. Cooperation-Performance - Able to perform as a member of a team effort; works smoothly with others; cooperates with others.
- E. General Activity Level - Degree of excitability, motion, tenseness obvious most of the time. Ability to control actions within normal limits.
- F. Calmness with Change - Ability to accept changes in situation without becoming upset. Able to take directions, reprimands, suggestions without losing temper or showing emotional outburst or decrease in work production.
- G. Attention - Always pays close attention to work and directions. Ability to center attention toward the teacher or supervisor.

	Most of the Time	Some of the Time	Never

COMMUNICATION SKILLS

(circle one)

- A. Speech - (volume) soft moderate loud
(understandability) good poor: covers mouth with hand ___ low volume ___
speech impediment ___
- B. Eye Contact - generally present occasionally hardly ever none
- C. Comprehension of Language - (understanding) good average poor

VOCATIONAL BEHAVIOR CHECKLIST: PRELIMINARY SCREENING FOR PLACEMENT IN VOCATIONAL TRAINING AND JOB ENTRY

Lawrence T. McC , *Ph.D.*

NAME _____ AGE _____ SEX _____

TEACHER _____ GRADE _____

FIRST SEMESTER REPORT _____

SECOND SEMESTER REPORT _____ HOURS IN RESOURCE ROOM _____

MARK THE STATEMENT WHICH DESCRIBES THE STUDENT

	NEEDS EXTENDED REMEDIAL PROGRAM	TRIAL BASIS WITH REMEDIAL ASSISTANCE	READY FOR PLACEMENT
INTERPERSONAL RELATIONSHIPS Appearance & Mannerisms	Unkept appearance or annoying mannerisms.	Occasional inappropriate appearance or annoying mannerisms.	Appropriate appearance and mannerisms.
Interaction with Others	Inappropriate or aggressive interaction with others.	Interacts with a limited number of familiar persons.	Appropriately interacts with many different people.
DIRECTION FOLLOWING Instructional Procedures	Does not consistently follow directions.	Needs assistance in either oral or written instructions.	Follows both oral and written instructions.
Safety Standards	Disregard for safety of self and others.	Minimal infractions of safety or careless distractible behavior.	Follows standards of safe conduct.
SELF-RELIANCE Initiative	Requires direct, constant supervision to initiate and maintain performance.	Requires intermittent supervision or may not ask for help when needed.	Works independently and asks for help when needed.
Retention of Information	Requires structuring of tasks and directed prompting.	Occasionally needs repeated instructions and prompting.	Remembers task organization and initiates activity.
RESPONSIBILITY Reliability	Other persons have to assume responsibility for work.	Occasionally unreliable in assuming own responsibilities.	Maintains personal responsibility for materials and work.
Adherence to Standards	Flagrant violation of policies, work schedule and conduct.	Occasional infractions of policies and work schedule.	Adheres to policies and work schedule.
ADAPTABILITY Application of Skills	Unable to apply basic skills in learning vocational tasks.	Needs assistance in application of acquired skills to learn vocational tasks.	Can apply acquired basic skills to learn vocational tasks.
Flexibility	Changes in work or environment result in substantial reduction in productivity.	Has some initial difficulty accommodating to changes in work or environment, with temporary reduction in productivity.	Accommodates to change in work or environment and maintains productivity.

APPENDIX D

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	NEEDS EXTENDED REMEDIAL PROGRAM	TRIAL BASIS WITH REMEDIAL ASSISTANCE	READY FOR PLACEMENT
WORK STABILITY Focused Attention	Environmental stimuli disrupts and discontinues performance.	Environmental distractors temporarily interrupt performance.	Maintains work performance despite environmental distractions.
Persistence	Lacks determination. Unable to persist at a task until completed.	Occasional encouragement needed to persist on and complete task.	Able to sustain work performance until completed.
LEARNING CAPACITY Productiveness	Performs work at an extremely slow rate and unable to complete task within specified time frame.	Inconsistent rate of work performance. Productivity varies from task to task.	Performs work at an acceptable rate.
Quality	Consistently poor quality of work (i.e. sloppiness, incomplete, frequent errors).	Inconsistent quality of work. (i.e. one area of work completed well, while another poorly done).	Consistently good quality of work; few errors.
RESPONSE TO TRAINING Accepts Supervision	Rejects and is resistant to suggestions and corrections.	Accepts suggestions, but may be resistant to corrections.	Accepts and responds to suggestions and corrections.
Improvement of Skills.	Work skills show little or no improvement with training.	Work skills show some, but inconsistent improvement with training.	Work skills show noted and consistent improvement with training.
STRESS TOLERANCE Emotional Stability	Becomes easily upset, emotionally distressed and disorganized.	Occasionally becomes emotionally upset, but able to regain calm composure and resume work.	Remains emotionally calm even under stress.
Impulse Control	Impatient, unable to wait turn, acts without anticipating consequences of behavior.	Occasionally becomes impatient or does not wait turn. Is able to regain self-control.	Consistent, predictable behavior. Adequate self-control.
WORK ATTITUDE Work Satisfaction	Disgruntled and dissatisfied with the work/and environment.	Has a neutral, undeveloped attitude toward the work and environment.	Finds pleasure and satisfaction in the work and environment.
Self-image	Has a negative, demeaning self-image and pessimistic outlook.	Has an indifferent self-image and undefined outlook.	Has a positive self-image and optimistic outlook.

Developed by Lawrence T. McCarron, Ph.D, as a part of a program improvement project under contract to the Department of Occupational Education and Technology, the Texas Education Agency.

Combination Interest and General Aptitude

Title	Author/Publisher	Cost	Purpose and Target Group	Format	Length	Comments
APTICOM Individual	Vocational Research Institute Jewish Employment and Vocational Services, 1700 Samson Street, Philadelphia, PA (215) 893-5911	\$4,640	Measures the same aptitudes as the GATB; assesses interests and develops an aptitude-interest interaction report	Computer generated testing format weighing approximately 27 lbs. Self-scoring	45 minutes	Sales representative in Texas is James E. Anderson, 10157 D Cashel Street, Baton Rouge, LA 70815, (504) 926-4091. Is being used extensively with the Job Training Partnership Act
Valpar Micro-Computer Evaluation and Assignment (MESA) Individual or Group	Valpar Corporation, 3801 East 34th Street, Tucson, AZ 85713 (602) 790-7141	\$10,100	Vocational screening and assessment compares performance to D.O.T. qualifications	Hands-on computer activities	3.5 hours	Computer generated reports with evaluative summary; cost quoted is for 4 work stations, complete package including computer
Occupational Aptitude Survey and Interest Schedule (OASIS)	PRO-ED, 5341 Industrial Oaks Boulevard, Austin, TX 78735 (512) 892-3142	\$93	Aptitude and interest assessment; sixth grade reading level	Paper and pencil format using test booklet and answer sheets	90 minutes	Cost and length of test include both the aptitude and interest portions; these sections may be obtained separately on a 30-day trial basis available

Aptitude

Title	Author/Publisher	Cost	Purpose and Target Group	Format	Length	Comments
McCarron-Dial Evaluation System Individual	McCarron-Dial Systems, Inc., P. O. Box 45628, Dallas, TX 75245 (214) 247-5945	\$1250	Assess a variety of functional abilities; can be used with non-readers and low IQ individuals (MR)	Assessment consists of three broad components: 1. Paper and pencil 2. Visual discrimination 3. Gross motor testing	3-4 hours	Training is required; computer software and adaptation for the visually impaired is available
Skills Assessment Module (S.A.M.)	Piney Mountain Press, Inc. Box 333 Cleveland, GA 30528	\$1995	Assesses students' manipulative and cognitive strengths	Hands-on activities using skill modules	90 minutes	Sales representative in Texas is the Education Connection 12597 Montego Plaza Dallas, TX 75230 (214) 999-5252
Career Ability Placement Survey (CAPS) Individual or Group	Educational Industrial Testing Service, P. O. Box 7234, San Diego, CA 92107 (619) 222-1666	\$54	Measurement of aptitudes keyed to entry requirements of jobs in 14 occupational clusters; 8th grade up	Paper and pencil testing format	40 minutes	Good reading skills required; price includes 30 self-scoring answer booklets

Interest Inventories

Title	Author/Publisher	Cost	Purpose and Target Group	Format	Length	Comments
Becker Reading Free Vocational Interest Inventory Individual or Group	Elbern Publish. Columbus, Ohio (614) 235-2643	\$24	Identify areas of vocational interest at the non-skilled and semi-skilled level	Nonreading, picture format; student identifies pictures of certain jobs	20 minutes	1981 revisions combine test for both sexes. Price quoted includes 20 test booklets. Sample sets are available
California Occupational Preference Systems (COPS) Individual or Group	Educational and Industrial Service, P. O. Box 7234, San Diego, CA 92107 (619) 222-1666	\$36.25	Assist in career decision making at junior high school age and above	168 items; student indicates a like or dislike of the jobs represented	30 minutes	Client scoring format available; price quoted includes 100 answer sheets and 25 reusable books
Career Assessment Survey Exploration (CASE) Individual or Group	America Assessment Corporation P. O. Box 1125 Gardendale, AL 35071 (205) 631-3339	\$430	Occupational interest inventory; age 14 and above	Audio/visual presentation	45 minutes	Distributed in Texas by Bonnie Krause (214) 991-5252; price includes audio/visual materials
Pictorial Inventory of Careers (PIC) Individual or Group	Talent Assessment P. O. Box 5087 Jacksonville, FL 32247-5087	\$495	Interest assessment correlated to D.O.T.	35mm filmstrip and cassette hand scoring necessary	20 minutes	Sales representative in Texas is the Education ConneXtion 12597 Montego Plaza Dallas, TX 75230 (214) 999-5252

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Appendix F

PROFILE FOR SPECIAL NEEDS STUDENTS
(Summary)

Level I

Name _____ Birthdate _____ Grade _____ Sex _____

School _____ Attendance _____

Cumulative Data

Academic Performance _____ Grade Level _____ Below Grade Level _____

Teams Test _____ Math _____ Reading _____ Writing
 _____ Composition _____ Aggregate _____ Percentile Rank

Other Assessment Scores _____

Interview and Observation

STRENGTHS

LIMITATIONS

Personal Characteristics:	Personal Characteristics:
Interpersonal Skills:	Interpersonal Skills:
Career Awareness:	Career Awareness:
Student Attitude:	Student Attitude:
Vocational Behaviors:	Vocational Behaviors:
Physical:	Physical:
Interests:	Interests:

Level II

Interests:

Aptitude:

STRENGTHS

LIMITATIONS

General Learning Ability:	General Learning Ability:
Verbal:	Verbal:
Numerical:	Numerical:
Perception (Spacial, form, clerical):	Perception (Spacial, form, clerical):
Motor Coordination:	Motor Coordination:
Eye Hand Coordination:	Eye Hand Coordination:
Dexterity:	Dexterity:

Recommendations:

Comprehensive Analysis of A Vocational Training Program

Vocational Program Title: _____

Location: _____

Teacher: _____

I. Occupational Cluster

Match the program to an Occupational Cluster. Circle the cluster which best describes the job.

1. Professional, Technical and Managerial Occupations
2. Clerical and Sales Occupations
3. Service Occupations
4. Agricultural, Fishery, Forestry, and Related Occupations
5. Processing Occupations
6. Machine Trades Occupations
7. Bench Work Occupations
8. Structural Work Occupations
9. Miscellaneous Occupations

.II. Unpleasant Working Conditions

Rate each working condition as applied to the vocational/training program. Mark an "X" in the space which best describes the working conditions.

	Continuous Exposure 76-100%	Extensive Exposure 51-75%	Intermittent Exposure 16-50%	Rare Exposure 1-15%	No Exposure 0%
1. Hazardous					
2. Loud Noises					
3. Vibrations					
4. Intense Light					
5. Hi/Lo Temp.					
6. Fumes					
7. Odors					
8. Toxic Materials					
9. Dust or Lint					
10. Poor Ventilation					

NOTE: The percent refers to the amount of time each program is involved in a particular condition or skill. For example, if the program is not hazardous at any time, it is marked in the No Exposure 0%; while a program that exposes the worker to loud noises a little more than half the time is marked in the space Extensive Exposure 51-75%.

III. Job Characteristics

Mark an "X" in the space which best describes the characteristics of the vocational training program.

	Continuous 76-100%	Extensive 51-75%	Intermittent 16-50%	Minimal 1-15%	None 0%
DATA					
1. Money Transactions					
2. Measurement/Gages					
3. Weights/Scales					
4. Calculations					
5. Applied Reading Skills					
PEOPLE					
6. Working Around Others					
7. Supervised by Employer					
8. Co-worker Teamwork					
9. Customer Interaction					
10. Directing Work of Others					
THINGS					
11. Production Stress					
12. Precision/Quality Control					
13. Short Term Task Repetition					
14. Self-control of Work Pace					
15. Cleanliness					

IV. Sensory Capacity

Mark an "X" in the space which best describes the sensory capacities needed to perform the vocational training program.

	Continuous 76-100%	Extensive 51-75%	Intermittent 16-50%	Minimal 1-15%	None 0%
1. Visual Discrimination					
2. Color Vision					
3. Spatial/Form Perception					
4. Tactile (touch) Sensitivity					
5. Hearing/Talking					

VOCATIONAL SUPPORT SERVICES FOR HANDICAPPED STUDENTS IN VOCATIONAL PROGRAMS

Student's Name _____ Grade Level _____ Adult _____
 Age _____

Based on vocational interest and aptitude assessment data, this student is recommended for placement in the following vocational program area:

- | | | | |
|---|--|---|---|
| <input type="checkbox"/> Agriculture | <input type="checkbox"/> Marketing and
Distributive Education | <input type="checkbox"/> Consumer and
Homemaking Education | <input type="checkbox"/> Health Occupations |
| <input type="checkbox"/> Occupational Home
Economics Education | <input type="checkbox"/> Industrial Arts | <input type="checkbox"/> Office Education | <input type="checkbox"/> Occupational Orientation |
| | | | <input type="checkbox"/> Industrial Education |

Instructional arrangements: Regular Program CVAE VEH

Specific Class: _____

Characteristic of Student

Vocational assessment data show deficits in the following areas:

- Communication skills
- Reading
- Writing
- Composition
- Math skills
- Vocational behaviors
- Work attitudes
- Career awareness
- Is below grade level
- Other (describe)

Support Services Needed

Items checked are the programs or services necessary for the student to succeed in the program:

- Specialized vocational counseling
- Extended community involvement
- Use of teacher aides
- Tutorial services and assistance
- Integration of basic education and vocational subject matter
- Team teaching in vocational programs
- Curriculum modification (implementation, not development)
- Adaptations in the career/employment goals for individual students
- Changes in the rules regarding
 - a. time allowed to complete a course or program
 - b. time spent in the lab or classroom
- Changes in the course of study in an individual student's program
- Changes in the way program accomplishments are reported
- Programmed and individualized instruction
- Special teachers
- Special teachers for job readiness (prevocational) instruction
- Arrangements for transportation
- Specialized equipment
- Other (describe)

Check modifications of courses necessary for student participation.

- Changes in reading requirements
- Changes in listening requirements
- Changes in math requirements
- Changes in the methods of instruction
- Changes in the pace of the instruction
- Changes in the sequence of topics
- Changes in tools, equipment, or machinery used in the classroom
- Changes in the classroom environment
- Changes in project or report requirements
- Changes in the way tests are given

V. Physical Capacity

Mark an "X" in the space which best describes the physical demands of the vocational training program.

	Continuous 76-100%	Extensive 51-75%	Intermittent 16-50%	Minimal 1-15%	None 0%
1. Use of Both Hands					
2. Hand Strength					
3. Eye-Hand Coordination					
4. Finger Dexterity					
5. Prolonged Sitting					
6. Standing/Walking					
7. Lifting/Carrying					
8. Balancing/Climbing					
9. Total Body Coordination					
10. Physical Endurance					

VI. Educational Requirements

Circle the educational requirements which apply:

- 0. Reading and math skills not required.
- 1. Third grade reading and math skills.
- 2. On-the-job training without completing high school.
- 3. High school diploma or G.E.D.
- 4. Vocational technical training.
- 5. College degree.

Developed by Lawrence T. McCarron, Ph.D. and Harriette Spires as part of a program improvement project under contract to the Department of Occupational Education and Technology, Texas Education Agency.

VOCATIONAL SUPPORT SERVICES FOR DISADVANTAGED STUDENTS IN VOCATIONAL PROGRAMS

Student's Name _____ Grade Level _____ Adult _____
 Age _____

Based on vocational interest and aptitude assessment data, this student is recommended for placement in the following vocational program area:

- | | | | |
|---|--|---|---|
| <input type="checkbox"/> Agriculture | <input type="checkbox"/> Marketing and
Distributive Education | <input type="checkbox"/> Consumer and
Homemaking Education | <input type="checkbox"/> Health Occupations |
| <input type="checkbox"/> Occupational Home
Economics Education | <input type="checkbox"/> Industrial Arts | <input type="checkbox"/> Office Education | <input type="checkbox"/> Occupational Orientation |
| | | | <input type="checkbox"/> Industrial Education |

Instructional arrangements: Regular Program CVAE

Specific Class: _____

Characteristic of Student

Vocational assessment data show deficits in the following areas:

- Communication skills
- Reading
- Writing
- Composition
- Math skills
- Vocational behaviors
- Work attitudes
- Career awareness
- Is below grade level
- Other (describe)

Support Services Needed

Items checked are the programs or services necessary for the above disadvantaged student:

- Specialized vocational counseling
- Use of teacher aides
- Tutorial services and assistance
- Integration of basic education and vocational subject matter
- Team teaching in special vocational education programs
- Curriculum modification (implementation, not development)
- Programmed and individualized instruction
- Special teachers
- Work study arrangements
- Reduction of student-teacher ratio in special classes (CVAE)
- Arrangements for transportation
- Specialized instruction material and equipment
- Other (describe)

Describe How Services Are To Be Provided

VOCATIONAL SUPPORT SERVICES FOR STUDENTS WITH LIMITED ENGLISH PROFICIENCY

Student's Name _____ Grade Level _____ Adult _____
 Age _____

Based on vocational interest and aptitude assessment data, this student is recommended for placement in the following vocational program area:

- | | | | |
|---|--|---|---|
| <input type="checkbox"/> Agriculture | <input type="checkbox"/> Marketing and
Distributive Education | <input type="checkbox"/> Consumer and
Homemaking Education | <input type="checkbox"/> Health Occupations |
| <input type="checkbox"/> Occupational Home
Economics Education | <input type="checkbox"/> Industrial Arts | <input type="checkbox"/> Office Education | <input type="checkbox"/> Occupational Orientation |
| | | | <input type="checkbox"/> Industrial Education |

Instructional arrangements: Regular Program CVAE

Specific Class: _____

Characteristic of Student

- Native tongue is not English.
- English is not the dominant language in the home.
- Student has difficulties speaking and understanding instruction in the English language.

Vocational assessment data show deficits in the following areas:

- Communication skills
 - Reading
 - Writing
 - Composition
- Math skills
- Vocational behaviors
- Work attitudes
- Career awareness
- Is below grade level
- Other (describe)

Support Services Needed

Items checked are the programs or services necessary for the above disadvantaged student:

- Specialized vocational counseling
- Interpreters (including peers)
- Use of teacher aides
- Tutorial services and assistance
- Integration of basic education and vocational subject matter
- Team teaching in special vocational education programs
- Curriculum modification (implementation, not development)
- Programmed and individualized instruction
- Special teachers
- Work study arrangements
- Reduction of student-teacher ratio in special classes (CVAE)
- Arrangements for transportation
- Specialized instruction material and equipment
- Other (describe)

Describe How Services Are To Be Provided

VIII-35

APPENDIX K

SELECTED SOURCES OF BILINGUAL AND NON-ENGLISH VOCATIONAL MATERIALS

<u>Source</u>	<u>Vocational Areas</u>	<u>Language(s)</u>
Bilingual Publications Company 1966 Broadway New York, NY 10023	Air conditioning and refrigeration, auto mechanics, business education, commercial correspondence, electronics, health occupations, home economics, TV and radio repair	Spanish
Brolet Press 18 John Street New York, NY 10038	Electronics	Creole Portuguese Spanish
Chilton Book Company Radnor, PA 19089	Auto mechanics	Spanish
European Book Company 925 Larkin Street San Francisco, CA 94109	Agribusiness, air conditioning and refrigeration, auto mechanics, construction, data processing, electronics, health occupations, sewing, TV and radio repair, vocational teacher education	Spanish
Haffernan's Supply Company 926 Fredericksburg Road Box 5309 San Antonio, TX 78201	Accounting, agribusiness, auto mechanics, commercial correspondence, construction, data processing, drafting, electronics, TV and radio repair	Spanish
Lab Volt Systems P. O. Box 686 Farmingdale, NJ 07727	Electricity and electronics	Multilingual
McGraw Hill 1221 Avenue of Americas New York, NY 10022	Business education, drafting, machine shop, welding	Spanish

<u>Source</u>	<u>Vocational Areas</u>	<u>Language(s)</u>
Milady Publishing Corporation 3839 White Plains Road Bronx, NY 10467	Cosmetology	Spanish
Minerva Book Company 137 West 14th Street New York, NY 10011	Air conditioning and refrigeration, auto mechanics, business education, health occu- pations, TV and radio repair	Spanish
Quality Book Company 400 Anthony Trail Northbrook, IL 60062	Auto mechanics, con- struction, electronics, TV and radio repair	Spanish
Richards Rosen Press 29 East 21st Street New York, NY 10010	Employability skills	Spanish
South-Western Publishing Company Dpto. de Ediciones en Espanol 5101 Madison Road Cincinnati, OH 45227	Business education, health occupations, industrial arts	Spanish
The French & Spanish Book Corporation 619 Fifth Avenue New York, NY 10020	Agriculture, auto repair, business education, carpentry construction, cosmetology, data pro- cessing, electricity, electronics, graphics arts, health occupations, heating, home economics, hotel and restaurant, photography, printing, real estate, radio and TV repair, refrigeration	French

UNITED STATES DEPARTMENT OF EDUCATION
THE SECRETARY



APR 14 1986

APR 18 1986

Honorable Augustus P. Hawkins
Chairman
Committee on Education and Labor
House of Representatives
Washington, D.C. 20515

RECEIVED

APR 30 1986

SPECIAL NEEDS

Dear Mr. Chairman:

Thank you for your letter of January 23, 1986, regarding whether vocational education or special education personnel are responsible under section 204(c)(1) of the Carl D. Perkins Vocational Education Act for an assessment of a handicapped student's vocational education needs. I am sorry for the delay in responding.

Section 204(c)(1) requires that each handicapped student who enrolls in vocational education programs receive an "assessment of the interests, abilities and special needs of such student with respect to completing successfully the vocational program." The Department's program regulation, in 34 C.F.R. § 401.101(b), which was published on August 16, 1985, provides that it is the responsibility of a local educational agency to perform a needs assessment of handicapped students enrolled in vocational education programs.

The Act does not specify who is required to conduct the assessment under section 204(c)(1), nor does it require or preclude special education or vocational education personnel from doing so. We also note that the needs assessments, special services, and counseling required under section 204(c) apply to disadvantaged individuals as well as to handicapped individuals. By not specifying who is to conduct these activities, we believe Congress contemplated that the local educational agency have the flexibility to provide appropriate assessments for individual students.

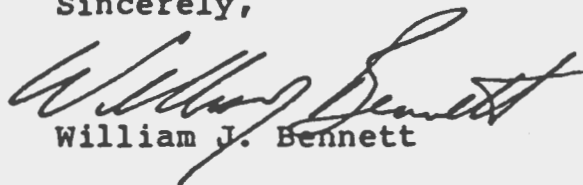
This is supported by both the language of section 204 of the statute and its legislative history which emphasize coordination between vocational education and special education. Section 204(a)(3)(A) requires a State to assure that vocational education programs for the handicapped be included as a component of the individualized education plan

(I.E.P.) required under the Education of the Handicapped Act, whenever appropriate. In addition, section 204(a)(3)(B) requires the State to assure that vocational planning for handicapped individuals will be coordinated between appropriate representatives of vocational education and special education. Section 401.19(a)(18)(ii)(B) and (C) of the governing regulations also requires these assurances. Similarly, the committee report accompanying the Senate bill, S. 2341, from which section 204 is derived, states that a representative of vocational education should participate in the development of the I.E.P., and that vocational education and special education should cooperate so that they "will not be seen as separate preserves." S. Rep. 98-507 at 17-18.

Thus, it appears that coordination, where appropriate, between special education and vocational education to address the needs of handicapped students was a major concern of the Senate committee. Accordingly, once a student chooses to enroll in vocational education, the needs assessment, special services, and counseling required under section 204(c) should be conducted by the personnel best qualified to provide such services, taking into account the vocational component already included in the I.E.P. developed by both vocational education and special education personnel. Collaborative efforts would help to ensure that vocational education not repeat assessments already conducted and that compliance with requirements under the Carl D. Perkins Vocational Education Act and the Education for the Handicapped Act is achieved.

We appreciate your concern about this issue, which is important to the implementation of the Carl D. Perkins Vocational Education Act. If you need further information, please contact Dr. LeRoy Cornelsen, Director, Division of Vocational Education, at 732-2441.

Sincerely,



William J. Bennett

VAH Appendix A-3

OVERVIEW OF SCR 129*

A. Agencies Involved:

1. Texas Rehabilitation Commission
2. Texas Education Agency
3. Texas Department of MHMR

B. Purpose : To assure that a transitioning process is available for persons with disabilities, enabling those persons to achieve maximum independence.

C. Basic Goals:

1. To provide a continuous flow of services to persons with mental retardation.
2. To prevent duplication of services, barriers to services, and inefficiencies in delivery of services.
3. To share diagnostic information in order to streamline entry into services and represent a cost savings to the state.
4. To provide transition from the education system to the various services of the other agencies.
5. To improve coordination of their services.
6. To initiate joint agreements concerning educational, vocational and other services.

D. Agency Responsibilities:

1. To jointly develop a strategic plan, including:
 - a. Designating individuals needing transition services as a priority population.

* Source: Atwood, T. & Young, D. (1987, October 1). Conjoint diagnostic training manual: For use by TDMHMR facilities and community centers, Texas Rehabilitation Commission, and Texas Education Agency (Draft).

- b. Developing a coordinated process for screening, identification and referral, non-duplicative diagnostics and evaluation, and coordinated staffings for the purpose of developing an Individual Transition Plan.
 - c. Jointly developing a process for implementing an Individual Transition Plan for the person at the earliest appropriate age.
 - d. Developing, implementing and monitoring a plan for inter-agency cost sharing to maximize the provision of transition of services.
 - e. Developing and implementing a process to share information in a manner that maintains the confidentiality of personally identifiable information.
 - f. Developing a process and committing resources for the provision of in-service training within the cooperating agencies.
2. The Agency's responsibilities are accomplished through a state-wide Steering Committee and through local Steering Committees.

Vocational Assessment Handbook (VAH)

Appendix B

- B-1 Table 1: Instruments Which May Be Useful for Level II Vocational Assessment of Handicapped Students.
- B-2 Table 2: Work Samples Which May Be Useful for Level III Assessment of Handicapped Students.
- B-3 Alphabetical Listing of Career Assessment Instruments By Category and Level of Use.

VAH Appendix B-1

Source: Kapes, J. T., & Parrish, L. H. (1983). Career guidance and assessment tools for handicapped persons. In R. C. Rodgers (Ed.) Measurement trends in career and vocational education (pp. 47-61). San Francisco: Josey-Bass.

TABLE I

Instruments Which May Be Useful for Level II Vocational Assessment of Handicapped Students

<u>Type/Name</u>	<u>Publisher</u>	<u>Description & Comments on Use</u>
<u>Aptitude/basic Skill</u>		
Adult Basic Learning Exam (ABLE)	The Psychological Corporation	Measures learning ability of non-completing high school students. Gives scores for vocabulary, reading, spelling and arithmetic. High school-adults.
Appraisal of Occupational Aptitudes	Riverside Publishing Company	Used for selection and counseling regarding business and office careers. Grade 9-adults.
Basic Occupational Literacy Test (BOLT)	U.S. Government Printing Office	Assesses basic skills in reading comprehension, vocabulary, arithmetic computation and reasoning. Grades 1-11.
Bennett Hand-Tool Dexterity Test	The Psychological Corporation	Measures manual dexterity and gross motor coordination while using tools. High school-adults.
Career Ability Placement Survey (CAPS)	Educational and Industrial Testing Service (EdITS)	Measures abilities keyed to entry requirements for the majority of jobs within 14 occupational clusters. Grades 7-adults.
Clerical Skills Series	Martin M. Bruce Publishers	Reports scores on clerical skills such as filing and punctuation. Clerical workers and applicants.
Comprehensive Ability Battery	Institute of Personality and Ability Testing	Twenty sub-tests some of which include rote memory, spelling, originality, and mechanical ability. Ages 15-over.
Crawford Small Parts Dexterity Text	The Psychological Corporation	Measures fine finger dexterity and eye-hand coordination while manipulating tweezers and pins. High school and adults.
Dailey Vocational Tests	Riverside Publishing Company	Examines potential for a wide range of occupations in trade, technical, and business-secretarial fields. Grade 8-adults.
Differential Aptitude Test (DAT)	The Psychological Corporation	Designed for educational and vocational guidance in Jr. and Sr. high schools. Nine scores include mechanical reasoning and space relations. Grades 8-12.
Flanagan Industrial Tests	Science Research Associates, Inc.	Eighteen short tests which include assembly, electronics, and vocabulary. Seven tests are entry level specific. Non-college adults.
General Aptitude Test Battery (GATB)	U.S. Government Printing Office	Measures nine major aptitudes required for occupational success. Used by U.S. Employment Service. Grades 9-12 and adults.
Minnesota Clerical Test	The Psychological Corporation	A test of speed and accuracy in performing tasks such as number and name checking. Grades 8-12 and adults.
Minnesota Rate of Manipulation Test	American Guidance Service, Inc.	Assesses arm-hand dexterity. Requires placement, turning and displacing of cylinders into holes. Grades 7-adults, plus norms for blind persons.
Minnesota Spatial Relations Test	American Guidance Service, Inc.	Requires the transfer of 58 blocks of assorted sizes and shapes from one board to another. Ages 11 and over.
Nonreading Aptitude Test Battery (NATB)	U.S. Government Printing Office	A non-reading alternative to the GATB. Useful in vocational counseling with educationally deficient students. Grade 9-adults.

TABLE I (Continued - P. 2)

<u>Type/Name</u>	<u>Publisher</u>	<u>Description & Comments on Use</u>
O'Connor Finger Dexterity Test	Stoelting Company	Assesses motor coordination and manual dexterity. Metal pins are inserted in holes as rapidly as possible. Ages 14 and over.
O'Connor Tweezer Dexterity Test	Stoelting Company	Assesses motor coordination and manual dexterity. Metal pins are inserted in holes with use of tweezers. Ages 14 and over.
Pennsylvania Bi-Manual Worksample	American Guidance Service, Inc.	Requires assembly and disassembly of nuts and bolts as it measures hand and finger dexterity. Ages 16 and over.
Purdue Pegboard	Science Research Associates, Inc.	Measures manual dexterity using a board, pins, washers and collars. Grades 9-adults.
Short Occupational Knowledge Tests	Science Research Associate, Inc.	Twelve Tests measure content knowledge in such occupations as carpenter, secretary, and welder. Adults.
Short Test of Clerical Ability	Science Research Associate, Inc.	Measures seven areas associated with clerical work for use in job placement. Applicants for office positions.
SRA Test of Mechanical Concepts	Science Research Associate, Inc.	Used to evaluate for hire, promotion or training for mechanical jobs such as assembler or machinist. Grades 8-adults.
Stromberg Dexterity Test	The Psychological Cooperation	Assesses speed and accuracy of arm and hand movement. Used by trade schools with adults.
Tests of Adult Basic Education (TABE)	CTB/McGraw-Hill	Establishes a level at which instruction should begin in basic skills. Analyzes the needs of adults who wish to pursue vocational training or general literacy study. Adults.
Word and Number Assessment Inventory	NCS Interpretive Scoring System	Measures verbal and mathematical ability and compares them with educational and occupational groups. Grades 9-adults.
<u>Interests/Work Values</u>		
AAMD-Becker Reading-Free Vocational Interest Inventory	American Association on Mental Deficiency	A non-reading vocational preference inventory for mentally retarded people at the unskilled and semiskilled levels. High school EMR.
Applied Biological and Agribusiness Interest Inventory	Interstate Printers & Publishers, Inc.	Identifies students with high interest in vocational agriculture fields. Grade 8.
California Life Goals Evaluation Schedules	Western Psychological Services	An inventory based on ten career value areas such as fame, security, and independence. Ages 15 and over.
California Occupational Preference System (COPS)	Educational & Industrial Testing Service (EdITS)	Measures job activity interests in 14 general interest areas such as outdoor, clerical and arts. Middle school-adults.
Career Assessment Inventory (CAI)	NCS Interpretive Scoring Systems	An interest inventory that compares interests to those of workers in occupations requiring less than a college education. Grade 8-adults.
Career Guidance Inventory	Educational Guidance, Inc.	Designed for counseling students with interests in trades, services and technology. Grades 7-13.
Career Orientation Placement and Evaluation Survey (COPES)	Educational & Industrial Testing Service (EDITS)	Measurement of personal values representing the vocational motivation or value domain. Grades 7-12, college, and adults.

TABLE I (Continued P. 3)

<u>Type/Name</u>	<u>Publisher</u>	<u>Description & Comments on Use</u>
Geist Picture Interest Inventory	Western Psychological Service	Uses pictures to obtain 11 interest scores such as mechanical or literary and seven motivational scores such as prestige and environmental. Male and female versions.
Geist Picture Interest Inventory (Deaf Form)	Western Psychological Service	Reports 10 interest scales omitting musical from the original Geist instrument. Deaf and hard of hearing males, grades 7-16 and adults.
Gordon Occupational Check List	The Psychological Corporation	An interest checklist covering 240 jobs not requiring college training. Grades 8-adults.
Hall Occupational Orientation Inventory	Scholastic Testing Service, Inc.	An instructional package in a measurement format. Aids in recognizing occupational values and needs. Grades 3-college and reading handicapped adults.
Harrington-O'Shea Career Decision-Making System	American Guidance Service, Inc.	A self-assessment and interest inventory that provides detailed occupational information. Grade 7-adults.
How Well Do You Know Your Interests	Edupac, Inc.	Collects information about students likes and dislikes of jobs, activities, people, and things. High school and college.
Interest Determination, Exploration and Assessment System (IDEAS)	NCS Interpretive Scoring System	A self-contained, self-scoring interest inventory consisting of 14 scales such as electronics, science, writing and sales. Grades 6-12.
Jackson Vocational Interest Survey	Research Psychologists Press, Inc.	Consists of 34 basic interest scales that assist in college and career planning. High school-adults for college level careers.
Job Attitude Scale	Shoukry D. Sahel	Deals with 17 intrinsic and extrinsic factors in job satisfaction and motivation such as salary and recognition. Adults.
Judgement of Occupational Behavior-Orientation (JOB-O)	CFKR Career Materials, Inc.	Assists in narrowing job titles to those that best match personal needs through preference testing. Grade 7-adults.
Kuder General Interest Survey (Form E)	Science Research Associates, Inc.	Measures 10 broad vocational interests such as outdoor, mechanical, and artistic for use in counseling and career exploration. Grades 6-12.
Kuder Occupational Interest Survey (FORM DD)	Science Research Associates, Inc.	Measures 126 occupational scales and 48 college major scales for use in counseling college bound. Grade 11-adults.
Minnesota Importance Questionnaire (MIQ)	Vocational Psychology Research	Measures 20 psychological needs relevant to work satisfaction. Ages 16 and over.
Missouri Occupational Card Sort	Career Planning and Placement Service	Expands the range of occupations being considered and encourages further career exploration. Grades 11-adults.
Missouri Occupational Preference Inventory	Human Systems Consultants, Inc.	A card sort which assists in exploring career options and understanding career choice. High school-adults.
Non-Sexist Vocational Card Sort	NSVCS	A card sort which explores feeling and values which limit the options that vocational clients perceive as being open to them. High school-adults.
OCC-U-Sort	Publishers Test Service	A card sort designed to stimulate career exploration, examine motives for occupational choice and broaden career options. Junior high school-adults.

TABLE I (Continued P. 4)

<u>Type/Name</u>	<u>Publisher</u>	<u>Description & Comments on Use</u>
Ohio Vocational Interest Survey (OVIS II)	The Psychological Corporation	Consists of 23 scales based on data, people and things such as agriculture and medical. To assist students with vocational planning. Grade 8-adults.
Picture Interest Exploration Survey	Education Achievement Corporation	A career interest inventory using 156 slides. Includes 13 areas such as office and construction work using workers' hands in each slide. Grades 7-12.
Self Description Inventory	NCS Interpretive Scoring Systems	Relates 11 personality scales to career choice. Holland's six types are used. Grades 9-adults.
Self Directed Search (SDS)	Consulting Psychologists Press, Inc.	A self administered, scored and interpreted vocational counseling tool that encourages the exploration of careers. Junior high school-adults.
Strong-Campbell Interest Inventory (SCII)	Stanford University Press	Provides a comparative measure of one's interest to people in general and people in a wide variety of professional occupations. Grade 8-adults.
Temperament and Values Inventory (TVI)	NCS Interpretive Scoring Systems	Temperament scales describe how one reacts in various situations while the reward values scale measures what parts of a job may be rewarding. Grades 9-adults.
USES Interest Inventory	U.S. Government Printing Office	Provides measures of occupational interest in occupations that have been classified in the USES Guide for Occupational Exploration. High school-adults.
Vocational Exploration and Insight Kit	Consulting Psychologist Press, Inc.	Uses a card sort to encourage self exploration. Based on Holland's Self Directed Search. High school-adults.
Vocational Interest, Experience and Skill Assessment (VIESA)	The Riverside Publishing Company	Develops self awareness while exploring over 650 career options. Grades 8-12.
Vocational Interest and Sophistication Assessment	O.S.U. Nisonger Center	A reading free picture instrument that measures one's interest and knowledge about unskilled and semi-skilled jobs. Mildly retarded adolescents-adults.
Wide Range Interest-Opinion Test (WRIOT)	Jastak Associates, Inc.	Determines interests and attitudes about jobs regardless of age, sex, mental ability, cultural background or educational level. Age 5-adults.
What I Like to Do	Science Research Associates, Inc.	Helps children identify interests, curricular and career preferences. Grades 4-7.
Work Values Inventory (WVI)	The Riverside Publishing Co.	Self report inventory designed to measure 15 satisfactions (values) that people seek in their work. Grades 7-12-adults.
<u>Work Adjustment Competencies</u>		
AAMD Adaptive Behavior Scale	American Association of Mental Deficiency	Assesses the effectiveness of an individual in coping with the natural and social demands of the environment. Primarily for mentally retarded.
Career Awareness Inventory	Scholastic Testing Service, Inc.	Assesses overall occupational awareness and evaluates the effectiveness of instructional programs. Elementary-high school.
Career Decision Scale	Marathon Consulting & Press	An 18 item rating scale designed to identify barriers preventing one from making career decisions. Grades 9-college.
Career Development Inventory (CDI)	Consulting Psychologists Press,	Assesses the readiness to make pre-occupational and vocational decision in terms of attitudes, knowledge and skills. Junior high school-college.

TABLE I (Continued P. 5)

<u>Type/Name</u>	<u>Publisher</u>	<u>Description & Comments on Use</u>
Career Education Readiness Test	Career Education Readiness Measurement & Research	Measures knowledge and attitude regarding vocational concepts such as work vocabulary and sex role stereotyping. Grades K-6.
Career Maturity Inventory (CMI)	CTB/McGraw-Hill	Consists of five competence scales and an attitude scale that provides information important for mature career decision-making. Grades 6-12.
Career Skills Assessment Program (CSAP)	The College Board	Evaluates the extent to which students have mastered fundamental career development principles. Grade 9-adults.
Employment Readiness Scale	Anthony M. Alfano	Measures a person's readiness for work by assessing work values. Beneficial for un, semi or skilled work settings. High school-adults.
Experience Exploration	Chronicle Guidance	A career decision model based on evaluation of experience. Relates self-assessed experiences to the world of work. Grades 9-14.
Individual Career Exploration	Scholastic Testing Service	Consists of both picture and verbal forms that measures interests, abilities, experiences and occupational choices. Grades 3-12.
Knowledge of Occupations Test	Edupac, Inc.	Measures student information about careers in terms of earnings, licensing, employment trends etc. High school.
Mooney Problem Checklist	The Psychological Corporation	Self report inventory used to identify problems for group discussion or individual counseling. Four Forms-junior high school to adults.
My Vocational Situation	Consulting Psychologists Press, Inc.	Provides information about one's vocational identity, occupational information, and barriers that restrict a career choice from being made. High school-adults.
New Mexico Career Education Test Series	Monitor, Inc.	Assesses specific learner objectives such as attitudes toward work and job application procedures as they relate to career education. Grades 9-12.
Occupations and Careers Information BOXSCORE	Chronicle Guidance Publications, Inc.	Measure basic knowledge of occupational information such as licensing, job entry requirements and occupational outlook. Grades 7-12.
Priority Counseling Survey	Minicomp Corporation	Identifies vocational and educational counseling needs. Grades 7-12 and junior college.
San Francisco Vocational Competency Scale	The Psychological Corporation	Rates mentally retarded adults for participation in sheltered workshops. Measures motor skills, cognition, responsibility, and social-emotional behavior. Mentally retarded adults.
Social and Prevocational Information Battery	CTB/McGraw-Hill	Assesses knowledge of skills regarded as important for the community adjustment of EMR students. Junior and senior high school EMR students.
Survey of Educational/ Occupational Expectations/ Aspirations	Designed Learning Association	Collects information regarding students aspirations relevant to jobs, education, marriage and career goals. Grades 7-12.
16 Personality Factors (16 PF)	Institute for Personality and Ability Testing	Assesses 16 personality dimension which can be interpreted for use in career or life adjustment counseling. Ages 16-adults.

TABLE I (Continued P. 6)

<u>Type/Name</u>	<u>Publisher</u>	<u>Description & Comments on Use</u>
Test for Everyday Living (TEL)	McGraw-Hill	Measures achievement in the life skills area such as banking, health care and job search skills. Jr. and Sr. high school.
Vineland Social Maturity Scale	American Guidance Services, Inc.	Interview based developmental scale which assesses an individuals ability to take responsibility and look after practical needs. Primarily mentally retarded.
Vocational Opinion Index	Associates for Research in Behavior, Inc.	Defines ones attitudes, perceptions, and motivation as they relate to the ability to obtain and maintain a job. For disadvantaged vocational trainees.

VAH Appendix B-2

Source: Kapes, J. T., & Parrish, L. H. (1983). Career guidance and assessment tools for handicapped persons. In R. C. Rodgers (Ed.), Measurement trends in career and vocational education (pp. 47-61). San Francisco: Jossey-Bass.

TABLE II

Work Samples Which May Be Useful for Level III Assessment of Handicapped Students

Name	Publisher	Description & Comments On Use
Carrels for Hands On Individualized Career Education (CHOICE)	Career Research Corporation	Consists of a series 50 self instructional carrels (Job samples) designed for individual study and hands on experience. Adaptable to rehabilitation and handicapped clients.
Comprehensive Occupational Assessment and Training System (COATS)	Prep, Inc.	Consists of four components: Job matching, employability attitudes, work samples (26), and living skills. For rehabilitation clients.
Hester Evaluation System (HESTER)	Evaluation Systems, Inc.	A battery of psychological tests and ratings designed to relate client scores to the DOT. Yields 28 scores. For all IQ levels, physically handicapped and deaf.
Jewish Employment Vocational Service Work Sample System (JEVS)	Vocational Research Institute Jewish Employment & Vocational Service	Contains 28 work samples arranged in ten DOT worker trait groups such as nut, bolt and washer assembly. For disadvantaged and other special needs people.
McCarron Dial Work Evaluation System	McCarron-Dial Systems, Common Market Press	Measures five factors: verbal-cognitive, sensory, motor, emotional and integration-coping. Utilizes eight instruments and yields 17 scores. For mentally retarded, mentally ill, learning & neurologically impaired.
Micro-Tower	ICD Rehabilitation & Research Center	A group aptitude test that uses work sample methodology to measure eight aptitudes based on the GATB. Target groups include rehabilitation, disadvantaged and special education clients.
Project Discovery	Experience Education	A career exploration package consisting of over 40 individualized simulated work situations such as masonry and sales. A guidance component is included. Ages 12-adults.
Tool Tech Today	Mind, Inc.	A hands on training & assessment program in the correct & safe usage of over 100 hand tools. Women, as well as handicapped students find this system beneficial. Pre-vocational students - adults.
Singer Vocational Evaluation System	Singer Educational Division	Contains 25 work stations each used independently such as bench assembly, needle trades, masonry, cooking, & baking. Primarily intended for special populations.
System for Assessment and Group Evaluation (SAGE)	Progressive Evaluation Systems Corporation (PESCO)	Consists of measures of aptitude, attitude and interests related to DOT (4th edition). Not specifically designed for the handicapped but can be used with most types of disabilities.
Systematic Approach to Vocational Evaluation (SAVE)	SAVE Enterprises	Consists of work samples designed to assess 46 Worker Trait Groups based on the DOT. A subset of 16 worker trait group assessments are directed at the mentally handicapped and academically deprived.
Talent Assessment Program (TAP)	Talent Assessment, Inc.	Contain ten tests such as Discrimination by color, gross dexterity without tools, and retention of structural and mechanical detail. For disadvantaged, handicapped and emotionally disturbed.

TABLE II (CONTINUED)

Name	Publisher	Description & Comments on Use
Testing, Orientation, and Work Evaluation in Rehabilitation (TOWER)	ICD Rehabilitation and Research Center	Consists of 93 work samples arranged in 14 job training areas such as clerical, electronics assembly and mail clerk. For physically and emotionally disturbed.
Valpar Component Work Sample System	Valpar Corporation	Consists of 16 work samples such as small tools, numerical sorting, money-handling and drafting. For physically handicapped, adaptations for visual and deaf handicapped.
Valpar Pre-Vocational Readiness Battery (Valpar 17)	Valpar Corporation	Contains five areas each with separate subtests: development assessment, workshop evaluation, vocational interest screening, social/interpersonal skills and independent living skills. For mentally retarded.
Vocational Information & Evaluation Work Sample (VIEWS)	Vocational Research Institute, Jewish Employment & Vocational Services	Consists of 16 work samples in four areas such as tile sorting, mail counting, drill press and circuit board assembly. For mild, moderate and severely retarded adults.
Vocational, Interest, Temperament and Aptitude (VITAS)	Vocational Research Institute, Jewish Employment & Vocational Services	Consists of 21 work samples in 15 worker trait groups such as packing matchbooks, message taking, circuit board inspection and drafting. For educationally and/or culturally disadvantaged.
Vocational Skills Assessment and Development Program	Broadhead-Garrett	Consists of 3 phases with phase I containing 18 work samples based on sorting, assembly and disassembly. For handicapped and disadvantaged, ages 12 - adults.
Wide Range Employment Sample Test (WREST)	Jastak Associates	Consists of ten work samples including such tasks as folding, stapling, packaging, and pattern matching. For mentally retarded, cerebral palsied, and other severely handicapped.

**ALPHABETICAL LISTING OF CAREER ASSESSMENT INSTRUMENTS
BY CATEGORY AND LEVEL OF USE***

LEGEND

- P - Primary Category of Use
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INSTRUMENTS

	CATEGORY							LEVEL			
	Aptitudes	Interests	Values	Career Development	Combined Measures	Personality	Special Populations	Elementary School	Junior High/Middle School	High School	Post-High School/Adult
ACT Career Planning Program (CPP)	S	S			P			*	*	*	
Adaptability Test	S						P			*	*
Adult Basic Learning Exam (ABLE)	P										*
Adult Career Concerns Inventory (ACCI)				P							*
Applied Biological and Agribusiness Interest Inventory		P						*			
Apticom	S	S			P		S			*	*
Aptitude Based Career Decision Test (ABCD)	P										*
Aptitude Tests for Occupations	P									*	*
Aptitudes	P									*	
Armed Services Vocational Aptitude Battery (ASVAB)	P									*	*
Assessment of Career Decision Making (ACDM)				P						*	*
Ball Aptitude Battery	P									*	
Bennett Hand Tool Dexterity Test	P						S			*	*
Birkman Method - Needs at a Glance		S	S			P					*
Canadian Occupational Interest Inventory		P									*
Career Ability Placement Survey (CAPS)	P							*	*	*	
Career Area Interest Checklist		P								*	
Career Assessment Inventory - The Enhanced Version (CAI)		P								*	*
Career Awareness Inventory				P				*	*	*	
Career Decision Scale (CDS)				P						*	*
Career Development Inventory (CDI)				P				*	*	*	
Career Directions Inventory		P								*	*

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Career Education Readiness Test				P				*	*		
Career Exploration Series		P							*	*	*
Career Evaluation System Series 100	S				S		P			*	*
Career Guidance Inventory		P							*	*	*
Career Guidance Inventory for Trades, Services, & Technologies		P							*	*	*
Career Interests		P									*
Career Interest Survey		P								*	
Career Interest Tests (CIT)		P							*	*	*
Career Maturity Inventory (CMI)				P					*	*	*
Career Occupational Preference System Interest Inventory (COPS)		P							*	*	*
Career Orientation Placement and Evaluation Survey (COPES)			P						*	*	*
Career Path Strategy				P						*	*
Career Skills Assessment Program (CSAP)				P					*	*	*
Career Survey	S	S			P				*	*	*
Career Values Card Sort Kit			P								*
College Major Card Sort					P				*	*	*
Comprehensive Ability Battery (CAB)	P									*	*
Comprehensive Career Assessment Scale		S		P				*	*	*	
Comprehensive Occupational Assessment & Training System	S	S			S		P			*	*
Computerized Career Assessment & Planning Program (CCAPP)	S	P								*	
Computer Operator Aptitude Battery (COAB)	P										*
Computer Programmer Aptitude Battery (CPAB)	P										*
Crawford Small Parts Dexterity Test	P						S			*	*
Differential Aptitude Tests (DAT)	P								*	*	*
Employment Readiness Scale			P							*	*
Experience Exploration		S			P				*	*	*
Exploring Career Options (ECO)	S	S				P					*

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Flanagan Aptitude Classification Test (FACT)	P						S			*	*
Forer Vocational Survey: Men-Women						P				*	*
Gelst Picture Interest Inventory		S					P		*	*	*
Gordon Occupational Checklist II		P							*	*	*
Hackman-Gaither Interest Inventory		P							*	*	*
Hall Occupational Orientation Inventory (HALL)			P					*	*	*	*
Harrington O'Shea Career Decision-Making System (CDM)		P							*	*	*
Hester Evaluation System (HESTER)	S						P			*	*
How Well Do You Know Your Interests?		P								*	*
Individual Career Exploration (ICE)	S	S	S		P			*	*	*	
Interest Determination, Exploration & Assessment System (IDEAS)		P							*	*	
Inventory of Interests		P							*	*	*
Jackson Vocational Interest Survey (JVIS)		P								*	*
Jewish Employment Vocational Services Work Samples (JEVS)	S						P			*	*
Job Descriptive Index (JDI)			P								*
Judgement of Occupational Behavior-Oriented (JOB-O)		P							*	*	*
Jobtap II					P					*	*
Key Educational Vocational Assessment System (KEVAS)	S	S			S	S	P			*	*
Knowledge of Occupations Test				P						*	
Kuder Career Development Inventory		S			P				*	*	*
Kuder General Interest Survey, Form E (KUDER-E)		P							*	*	*
Kuder Occupational Interest Survey, Form DD (KUDER-DD)		P							*	*	
Major-Minor-Finder (M-M-F)					P					*	*
Manipulative Aptitudes Test	P						S		*	*	*
McCarron-Dial System (MDS)	S				S		P		*	*	*
Measures of Occupational Stress, Strain, and Coping						P					*
Microcomputer Evaluation & Screening Assessment (MESA)	S	S			S		P			*	*

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INSTRUMENTS

	CATEGORY							LEVEL			
	Aptitudes	Interests	Values	Career Development	Combined Measures	Personality	Special Populations	Elementary School	Junior High/Middle School	High School	Post-High School/Adult
Microcomputer Evaluation of Career Areas (MECA)	S	S			S		P	.	.		
Micro-Tower	S						P		.	.	.
Milwaukee Academic Interest Inventory		P							.	.	
Minnesota Clerical Test (MCI)	P								.	.	
Minnesota Importance Questionnaire (MIQ)			P						.	.	
Minnesota Rate of Manipulation Test, 1969 Edition (MRMT)	P						S	.	.	.	
Minnesota Satisfaction Questionnaire (MSQ)			P							.	
Missouri Occupational Card Sort (MOCS)		P							.	.	
Missouri Occupational Preference Inventory (MOPI)		P							.	.	
Motivated Skills Card Sort (MSCS)				P					.	.	
Myers-Briggs Type Indicator (M-BTI)						P		.	.	.	
My Vocational Situation (MVS)				P					.	.	
New Mexico Career Education Test Series				P				.	.		
Non-Sexist Vocational Card Sort		P							.	.	
Occupational Aptitude Survey & Interest Schedule (OASIS)	S	S			P			.	.		
Occupations & Career Information BOXSCORE				P				.	.		
Occupation Interest Card Sort (OICS)		P							.	.	
Occ-U-Sort		P							.	.	
O'Connor Finger Dexterity Test	P						S	.	.	.	
O'Connor Tweezer Dexterity Test	P						S	.	.	.	
Office Skills Test	P						S		.	.	
Ohio Vocational Interest Survey: II (OVIS)		P						.	.	.	
Ohio Work Values Inventory			P					.	.	.	.
Orientation Inventory			S			P			.	.	
Pennsylvania Bi-Manual Worksample	P						S		.	.	
Personal Skills Map (PSM)						P	
Personnel Tests for Industry-Oral Directions Test (PTI-ODT)	S						P				.

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Pictorial Inventory of Careers (PIC)		S					P		*	*	*
Picture Interest Exploration Survey (PIES)		S					P		*	*	
Planning Career Goals (PCG)	S	S	S		P				*	*	
Prep Work Samples	S						P			*	*
Program for Assessing Youth Employment Skills (PAYES)	S	S		S	S		P			*	*
Purdue Pegboard	P						S	*	*	*	
Reading Free Vocational Interest Inventory - Revised (RFVII)		S					P	*	*	*	
System for Assessment & Group Evaluation/Compute-A-Match	S	S			P		S			*	*
Sales Attitude Checklist						P				*	*
The Salience Inventory (SI)			P						*	*	*
San Francisco Vocational Competency Scale	S				S		P				*
Self Description Inventory						P		*	*	*	
Self-Directed Search (SDS)		P						*	*	*	
Short Employment Tests (SET)	P						S			*	*
Short Tests of Clerical Ability (STCA)	P						S			*	*
Sixteen PF Personal Career Development Profile (PCDP)						P				*	*
Skills Assessment Module (SAM)	S						P	*	*		
Social & Prevocational Information Battery - Form T (SPIB-T)	S			S			P	*	*	*	
Social & Prevocational Information Battery - Revised (SPIB)	S			S			P	*	*	*	
SRA Pictorial Reasoning Test (PRT)	P						S	*	*	*	
SRA Test of Mechanical Concepts	P						S	*	*	*	
Strong-Campbell Interest Inventory (SCII)		P						*	*	*	
Stromberg Dexterity Test (SDT)	P						S			*	*
Study of Values (SOV)			P							*	*
Talent Assessment Program System (TAPS)	S						P	*	*	*	
Temperament & Values Inventory (TVI)			S			P		*	*	*	
Test Orientation Procedure	S						P				*

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	CATEGORY							LEVEL			
	Aptitudes	Interests	Values	Career Development	Combined Measures	Personality	Special Populations	Elementary School	Junior High/Middle School	High School	Post-High School/Adult
Testing, Orientation, & Work Evaluation in Rehabilitation (TOWER)	S						P			*	*
Tests of Adult Basic Education (TABE)	P										*
Uniact IV		P								*	*
USES Basic Occupational Literacy Test (BOLT)	S						P	*	*	*	
USES General Aptitude Test Battery (GATB)	P								*	*	*
USES Interest Checklist		P									*
USES Interest Inventory (USES II)		P							*	*	*
USES Non-Reading Aptitude Test Battery (NATB)	S						P	*	*	*	
Valpar Component Work Sample System (VALPAR)	S						P			*	*
Valpar-17 Pre-Vocational Readiness Battery	S			S	S		P	*	*	*	
The Values Scale (VS)			P						*	*	*
Vocational Adaptation Rating Scales	S			S	S		P	*	*	*	
Vocational Exploration & Insight Kit (VEIK)		P		S						*	*
Vocational Evaluation System by Singer (VES)	S	S			S		P	*	*	*	
Vocational Implications of Personality (VIP)						P			*	*	*
Vocational Information & Evaluation Work Samples (VIEWS)	S						P			*	*
Vocational Interest & Sophistication Assessment (VISA)		S		S			P	*	*	*	
Vocational Interest, Experience, and Skill Assessment (VIESA)	S	P			S				*	*	*
Vocational Interest Inventory (VII)		P								*	*
Vocational Interest Profile Report		P								*	
Vocational Interest Temperament & Aptitude System (VITAS)	S						P			*	*
Vocational Opinion Index						S	P			*	*
Vocational Preference Inventory, 1985 Revision (VPI)		P				S				*	*
Vocational Research Interest Inventory (VRII)		P								*	*
Vocational Skills Assessment & Development Program	S						P	*	*	*	
Vo-Tech Major Card Sort		P							*	*	*
What I Like To Do		P						*	*		

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Wide Range Employability Sample Test (WREST)	S						P			*	*
Wide Range Intelligence and Personality Test (WRIPT)	S					S	P	*	*	*	*
Wide Range Interest-Opinion Test (WRIOT)		S					P	*	*	*	*
Word and Number Assessment Inventory (WNAI)	P								*	*	*
Work Activities Checklist		P								*	
Work Activities Inventory		P								*	
Work Attitudes Questionnaire						P					*
Work Content Skills Inventory	P										*
Work Situations						P				*	
Work Skills Assessment Package	S						P	*	*	*	
Work Values Inventory (WVI)			P					*	*	*	
World of Work Inventory (WOWI)	S	S			P			*	*	*	

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Vocational Assessment Handbook (VAH)

Appendix C

Easy Measurement User Documentation

EASY MEASUREMENT
USER DOCUMENTATION

Program and Documentation

Authored by

Timothy R. Vansickle
Texas A&M University

DECEMBER 1987

ACKNOWLEDGMENT: EASY MEASUREMENT would not have evolved into its disseminated version without the help of a great many people who have reviewed the program and the documentation. My sincere thanks to Dr. Jerome T. Kapes, whose tireless review and comments have produced significant improvements in the program and documentation. TRV

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INTRODUCTION

The program EASY MEASUREMENT is intended to aid in the development of local norms and provide other technical data. It is apparent that standardized tests cannot be applied to all populations and that the development of local norms for these tests could aid in the decision processes for individual schools and students. It is also apparent that locally developed performance samples and checklists are often necessary to provide relevant data at the local level. The development of these measures requires technical analysis to obtain norms, reliability, and validity data in an easy and consistent manner.

WHAT IS EASY MEASUREMENT

EASY MEASUREMENT is a package that will aid you (the user) in the development of local norms and provide other technical data (i.e., reliability and validity) necessary to help you interpret the data you collect.

What EASY MEASUREMENT will do is allow you to store data collected on your own sample of students and then provide the following statistics: means; standard deviations; standard (Z-scores, T-scores, and IQ-equivalent scores) and percentile scores; inter-rater, test-retest, and internal consistency (KR-21) reliabilities, and the standard error of measurement.

GETTING STARTED

System Requirements

The program requires an IBM PC, or compatible, with 1 floppy disk drive and 256k of memory. A printer is optional, but is recommended to aid in using the results.

A 640k version of this program is available upon request:

Vocational Special Needs Information Center
Educational Psychology
Mail Stop 4225
Texas A&M University
College Station, TX 77843

MAKING BACKUP DISKS

The software and files included on the EASY MEASUREMENT disk are not copy protected and may be copied with any file or disk copy program. It does contain the MS version of DOS 3.2 and is a bootable system disk. The following is a suggested method of making backup disks.

Single Drive

1. With your DOS system disk in the drive, turn on your monitor and computer.
2. At the A> prompt type DIR and verify that the DOS disk in the drive contains the DOS program DISKCOPY. If not, find the working copy of your DOS system that contains that program.
3. At the A> prompt type DISKCOPY A: B: and press [ENTER] (even though you have only one drive the computer will address that drive as both A and B).
4. When the computer prompts you to place the source disk in drive A place the original EASY MEASUREMENT disk in the drive and press [ENTER].
5. When the computer prompts you to place the target disk in drive B place a blank disk in the drive and press [ENTER].
6. Continue to follow the prompts until the copy process is complete.
7. When the copy process is complete store the original EASY MEASUREMENT disk in a safe place and label the other disk EASY MEASUREMENT WORKING COPY.

Dual Drive

1. With your DOS system disk in drive A: turn on your monitor and computer.
2. At the A> prompt type DIR and verify that the DOS disk in the drive contains the DOS program DISKCOPY. If not, find the working copy of your DOS system that contains that program.
3. At the A> prompt type DISKCOPY A: B: and press [ENTER].
4. When the computer prompts you to place the source disk in drive A place the original EASY MEASUREMENT disk in drive A and a blank disk in drive B then press [ENTER].
5. When the copy process is complete store the original EASY MEASUREMENT disk in a safe place and label the other disk EASY MEASUREMENT WORKING COPY.

Hard Drive

1. Turn on you monitor and computer.
2. At the C> prompt type MD EASY to make a sub-directory named EASY (if you already have a sub-directory named EASY use another name of your choice).
3. At the C> prompt type CD EASY (this will change directories to the sub-directory named EASY).
4. Place the original EASY MEASUREMENT disk in drive A.
5. At the C> prompt type COPY A:*. * (this will cause all of the programs contained on the original disk to be copied to the directory called EASY).
6. When the copy process is complete store the original EASY MEASUREMENT disk in a safe place.

USING EASY MEASUREMENT

Booting EASY MEASUREMENT Single & Dual Drives

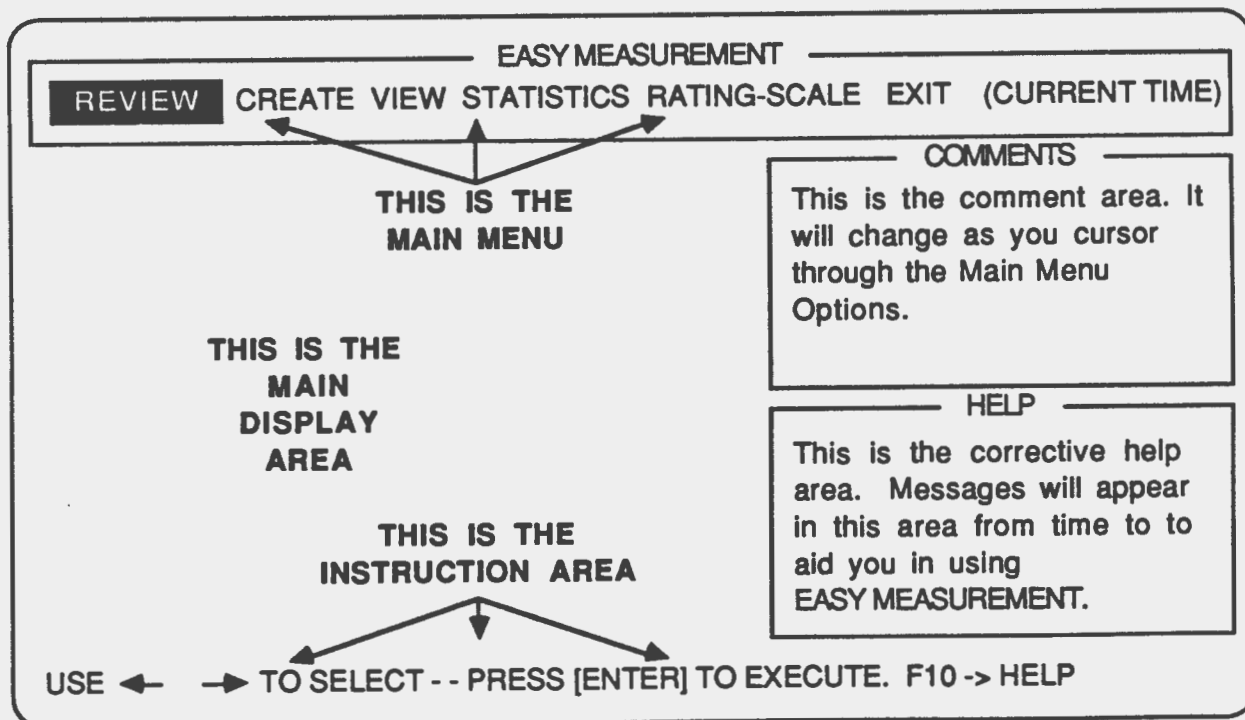
Starting the program is very easy, simply place your working copy of EASY MEASUREMENT in drive A and turn on your PC. The original disk contains an AUTOEXEC.BAT file that will boot directly into EASY MEASUREMENT.

Booting EASY MEASUREMENT Hard Drives

Turn on you computer and peripherals. At the C> prompt change directories to the sub-directory containing EASY MEASUREMENT (CD EASY). At the C> prompt type AUTOEXEC and the program will execute.

Menu Options and How to Select

After the introduction 'screen displays' have been generated the program will display the Main Menu (shown below) as part of the standard screen display (shown below). The options available to you are listed across the top of the display along with the current time (if set at the time prompt).



To select any option listed, use the left and right cursor (arrow) keys located either on the numeric key pad or separate cursor key pad. When using the cursor keys notice that the highlight moves from one option to the next. Notice too, that as the highlight moves from one option to the next the messages in the COMMENTS box change. These messages indicate briefly what functions are associated with each option. To choose any option first select it by moving the highlight to that option and then press the [ENTER] key.

After you have executed an option the highlight and COMMENTS section are frozen as a reminder of which option has been chosen. A new menu or message will be displayed in the MAIN DISPLAY AREA, in accordance with the option chosen. The INSTRUCTION AREA at the bottom of the display provides further instructions on how to choose options or answer prompts.

ON-LINE HELP

Only a limited amount of help is necessary to operate this software and this documentation should provide all the help needed. There is; however, limited on-line help for the MAIN MENU OPTIONS. Prior to executing an option, by pressing the [ENTER] key, you may press the [F10] key and receive help on that option. Move the highlight to different options and press the [F10] key to view the different help displays.

Other types of help will be displayed as you use the software either in the HELP box or in the MAIN DISPLAY AREA. This type of help is usually to notify of an error in filename length, number of subjects, or missing data.

Review Option

The REVIEW option is a quick review of some of the statistical and measurement concepts that are contained in the software and with which you as a user should be familiar. This portion of the program is not intended to replace formal training in statistics or measurement. Pressing the [F10] key with Review highlighted at the MAIN MENU will display references that will help in acquiring specific knowledge in these areas.

Create Option

The CREATE option allows you to create, modify, and store data sets on disk for later use in the statistics and view sections.

View Option

The VIEW option allows you to inspect the data set either on the monitor or as a printout.

Statistics Option

The STATISTICS option will perform statistical operations on the data sets you create and display or print out the results. There are three ways that the data can be analyzed and these will be explained later in more detail.

Rating-Scale Option

The RATING-SCALE option will allow you to create, modify and print out 5 response Likert type scales. It does this by prompting you for information which is stored on disk for later editing or printing. A maximum of 10 items (questions) is permitted for each scale.

Exit Option

The EXIT option provides 2 different services. The first is a DOS shell routine where the drive containing the data disk can be specified. The second, as the name implies, returns you to the DOS operating system.

USING THE OPTIONS

Review Option

To execute the Review option move the highlight to Review and press [ENTER]. The Review Menu will be displayed and you may choose those areas you wish to review by selecting an option using the up and down arrows and then pressing [ENTER] to execute.

The concepts contained within this review include: Measures of Central Tendency, Variability, Correlation, Scores and Norms, Reliability, and Validity. These sections cover the basic concepts and are not intended to replace formal training in statistics and measurement.

Create Option

To execute the Create option move the highlight to Create and press [ENTER]. A new menu will be presented in the MAIN DISPLAY AREA. Choose an option from this menu by using the up and down arrows to select the option and press [ENTER].

Data Disks & Storage

The software is completely self supporting which means that once it is loaded the program disk may be removed and a data disk inserted. Although it is not necessary to use a data disk it is recommended that data be kept on separate data disks.

Creating Data Sets

To create a new data set select **Create A New Data Set** from the create menu. The software will query responses to set up your data sets.

File names may only contain 8 characters or digits and the first character must be a letter. The software will automatically generate the file extension of .ESY for all data files. File names should be unique as naming a file that already exists will replace the old file with the new file of the same name.

A series of questions will require responses concerning the data set. Answer these queries with the following restrictions in mind: 100 students, 2 observations, and 10 scores as maximum values for these variables. Enter only the numbers that correspond to the amount of data collected for the data set. Data may be added (within the constraints of the program) at a later time when it is obtained.

If all answers to these data questions are correct press the [Y]

key. If not press the [N] key and repeat the above procedure. The program will initialize the data set and will display a message to use the Enter Modify Data option to enter data.

Upon completion of data initialization you are asked if you wish to save the data set. You should always respond by pressing [Y] unless you want to abort the data set just created.

Entering Data

After the data set has been initialized and saved the create menu is displayed. Choose Enter Modify Data to enter your data. You will be asked how many scores and observations you wish to enter at this time. You should try to enter all the data for which you initialized the data set at this time (if it is not possible to do this, data can be entered later using the Edit function).

Read the screen carefully as you begin your data entry. It is not necessary to include student/subject names in the data set. To exclude names simply press the [ENTER] key to tab through the name fields and begin entering data for each subject.

Upon completion of the data entry you will be asked if you wish to save the data set. Again, you should respond with [Y] unless you want to lose your data. If you used student names you will also be asked if you want to alphabetize your data by last name.

Modifying Data

Once a data set has been created and saved the data can be modified using the Enter Modify Data option from the main menu. The software checks to see if the data set named is empty, if it is, the program will go to the data entry mode, however, if some data has been entered the program will go into a Review mode. While in the Review mode each record can be viewed, edited, and more students, scores or observations added to your data set.

To edit the data in a particular record press the [F3] or [F4] keys until you are viewing the record you wish to edit. Press the [F5] key to enter the edit mode. The cursor will appear next to the first field that can be changed (according to the way the file was originally created). Type the change and press [ENTER] or press [ENTER] to move to the next field. Continue to move through the records' data fields until you have moved past the last field. This will return you to the review mode and display the record and the changes you have made.

When all changes have been made to the data set press [F1] to exit. An option to save the changes or to exit without saving will be presented after pressing [F1].

Exit Create

When you are finished creating, entering, and modifying data sets use the Exit Create option to return to the Main Menu. If you have forgotten to save the data, return to the Create option and use the Enter Modify Data option to save your data.

Viewing Data

Once the data has been entered and saved you can view it in two ways; either printed on paper or on the screen. To execute the View option move the highlight to View and press [ENTER].

The program will prompt you with the current file and ask whether you wish to view a directory of files. You may use the current file or select a new file to use.

The next option is to print a copy of the data. If you indicate no by pressing [N] you will view the data on the monitor one record at a time. After completing the option you have chosen the program will return to the Main Menu options.

Statistics Option

To execute the Statistics option move the highlight to Statistics and press [ENTER]. A menu of options will be presented. Select the option desired and press [ENTER].

Statistics Across Students

This option allows you to produce descriptive statistics across the number of students in your data sets. It will generate these statistics across students for each of the scores you have entered (maximum of 10). This is similar to what you might do as a teacher computing statistics on an assignment for an entire class. The descriptive statistics provided include: sum, mean, and standard deviation.

This option will also provide frequency of scores, standard scores, and percentiles for each score in the data set. These standard scores include: Z-scores, T-scores, and IQ based scores (mean = 100 and standard deviation = 15) (i.e., this will produce a maximum of 10 standard score tables for each observation or rater).

Lastly the program will estimate the reliability using one of two methods. The first method requires that you have entered two observations for each of the scores in the data set. This could be done using a test-retest method which requires that you administer an instrument twice to the same students/subjects with some interval of time between administrations. It is also

possible with this method to compute an inter-rater reliability using two individuals rate the same students/subjects behavior on a behavioral checklist or performance rating scale. The second approach uses the KR-21 formula to estimate the internal consistency of each score. This method requires that you enter only one observation for each score in the data set. For both methods, the Standard Error of Measurement will also be reported based on the method of reliability computed. To summarize, the reliability coefficient produced will be a KR-21 if only one observation / rater is used, test-retest coefficient if the scores/items are from two time points, or an inter-rater reliability if two individuals were used to rate the scores/items at the same time.

A prompt will appear with the current data set after selecting this option. You will have an opportunity to view a directory of files and to change the current data set. After you have completed this task the program will begin to calculate the statistics in this option. Numbers will be printed in the main display area corresponding to approximately every 25 calculations. The computing time can range from 1 to 20 minutes depending on the size of your data set and the clock speed of your PC. Be patient, the computer will announce its completion with a musical phrase and display the first part of the output. Follow the prompts on the screen to view the data. When you have completed viewing the data on the screen you will be given the option of printing the data.

Statistics Across Scores/Items

This option is designed with the rating scale or observational checklist in mind. It provides similar types of statistics as the first option (across students) with one difference. This option looks at the data as item scores, not students. For example: a 5 item test on which the maximum score is 25, each score or item could range from 0 to 5 and each student would have 5 scores for each of the 5 items. The software will compute the statistics for each score/item.

This option will compute the sum, mean, and standard deviation for all of the scores/items for each student and then compute the mean and standard deviation of those totals.

The program will compute the frequencies for each score/item as well as standard scores and percentiles for each score/item and will provide reliability by score/item using either of the two methods described in the first option along with the standard error of measurement. As contrasted with the first option these statistics are computed over the sum of the scores or items entered (i.e., 5 scores for each student will produce one set of standard scores for each observation / rater). The reliability

coefficient will be a KR-21 if only one observation / rater is used, test-retest coefficient if the scores/items are from two time points, or an inter-rater reliability if two raters were used to rate the scores/items at the same time.

This option also has a hidden feature. It will allow you to compute inter-rater reliabilities by creating a data set with 1 student, a number of scores/items, and 2 observations / raters. The reliability coefficient reported will be the inter-rater reliability for the two raters involved.

A prompt will appear with the current data set after selecting this statistics option. You will have an opportunity to view a directory of files and to change the current data set. After you have completed this task the program will begin to calculate the statistics in this option. Numbers will be printed in the main display area corresponding to approximately every 25 calculations. The computing time can range from 1 to 20 minutes depending on the size of your data set and the clock speed of your PC. Be patient, the computer will announce its completion with a musical phrase and will display the first part of the output. Follow the prompts on the monitor to view the data. When you have completed viewing the data on the screen you will be given the option of printing the data.

Intercorrelations

The last statistical option computes the intercorrelations of the scores/items in your data sets. This option will provide a matrix of Pearson Product-Moment correlations for the number of scores/items in your data set for each observation / raters. Similar prompts appear in this option as in the first two options for file names and viewing of a directory. This option can be used to provide correlations among all scores/items, which have many uses depending on the type of data entered for each score/item. The option can also be used to produce validity coefficients by representing score/item one as a predictor (X) variable (e.g. performance sample scores) and score/item two as a criterion (Y) variable (e.g. job performance rating). A maximum of a 10 by 10 matrix can be computed in this manner.

Exit Statistics

Choose this option to exit the Statistics option and return to the Main Menu.

Rating-Scales

To execute the Rating-Scale option move the highlight to Rating-Scale and press [ENTER]. A menu of options will be presented. Select the option desired and press [ENTER].

Creating A Rating Scale

Select **Create A New Rating Scale** and press [ENTER]. A prompt to name the file will appear on the monitor -- name the file with a maximum of 8 characters. The software will automatically add the extension '.TXT' to the file name given.

After naming the file a prompt to enter a title will be presented. Create a title you want to appear at the top of the rating scale. The program allows one line of 45 characters for the title. Enter your title and ensure it is correct prior to pressing [ENTER].

Next enter the directions for the scale being created. A maximum of 5 lines of 45 characters per line are allowed by the program. Each line will be displayed as you enter characters. A tone will sound 5 characters prior to the end of each line. If you type past the 45 character limit a tone will sound and a message will appear indicating that the backspace should be used to reduce the line length. Ensure that each line is correct prior to pressing [ENTER]. Once a line has been entered it will be displayed below the instructions and input area.

After completing the instructions, 4 choices for the scale headings will be displayed. To choose the one you wish to use type the number of that choice and press [ENTER]. The 4 choices include: 1) Strongly Disagree / Strongly Agree; 2) Low / High; 3) Poor / Excellent; and 4) Very Dissatisfied / Very Satisfied. Once a choice is made the items for the scale should read in ways that are in agreement with the scale heading chosen.

A prompt requesting the number of items for the scale will appear. Enter a number (maximum of 10 items) and press [ENTER]. Each question is entered separately and in a similar manner as explained for the directions with the following differences: 4 lines per item / question and 40 characters per line.

Upon completion of the above steps the program will save the file with the indicated name. If you have made an error or wish to change some of the items use the **Modify / Print A Scale** option.

Modifying A Scale

Select **Modify / Print A Scale** and press [ENTER]. After selecting a file choose the option **Modify** by pressing the number [1] to enter the modify mode.

The title will be displayed followed by a the prompt 'Change Y/N'. If you wish to change the title press [Y]. The cursor will appear directly below the title and you must type the new line

containing the corrections and press [ENTER]. The corrected version will replace the old line. The same process will be repeated for the directions and the items except that all of the lines will be displayed and a choice to correct one or more of the lines will be received.

Upon completion of this operation an opportunity to change the file name will be displayed. This is useful when developing slightly different scales, thereby avoiding retyping the common parts of the scale a second time.

Printing A Scale

Select **Modify / Print A Scale** and press [ENTER]. After indicating a file, choose the option **Print** by pressing the number [2] to enter the print mode.

Ensure that your printer is ready and press [ENTER]. After completion of printing the program will return to the **Rating-Scales** menu.

Data Drive and Exit

The DOS shell is provided as a means of indicating where the data files are to be saved and read. If you do not indicate a drive the program will assume the drive from which the program was started is also the data drive. Select **EXIT** from the main menu and press [ENTER]. Select from the Exit menu **Data Drive** and press [ENTER]. At the drive prompt type the letter of the drive containing the data disk followed by a colon (i.e., B:) and press [ENTER]. All data will be read from and saved to the drive specified.

To exit the program select from the Exit menu **Quit** and press [ENTER]. After a closing message the program will return control to DOS.

Sample Session 1: Entering & Viewing Data

The process of establishing technical data for assessment purposes can lead one in many directions. One of those directions could be the development of local performance samples. In this sample session let us assume that such sample has been developed with the associated rating scale. A set of data has been collected and now the technical data needs to be provided for future use.

First, start the program EASY MEASUREMENT (refer to Getting Started). Be sure to read the introduction screen if this is your first time using the software.

When the Main Menu is displayed use the right arrow key to move the highlight to CREATE and then press the [ENTER] key. We will use the current disk as the data disk for the sample sessions, however, for your data it is recommended that you use a different disk for data storage (to change disks and drives see the EXIT option).

A new menu will be displayed. Since we need to create a new data set and that is the highlighted option press the [ENTER] key.

Next you are asked to enter a file name. Type [firstset] and press the [ENTER] key. Enter the number of students [5], then number of scores/items [10], and the number of observations / raters [1].

The program will next ask you if your responses are correct; if they are press the [Y] key. If you have made a mistake press [N] and re-enter the numbers indicated above.

When the program prompts you with **save this file** respond with the [Y] key.

The software returns you to the CREATE menu and the Enter / Modify Data option is highlighted. Press the [ENTER] key to begin entering data. The software will place you in the data entry mode and will display some instructions.

Next, the program prompts you for the number of scores/items you will be entering at this time -- enter [10]. The program now prompts you for the number of observations / raters -- enter [1].

The program now displays the beginning of record 1 and the words LAST NAME. If you desired you could enter the students last name, however for this exercise press the [ENTER] key. Now FIRST NAME is displayed -- again press the [ENTER] key to bypass entering the name.

Next the program displays OBSERVATION 1 SCORE 1. Enter the first score [5] and press the [ENTER] key. The prompt changes only slightly OBSERVATION 1 SCORE 2. Enter the following remaining data for student 1.

```
SCORE 2 = 4
SCORE 3 = 3
SCORE 4 = 5
SCORE 5 = 3
SCORE 6 = 5
SCORE 7 = 2
SCORE 8 = 1
SCORE 9 = 4
SCORE 10 = 5
```

The software prompts you to quit input or continue -- there are four more students scores to enter so press any key other than Q. At the name prompts press the [ENTER] key and enter the following data for the next four students

Student 2	Student 3	Student 4	Student 5
SCORE 1 = 2	SCORE 1 = 5	SCORE 1 = 3	SCORE 1 = 1
SCORE 2 = 3	SCORE 2 = 2	SCORE 2 = 3	SCORE 2 = 1
SCORE 3 = 2	SCORE 3 = 2	SCORE 3 = 2	SCORE 3 = 3
SCORE 4 = 5	SCORE 4 = 4	SCORE 4 = 3	SCORE 4 = 3
SCORE 5 = 4	SCORE 5 = 3	SCORE 5 = 4	SCORE 5 = 1
SCORE 6 = 2	SCORE 6 = 3	SCORE 6 = 3	SCORE 6 = 4
SCORE 7 = 4	SCORE 7 = 3	SCORE 7 = 3	SCORE 7 = 4
SCORE 8 = 2	SCORE 8 = 2	SCORE 8 = 3	SCORE 8 = 3
SCORE 9 = 3	SCORE 9 = 1	SCORE 9 = 3	SCORE 9 = 4
SCORE 10 = 1	SCORE 10 = 2	SCORE 10 = 4	SCORE 10 = 3

Press any key to continue and when prompted to save the data enter [Y]. You are again returned to the CREATE menu. Use the down arrow key and select Exit Create and press the [ENTER] key.

Once the data has been entered it is a good practice to review the data set to ensure accuracy. To do this the program allows one to view the data. From the main menu select VIEW using the right arrow key and press [ENTER]. A prompt will appear asking if you want a print out. The printout is the easiest means of checking a data set as all of the data can be viewed at once. If a printer is available respond to the prompt with [Y] and follow the prompts on the monitor. If a printer is unavailable respond with [N] and the data will be displayed record-by-record on the screen until you have viewed the entire data set. Once the data has been printed or viewed on the monitor the program returns to the main menu. This is the end of the first sample session. To exit the program select EXIT from the main menu and press [ENTER], then press [2] to exit to the DOS prompt.

Sample Session 2: Statistics & On-line Help

First Start EASY MEASUREMENT as before. Since this is not your first time using the software you need not spend as much time at the introduction screen. Select STATISTICS from the main menu and press [F10]. The program will display a single page of information about the statistics option. Similar help is available for each of the main menu options. Press any key to continue. Notice that the help disappears and returns to the option selected, now press [ENTER].

A new menu is displayed with 4 options. Select Across Scores / items using the down arrow key and press [ENTER]. This option was selected because we are interested in the students total score across the 10 item scale and need to develop the norms and other technical data needed for this scale.

If you did not exit after completing Sample Session 1 the program will indicate that the current file is FIRSTSET, otherwise it should display NONE as the current file. An opportunity is available to view a directory of the files at this time. Respond to this opportunity with [N]. Next the current file is displayed again with an opportunity to change the file to be used for the statistical option chosen. Enter [FIRSTSET] if you have NONE or a different file name as the current file and press [ENTER]. If FIRSTSET is the current file press [ENTER].

Next, the program displays a message about computing statistics and displays a changing set of numbers. If the maximum number of students, scores, and observations has been entered the computing time will vary between 5 and 20 minutes depending on the clock speed of the PC being used. Be patient, the program will announce its completion of the compilation with a musical phrase and display the first portion of the information requested.

Follow the prompts on the monitor to view the data. When all the data has been viewed an opportunity is presented to print the data. It is a good practice to print a hard copy of the data. Once the option is completed the program returns to the Statistics menu and you may select any of the other options available and use other data sets for those options. Your data should look similar to the sample output headed "STATISTICS ACROSS SCORES/ITEMS".

Although we have just scratched the surface of what the software can do This completes the sample sessions. It is up to you, the user, to explore where this program could provide needed technical data, and help in interpreting data for different populations within individual programs. Test scores, ratings, and performance data are just numbers unless you, the user of

this data can make well informed judgments about the data and can interpret that data in a meaningful way.

Three other data sets are supplied with the original disk (Samp1, Samp2, and Samp3), use these with any of the Statistics options.

Printed Output & Scales

Immediately following this section are examples of the printed output available including: the data set; statistics across students, across scores/items, and intercorrelations, and the Generic Performance Sample Rating Scale.

On each of the different output samples notice the following is displayed: 1) the name of the file, 2) the type of output (data set, across students, across scores/items, and intercorrelations), 3) the number of students, scores or items, and observations or raters, 4) time and date, and 5) page number. This will help maintain the organization of the output when filed.

A sample rating scale is provided after the output samples. It is the Generic Performance Sample Rating Scale (GPSRS) which is also a file on the original disk (GPRS.TXT).

All scales will be a 5 point Likert type with the different headings previously discussed. It should be possible to construct a number of different behavioral rating scales using this type of procedure and then develop the technical data to help interpret the information collected.

***** STATISTICAL OUTPUT ACROSS STUDENTS *****

FILE: samp1.ESY DATE: 12-04-1987 TIME: 06:46:02 PAGE 1

NUMBER OF STUDENTS 11

NUMBER OF SCORES/ITEMS 3

NUMBER OF OBSERVATIONS/RATERS 2

Summary Statistics Across Students

Observation 1
Score/Item 1
Sum = 893 Mean = 81.18 SD = 11.46
Score/Item 2
Sum = 795 Mean = 72.27 SD = 12.40
Score/Item 3
Sum = 729 Mean = 66.27 SD = 16.08

Observation 2
Score/Item 1
Sum = 938 Mean = 85.27 SD = 10.73
Score/Item 2
Sum = 844 Mean = 76.73 SD = 9.76
Score/Item 3
Sum = 788 Mean = 71.64 SD = 16.34

Standard and Percentile Scores

Observation/Rater 1

Score	1				
Score	Freq	Z-Score	T-Score	IQ-Score	%-Tile
91	1	0.86	59	113	80
90	4	0.77	58	112	78
88	1	0.59	56	109	72
80	1	-0.10	49	98	46
79	1	-0.19	48	97	42
75	1	-0.54	45	92	29
65	1	-1.41	36	79	8
55	1	-2.28	27	66	1

Score 2

Score	2				
Score	Freq	Z-Score	T-Score	IQ-Score	%-Tile
87	1	1.19	62	118	88
80	3	0.62	56	109	73
78	1	0.46	55	107	68
77	1	0.38	54	106	65
76	1	0.30	53	105	62
70	1	-0.18	48	97	43
67	1	-0.43	46	94	34
60	1	-0.99	40	85	16
40	1	-2.60	24	61	1

Score 3

Score	3				
Score	Freq	Z-Score	T-Score	IQ-Score	%-Tile
90	2	1.48	65	122	93
77	1	0.67	57	110	75
70	1	0.23	52	103	59
67	2	0.05	50	101	52
66	1	-0.02	50	100	49
65	1	-0.08	49	99	47
60	1	-0.39	46	94	35
40	1	-1.63	34	75	5
37	1	-1.82	32	73	3

Observation/Rater 2

Score 1

Score	1				
Score	Freq	Z-Score	T-Score	IQ-Score	%-Tile
93	1	0.72	57	111	76
92	2	0.63	56	109	73
91	2	0.53	55	108	70
90	1	0.44	54	107	67
88	2	0.25	53	104	60
87	1	0.16	52	102	56
66	1	-1.80	32	73	4
60	1	-2.36	26	65	1

Score 2

Score	2				
Score	Freq	Z-Score	T-Score	IQ-Score	%-Tile
90	1	1.36	64	120	91
88	1	1.15	62	117	88
80	3	0.34	53	105	63
78	2	0.13	51	102	55
77	2	0.03	50	100	51

***** STATISTICAL OUTPUT ACROSS STUDENTS *****
 FILE: samp1.ESY DATE: 12-04-1987 TIME: 06:47:29 PAGE 3
 NUMBER OF STUDENTS 11
 NUMBER OF SCORES/ITEMS 3
 NUMBER OF OBSERVATIONS/RATERS 2

Score	Freq	Z-Score	T-Score	IQ-Score	%-Tile
60	1	-1.71	33	74	4
56	1	-2.12	29	68	1
93	1	1.31	63	120	90
90	1	1.12	61	117	87
89	1	1.06	61	116	86
87	1	0.94	59	114	83
70	2	-0.10	49	98	46
69	1	-0.16	48	98	44
67	1	-0.28	47	96	39
65	1	-0.41	46	94	34
45	1	-1.63	34	76	5
43	1	-1.75	32	74	4

Coefficients by Observation

Score 1
 r = 0.95
 Standard Error of Measurement = 2.56

Score 2
 r = 0.91
 Standard Error of Measurement = 3.72

Score 3
 r = 0.93
 Standard Error of Measurement = 4.25

***** STATISTICS ACROSS SCORES/ITEMS *****
 FILE: samp2.E5Y DATE: 12-04-1987 TIME: 06:49:55 PAGE 1
 NUMBER OF STUDENTS 11
 NUMBER OF SCORES/ITEMS 10
 NUMBER OF OBSERVATIONS/RATERS 2

Summary Statistics Across Scores/Items

Observation/Rater 1

Student 1	Sum = 32	Mean = 3.20	SD = 0.75
Student 2	Sum = 36	Mean = 3.60	SD = 0.80
Student 3	Sum = 28	Mean = 2.80	SD = 0.60
Student 4	Sum = 32	Mean = 3.20	SD = 0.60
Student 5	Sum = 38	Mean = 3.80	SD = 0.40
Student 6	Sum = 19	Mean = 1.90	SD = 0.54
Student 7	Sum = 27	Mean = 2.70	SD = 0.64
Student 8	Sum = 30	Mean = 3.00	SD = 0.63
Student 9	Sum = 29	Mean = 2.90	SD = 0.54
Student 10	Sum = 27	Mean = 2.70	SD = 0.46
Student 11	Sum = 27	Mean = 2.70	SD = 1.19

Observation/Rater 2

Student 1	Sum = 40	Mean = 4.00	SD = 0.63
Student 2	Sum = 37	Mean = 3.70	SD = 0.64
Student 3	Sum = 33	Mean = 3.30	SD = 0.78
Student 4	Sum = 38	Mean = 3.80	SD = 0.40
Student 5	Sum = 34	Mean = 3.40	SD = 0.49
Student 6	Sum = 21	Mean = 2.10	SD = 0.83
Student 7	Sum = 37	Mean = 3.70	SD = 1.00
Student 8	Sum = 31	Mean = 3.10	SD = 0.83
Student 9	Sum = 35	Mean = 3.50	SD = 0.50
Student 10	Sum = 36	Mean = 3.60	SD = 0.49
Student 11	Sum = 34	Mean = 3.40	SD = 1.20

***** STATISTICS ACROSS SCORES/ITEMS *****

FILE: samp2.ESY DATE: 12-04-1987 TIME: 06:50:13 PAGE 2

NUMBER OF STUDENTS 11

NUMBER OF SCORES/ITEMS 10

NUMBER OF OBSERVATIONS/RATERS 2

Standard and Percentile Scores

Observation/Rater 1

Score	Freq	Z-Score	T-Score	IQ-Score	%-Tile
38	1	1.74	67	126	96
36	1	1.33	63	120	91
32	2	0.51	55	108	69
30	1	0.09	51	101	54
29	1	-0.11	49	98	46
28	1	-0.32	47	95	37
27	3	-0.52	45	92	30
19	1	-2.17	28	67	1

Across Students Mean = 29.55 SD = 4.85

Observation/Rater 2

Score	Freq	Z-Score	T-Score	IQ-Score	%-Tile
40	1	1.21	62	118	89
38	1	0.80	58	112	79
37	2	0.59	56	109	72
36	1	0.38	54	106	65
35	1	0.17	52	103	57
34	2	-0.04	50	99	48
33	1	-0.25	48	96	40
31	1	-0.66	43	90	25
21	1	-2.75	23	59	1

Across Students Mean = 34.18 SD = 4.80

Coefficients

r = 0.66

Standard Error of Measurement = 0.02

GENERIC PERFORMANCE RATING SCALE

Directions: While observing the performance sample, rate the examinee's behavior on the following items. The greater the agreement the better the examinee has performed.

	STRONGLY DISAGREE			STRONGLY AGREE	
1. The instructions were followed correctly.	1	2	3	4	5
2. The technique used was appropriate to the task.	1	2	3	4	5
3. The time taken to perform the task was reasonable.	1	2	3	4	5
4. The task was performed in a safe manner.	1	2	3	4	5
5. The finished product was useable.	1	2	3	4	5
6. The examinee avoided inappropriate behavior during performance of the task.	1	2	3	4	5
7. The examinee was able to communicate an understanding of the task.	1	2	3	4	5
8. The examinee appeared to be interested in the task.	1	2	3	4	5
9. The examinee could probably make a living at this task.	1	2	3	4	5
10. I would be willing to employ the examinee to perform this task if I had an appropriate job opening.	1	2	3	4	5

Vocational Assessment Handbook (VAH)

Appendix D

Annotated Bibliography of Resources
for Vocational Assessment

Appendix D

ANNOTATED BIBLIOGRAPHY OF RESOURCES FOR VOCATIONAL ASSESSMENT

Included here, in alphabetical order, are resources useful in the vocational assessment process. Among the references annotated are those pertaining to instrument descriptions and reviews, basic measurement techniques, assessments with special needs students, work (performance) sample development, and using assessment information.

Anastasi, A. (1982). Psychological testing (5th ed.). New York: Macmillan.

This text provides information on the technical aspects of psychological tests and the correct interpretation and use of test results.

Bolton, B. (Ed.). (1976). Handbook of measurement and evaluation in rehabilitation. Baltimore, MD: University Park Press.

Collection of papers that covers psychological measurement principles and practices as they are applied in the evaluation of disabled individuals.

Bolton, B. (Ed.). (1986). Handbook of measurement and evaluation in rehabilitation (2nd ed.). University Park, MD: University Park Press.

This text is divided into three major sections: fundamentals of measurement, review of instruments, and applications for rehabilitation. Chapters within the last section address the issues of applying test results in the development of individualized rehabilitative programming with various special populations.

Botterbusch, K. F. (1980). A comparison of commercial vocational evaluation systems. Menomonie, WI: Materials Development Center.

This publication compares 15 vocational evaluation systems. A detailed description of each system is given.

Botterbusch, K. F. (1981). Work sample norms, reliability, and validity. Menomonie, WI: Materials Development Center.

This publication discusses the technical aspects of developing work samples and provides practical guidelines.

Botterbusch, K. F. (1987). Vocational assessment and evaluation systems: A comparison. Menomonie, WI: Materials Development Center.

This publication is an update of the 1980 edition. It contains more instruments including evaluation systems and other vocational assessment devices.

Botterbusch, K. F., & Michael, N. (1985). Testing and test modification in vocational evaluation. Menomonie, WI: Materials Development Center.

This publication is beneficial in selecting commercially available instruments that can be used in particular vocational assessment situations.

Brolin, D. E. (1982). Vocational preparation of persons with handicaps. (2nd ed.). Columbus, OH: Charles E. Merrill.

This book can serve as a basic reference for any educator working to prepare students with handicaps for a vocational role.

Cronbach, L. J. (1970). Essentials of psychological testing (3rd ed.). New York: Harper and Row.

A Widely used text designed to be a comprehensive introduction to the uses of testing, types of tests, administration, scoring, and validation.

Educational Testing Service. (1987). Test collection (Vol. 2): Vocational tests and measurement devices. Phoenix, AZ: Onyx.

This second volume in a series describes vocational aptitude and interest measures, work samples, career development and attitude instruments, and certification tests. It also includes measures for use with handicapped people.

Flanagan, M., Boyer-Stephens, A., Maxam, S., Hughey, J., & Alff, M. (no date). Career assessment instrument resource guide: A manual for assessing vocational special needs students. Columbia, MO: Missouri LINC/University of Missouri-Columbia.

Focusing on issues central to career assessment of handicapped students, this text addresses nine special populations. Information is provided on the selection of assessment instruments, report writing, and interpretation and use of assessment results. In addition, brief reviews on 152 assessment instruments are provided.

Horrocks, J. E., & Schoonover, T. L. (1968). Measurement for teachers. Columbus, OH: Charles E. Merrill.

Written specifically for teachers, counselors, and others in the school setting. This book is strong on the measurement of achievement, but also contains sections on intelligence and interests.

Kapes, J. T., & Mastie, M. M. (Eds.). (1982). A counselor's guide to vocational guidance instruments. Alexandria, VA: The National Career Development Association.

This book is a compendium of instrument descriptions and reviews written for practitioners. Forty instruments are reviewed in depth with a brief description of 70 additional instruments.

Kapes, J. T., & Mastie, M. M. (Ed.). (1988). A counselor's guide to career assessment instruments (2nd ed.). Alexandria, VA: The National Career Development Association.

This is a revision of the original 1982 publication with 43 complete reviews and 169 additional instruments briefly described. Many instruments appropriate for both disadvantaged and handicapped students are included.

Keyser, D. J., & Sweetland, R. C. (Eds.). (1984-87). Test critiques. (Vols. 1-6). Kansas City, MO: Test Corporation of America.

This six volume work is comprised of original reviews of measurement devices which are the most frequently used in the areas of psychological, educational, and business testing. It includes most instruments used in vocational guidance.

Krug, S. E. (Ed.). (1987). Psychware yearbook: A reference guide to computer-based products for behavioral assessment in psychology, education, and business. Kansas City, MO: Test Corporation of America.

This comprehensive reference contains 339 entries for computer-based assessment packages, ranging from vocational guidance to behavioral medicine. Information on each instrument includes: product name, supplier, category, application, sales restrictions, type and cost of service, product descriptions, and sample printouts.

McCray, P. (1980). Suggested guidelines for evaluating work samples. Menomonie, WI: Materials Development Center.

This booklet provides a thorough understanding of the essential elements of a well constructed work sample.

McCray, P. (1980). Work sample manual clearinghouse catalog. Menomonie, WI: Materials Development Center.

This publication lists all work sample manuals currently available through the MDC. The manuals can be borrowed or rented from the MDC and copied for local use.

Mitchell, J. V., Jr. (Ed.). (1983). Tests in print III. Lincoln, NE: Buros Institute of Mental Measurements, The University of Nebraska Press.

Contains a thorough listing and brief description of most tests published in the English language.

Sweetland, R. C., & Keyser, D. J. (Eds.). (1986). Tests: A comprehensive reference for assessments in psychology, education, and business (2nd ed.). Kansas City, MO: Test Corporation of America.

This second edition of Tests follows close on the heels of the first edition (1983). More recent tests or newer editions of established tests published since 1983 are included. Each test's entry includes the purpose(s) for, as well as a description of, the instrument. Those serving handicapped clientele may find the hearing-impaired, physically-impaired, and visually-impaired indexes to Tests very handy.

Zunker, V. G. (1982). Using assessment results in career counseling. Monterey, CA: Books/Cole.

This text provides an overview of assessment as well as chapters describing the use of prominent aptitude, achievement, career maturity, interest, personality, and values instruments. Case studies are included.