

DOCUMENT RESUME

ED 406 523

CE 073 722

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 TITLE Assessing Employability Skills.  
 INSTITUTION Iowa State Dept. of Education, Des Moines. Div. of Community Colleges and Workforce Preparation.  
 PUB DATE Jan 97  
 NOTE 135p.  
 PUB TYPE Reference Materials - Bibliographies (131) -- Reports - Research (143)  
 EDRS PRICE MF01/PC06 Plus Postage.  
 DESCRIPTORS \*Achievement Tests; Adult Education; Competence; \*Competency Based Education; Elementary Secondary Education; \*Employment Potential; Evaluation Methods; \*Job Skills; Occupational Tests; Postsecondary Education; Statewide Planning; \*Student Evaluation; Vocational Education

ABSTRACT

This report describes how available measures/tests of employability skills were identified and analyzed to determine their suitability for evaluating the employability skills of students enrolled in Iowa vocational programs. Conclusions of this research are as follows: suitable measures are available for assessing the employability skills of elementary, high school, college, and adult students; and available measures use a variety of testing/assessment techniques and measure employability skills other than skills in reading for information, applied mathematics, listening, and writing. Descriptions of 41 available employability skill measures/tests constitute approximately 75% of this document. For each measure, the following are provided: intent, test population, testing time, form(s), description, special feature(s), cost, and source. The report contains 12 tables and 41 references are listed. Appendices include: lists of workplace basics, skills identified by the Secretary's Commission on Achieving Necessary Skills; unit and competency statements in the employability occupational competency analysis profile; combined sets of employability skills; competencies not selected for the occupational analysis profile, 11 publications containing model standards, achievement test batteries, publishers, and acronyms; diagram of thinking; outline of enabling thinking skills; examples of frameworks with applications of knowledge; and examples of items from different sources. (MN)

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ED 406 523

# ASSESSING EMPLOYABILITY SKILLS

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January, 1997

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## INTRODUCTION

The Carl D. Perkins Vocational and Applied Technology Act of 1990 (U.S. Department of Education, 1992) required states to develop and implement a statewide system of core standards and measures of performance. Iowa complied by developing nine standards (Iowa Department of Education, 1994). Three of the standards were academic skills or occupational competencies standards. The academic skills were defined as including communication, mathematics, and science knowledge and comprehension leading to higher order thinking skills. Occupational competencies included knowledge, skills, and/or attitudes needed to perform a specific task. Any competencies required by Section 256.11(5h), Code of Iowa, such as job-seeking and job-adaptability competencies were considered occupational competencies. A limited number of employability skills were included without being called employability skills.

The Iowa Vocational Performance Measures and Standards were implemented with processes to maximize the use of existing local education agency evaluation procedures (Carey, 1994; Carey, 1995). Academic skills were assessed by norm-referenced tests such as the Iowa Tests of Educational Development (ITED), locally developed performance assessments, analysis of course performance, and other techniques such as self-perception tests. Schools were encouraged to integrate the assessment of academic skills for vocational requirements with the assessment plans for Section 280.18, Code of Iowa, relating to achievement goals. Connecting the Iowa Vocational Measures and Standards to Section 280.18, Code of Iowa, essentially expanded the definition of academic skills to include reasoning, studying, and technological literacy.

The Iowa Vocational Performance Measures and Standards requirements for occupational competencies were implemented using assessments involving commercial tests such as Student Occupational Competency Achievement Tests (SOCAT) by the National Occupational Competency Testing Institute (NOCTI) (NOCTI, 1994), locally developed performance tests, rubric and competency profile systems, and self-perception tests. Some presently recognized employability skills were assessed in all the measures except the commercial tests. SOCAT tests focus on occupational areas (e.g., Agriculture Mechanics).

Other states had experiences similar to Iowa in implementing the Carl D. Perkins Vocational and Applied Technology Education Act of 1990 performance measures and standards requirements (McCaslin and Headley, 1993; Rahn, Hoachlander, and Levesque, 1992). Basic skills were mainly limited to reading, language, mathematics, and a category called other skills. Assessments of basic skills were highly dependent on state and locally developed tests. Less than 40% of the states used nationally recognized tests such as the Iowa Test of Educational Development, Stanford Achievement Test, and Test of Adult Basic Education.

After studying the vocational performance measures and standards produced in all the states, McCaslin and Headley (1994) concluded that only 44% of the states had measures and standards on the acquisition of employability skills other than academic skills. Occupational skills were classified separately from employability skills. The assessment techniques for employability skills were most often state or locally developed.

The Secretary's Commission on Achieving Necessary Skills (SCANS) became involved with employability skills when it was directed to study the levels of skills required to enter employment. In the report What Work Requires of Schools (SCANS, 1991), the Commission identified three categories of foundation skills and abilities and five competency areas. The components of the foundation and competency areas became categories of employability skills.

The Secretary's Commission on Achieving Necessary Skills was asked to consider assessment requirements for the competencies and foundation skills. The Commission reported in Learning A Living (SCANS, 1992) six criteria for an effective assessment system (e.g., #3, "It permits comparison of local performance to national benchmarks."). Included in examples of major elements of a new assessment system were the New Standards Project (New Standards, 1995) and American College Testing Service Work Keys (ACT, 1996). Both the New Standards and Work Keys were in early stages of development in 1992.

The State of Iowa became more involved in the assessment of employability skills with the establishment of a Career Pathways Program. A component of the program addressing assessment is:

"Measure the employability skills of students. Employability skills shall include, but are not limited to, reading for information, applied mathematics, listening, and writing (Section 256.39(2)(a), Code of Iowa)."

The Iowa Department of Education was directed to help clarify some issues involved in the assessment of employability skills. Directions to the Department of Education contained in the Department's Budget Bill were:

"The department of education shall conduct a study of the means by which student employability skills may be measured, including but not limited to the employability skills of students at various levels of their secondary education and students who have graduated, the businesses that employ them, and the institutions of higher learning which admit the graduates (House File 2477, p. 8, 1996)."

The Department of Education responded to the employability study directive in House File 2477 by identifying thirty-five assessment systems (Iowa Department of Education, 1996). Each assessment was analyzed for test population, categories of employability skills measured, and evaluation techniques. Suitable tests and/or

assessment systems were found to be available for measuring employability skills. The measures assessed the employability skills of high school students, college students, and adults. Some of the measures were suitable for assessing employability skills other than the skills in reading for information, applied mathematics, listening, and writing. The thirty-five assessment systems contained a variety of testing and assessment techniques.

Options for assessment in training for work are important issues in vocational education. Means by which student employability skills may be measured are included in the options for assessment issues. The recommendations in Vocational Education Standards For National Board Certification (National Board For Professional Teaching Standards, 1996) include Standard VIII: Assessment that states:

"Accomplished vocational teachers utilize a variety of assessment methods to obtain useful information about student learning and development, to assist students in reflecting on their own progress and to refine their teaching (p. 55)."

There is a need for the identification and assessment of employability skills. Vocational educational teachers, general education teachers, public and private trainers of employees, employee placement personnel, employment services personnel, etc. all need a definition of employability skills and an understanding of appropriate employability skills. A knowledge and understanding of employability skills is not complete without knowing how to assess employability skills. Alleviation of an assessment need involves a variety of assessment instruments and evaluation methods and techniques. A knowledge of available means by which student employability skills may be measured is a step toward alleviating assessment needs.

This document is a response to knowledge requirements and needs associated with the identification and assessment of employability skills. The information needs serve as a basis for a number of study questions. Data and knowledge to alleviate the needs are obtained and reported as a study. Some data reported in the study to satisfy the directive in House File 2477 are included in this study on employability skills. Duplicate data are limited mainly to titles of a number of assessment measures.

## STUDY QUESTIONS

The information needs in identifying and assessing employability skills establish the parameters of the employability skills study. The basic study problem can be stated as follows:

What are the means by which student employability skills may be measured?

One cannot solve the study problem without knowing something about a set of desired employability skills and measures to assess the employability skills. In order to solve the problem, the following questions were devised to focus and drive the study.

1. What employability skills should be measured?
2. What tests and/or assessments are available to measure employability skills?
3. Do the available tests and/or assessments measure the desired employability skills?
4. Are sufficient means available by which student employability skills can be measured?

### DEFINITION OF EMPLOYABILITY SKILLS

Until recent times employability skills were considered to be primarily vocational or job specific (Saterfiel and McLarty, 1995). As recently as 1994 the U.S. Office of Technology Assessment in Testing and Assessment in Vocational Education (U.S. Congress, Office of Technology Assessment, 1994) classified the skills assessed in Vocational Education as academic and occupational. Occupational skills were subdivided into vocational, generic workplace, and broad technical skills.

Employability skills are not now considered to be job specific. Buck and Barrick (1987) equated employability skills with nontechnical abilities. The Secretary's Commission on Achieving Necessary Skills (SCANS, 1991) considered the SCANS competencies and foundation skills to be workplace know-how and differ from a person's technical knowledge. Saterfiel and McLarty (1995) considered employability skills as skills required to acquire and retain a job. In the Saterfiel and McLarty definition "acquire a job" was considered being a successful applicant instead of being a series of job-seeking skills.

A generic approach to defining employability skills is consistent with the employability skills definition from SCANS and other sources identified above. Employability skills for this study are defined as generic skills used in the workplace. Emphasis is placed on "in the workplace." These skills cut across all jobs. Technical occupational skills are not considered generic employability skills. Job-seeking skills and career interests are not included in the definition. Entrepreneurship competencies such as evaluating the role of small businesses and the consideration of entrepreneurship as a career option are not considered generic skills used in the workplace.

## STUDY PLAN OR PROCEDURES TO OBTAIN STUDY FINDINGS

The study plan is a series of operations or procedures that were predetermined to be used to obtain, analyze, and evaluate information in the study. The procedures listed below were not intended to be completed in numerical sequence, but some natural sequences do exist in procedural relationships.

1. Combine the skills and competencies in Workplace Basics: The Essential Skills Employers Want (Carnevale, Gainer, and Meltzer, 1990), What Work Requires of Schools (SCANS, 1991), and Occupational Competency Analysis Profile: Employability (Vocational Instructional Materials Laboratory, 1995) into one set.
2. Abstract a desired set of employability skills from the combined sets identified in #1 above by using natural relationships and attributes.
3. Adjust the desired set of employability skills by adding any skill categories that are already identified by the literature on knowledge relationships and appear to be natural relationships omitted in the original sets in #1 above.
4. Evaluate the appropriateness and comprehensiveness of the desired set of employability skills by comparing the set to a list of employability attributes comprised of employer desired employability skills most frequently cited by different researchers (Cotton, 1995).
5. Review current publishers' catalogs and advertisements and the following sources for available employability skills tests and assessment systems.  
  
10th Mental Measurements Yearbook (Buros Institute, 1990)  
10TH Mental Measurements Yearbook, Supplement (Buros Institute, 1991)  
11th Mental Measurements Yearbook (Buros Institute, 1992)  
11th Mental Measurements Yearbook, Supplement (Buros Institute, 1994)  
12th Mental Measurements Yearbook (Buros Institute, 1995)  
12th Mental Measurements Yearbook, Supplement (Buros Institute, 1996)  
Tests in Print IV (Buros Institute, 1994)  
Test Collection Catalog Volume 2: Vocational Tests and Measurement Devices, Second Edition (Educational Testing Service, 1995)
6. Evaluate the appropriateness and comprehensiveness of the available employability skills tests and assessment systems search by comparing the results with tests identified in Workplace Basic Skills Assessment Tools. Library Research

Report (Grace, 1994) and Career Assessment Instruments for Vocational Studies With Special Needs (Kapes, Lynch, and Parrish, 1992).

7. Evaluate the appropriateness and comprehensiveness of the available employability skills tests and assessment systems search by comparing the identified tests and assessment systems to the desired employability skills to be measured.
8. Identify the skill categories which indicate a need for the identification of additional assessment measures.
9. Again search the publishers' catalogs and test collection sources listed in #5 above for specific tests to match the needs identified in #8 above. Adjust the selection focus from strictly workplace measures to the same skills in other contexts. If necessary, add additional volumes of the Test Collection Catalog such as personality tests to the search.

#### DETERMINATION OF EMPLOYABILITY SKILLS TO BE ASSESSED

The employability skills to be candidates for assessment were identified by combining the skills and competencies in Workplace Basics: The Essential Skills Employers Want (Carnevale, Gainer, and Meltzer, 1990) (Appendix A), What Work Requires of Schools (SCANS, 1991) (Appendix B), and Occupational Competency Analysis Profile: Employability (Vocational Instructional Materials Laboratory, 1995) (Appendix C) and abstracting a set of skills to represent all members of the three separate sets. The combining process began with selecting the three foundation areas and five competency areas of SCANS as the major categories of the combined set. At this point in time, the sub-categories of the foundation and competency areas of SCANS were automatically grouped in their original categories. Then all the workplace basics skills were classified into the eight categories. The last items to be added to complete the combined set (Appendix D) were competencies from the Occupational Competency Analysis Profile: Employability. Some competencies from the employability profile were not selected for inclusion because they did not meet the definition of employability skills criterion (Appendix E).

Before beginning to abstract skill commonalities, it was necessary to eliminate the "behavioral" part from several of the employability profile competencies. A "behavioral statement" limits the skill to one instance of the skill and may restrict a generalized thinking about the skill. Words such as "develop," "demonstrate," and "evaluate" were mentally, if not physically, eliminated to give all the skills similar structures. The SCANS competencies did not create a "behavioral" problem because they were stated more like the foundation skills.

Skills in each major category were put through processes such as combining and relabeling in order to produce skills that were representative of all the original category members. Some skills had to be moved to other major categories because of similarities of members across major categories. "Knowing How to Learn" was moved from "Thinking Skills" to "Personal Qualities" and combined with other learning members such as "Lifelong Learning Practices", and "Individual Career Plan." "Critical Thinking" was added to the major category "Thinking Skills" because of the studies of Presseisen (1987), Marzano et al. (1988), Halpern (1994), and Perkins et al. (1994) on defining thinking. The addition of "Critical Thinking" allows for the division of thinking into the major categories of "Critical" and "Creative" (Appendix F) and increases the critical thinking challenges to include more than "Problem Solving" and "Decision Making." "Seeing Things in the Mind's Eye" was transformed through "Mental Models" (Perkins, 1986), "Mental Images" (Perkins, 1992), and "Visualizing" (Crabbe, 1994) to become "Enabling Thinking Skills" (Appendix G).

TABLE 1

EMPLOYABILITY SKILLS TO BE MEASURED

BASIC ACADEMIC SKILLS

Reading  
Writing  
Math  
Listening  
Speaking

THINKING SKILLS

Creative Thinking  
Critical Thinking  
Decision Making  
Problem Solving  
Enabling Thinking Skills  
Reasoning

PERSONAL QUALITIES

Responsibility  
Self-Esteem  
Sociability  
Self-Management  
Learning  
Change Adaptability  
Integrity/Honesty

INTERPERSONAL

Teamwork  
Acceptable Behaviors  
Clients/Customer Interactions  
Leadership  
Relationships  
Negotiations

RESOURCES MANAGEMENT

Time  
Money  
Materials/Facilities  
Human Resources

SYSTEMS

Utilize Systems  
Monitor and Improve Systems  
Design Systems

TECHNOLOGY

Technology Applications

The original major category "Information" was eliminated because three of the skills were enabling thinking skills and the remaining skill dealt with technology. After all the adjustments and combinations, the abstracted set of employability skills (study employability skills) to be measured consisted of thirty-two skills grouped into seven categories (TABLE 1).

Cotton (1995) analyzed thirty-two studies on skills and traits employers value. The skills cited most frequently were grouped into the three categories of basic skills, higher-order thinking skills, and affective skills and traits (TABLE 2).

TABLE 2

COTTON'S LIST OF SKILLS AND TRAITS EMPLOYERS VALUE

<u>Basic Skills</u>	<u>Affective Skills and Traits</u>
Oral communications (speaking, listening)	Dependability/Responsibility
Reading, esp. understanding and following instructions	Positive attitude toward work
Basic arithmetic	Conscientiousness, punctuality, efficiency
Writing	Interpersonal skills, cooperation, working as a team member
<u>Higher Order Thinking Skills</u>	Self-confidence, positive self-image
Problem solving	Adaptability, flexibility
Learning skills, strategies	Enthusiasm,, motivation
Creative, innovative thinking	Self-discipline, self-management
Decision making	Appropriate dress, grooming
	Honesty, integrity
	Ability to work without supervision

When the study employability skills are compared to Cotton's employability skills the following similarities and differences are observed.

1. The basic academic skills in both sets are essentially identical skills.
2. The thinking skills in the study employability skills set has more members by including critical thinking, enabling thinking skills, and reasoning. There are many instances of thinking (judgments; criticism; mechanical reasoning) which cannot be simply classified as problem solving, creative thinking, or decision making.

3. All of Cotton's employability skills listed as "Affective Skills and Traits" can be classified into the skill areas listed under "Personal Qualities" and "Interpersonal" in the study employability skills set.
4. Cotton's "Affective Skills and Traits" do not account for the sociability, leadership, and clients/customer interactions skills in the study employability skills set.
5. Cotton's employability skills set does not have the "Resources Management," "Systems," and "Technology" skill categories found in the study employability skills set.

The appropriateness of the study employability skills set is shown because it includes all the skills in Cotton's employability skills set. Since the study employability skills set has skills not included in Cotton's set, the study employability skills set is a more comprehensive set.

### CRITERIA FOR SELECTING EMPLOYABILITY SKILLS TESTS

After determining a desired set of employability skills, it was necessary to determine what assessment measures are available for assessing employability skills. The process eventually leads to analyzing the match between study employability skills and available assessment measures. Available employability skills tests and assessment systems were selected from current publishers' catalogs and advertisements and sources such as the Mental Measurements Yearbooks and Educational Testing Service test collections. The following criteria and reasons governed the selection process.

1. Instrument or assessment system must be copyrighted or revised no earlier than 1986.

Reason: Instruments or assessment systems developed or revised since 1986 should reflect current thinking about employability skills. A majority of the instruments selected will be developed or revised from 1990 to 1996.

2. Instrument or assessment system is advertised for assessing vocational skills, or School-To-Work abilities, or career pathway abilities (including achievement and/or aptitude). Guideline #4 may be substituted for this guideline.

Reason: The intent for developing the instruments or assessment systems is measurement of employability skills or abilities.

3. Instrument or assessment system is "in print" and readily available for purchase.

Reason: Current publisher catalogs and publications of available tests can be used to identify instruments and assessment systems. Identified tests must be easily obtained. Foreign published tests will not be considered because of difficulty in obtaining.

4. Instrument or assessment system development is based on a framework (Appendix H) which includes applications of skills and abilities. This guideline is applied when the test is not advertised for assessing vocational skills.

Reason: Some instruments or assessment systems do not directly state the measurement of employability skills and abilities, but the development of the tests was based on a framework (Appendix I) which includes employability skills and abilities. It is difficult to establish the origin and classification of a test item by analyzing only the test item (Appendix J).

5. Instrument or assessment system limited to only measuring career interests is not selected for review.

Reason: Employability skills and abilities are assessed in achievement and aptitude measures and not interest inventories.

6. Instrument or assessment system advertised as an achievement or aptitude measure and advertised as being connected to a career interests measure is selected for review.

Reason: Some tests are advertised and appear as regular achievement and aptitude tests. Connecting a test to a career interests inventory shows the intent to measure employability skills and abilities.

7. Instrument or assessment system considered to be an achievement test battery (Appendix K) is not selected for review.

Reason: The intent of achievement test batteries is to measure achievement. One should not interpret this intent to mean the batteries do not measure any employability skills and abilities.

8. Instrument or assessment system which is derived from an achievement test battery and intended to measure

employability skills and abilities is selected for review.

Reason: Publishers of achievement test batteries package portions or modified portions of a test battery to be used for specific assessments. The selected portion of a test battery can test employability skills and abilities.

## ORIGINAL SET OF IDENTIFIED MEASURES

TABLE 3

### ORIGINAL SET OF MEASURES IDENTIFIED FOR ASSESSING EMPLOYABILITY SKILLS

Adult Basic Learning Examination, Second Edition (ABLE)  
Ability Explorer [AE]  
APTICOM  
ASSET  
Brigrance Life Skills Inventory [BLSI]  
Collegiate Assessment of Academic Proficiency (CAAP)  
COMPUTE-A-MATCH [CAM]  
Career Ability Placement Survey (CAPS)  
College BASE [CB]  
Career Beliefs Inventory (CBI)  
CAT/5 Listening and Speaking Checklist [CLAS]  
Career Orientation Placement and Evaluation Survey (COPES)  
CTB Performance Assessment [CPA]  
CTB Writing Assessment System [CWAS]  
Differential Aptitude Tests, Fifth Edition (DAT)  
Employability Competency System (ECS)  
Brigrance Employability Skills Inventory (ESI)  
Listening Assessment for TAP/ITED [LATI]  
New Standards Reference Examinations [NSRE]  
Occupational Aptitude Survey and Interest Schedule,  
Second Edition (OASIS-2)  
Ohio Vocational Competency Assessment (OVCA)  
Performance Assessments for ITBS and TAP & ITED [PAITI]  
Scholastic Level Exam (SLE)  
Success Skills 2000 (SS2000)  
Tests of Adult Education (TABE)  
TABE Work-Related Problem Solving (TABE-PS)  
TABE Work-Related Foundation Skills (TABE-WR)  
Tests of Applied Literacy Skills (TALS)  
Test of Academic Performance (TAP)[HB]  
Tests of Achievement and Proficiency (TAP)[R]  
Stanford Test of Academic Skills (TASK)  
Work Adjustment Inventory (WAI)  
WinValuate and MacValuate [WAM]  
Wonderlic Basic Skills Test (WBST)  
Work Keys Assessments [WKA]  
Workplace Success Skills (WSS)

The search for employability skills measures produced the identification of thirty-six tests and assessment systems that met the selection criteria. Table 3 contains a list of the measures by title and acronym. Publisher provided acronyms are in parentheses and locally produced acronyms are in brackets. Measures are "tracked" in later matrix comparisons by acronym. The measures are alphabetized by acronym and a title when a title has the appearance of an acronym.

The first appropriateness and comprehensiveness check for the identified assessment tests is a comparison of the members with assessments identified by Kapes, Lynch, and Parrish (1992) and the measures identified by Grace (1994). The first step in the two step check process consists of identifying tests that are common to the study list and either the Kapes et al. set or the Grace set. Step two consists of justifying why a particular test was not identified for the study.

Twelve measures identified in the study are common to a combination of the two sets of external criteria (TABLE 4). Four study members are identical to the Kapes et al. set and eight study tests are common to the Grace set.

TABLE 4

TESTS COMMON TO STUDY TESTS AND EXTERNAL CRITERIA TESTS

Kapes et al. Set\*

APTICOM  
Career Ability Placement Survey (CAPS)  
Differential Aptitude Test (DAT)  
Occupational Aptitude Survey and Interest Schedule (OASIS-2)

Grace Set\*\*

Adult Basic Learning Examination (ABLE)  
Career Ability Placement Survey (CAPS)  
Comprehensive Adult Student Assessment System (CASAS)  
Compute-A-Match  
Tests of Adult Education (TABE)  
Tests of Applied Literacy Skills (TALS)  
Test of Achievement and Proficiency (TAP)  
Work Keys

\* Career Assessment Instruments For Vocational Students  
With Special Needs (Kapes et al., 1992)

\*\* Workplace Basic Skills Assessment Tools (Grace, 1994)

Eight measures in the Kapes et al. study are not in the employability skills study (TABLE 5). Four of the eight measures are interest inventories. One assessment measured technical skills. Two of the measures provided information for remediation and rehabilitation. Only the "Social and Prevocational Information Battery - Revised (SPIB-R)" test required detailed analysis before being rejected. SPIB-R consists of nine tests assessing knowledge of life skills required for community adjustment of mildly mentally retarded individuals. Only two of the nine tests relate to employability and one of these tests addressed job-search skills.

TABLE 5

KAPES ET AL. STUDY MEASURES NOT IN EMPLOYABILITY STUDY

<u>TEST</u>	<u>REJECTION REASON</u>
Career Occupational Preference System (COPS)	Yields Career Interest Scores
McCarron-Dial System (MDS)	Rehabilitation Program Intent for Mentally Impaired
Prevocational Assessment Screen (PAS)	Measures Motor and Perceptual Abilities to Determine Remediation
The Pictorial Inventory of Careers (PIC)	Interest Inventory
Reading Free Vocational Interest Inventory (R-FVII)	Interest Inventory
Social and Prevocational Information Battery - Revised (SPIB-R)	Focuses on Community Adjustment for Mildly Retarded
Talent Assessment Program (TAP)	Measures Technical Skills
Wide Range Interest Opinion Test (WRIOT)	1979 Interest and Attitude Test

TABLE 6

## GRACE STUDY MEASURES NOT IN EMPLOYABILITY STUDY

<u>Test</u>	<u>Rejection Reason</u>
Brigance Diagnostic Inventory	Old Version, New Version Selected
Business English Test (BET)	1965 Test
Clerical Basic Skills Test (BST)	Clerical Test
Cornell Test of Basic	1983 Test
Gates-MacGinite Reading Test	Reading Survey Test
Industrial Reading Test (IRT)	Not Available
Life Skills Applications Mathematics Test	Math Computations Test for Daily Use of Math
Northwest Workplace Bacis (NWB)	Uses CASAS (ECS) Assessment ECS Was Selected
Skills 2000 Softward	Assessment is TABE TABE Was Selected
Wide-Range Achievement Test-3 (WRAT-3)	Assesses Basic Achievement

Ten of the measures in the Grace study are not in the employability skills study (TABLE 6). Three of the measures are replaced in the study with a new version of an old test or utilization of a current assessment system. Two of the measures are too old to be included. Only basic achievement is assessed by three of the rejected measures. One measure is a technical test. The "Industrial Reading Test" is no longer advertised.

When compared to the external criteria tests, the study set of identified employability skills tests appear to be an appropriate and comprehensive set of tests. All measures in the Kapes et al. and Grace sets are included in the study or logically excluded from the employability skills study. Measures included from the study by Kapes et al. add a special education orientation to the employability skills study.

## RELATIONSHIPS BETWEEN LEVELS, SKILLS, AND MEASURES

The relationships between levels, skills, and measures (TABLE 7) provide information for the second appropriateness and comprehensiveness check on the identified employability skills measures. The check involves available employability skills measures being matched against the desired employability skills. A matrix of information on relationships provides an insight to a need for additional measures of employability skills.

TABLE 7 contains levels, skills, traits, and assessments. Levels are the four test populations of elementary, high school, college (2 and 4 year), and adult (not enrolled in high school or college). The skills consist of the seven major categories of desired employability skills along with the skills in each category. The assessments are each of the thirty-six identified tests or assessment systems. Each measure is listed as an acronym. The order of the assessments is the same as the "Original Set of Measures Identified For Assessing Employability Skills" in TABLE 3. TABLE 3 or the Index of Acronyms can be consulted for actual titles of measures.

Traits are not skills, but traits are included in TABLE 7 because some measures assess traits in addition to skills. Traits can be considered attributes of individuals such as "finger dexterity", "eye-hand coordination," and "perceptual speed." Since traits are characteristics of an individual, the only traits subcategory listed is self-traits.

TABLE 7

RELATIONSHIPS BETWEEN LEVELS, SKILLS, AND MEASURES

Levels, Skills and Traits		Assessments					
		ABLE	AE	APTICOM	ASSET	BLSI	CAAP
Levels	Elementary		#				
	High School		#	#		#	
	College			#	#		#
	Adults	#	#	#		#	
Basic Academic Skills	Reading	#	#	#	#	#	#
	Writing	#	#		#	#	#
	Math	#	#	#	#	#	#
	Listening					#	
	Speaking					#	
Thinking Skills	Creative Thinking						
	Critical Thinking						#
	Decision Making						
	Problem Solving	#					
	Enabling Thinking Skills		#	#	#		
Personal Qualities	Reasoning			#	#		#
	Responsibility						
	Self-Esteem						
	Sociability		#				
	Self-Management						
	Learning				#		
	Change Adaptation						
Integrity/Honesty							
Inter-personal	Teamwork						
	Acceptable Behaviors						
	Client/Customer Interactions						
	Leadership Relationships		#				
	Negotiation Skills						
Resources Management	Time						
	Money					#	
	Materials/Facilities					#	
Systems	Human Resources						
	Utilize Systems						
	Monitor and Improve Systems						
Technology	Design Systems						
	Technology Applications						
Traits	Self-Traits		#	#	#		

TABLE 7 (continued)

RELATIONSHIPS BETWEEN LEVELS, SKILLS, AND MEASURES

Levels, Skills and Traits		Assessments						
		CAM	CAPS	CB	CBI	CLAS	COPEs	CPA
Levels	Elementary	#			#	#	#	#
	High School	#	#		#	#	#	#
	College	#	#	#	#		#	
	Adults	#	#		#		#	
Basic Academic Skills	Reading	#	#	#				
	Writing	#	#	#				
	Math	#	#	#				
	Listening					#		
	Speaking	#				#		
Thinking Skills	Creative Thinking							
	Critical Thinking							
	Decision Making							
	Problem Solving							#
	Enabling Thinking Skills	#	#					#
	Reasoning	#	#	#				
Personal Qualities	Responsibility	#			#		#	
	Self-Esteem	#			#		#	
	Sociability				#		#	
	Self-Management				#		#	
	Learning	#			#			
	Change Adaptation				#			
	Integrity/Honesty				#			
Inter-personal	Teamwork							
	Acceptable Behaviors	#			#		#	
	Client/Customer Interactions							
	Leadership						#	
	Relationships				#		#	
	Negotiation Skills				#			
Resources Management	Time							
	Money							
	Materials/Facilities							
	Human Resources							
Systems	Utilize Systems							
	Monitor and Improve Systems							
	Design Systems							
Technology	Technology							
	Applications							
Traits	Self-Traits	#	#					

TABLE 7 (continued)

RELATIONSHIPS BETWEEN LEVELS, SKILLS, AND MEASURES

Levels, Skills and Traits		Assessments						
		CWAS	DAT	ECS	ESI	LATI	NSRE	OASIS-2
Levels	Elementary	#	#				#	#
	High School	#	#	#	#	#	#	#
	College							
	Adults	#	#	#	#			
Basic Academic Skills	Reading		#	#	#		#	
	Writing	#	#	#	#		#	
	Math		#	#	#		#	#
	Listening			#	#	#		#
	Speaking			#	#			#
Thinking Skills	Creative Thinking			#				
	Critical Thinking			#				
	Decision Making				#			
	Problem Solving			#				
	Enabling Thinking Skills		#					#
Personal Qualities	Reasoning		#					
	Responsibility							
	Self-Esteem				#			
	Sociability							
	Self-Management							
	Learning							
	Change Adaptation							
Integrity/Honesty								
Inter-personal	Teamwork							
	Acceptable Behaviors							
	Client/Customer Interactions							
	Leadership Relationships							
	Negotiation Skills							
Resources Management	Time							
	Money							
	Materials/Facilities							
Systems	Human Resources							
	Utilize Systems							
	Monitor and Improve Systems							
	Design Systems							
Technology	Technology Applications							
	Self-Traits		#					#

TABLE 7 (continued)

RELATIONSHIPS BETWEEN LEVELS, SKILLS, AND MEASURES

Levels, Skills and Traits		Assessments				
		OVCA	PAITI	SLE	SS2000	TABE
Levels	Elementary		#			
	High School	#	#	#		#
	College				#	
	Adults	#		#	#	#
Basic Academic Skills	Reading		#			#
	Writing		#			#
	Math		#			#
	Listening					
	Speaking					
Thinking Skills	Creative Thinking					
	Critical Thinking				#	
	Decision Making	#				
	Problem Solving	#		#	#	
	Enabling Thinking Skills					
Personal Qualities	Reasoning					
	Responsibility	#			#	
	Self-Esteem	#				
	Sociability	#				
	Self-Management	#			#	
	Learning	#		#		
	Change Adaptation	#				
Inter-personal	Integrity/Honesty					
	Teamwork	#			#	
	Acceptable Behaviors	#				
	Client/Customer Interactions					
	Leadership	#			#	
	Relationships	#			#	
Resources Management	Negotiation Skills					
	Time					
	Money					
	Materials/Facilities					
Systems	Human Resources					
	Utilize Systems	#				
	Monitor and Improve Systems					
Technology	Design Systems					
	Technology Applications	#				
Traits	Self-Traits					

TABLE 7 (continued)

RELATIONSHIPS BETWEEN LEVELS, SKILLS, AND MEASURES

Levels, Skills and Traits		Assessments				
		TABE-PS	TABE-WR	TALS	TAP[HB]	TAP[R]
Levels	Elementary				#	#
	High School	#	#	#	#	#
	College					
	Adults	#	#	#		
Basic Academic Skills	Reading		#	#	#	#
	Writing		#		#	
	Math		#	#	#	#
	Listening					
	Speaking					
Thinking Skills	Creative Thinking	#				
	Critical Thinking					
	Decision Making					
	Problem Solving	#				#
	Enabling Thinking Skills Reasoning			#		#
Personal Qualities	Responsibility					
	Self-Esteem					
	Sociability					
	Self-Management					
	Learning					
	Change Adaptation Integrity/Honesty					
Inter-personal	Teamwork					
	Acceptable Behaviors					
	Client/Customer Interactions					
	Leadership Relationships					
	Negotiation Skills					
Resources Management	Time					
	Money			#		
	Materials/Facilities					
	Human Resources					
Systems	Utilize Systems					
	Monitor and Improve Systems					
	Design Systems					
Technology	Technology					
	Applications					
Traits	Self-Traits					

TABLE 7 (continued)

RELATIONSHIPS BETWEEN LEVELS, SKILLS, AND MEASURES

Levels, Skills and Traits		Assessments					
		TASK	WAI	WAM	WBST	WKA	WSS
Levels	Elementary						
	High School	#	#	#	#	#	#
	College	#					#
	Adults		#	#	#	#	#
Basic Academic Skills	Reading	#			#	#	
	Writing	#			#	#	
	Math	#			#	#	
	Listening					#	#
	Speaking						
Thinking Skills	Creative Thinking						
	Critical Thinking						
	Decision Making						
	Problem Solving					#	
	Enabling Thinking Skills				#	#	#
	Reasoning						
Personal Qualities	Responsibility		#				
	Self-Esteem		#				
	Sociability		#				
	Self-Management						#
	Learning	#					#
	Change Adaptation		#				
Inter-personal	Integrity/Honesty						
	Teamwork		#			#	
	Acceptable Behaviors		#				
	Client/Customer Interactions						#
	Leadership						#
	Relationships		#				#
Resources Management	Negotiation Skills						
	Time						
	Money						
	Materials/Facilities						
Systems	Human Resources						
	Utilize Systems						
	Monitor and Improve Systems						
Technology	Design Systems						
	Technology Applications			#			
Traits	Self-Traits						

## SECOND APPROPRIATENESS AND COMPREHENSIVENESS CHECK

The second appropriateness and comprehensiveness check consists of analyzing the relationships between levels, skills, and measures (TABLE 7) to identify a shortage of assessments to measure particular skills. Attention is focused mainly on skills without any identified measures.

Measures are available to assess each skill in the "Basic Academic Skills" category. At least one measure is available to assess each skill at each test population level. There does not appear to a need to search for additional "Basic Academic Skills" measures.

There are an abundance of measures to assess "Problem Solving," "Enabling Thinking Skills," and "Reasoning" in the "Thinking Skills" category. "Decision Making" is assessed by only one measure. "Creative Thinking" and "Critical Thinking" are assessed with more than one measure. The search for measures of "Thinking Skills" is considered complete.

Every test population level has at least two measures of assessing six of the seven skills in the "Personal Qualities" category. "Integrity/Honesty" is the only "Personal Quality" skill without a measure. Measures for the "Personal Qualities" category are not a comprehensive set without a measure for "Integrity/Honesty."

The measures for "Interpersonal" skills pass the appropriateness and comprehensiveness check. If there is any weakness in the set of measures for "Interpersonal" skills, it is in assessing "Negotiation Skills." This weakness is not considered important because of the degree negotiations is involved in teamwork measures.

Only two measures are identified for assessing skills in the "Resources Management" category. "Materials/Facilities" and "Money" management are assessed. The "Resources Management" set of measures appears to be incomplete.

The "Systems" category of skills contains only one measure assessing only one skill area of "Systems." A consideration of the relationships between skills and measures indicates a need to search for more measures to assess skills in the "Systems" category.

The "Technology" category of skills contains only two measures, but these two measures may provide sufficient information. Generic technology use focuses highly on computers and other general equipment such as copying machines. One can easily exceed the generic use of technology and expand into the technical use of technology. The SCANS definition of technology (SCANS, 1992) involves the use of tools, machines, and equipment other than computers. A distinction is not made between generic and technical technology skills by SCANS. Many technology application measures

are classified as tests of technical skills. Different occupations include a variety of technology applications which are considered technical applications. For example, a Medical Technologist uses a machine instead of manual process to identify organisms and perform sensitivities (SCANS, 1992 p. 3-55). For these reasons, the search for additional measures of generic "Technology Applications" skills is ended.

## SECOND SEARCH FOR MEASURES OF EMPLOYABILITY SKILLS

The goal of the second search for available assessments to measure employability skills is to eliminate the measure availability needs identified in the second appropriateness and comprehensiveness check. According to the measure needs, more measures are needed for the "Personal Qualities," "Resources Management," and "Systems" categories of skills. Because of the importance of "Self-Esteem" and "Self-Management" in the workplace, additional measures in these areas are desired. Procedures for conducting the search are described in operation #9, Study Plan or Procedures to Obtain Study Findings. If additional measures for a skill category cannot be identified, then a rationale for non-identification is required.

Three different measures (TABLE 8) are available to up-grade the assessment of "Personal Qualities." The Multi-Dimensional Self-Esteem Inventory is a self-esteem and self-concept test that also measures "Self-Management" and "Responsibility." The Student Adjustment Inventory and Student Styles Questionnaire expands the "Personal Qualities" assessment to include "Sociability" and "Change Adaptation."

Two measures are available for assessing "Integrity/Honesty." The Employee Reliability Inventory (TABLE 8) measures "Responsibility" and "Integrity/Honesty." An Integrity Attitude Scale is found in the Reid Report (TABLE 8).

TABLE 8

### ADDED SET OF MEASURES IDENTIFIED FOR ASSESSING EMPLOYABILITY SKILLS

Employee Reliability Inventory (ERI)  
Multi-Dimensional Self-Esteem Inventory (MSEI)  
Reid Report (RR)  
Student Adjustment Inventory (SAI)  
Student Styles Questionnaire [SSQ]

Additional appropriate "Resources Management" measures limited only to employability skills are not a product of the second search. It appears "Resources Management" measures are mainly either inherently in particular test items or limited to technical or

occupational tests. The ACT test Proficiency Examinations in Management of Human Resources is a technical examine. Planning a restaurant is included in the Maryland School Assessment Program (Wirt, 1993, p. 115). ACT Work Keys has an item in problem solving on allocating resources as equipment is installed (Wirt, 1993, p. 120). Time allocation is frequently found in Study Skills measures.

Claims on particular items assessing skills may create a problematic situation for evaluators when the test titles or descriptions do not indicate specific content of each test item. Scoring of the instrument may not be structured on the situation used in an item (e.g., a problem solving skill may be scored instead of a resources management skill). A logical extension of this line of thought leads to any item testing a magnitude of skills because of a variety of information in an item.

There are exceptions to the inherent item problem with measures such as Performance Based Interviewing Plus (PBI) by Wilson Learning Corporation (Wirt, 1993, p. 118). In PBI the interview is not objectively linked to particular skills, but a score for a specific skill is derived from the interview results.

The second search did not identify measures which assessed generic "Systems" skills. Judged by available measures, it appears "Systems" skills are not generic. Many of the skills used in operations of systems come from other disciplines such as statistics. Since systems involve components and variables that interact and influence each other, "Systems" skills are automatically included in any describable situation. The SCANS definition of systems (SCANS, 1992) includes knowing social, organizational, and technological systems. "Systems" skills are involved in other skill areas such as "Sociability," "Leadership," and "Teamwork." Incorporating a new chemical testing reagent into the laboratory process (SCANS, 1992, p. 3-54) obviously changes a system. One is dealing with systems even when the word system or an idea of a system is not overtly involved.

The five measures identified in the second search improve the assessment of "Personal Qualities" and "Interpersonal Skills." The relationships between the five measures and the skills and levels they assess are described in TABLE 9. TABLE 9 provides the same information on the added measures as provided in TABLE 7 on the original set of measures.

TABLE 9

RELATIONSHIPS BETWEEN LEVELS, SKILLS, AND ADDED MEASURES

Levels, Skills and Traits		Assessments				
		ERI	MSEI	RR	SAI	SSO
Levels	Elementary				#	#
	High School	#	#		#	#
	College				#	
	Adults	#	#	#		
Basic Academic Skills	Reading					
	Writing					
	Math					
	Listening				#	
	Speaking				#	
Thinking Skills	Creative Thinking					
	Critical Thinking					
	Decision Making					
	Problem Solving					
	Enabling Thinking Skills					
	Reasoning					
Personal Qualities	Responsibility	#	#			
	Self-Esteem		#		#	
	Sociability				#	#
	Self-Management		#		#	#
	Learning				#	
	Change Adaptation					#
	Integrity/Honesty	#		#		
Inter-personal	Teamwork					#
	Acceptable Behaviors					
	Client/Customer Interactions					
	Leadership					
	Relationships				#	#
	Negotiation Skills					
Resources Management	Time					
	Money					
	Materials/Facilities					
	Human Resources					
Systems	Utilize Systems					
	Monitor and Improve Systems					
	Design Systems					
Technology	Technology					
	Applications					
Traits	Self-Traits					

## DESCRIPTIONS OF AVAILABLE MEASURES

A comprehensive description is provided on each measure identified in the original set of measures (TABLE 3) and the added set of measures (TABLE 8). The added set of measures is appended to the original set of measures. Each description consists of the following information.

Measure Title, Acronym, Publication or Revision Date

INTENT: Appropriate use of the measure or why the measure was developed.

TEST POPULATION: To whom should the measure be administered.

TESTING TIME: Length of time required for an individual to complete a measure.

TEST FORM(S): Test forms are listed.

DESCRIPTION: A description of what each test or subtest measures. The differences between subtests are explained.

SPECIAL FEATURE(S): Additional information provided to assist in evaluating a test. The information varies from scoring assistance to interpretation and use of results.

COST: The date by year of the information and the cost are stated.

SOURCE: Where the measure can be purchased.

The order of the descriptions is the same as in the Relationships Between Levels, Skills, and Measures (TABLE 7) and the Relationships Between Levels, Skills, and Added Measures (TABLE 9). Alphabetized acronyms determine the order of measures in both the relationships tables and the descriptions. One can "track" a measure by acronym through the identification tables, relationships tables, and descriptions.

Adult Basic Learning Examination, Second Edition (ABLE) 1986

INTENT:

Provide an examination battery appropriate for versatile applications in a variety of adult education programs including Tech Prep.

Measure adult learning with a test specifically designed for adults.

TEST POPULATION: Adults

TESTING TIME: Regular Form: 2 Hours, 40 Minutes

Level 2, Alternate Form: 1 Hour

TEST FORM(S): Level 1 - 1 to 4 Years Formal Education

Level 2 - 5 to 8 Years Formal Education

Level 3 - At Least 8 Years of Schooling

Level 2 Alternate - ABLE Screening Battery

DESCRIPTION:

Level 1 subtests include Vocabulary, Reading Comprehension, Spelling, Number Operations, and Problem Solving.

Levels 2 and 3 subtests include all Level 1 subtests plus an applied grammar, capitalization, and punctuation Language subtest.

SPECIAL FEATURE(S):

SelectABLE used to place examinees in appropriate test level.

ABLE Spanish Edition and computer scoring are available.

ABLE is approved to be used for Ability to Benefit Testing (ATB).

Handbook of Instructional Techniques and Materials exists to assist teachers in taking the critical step from assessment to instruction.

COST: 1997 Information

Hand-Scorable or Reusable Test Booklets:  
64.00/Pkg 25, Any Level

Screening Battery: 52.50/Pkg 25

SOURCE: Harcourt Brace Educational Measurement  
555 Academic Court  
San Antonio, Texas 78204-2498

Ability Explorer [AE] 1996

INTENT:

Provide a self-reported measure of work-related abilities.

Help students and adults explore their abilities as they relate to the world of work and career and educational planning.

TEST POPULATION: Grades 6-12 and Adults

TESTING TIME: Less Than One Class Period

TEST FORM(S): Level 1 - Grades 6-8

Level 2 - Grades 9-12 and Adult

DESCRIPTION:

Both form levels include the work-related ability areas Artistic, Clerical, Interpersonal, Language, Manual, Musical/Dramatic, Numerical/Mathematical, Organizational, Persuasive, Social, Spatial, and Technical/Mechanical.

Each level consists of work-related skills statements.

Level 1 helps students explore abilities and careers, begin career planning, and select courses in high school.

Level 2 helps individuals learn about their abilities, do advanced career and/or educational exploration, and develop career plans.

SPECIAL FEATURE(S):

Results are linked to the U.S. Department of Labor Guide for Occupational Exploration.

Reading level is at or below fifth grade level.

COST: 1996 Information

Hand-Scorable Assessment Booklet: 35.00/Pkg 25,  
Any Level

SOURCE: Riverside Publishing  
425 Spring Lake Drive  
Itasca, IL 60143

APTICOM 1990

INTENT:

Improve the process of vocational and career assessment.

Provide a desktop console career assessment system that meets a wide range of needs and is not tedious and time consuming.

TEST POPULATION: Secondary Students, Postsecondary Students, and Adults

TESTING TIME: 90 Minutes or Less

FORM(S): One Form of Each Subtest or Scale

DESCRIPTION:

APTICOM console is small and portable.

APTICOM can test an individual or group of people.

APTICOM assesses using 11 aptitude subtests, 12 interest scales, and 4 levels of math and language.

Aptitudes are assessed by the following subtests.

- a. Object Identification
- b. Abstract Shape Matching
- c. Clerical Matching
- d. Eye-Hand-Foot Coordination
- e. Pattern Visualization
- f. Computation
- g. Finger Dexterity
- h. Numerical Reasoning
- i. Manual Dexterity
- j. Word Meanings
- k. Eye-Hand Coordination

The Occupational Interest Inventory relates to the 12 interest areas used by the U.S. Department of Labor. Each of the following interest areas contains interests to be rated as "Like", "?"; and "Dislike".

- a. Artistic
- b. Scientific
- c. Plants/Animals
- d. Protective
- e. Mechanical
- f. Industrial
- g. Business Detail
- h. Selling
- i. Accommodating
- j. Humanitarian

- k. Lead/Influence
- l. Physically Performing

The topic areas in each scale of the Language Development Test are:

- a. Spelling/Vocabulary,
- b. Vocabulary,
- c. Reference Skills,
- d. Punctuation/Capitalization, and
- e. Verb Forms.

Topic areas in each scale of the Mathematics Development Test are:

- a. Computation,
- b. Measurement,
- c. Ratio/Percent,
- d. Algebra,
- e. Geometry, and
- f. Trigonometry.

Flexible report options offer a wide range of vocational guidance alternatives linked to Dictionary of Occupational Titles (DOT) and Occupational Outlook Handbook (OOL).

SPECIAL FEATURE(S):

APTICOM has been approved by the U.S. Department of Education for Ability to Benefit Determination.

The assessment is available in Spanish and English.

A successor to APTICOM called CareerScope is available. CareerScope is networkable or stand-alone workstations. Assessment time is reduced to 60 minutes or less. CareerScope has a graphical user interface for Windows or Macintosh.

COST: 1995 Information

Single APTICOM Unit, Self-Contained: 6050.00

SOURCE: Vocational Research Institute (VRI)  
1528 Walnut Street, Suite 1502  
Philadelphia, PA 19102-3619

ASSET 1989

INTENT:

Provide short placement tests to help a student succeed in an educational program.

Identify strengths as well as the knowledge and skills needed to succeed in specific subject areas.

Provide an assessment to identify basic skill levels of students in two-year postsecondary institutions.

TEST POPULATION: Two Year Postsecondary Students

TESTING TIME: 25 Minutes Per Each Regular Test

6-14 Minutes Each Optional Measure

FORM(S): Two Parallel Forms of Each of The BASIC and ADVANCED measures

Self Scoring and Machine Scoring Options

DESCRIPTION:

ASSET is comprised of two levels with one level designed to measure basic skills in writing, reading, and mathematics and the second level assessing advanced skills in mathematics.

Optional measures include the career skills of mechanical reasoning, clerical speed/accuracy, and space relations and a Study Skills Inventory.

Understandings assessed in the Writing Skills Test are punctuation, grammar, sentence structure, organization, strategy, and style.

The Reading Skills Test measures reading comprehension as reflected in referring and reasoning.

A Numerical Skills Test for a basic skill measure assesses operations with whole numbers, decimals, and fractions and basic word problem solving skills involving arithmetic.

The Advanced Mathematics Tests are in the areas of elementary algebra, intermediate algebra, college algebra, and geometry.

The Study Skills Inventory measures managing time and environment, reading textbooks, taking class notes, using

information resources, and preparing for and taking exams.

SPECIAL FEATURE(S):

ASSET can be used as part of the ACT ASSET Student Success System. The ACT ASSET Student Success System is a student advising, placement, and retention service.

The ASSET system contains two research services which include the Entering Student Descriptive Report and the Returning Student Retention Report.

COST: 1996 Information

Student Sets By Volume: 2.65 Each

Study Skills Inventory: 12.50/Pkg 25

SOURCE: ACT ASSET Program  
Operations Division - 83  
P.O. Box 168  
Iowa City, IA 52243

Brigance Life Skills Inventory [BLSI] 1995

INTENT:

Assess basic skills and functional life skills in the context of real-world situations.

Provide assessment results to plan instruction, set learning goals, and monitor learning growth.

TEST POPULATION: Secondary Special Education and Adults

TESTING TIME: Variable

TEST FORM(S): 7-Ring Binder With 200+ Pages, Including Reproducible Pages For Group Administration

DESCRIPTION:

Life Skills Inventory assesses listening, speaking, writing, comprehending, and computing skills in the following nine life-skill sections.

- a. Speaking and Listening
- b. Functional Writing
- c. Words on Common Signs and Warning Labels
- d. Telephone
- e. Money and Finance
- f. Food
- g. Clothing
- h. Health
- i. Travel and Transportation

SPECIAL FEATURE(S):

"Quick Screen" feature to determine the entering functional level of a learner.

Opportunities to assess by observation in school or work setting.

Materials include Learner Record Book and Program Record Book.

COST: 1995 Information

Inventory and Record Books: 279.90/100 Students

SOURCE: Curriculum Associates, Inc.  
5 Esquire Road  
P.O. Box 2001  
N. Billerica, MA 01862-0901

Collegiate Assessment of Academic Proficiency (CAAP) 1992

INTENT:

Measure selective academic skills at the end of the sophomore level of college.

Determine the level of educational development for individual students as an indicator of their readiness for further education.

TEST POPULATION: Grades 13-14

TESTING TIME: Total: 240 Minutes

Each Subtest: 40 Minutes

FORM(S): One Form

DESCRIPTION:

Academic skills measured lay the foundation for performance in upper-level college courses and are essential to the general academic core curriculum.

CAAP consists of the following subtests.

- a. Writing Skills Test: Measures the student's understanding of standard written English in Usage/Mechanics and Rhetorical Skills.
- b. Reading Test: Measures reading comprehension as a product of skill in referring, reasoning, and generalizing.
- c. Science Reasoning Test: Measures the student's abilities in scientific reasoning.
- d. Mathematics Test: Measures student's mathematical reasoning ability to solve mathematical problems encountered in many postsecondary curricula.
- e. Critical Thinking: Measures the ability to clarify, analyze, evaluate, and extend arguments.
- f. Writing (Essay) Test: Examinee must make a decision, take a position, and support that position.

SPECIAL FEATURE(S):

Institutes can evaluate with all the subtests or use them separately.

COST: 1997 Information

Single Objective Test: First 1-500 Students 8.80

All Five Tests (Not Essay): First 1-500 Students 13.90

Writing Skills Objective Test and Writing (Essay)  
Test: 13.90/Student

SOURCE: American College Testing Program  
P.O. Box 168  
Iowa City, IA 52240

## COMPUTE-A-MATCH [CAM] 1990

### INTENT:

Assess vocational aptitudes, general educational development, and personal traits.

Provide a software system for evaluating an individual's greatest potential and matching the individual with training and jobs.

TEST POPULATION: Junior High Through College and Adults

TESTING TIME: Few Hours or Spread Over Any Number of Days

FORM(S): All tests except the Cognitive and Conceptual Abilities Test and Tests of Basic Adult Education are provided in one form.

### DESCRIPTION:

COMPUTE-A-MATCH is comprised of a testing system called S.A.G.E. (System for Assessment and Group Evaluation) and a training and placement system called J.O.B.S. S.A.G.E. includes the Vocational Aptitude Battery (VAB), the Cognitive and Conceptual Abilities Test (C-CAT), the Vocational Interest Inventory (VII), the Job Temperament Factor Assessment (TFA), Assessment of Work Attitudes (AWA), and a Learning Styles Inventory. J.O.B.S. matches participants to occupations and potential employers.

The Vocational Aptitude Battery assesses the following eleven aptitudes.

- a. General Ability
- b. Verbal Ability
- c. Numerical Ability
- d. Clerical Aptitude
- e. Spatial Ability
- f. Form Perception
- g. Color Discrimination
- h. Eye-Hand-Foot Coordination
- i. Finger Dexterity
- j. Manual Dexterity
- k. Motor Coordination

The Cognitive and Conceptual Abilities Test measures the three General Educational Development (GED) factors of reasoning, math, and language. C-CAT test items are related to the Dictionary of Occupational Titles (DOT).

The Vocational Interest Inventory relates to the Guide of Occupational Exploration (G.O.E.).

The Assessment of Work Attitudes consists of on-the-job situations to measure beliefs, values, and actions.

The Temperament Factor Assessment measures temperaments that often effect employee performance and turnover. Results are interpreted in relation to the eleven temperaments used by the Department of Labor in the classification of jobs.

The Learning Styles Inventory is based on the Center for Innovative Teaching Experiences (C.I.T.E.) Learning Style Inventory and produces a list of major and minor learning styles.

COMPUTE-A-MATCH includes a Test of Adult Basic Education (TABE) scoring and prescription writer for developing a profile of basic skills.

J.O.B.S. can match participants to local training, actual jobs, or potential employers. Current job titles and descriptions from the Dictionary of Occupational Titles are utilized.

All equipment is stored in portable carrying cases.

Software programs exist to score tests and print COMPUTE-A-MATCH results.

SPECIAL FEATURE(S):

COMPUTE-A-MATCH can be replaced with COMPUTE-A-MATCH - CAM 2001. CAM 2001 with all the features of COMPUTE-A-MATCH is a "state of the science" advanced computer managed testing system. CAM 2001 is considered an On-Line computerized assessment and placement system featuring multiple choice responses and manipulated tests linked and controlled directly by computers.

COST: 1996 Information

COMPUTE-A-MATCH Components Separately:

Vocational Aptitude Battery (VAB): 6495.00  
Cognitive & Conceptual Abilities Test (C-CAT): 375.00  
Vocational Interest Inventory (VII): 375.00  
Assessment of Work Attitudes (AWA): 375.00  
Temperament Factor Assessment (TFA): 375.00

COMPUTE-A-MATCH - CAM 2001: Complete Unit 19995.00

SOURCE: PESCO INTERNATIONAL  
21 Paulding Street  
Pleasantville, NY 10570

## Career Ability Placement Survey (CAPS) 1992

### INTENT:

Provide information about abilities to help in career planning.

Measure abilities keyed to entry requirements for jobs in 14 occupational clusters.

Provide a prediction of success in similar careers.

TEST POPULATION: Grades 8-12, College Students, and Adults

TESTING TIME: Not Over 50 Minutes

FORM(S): Self-Scoring Form and Machine-Scoring Form

### DESCRIPTION:

CAPS evaluates an individual's relative strengths and weaknesses in the following primary abilities.

- a. Mechanical Reasoning: Measures how well you understand mechanical principles and the laws of physics.
- b. Spatial Relations: Measures how well you can visualize or think in three dimensions and mentally picture the position of objects from a diagram or picture.
- c. Verbal Reasoning: Measures how well you can reason with words and your facility for understanding and using concepts expressed in words.
- d. Numerical Ability: Measures how well you can reason with and use numbers and work with quantitative materials and ideas.
- e. Language Usage: Measures how well you can recognize and use standard English grammar, punctuation and capitalization.
- f. Word Knowledge: Measures how well you can understand the meaning and precise use of words.
- g. Perceptual Speed and Accuracy: Measures how well you can perceive small detail rapidly and accurately within a mass of letters, numbers and symbols.
- h. Manual Speed and Dexterity: Measures how well you can make rapid and accurate movements with your hands.

Results are graphed on a CAPS Ability Profile Sheet.

Scores are interpreted in terms of national norms.

A CAPS Career Profile Sheet is used to relate the results to 14 occupational clusters.

SPECIAL FEATURE(S):

Results can be related to the COPSystem Career Cluster Booklets, the Occupational Outlook Handbook (OOH), and the Dictionary of Occupational Titles (DOT).

CAPS is a component of the Career Occupational Preference System (COPSystem) which includes measures of interests (Career Occupational Preference System) and values (Career Orientation Placement and Evaluation Survey).

COST: 1996 Information

Self-Scoring Test Battery: 69.25/Pkg 25

Self-Interpretation Profile and Guides: 11.50/Pkg 25

SOURCE: EdITS  
P.O. Box 7234  
San Diego, CA 92167

College BASE [CB] 1994

INTENT:

Test mastery of the college core curriculum.

Assess cross-disciplinary competencies.

Develop assessment in response to a concern over the quality of under-graduate education among a widely diversified student population.

TEST POPULATION: Most Appropriate For End of Sophomore Year

TESTING TIME: Complete Battery: 4 Hours

Institutional Matrix Edition: 50 Minutes

TEST FORM(S): Three Parallel Forms of Regular Edition

One Form of Institutional Matrix Edition

DESCRIPTION:

Assesses proficiency in English, mathematics, science, and social studies.

Assesses interpretive reasoning, strategic reasoning, and adaptive reasoning cross-disciplinary competencies.

SPECIAL FEATURE(S):

Each of the four academic subjects is organized into levels of increasing specificity identified as subjects, cluster, skills, and enabling subskills.

The competencies represent hierarchical levels of cognitive processing.

COST: 1996 Information

Regular Edition - Manual, Test Booklets and Answer Booklets: 84.00/Pkg 50

Institutional Matrix Edition - Manual, Test Booklets and Answer Booklets: 108.00/Pkg 50

SOURCE: Riverside Publishing  
425 Spring Lake Drive  
Itasca, IL 60143

## Career Beliefs Inventory (CBI) 1991

### INTENT:

An assessment designed to assist people in identifying career beliefs that may influence career goals.

Provide an assessment that measures beliefs instead of career interests.

TEST POPULATION: Junior High School and Over

TESTING TIME: Administration Time Not Reported

TEST FORM(S): One Form For All Population Members

### DESCRIPTION:

The Inventory consists of 96 items covering the following scales.

1. Administrative Index
2. Employment Status
3. Career Plans
4. Acceptance of Uncertainty
5. Openness
6. Achievement
7. College Education
8. Intrinsic Satisfaction
9. Peer Equality
10. Structured Work Environment
11. Control
12. Responsibility
13. Approval of Others
14. Self-Other Comparisons
15. Occupation/College Variation
16. Career Path Flexibility
17. Post-Training Transition
18. Job Experimentation
19. Relocation
20. Improving Self
21. Persisting While Uncertain
22. Taking Risks
23. Learning Job Skills
24. Negotiating/Searching
25. Overcoming Obstacles
26. Working Hard

SPECIAL FEATURE(S) :

Scoring must be done by a scoring service.

COST: 1992 Information

Test Booklets: 30.00/Pkg 25

Prepaid Answer Sheets: 40.00/ Pkg 10

SOURCE: Consulting Psychologists Press, Inc.  
3803 East Bayshore  
P.O. Box 10096  
Palo Alto, CA 94306

CAT/5 Listening and Speaking Checklist [CLAS] 1993

INTENT:

Assess oral language proficiencies required for success at school and at work.

Provide teachers with diagnostic information needed to plan and support instruction related to oral language skills.

TEST POPULATION: Grades K-12

TESTING TIME: Time lengths can vary by observing during the course of everyday classroom activities.

TEST FORM(S): Separate Checklists For Grades K-3, Grades 4-8, Grades 9-12

DESCRIPTION:

Listening and Speaking Checklist rates student ability based on classroom observation. Ratings are grouped according to listening behavior, speaking behavior, listening comprehension, participation, and critical listening. An Overall Rating Index classifies students as Basic, Proficient, or Advanced.

SPECIAL FEATURE(S):

CAT/5 Listening and Speaking Checklist can be used on its own or in conjunction with California Achievement Tests, Fifth Edition (CAT/5).

Can adjust checklist according to local program outcomes.

COST: 1996 Information

Checklist, Each Level: 21.00/Pkg 30

Teachers Guide: 9.55

SOURCE: CTB/McGraw-Hill  
20 Ryan Ranch Road  
Monterey, CA 93940

Career Orientation Placement and Evaluation Survey (COPES-1995)

INTENT:

Assess values which people consider to be important in their work and the activities they do.

Measure those personal values which have a demonstrated affect on vocational motivation and values.

TEST POPULATION: Grade 7-12, College Students, and Adults

TESTING TIME: Approximately 40-50 Minutes

FORM(S): Self-Scoring Form and Machine-Scoring Form

DESCRIPTION:

COPES-1995 measures the following work values.

a. Investigative vs. Accepting

Investigative: Possess intellectual curiosity and like the challenge of solving a complex task.

Accepting: See the concrete results of work and do not need to solve many complex problems.

b. Practical vs. Carefree

Practical: Showing proper appreciation for one's personal things and appreciation of practical and efficient ways of doing things.

Carefree: Value activities where others take care of equipment and keep things in good working order.

c. Independence vs. Conformity

Independence: Independence from rules, regulations and social conventions, and the freedom to work on their own.

Conformity: Value working under careful supervision where clear directions and regulations can be followed.

d. Leadership vs. Supportive

Leadership: Making decisions, directing others, and speaking for a group.

Supportive: Value activities in which they can be a good follower and do not need to direct others.

e. Orderliness vs. Flexibility

Orderliness: Keep things neat and in their proper place.

Flexibility: Value activities in which they can take things as they came and do not need to keep things orderly and neat.

f. Recognition vs. Privacy

Recognition: To become well known and famous and to know important people.

Privacy: Keep activities private and are not concerned with receiving honors or being considered a famous person.

g. Aesthetic vs. Realistic

Aesthetic: Shows artistic appreciation and the enjoyment of music and the arts.

Realistic: Value activities which do not rely on aesthetic senses or intuition and do not involve appreciation of artistic qualities.

h. Social vs. Reserved

Social: Helping others and appreciating the work of charitable service groups.

Reserved: Spend time on their own projects and tend to own affairs rather than helping others.

SPECIAL FEATURE(S):

COPEs-1995 results can be used in conjunction with measures of interests (COPS) and abilities (CAPS) and interpreted in terms of the career clusters provided in the COPSsystem.

COST: 1996 Information

Self-Scoring Booklets: 11.75/Pkg 25

Self-Interpretation Profile and Guide: 4.25/Pkg 25

SOURCE: EdITS

P.O. Box 7234  
San Diego, CA 92167

CTB Performance Assessment [CPA] 1994

INTENT:

Measure ability to use complex thinking and learning skills for both school and the workplace.

Provide teachers with a better understanding of the processes each student uses to solve problems in life-like situations.

TEST POPULATION: Grades 6-11

TESTING TIME: Reading/Language Arts: 55 Minutes

Three Other Areas: 25 Minutes Each

TEST FORM(S): Level 17/18 - Grades 7-8

Level 18/19 - Grades 8-9

Level 19/20 - Grades 9-10

Level 20/21 - Grades 10-11

DESCRIPTION:

Assessment uses constructed-response measures in the areas of reading/language arts, mathematics, science, and social studies. Written responses show a student's ability to draw conclusions, estimate answers, or determine good strategies for answering questions and solving problems.

SPECIAL FEATURE(S):

Can be administered with the California Achievement Tests, Fifth Edition (CAT/5) to provide performance in terms of six "Integrated Outcomes."

COST: 1996 Information

Test Books, Each Level: 42.30/Pkg 30

Readers, Each Level: 18.15/Pkg 30

Scoring Guide, Each Level: 2.05

Examiner's Manual, Each Level: 1.60

SOURCE: CTB/McGraw-Hill  
20 Ryan Ranch Road  
Monterey, CA 93940

CTB Writing Assessment System [CWAS] 1993

INTENT:

Provide information to plan performance-based instruction for improving writing skills.

Assessment that combines reading comprehension with writing tasks.

Assessment that includes a broad selection of writing tasks enabling the customization of writing assessment to School-To-Work, job skills training, and other programs.

TEST POPULATION: Grades 2-12 and Adults

TESTING TIME: Type of Prompt and Form Level Controlled:  
30-45 Minutes

TEST FORM(S): Level 12-13 - Grades 2.0-4.2  
Level 14-16 - Grades 3.6-7.2  
Level 17-19 - Grades 6.6-10.2  
Level 20-22 - Grades 9.6-12.9

DESCRIPTION:

Assessment contains both independent and reading-related prompts. A writing assignment elicits either personal expression (descriptive or narrative) or informative or persuasive writing.

SPECIAL FEATURE(S):

Assessment system can be used independently or in conjunction with California Achievement Tests, Fifth Edition (CAT/5).

Guidelines are provided for evaluating students' papers holistically and analytically.

COST: 1996 Information

Reading-Related Prompts: 31.15/Pkg 30

Independent Prompts: 24.50/Pkg 30

Administration and Scoring Manuals, Each Level: 9.55

SOURCE: CTB/McGraw-Hill  
20 Ryan Ranch Road  
Monterey, CA 93940

Differential Aptitude Tests, Fifth Edition (DAT) 1990

INTENT:

Measure aptitude of adolescents and adults.

Provide aptitude information for developing a career plan.

TEST POPULATION: Grade 7 - Adults

TESTING TIME: Complete Battery: 2.5 Hours

Partial Battery: 1.5 Hours With Interest Inventory

TEST FORM(S): Level 1 - Grades 7-9

Level 2 - Grades 10-12 and Adults

DESCRIPTION:

Complete battery subtests include Verbal Reasoning, Numerical Reasoning, Abstract Reasoning, Perceptual Speed and Accuracy, Mechanical Reasoning, Space Relations, Spelling, and Language Usage.

Partial battery subtests include Verbal Reasoning and Numerical Reasoning.

SPECIAL FEATURE(S):

Provides an integrated career pathway program when combined with Career Interest Inventory (CII).

DAT/CII Scoring Assistant software available.

COST: 1997 Information

Complete Battery, Any Level: 100.50/Pkg 25

Partial Battery, Any Level: 40.50/Pkg 25

SOURCE: Harcourt Brace Educational Measurement  
555 Academic Court  
San Antonio, TX 78204-2498

## Employability Competency System (ECS) 1996

### INTENT:

To place adults and youth into appropriate training programs or jobs.

To measure the employability skills of adults and youth enrolled in employment preparation and training programs.

TEST POPULATION: High School Students and Adults

TESTING TIME: ECS Appraisal Tests: 20 Minutes Each

Reading and Math Basic Skills Assessment Tests:  
Untimed, Less Than 1 Hour

Listening Comprehension Basic Skills Test:  
Level A - 28 Minutes; Level B - 43 Minutes;  
Level C - 33 Minutes

Thinking Test: Limit Questions; 10 Minutes  
Per Question

Applied Performance Appraisal: 10-45 Minutes  
Depending On Number of Questions

FORM(S): Two Parallel Forms For Each Level of Reading, Math,  
and Listening Comprehension test

One Form For Thinking Test; Select Number of  
Questions From Total of 15 Questions

One Form For Applied Performance Appraisal; Select  
Questions From Total of 8 Questions

### DESCRIPTION:

Assessments in the Employability Competency System include ECS Appraisal, Basic Skills Assessment in Employability Programs, Critical Thinking Assessment for Employability, and Oral Communication Applied Performance Appraisal (OCAPA).

ECS Appraisals provide information on learner's functional literacy skill levels in reading and math. Appraisal information determines placement level of student in Basic Skills for Employability pre-tests. The Comprehensive Adult Student Assessment System (CASAS) Basic Skill Levels are Level A - Pre-Literacy, Level B - Beginning Basic Skills and Intermediate Basic Skills, Level C - Advanced Basic Skills, Level D - Adult Secondary, and Level E - Advanced Adult Secondary.

The Basic Skills Assessment in Employability Reading Test has separate forms for Levels A-D. A learner's basic reading skills are measured using common every day situations. Some examples of reading situations are interpreting work safety manuals and using sources of information about job opportunities.

The Basic Skills Assessment in Employability Math Test has separate forms for Levels A-C. The following categories of competencies are assessed.

- a. Demonstrate Pre-Computation Skills
- b. Compute Using Whole Numbers
- c. Compute Using Decimal Fractions
- d. Compute Using Fractions
- e. Compute With Percents, Rate, Ratio, and Proportion
- f. Use Expressions, Equations, and Formulas
- g. Demonstrate Measurement Skills
- h. Interpret Data From Graphs and Compute Averages
- i. Use Statistics Probability
- j. Use Estimation and Mental Arithmetic

The Basic Skills Assessment in Employability Listening Comprehension Test has separate forms for Levels A-C. Skills are assessed using audiocassette tapes containing life skills and employability context situations.

The Critical Thinking Assessment for Employability assesses critical thinking and written expression skills. Questions are 15 hypothetical situations encountered at the work-place. Creative thinking, decision making, and problem solving are included in the assessment.

The Oral Communication Applied Performance Appraisal (OCAPA) assesses speaking, listening, reading, and writing skills in functional situations. Test is administered one-on-one. Results are recorded on a scoring tablet. A profile is created for each individual.

#### SPECIAL FEATURE(S) :

Training is required to order materials and implement any CASAS system. Trainers are located at three Community Colleges in Iowa.

ECS contains the following Pre-Employment/Work Maturity Checklists.

- a. Career Awareness
- b. Preparing a Resume
- c. Cover Letter
- d. Filling Out an Application
- e. Interviewing
- f. Work Maturity
- g. Job Experience/Training

ECS includes Certification for Employability tests in Reading and Math designed to determine if a student is ready for a higher level of instruction or is ready to be certified as completing a program.

The Employability Competency System includes Occupation Specific Tests.

The Comprehensive Adult Student Assessment System consists of a competency list, a curriculum materials guide, assessment instruments, training workshops, and implementation guides.

A computer version exists for ECS Appraisal.

COST: 1996 Information

Reading or Math Test: 44.00/Pkg 25

Listening Test, Includes One Tape: 51.00/Pkg 25

Thinking Test Booklets: 11.00 Each

Applied Performance Appraisal: 50.00/50 Examinees

SOURCE: Comprehensive Adult Student Assessment System  
8910 Clairemont Mesa Boulevard  
San Diego, CA 92123

## Brigance Employability Skills Inventory (ESI) 1995

### INTENT:

Assess skills necessary for job-seeking and for the workplace.

Assess skills in the context of job-seeking or employment situations.

Provide a criterion-referenced tool for assessing basic skills and employability skills.

TEST POPULATION: Secondary Special Education and Adults

TESTING TIME: Variable

TEST FORM(S): 7-Ring Binder With 200+ Pages, Including Reproducible Pages For Group Assessment

### DESCRIPTION:

The Employability Skills Inventory assesses skills in the following areas.

- a. Reading Grade Placement
- b. Career Awareness and Self-Understanding
- c. Job-Seeking Skills and Knowledge
- d. Ratings Scales
- e. Reading Skills
- f. Speaking and Listening
- g. Preemployment Writing
- h. Math Skills and Concepts

ESI helps instructors and learners to plan, monitor, and assess learning growth.

### SPECIAL FEATURE(S):

Correlates with Comprehensive Adult Student Assessment System (CASAS) standards and meets requirements of the Perkins Act.

Materials include Learner Record Book and Program Record Book.

"Quick Screen" provides a way to determine where assessment needs to begin.

COST: 1995 Information

Inventory and Record Books: 279.90/100 Students

SOURCE: Curriculum Associates, Inc.  
5 Esquire Road  
P.O. Box 2001  
N. Billerica, MA 01862-0901

Listening Assessment for TAP/ITED [LATI] 1994

INTENT:

Assess the developed listening skills of high school students.

Provide valuable insights into students' strengths and weaknesses in the art of listening.

TEST POPULATION: Grades 9-12

TESTING TIME: Approximately 40 Minutes

TEST FORM(S): No Test Booklet Required

Administered Orally

Level 15 - Grade 9

Level 16 - Grade 10

Level 17 - Grade 11

Level 18 - Grade 12

DESCRIPTION:

Content objectives assessed are literal meaning, inferential meaning, and speaker's purpose or point of view.

Each test level contains six parts.

1. Remember exactly what is heard.
2. Identifying word meaning in context.
3. Remembering main points and details.
4. Distinguishing between fact and opinion.
5. Listening to a lecture.
6. Detecting bias.

SPECIAL FEATURE(S):

Linked to the Tests of Achievement and Proficiency (TAP) and Iowa Test of Educational Development (ITED) Complete Batteries through concurrent standardization.

Listening Assessment for TAP/ITED is optional with TAP.

COST: 1996 Information

Answer Sheets, Each Level: 44.00/Pkg 50

SOURCE: Riverside Publishing  
425 Spring Lake Drive  
Itasca, IL 60143

New Standards Reference Examinations [NSRE] 1997

INTENT:

Provide an assessment system of performance examinations and portfolios referenced to New Standards performance standards.

Provide an assessment system that improves the performance of all students.

TEST POPULATION: Elementary, Middle, and High School Students

TESTING TIME: Three 45 Minute Periods Per Examination

TEST FORM(S): Different Form for Each the Elementary, Middle School, and High School Levels

DESCRIPTION:

The examinations consist of a English Language Arts examine and a Mathematics examine.

The English Language Arts examine includes essay questions, extended open-ended responses, and multiple-choice questions. The contents by examination period are:

- Period 1: Writing Sample,
- Period 2: Reading and Short Writing, and
- Period 3: Reading Comprehension and Editing.

Areas assessed by the English Language Arts examine are:

- a. Reading Comprehension,
- b. Inference and Analysis,
- c. Writing, and
- d. Conventions, Grammar, and Usage.

The Mathematics examine consists of extended open-ended and short answer items. The contents by examination period are:

- Period 1: Skills and Concept,
- Period 2: Concepts and Problem Solving, and
- Period 3: Problem Solving and Communication.

Areas assessed by the Mathematics examine are:

- a. Conceptual Understanding,
- b. Mathematical Skills and Tools, and
- c. Problem Solving and Reasoning/Mathematical Communication.

The following mathematical content is assessed.

- a. Arithmetic and Numbers
- b. Geometry and Measurement
- c. Function and Algebra
- d. Statistics and Probability
- e. Problem Solving and Mathematical Reasoning
- f. Mathematical Skills and Tools

g. Mathematical Communication

Performance standards for both examinations are set for performance at the end of fourth, eighth, and tenth grades.

SPECIAL FEATURE(S):

The Performance Assessment Scoring Center of Harcourt Brace Educational Measurement scores the examinations.

New Standards Reference Examinations are sold only to accredited schools and school districts.

The New Standards performance standards are derived from standards developed by organizations such as NCTM and NSTA.

Spanish versions are available for the math examinations.

COST: 1997 Information

Combination Test Package, 25 Booklets for Math and  
25 Booklets for English: 180.00/Level

Mathematics Examine: 100.00/Pkg 25

English Language Arts Examine: 125.00/Pkg 25

SOURCE: Harcourt Brace Educational Measurement  
555 Academic Court  
San Antonio, TX 78204-2498

Occupational Aptitude Survey and Interest Schedule  
Second Edition (OASIS-2) 1991

INTENT:

Short and easy measure to assess both aptitude and interest in career exploration.

Assessment to assist the career development of disabled, nondisabled, or disadvantaged students.

TEST POPULATION: Grades 8-12

TESTING TIME: Aptitude Survey: 45 Minutes

Interest Schedule: 30 Minutes

FORM(S): One Form For Each The Aptitude Survey and Interest Schedule

DESCRIPTION:

The OASIS-2 Aptitude Survey measures the following aptitude factors that relate to skills and abilities required in more than 20,000 jobs.

- a. General Ability
- b. Verbal Aptitude
- c. Numerical Aptitude
- e. Spatial Aptitude
- f. Perceptual Aptitude
- g. Manual Dexterity.

The OASIS-2 Interest Schedule measures the following interest factors related to occupations listed in the Guide of Occupational Exploration.

- a. Artistic
- b. Scientific
- c. Nature
- d. Protective
- e. Mechanical
- f. Industrial
- g. Business
- h. Business Detail
- i. Selling
- j. Accommodating
- k. Humanitarian
- l. Leading-Influencing
- m. Physical Performing

The Interest Schedule contains 240 items scored on a scale of Like, Neutral, or Dislike.

The OASIS-2 can be administered to students individually or in groups.

SPECIAL FEATURE(S):

Both machine scorable and hand scorable answer sheets are available.

The Interest Schedule meets guidelines for gender fairness.

COST: 1992 Information

Aptitude Survey, Complete Kit: 98.00/50 Students

SOURCE: PRO-ED  
8700 Shoal Creek Boulevard  
Austin, TX 78758-9965

Ohio Vocational Competency Assessment (OVCA)  
Employability Test 1995

INTENT:

Assess employability skills or competencies needed to enter a given occupation or occupational area.

Assess comprehensive and verified employability skills or competencies.

TEST POPULATION: High School Students and Adults

TESTING TIME: 40 Minute Time Limitation

FORM(S): One Form

Administration procedures adapt the assessment for student with special needs.

DESCRIPTION:

The Employability Test assesses employability skills generic to all occupations. The skills are clustered into the following 12 areas.

- a. Career Development
- b. Decision Making and Problem Solving
- c. Work Ethic
- d. Job-Seeking Skills
- e. Job Retention and Career Advancement Skills
- f. Technology in the Workplace
- g. Lifelong Learning
- h. Economic Education
- i. Balancing Work and Family
- j. Citizenship in the Workplace
- k. Leadership
- l. Entrepreneurship

SPECIAL FEATURE(S):

Skills assessed are related to competencies in a Employability Occupational Competency Analysis Profile (OCAP) verified by expert workers. A OCAP consists of competencies and competencies builders (knowledge, skills, and attitudes).

The Employability Test is part of a OVCA system which includes 31 occupational assessments.

COST: 1996 Information

Employability Test With Scoring and Reporting  
Services: 6.50/Student

SOURCE: Vocational Instructional Materials Laboratory (VIML)  
Center on Education and Training for Employment  
The Ohio State University  
1900 Kenny Road  
Columbus, Ohio 43210

Performance Assessments For ITBS and TAP & ITED [PAITI] 1993/1994

INTENT:

Assess students' strategic thinking and problem solving capabilities.

Assessments which give students an opportunity to apply content-area concepts and higher-order thinking processes in real-life situations.

TEST POPULATION: Grades 1-12

TESTING TIME: Approximately 1 Hour

TEST FORM(S): Separate Booklets for Each Grade in Each of Four Content-Areas.

DESCRIPTION:

Subtests for each grade include Integrated Language Arts, Mathematics, Social Studies, and Science.

SPECIAL FEATURE(S):

Normed with Iowa Test of Basic Skills (ITBS), Tests of Achievement and Proficiency (TAP), and Iowa Test of Educational Development (ITED).

Describes student performance in terms of standards established by:

Reading Framework for the 1992 National Assessment of Educational Progress,

Curriculum and Evaluation for School Mathematics, and

Project 2061: Science for All Americans.

COST: 1996 Information

Booklets By Grade By Test Area: 25.50/Pkg 25

SOURCE: Riverside Publishing  
425 Spring Lake Drive  
Itasca, IL 60143

Scholastic Level Exam (SLE) 1993

INTENT:

Assess cognitive ability or aptitude for learning.

Provide information on students' occupational potential and predictors of training success.

TEST POPULATION: Students In School, GED Population, and Adults

TESTING TIME: 12 Minutes

TEST FORM(S): One Form

DESCRIPTION:

The Scholastic Level Exam measures a student's:

- a. Ability to understand instruction,
- b. Ability to keep up with classroom pace,
- c. Ability to solve problems, and
- d. Ability to use occupational training on the job.

SLE provides not only a particular level of learning ability, but also a level of fundamental basic skills. A person's aptitude for learning, as well as one's capacity to apply that knowledge, is measured.

SPECIAL FEATURE(S):

The Wonderlic Personnel Test can be considered an alternate form.

Reading level is at the grade 6 level.

SLE is produced in multiple languages.

Can be administered with a career interest inventory such as the Self-Directed Search (SDS).

Results can be related to the Dictionary of Occupational Titles (DOT).

SLE is approved by the U.S. Department of Education for determining non-high school graduate students' "ability to benefit" from vocational training.

COST: 1996 Information

Test: 75.00/Pkg 25

SOURCE: Wonderlic Personnel Test, Inc.  
1509 N. Milwaukee Ave.  
Libertyville, IL 60048-1387

Success Skills 2000 (SS2000) 1996

INTENT:

Assess critical competencies and skills necessary for success in a high-performance workplace.

Develop a video-based, computer scored test for recruiting and the development of entry-level professionals.

TEST POPULATION: College and Adults

TESTING TIME: Approximately 65 Minutes

TEST FORM(S): One Video-Based Test

DESCRIPTION:

SS2000 measures a participant's strengths and weaknesses in job-related skills. Participants watch a series of video vignettes and respond to multiple-choice questions as a participant on the job. Test questions are displayed in the video, read by a narrator, and presented in a participant booklet. Responses are analyzed for "Highly Effective", "Effective", and "Less Than Effective" actions. A performance profile is provided for overall score and three area scores.

SS2000 measures seven critical skills grouped in Applied Problem Solving, Interpersonal Effectiveness, and Accountability categories as described below.

- A. Applied Problem Solving
  - 1. Critical Thinking
  - 2. Problem Solving
- B. Interpersonal Effectiveness
  - 1. Influencing Others
  - 2. Building Rapport
  - 3. Teamwork
- C. Accountability
  - 1. Initiative
  - 2. Self-Management

SPECIAL FEATURE(S) :

PC (IBM-compatible) computer processes results at your location in seconds.

Performance profiles can be printed on location.

COST: 1996 Information

Master Administrator Kit: 550.00

SOURCE: Wilson Learning Corporation  
2180 W. Highway 434, #4100  
Longwood, FL 32779

Tests of Adult Education (TABE), Forms 7 & 8 1994

INTENT:

To identify and analyze basic skills strengths and weaknesses.

Provide information to develop adult vocational education programs or School-To-Work and vocational programs for high school students.

TEST POPULATION: High School and Adults

TESTING TIME: Complete Battery: 3 Hours

Survey: 1 Hour, 30 Minutes

TEST FORM(S): Parallel Forms - Forms 7 & 8

Forms 7 & 8 Test Levels:

L(Limited Literacy) - Grade Range 0-1.9

E(Easy) - Grade Range 1.6-3.9

M(Medium) - Grade Range 3.6-6.9

D(Difficult) - Grade Range 6.6-8.9

A(Advanced) - Grade Range 8.6-12.9

DESCRIPTION:

Measures competencies in reading, mathematics, language, and spelling.

SPECIAL FEATURE(S):

Locator Test to determine most appropriate test level.

Word list used with Examinee Record Book Level 1 to determine whether a person reads well enough to take the Locator Test.

Form 7 is available in large print.

COST: 1996 Information

Complete Battery Test Booklets, Each Level: 54.50/Pkg 25

Survey Battery Test Booklets, Each Level: 54.50/Pkg 25

Locator Test: 30.00/Pkg 25

Answer Sheets: 19.00/Pkg 25

Hand-Scorable Answer Sheets For Complete Battery  
and Survey Battery: 19.00/Pkg 25

SOURCE: CTB/McGraw-Hill  
20 Ryan Ranch Road  
Monterey, CA 93940

TABE Work-Related Problem Solving (TABE-PS) 1994

INTENT:

Assessment that measures a wide range of problem solving competencies in a variety of work-related applications.

Help employers, educators, and training professionals diagnose how an examinee deals with various aspects of problem solving.

TEST POPULATION: High School Students and Adults

TESTING TIME: 1 Hour

TEST FORM(S): Two Equivalent Forms

DESCRIPTION:

TABE-PS measures ability to generate creative solutions to problems in occupational contexts. The problem solving skills include defining the problem, examining the problem, suggesting possible solutions, evaluating solutions, and extending the meaning of the solution.

SPECIAL FEATURE(S):

Measures problem solving skills rather than the basic reading, writing, or mathematics skills, or specific content knowledge about an occupation.

COST: 1996 Information

Test Booklets, Each Form: 32.00/Pkg 25

Hand-Scorable Profile: 8.00/Pkg 25

SOURCE: CTB/McGraw-Hill  
20 Ryan Ranch Road  
Monterey, CA 93940

TABE Work-Related Foundation Skills (TABE-WR) 1994

INTENT:

Measure basic skills competencies as they relate to work environments.

Assessment that gives employers, educators, and training professionals information to plan occupational educational programs.

TEST POPULATION: High School Students and Adults

TESTING TIME: 2 Hours

TEST FORM(S): General, Health, Trade/Technical, and Business/Office

DESCRIPTION:

Subtests in each form are Reading, Mathematics Computation, Applied Mathematics, and Language.

Reading subtest contains diagrams, charts, forms, schedules, and reference materials to focus on functional reading.

Mathematics Computation subtest measures an understanding of the operations of addition, subtraction, multiplication, and division as related to whole numbers, decimals, and fractions.

Applied Mathematics subtest measures the ability to apply concepts related to numeration, computation in context, number theory, measurement, data interpretation, geometry, and pre-algebra.

Language subtest measures skills in language usage, sentence formation, paragraph development, and writing conventions.

SPECIAL FEATURE(S):

Locator Test to determine whether test takers are functioning at the level required to complete TABE-WR.

A computer version, TABE-PC, to reduce administration and scoring time.

Test forms and TABE Forms 7 & 8 combinations provide pre-posttest capabilities.

COST: 1996 Information

Test Locator, All Forms: 30.00/Pkg 25

Test Booklets, Each Form: 54.50/Pkg 25

Answer Sheets: 14.50/Pkg 25

SOURCE: CTB/McGraw-Hill  
20 Ryan Ranch Road  
Monterey, CA 93940

## Tests of Applied Literacy Skills (TALS) 1990

### INTENT:

Assess real-life skills adults already have and identify skills they need to learn.

Provide an assessment based on materials and tasks that adults face everyday.

Assess skills adults use at work, at home, and in the community.

TEST POPULATION: High School Students and Adults

TESTING TIME: 40 Minutes Per Test

TEST FORM(S): Two Parallel Forms For Each Test

### DESCRIPTION:

A test battery consists of tests in the following three areas.

Prose Literacy: Understanding and using information in newspaper articles, brochures and other real-life materials.

Document Literacy: How effectively adult learners can locate and use information in forms, graphs, schedules, tables, and maps.

Quantitative Literacy: Skills in such activities as completing a deposit slip, balancing a checkbook, and using an advertisement to determine how much interest will be charged for a loan.

SPECIAL FEATURE(S):

TALS uses the same framework used by the National Assessment of Adult Literacy.

TALS program includes the following workbooks to complement the tests.

- a. Reading Skills for Life and Work
- b. Document Skills for Life and Work
- c. Number Skills for Life and Work

COST: 1996 Information

Test Pack in Each Area, One Form: 52.50/10 Students

SOURCE: Educational Test Service  
Language Learning and Assessment  
Mail Stop 05-P  
Rosedale Road  
Princeton, NJ 08541

Test of Academic Performance (TAP) [HB] 1989

INTENT:

Quickly assess group or individual achievement.

Assess student progress and determine critical areas for follow-up diagnosis.

TEST POPULATION: Grades K-12

TESTING TIME: 20-45 Minutes

TEST FORM(S): One Form

DESCRIPTION:

Subtests include Mathematics, Spelling, Reading Recognition, and Reading Comprehension. Writing subtests Copying Rate and Written Composition are optional.

SPECIAL FEATURE(S):

TAP requires students to produce rather than identify responses.

COST: 1997 Information

Complete Program, Hand-Scorable: 82.00/25 Students

SOURCE: Harcourt Brace Educational Measurement  
555 Academic Court  
San Antonio, TX 78204-2498

Tests of Achievement and Proficiency (TAP)[R], Form M 1996

INTENT:

Provide a comprehensive and objective measure of students' progress in a high school curriculum.

Measure skills and standards important to growth across the high school curriculum.

Measure achievement and critical thinking skills.

TEST POPULATION: Grades 9-12

TESTING TIME: Complete Battery: 4 Hours, 15 Minutes

Survey Battery: 90 Minutes

TEST FORM(S): Level 15 - Grade 9

Level 16 - Grade 10

Level 17 - Grade 11

Level 18 - Grade 12

DESCRIPTION:

Complete battery subtests include Vocabulary, Reading Comprehension, Written Expression, Math Concepts and Problem Solving, Math Computation (Optional), Social Studies, Science, and Information Processing.

Survey battery subtests include Reading With Vocabulary and Comprehension, Written Expression, Math Concepts and Problem Solving, and Math Computation (Optional).

SPECIAL FEATURE(S):

Co-normed with Iowa Test of Basic Skills (ITBS), Iowa Test of Educational Development (ITED), and Performance Assessments for TAP & ITED.

Incorporates the content standards from:

National Council of Teachers of Mathematics (NCTM)

International Reading Association (IRA)

National Council of Teachers of English (NCTE)

National Science Teachers Association (NSTA)

American Association for the Advancement of Science (AAAS)

Can be used with the Performance Assessments for TAP & ITED,  
Iowa Writing Assessments for TAP/ITED, and Listening  
Assessment for TAP/ITED.

Braille and large print editions are available.

COST: 1996 Information

Complete Battery, Each Level: 80.50/Pkg 25

Survey Battery, Each Level: 72.00/Pkg 25

SOURCE: Riverside Publishing  
425 Spring Lake Drive  
Itasca, IL 60143

Stanford Test of Academic Skills (TASK) 1996

INTENT:

Measure students basic skills that are requisite to continued academic and vocational training.

Encourage divergent thinking and problem solving.

Combine multiple-choice and open-ended subtests into a single assessment system.

TEST POPULATION: Grades 9-13

TESTING TIME: 3 Hours, 45 Minutes

TEST FORM(S): TASK 1 - Grades 9.0-9.9

TASK 2 - Grades 10.0-10.9

TASK 3 - Grades 11.0-13.0

DESCRIPTION:

Subtests for each form include Reading Comprehension, Mathematics, Language, Spelling, Study Skills, Science, and Social Science.

SPECIAL FEATURE(S):

Multiple-choice and open-ended formats are available to all subtests except Spelling and Study Skills.

Content aligned with National Standards projects, and models (e.g., Reading with National Assessment of Educational Progress (NAEP), Math with Curriculum and Evaluation Standards for School Mathematics (NCTM)).

COST: 1997 Information

Test Booklets, Each Level: 75.00/Pkg 25

Answer Sheets: 59.00/Pkg 100

SOURCE: Harcourt Brace Educational Measurement  
555 Academic Court  
San Antonio, TX 78204-2498

## Work Adjustment Inventory (WAI) 1994

### INTENT:

Measure the work-related temperament of young people.

Help young people match personality characteristics with job environments.

TEST POPULATION: Ages 12-22

TESTING TIME: 20 Minutes

TEST FORM(S): One Form

### DESCRIPTION:

Assesses how an individual is likely to react to certain situations, jobs and job tasks, co-workers, and supervisor. Measures the characteristics of an individual's work-related emotional nature. Provides information about how well an individual is likely to fit in with other employees, a supervisor, and required work activities. Personality aspects measured are activity, empathy, sociability, assertiveness, adaptability, and emotionality. Activity indicates an individual views work as important.

### SPECIAL FEATURE(S):

For a global vocational assessment of potential, interest, and attitudes toward work, WAI results are easily analyzed in conjunction with other vocational assessments.

COST: 1996 Information

Complete Kit - Manual and Response Forms: 69.00/Pkg 50

SOURCE: PRO-ED  
8700 Shoal Creek Boulevard  
Austin, TX 78758-9965

WinValuate and MacValuate [WAM] 1996

INTENT:

Provide evaluation software that will separate a novice user of software packages from a professional user of the software.

Assess an individual's proficiency with the most commonly used office software packages.

TEST POPULATION: High School Students and Adults

TESTING TIME: Variable

TEST FORM(S): WinValuate is Windows based software.

MacValuate is Macintosh based software.

Forms can be customized according to skills required for a position and skill levels of beginning, intermediate, and advanced. Forms vary due to automatic random order of items.

DESCRIPTION:

WinValuate modules available:

- Operating Systems
- Word Processing
- Desktop Publishing
- Art/Graphics
- Presentation
- Database/Spreadsheet
- Microsoft Testing Bundle

MacValuate modules available:

- Operating Systems
- Word Processing
- Desktop Publishing
- Art/Graphics
- Presentation
- Database/Spreadsheet

SPECIAL FEATURE(S):

Evaluation results are expressed as a percentage by skill level and category.

Participant can be provided with instructional feedback.

COST: 1996 Information

WinValuate - Testing and Scoring Software (Unlimited Use):  
One Stand-Alone Module 399.00  
Any Three Modules 599.00  
Any Five Modules 799.00  
All WinValuate Modules 999.00

MacValuate - Testing and Scoring Software (Unlimited Use):  
One Stand-Alone Module 249.00  
Any Six Modules 1299.00  
Any Ten Modules 1749.00  
All MacValuate Modules 2249.00

SOURCE: Wonderlic Personnel Test, Inc.  
1509 N. Milwaukee Ave.  
Libertyville, IL 60048-1387

Wonderlic Basic Skills Test (WBST) 1994

INTENT:

Assess a student's current level of work-related math and language skills.

Measure working world fundamental math and language skills.

Assess the ability to apply knowledge to specific work-related tasks.

TEST POPULATION: Students In School, GED Population, and Adults

Grade Level Content: Grades 4-10

TESTING TIME: 20 Minutes Each Test

TEST FORM(S): Verbal Skills: Two Equivalent Forms

Quantitative Skills: Two Equivalent Forms

DESCRIPTION:

The Test of Verbal Skills assesses the ability to recall, interpret, and apply verbal information. The following categories of skills are assessed.

- a. Locate, understand and use information in various formats.
- b. Recognize word meanings by definition or context.
- c. Recognize and identify proper grammar and sentence construction.

The Test of Quantitative Skills assesses the ability to recall, interpret and apply quantitative information. Some of the skills assessed are:

- a. Math computations with fractional units of measure,
- b. Evaluation and interpretation of line, bar or pie graphs,
- c. Computation of ratio, proportions, and percentages, and
- d. Computation and identification of magnitude of lengths, angles, areas and volumes of plane and solid geometric figures.

SPECIAL FEATURES(S):

WBST results reveal competency at each General Education Development (GED) level and grade level equivalence.

WBST results can be matched with information in the Dictionary of Occupational Titles (DOT).

COST: 1996 Information

WBST-Skills Composite (Verbal and Quantitative Tests) - Tests, User's Manual and Scoring Software: 110.00/Pkg 25  
245.00/Pkg 100

WBST-Verbal Skills - Test, User's Manual and Scoring Software: 80.00/Pkg 25 165.00/Pkg 100

WBST-Quantitative Skills - Test, User's Manual and Scoring Software: 80.00/Pkg 25 165.00/Pkg 100

SOURCE: Wonderlic Personnel Test, Inc.  
1509 N. Milwaukee Ave.  
Libertyville, IL 60048-1387

## Work Keys Assessments [WKA] 1994-1995

### INTENT:

Provide reliable information on workplace skill levels.

Assess an individual's levels of specific work-related skills using an emphasis on workplace applications.

TEST POPULATION: High School Students and Adults

TESTING TIME: Applied Mathematics: 40 Minutes

Applied Technology: 45 Minutes

Observation: 60 Minutes

Listening and/or Writing: 40 Minutes

Locating Information: 35 Minutes

Reading for Information: 40 Minutes

Teamwork: 80 Minutes

TEST FORM(S): Only One Form For Each Assessment

Observation and Teamwork assessments use multiple-choice response and videotape stimulus.

Listening and/or Writing assessment uses constructed-response and audiotape stimulus.

All other assessments use multiple-choice response and paper-pencil stimulus.

### DESCRIPTION:

Applied Mathematics assessment measures the application of mathematical reasoning to work-related problems. The Applied Mathematics skill scale ranges from Level 3, the least complex, to Level 7, the most complex. Skills at the lowest level involve using whole numbers and some decimals in basic math operations. Level 7 skills involve multiple steps of logic.

Applied Technology assessment measures skills in solving problems using basic principles of mechanics, electricity, fluid dynamics, and thermodynamics. The skill levels are Level 3 to Level 6. Level 3 questions are based on problems involving one system. Level 7 questions involve one or more tools or systems.

The Observation assessment measures attention to instructions and demonstrations and perceiving details. Question situations involve actual demands of the workplace. The skill levels are Level 3 to Level 6. Level 3 questions involve a few simple components and no distractors. Level 6 tasks include several components and extra details.

Listening and/or Writing assessment involves receiving and writing down information to communicate to another person. The audiotape contains directions and messages. The skill levels are Level 1 to Level 5. Listening level is based on accuracy and completeness of the information. Writing level is based on writing mechanics and style.

Locating Information assessment measures the ability to locate, insert, compare, and summarize information contained in graphic form. The skill levels are Level 3 to Level 6. Level 3 questions are based simple workplace graphics such as bar graphs and tables. Level 6 questions are based on complex workplace graphics with detailed information.

Reading for Information assessment measures the ability to read and understand work-related instructions and policies. The skill levels are Level 3 to Level 7. Level 3 questions involve short, uncomplicated passages containing elementary vocabulary. Level 7 questions require an individual to generalize, recognize implied details, and infer probable rationale.

Teamwork assessment measures the ability to support team interrelationships and to accomplish work tasks. The skill levels are Level 3 to Level 6. Level 3 questions involve teamwork in one problem or source of difficult situation. Level 6 questions involve complex problems and sources of difficulty.

SPECIAL FEATURE(S):

Work Keys Assessment is part of a system involving job profiling, reports and research, instructional support, and assessment.

Assessment results can be linked to job profile information.

All tests are scored and analyzed by ACT.

COST: 1996 Information

Applied Mathematics; Applied Technology; Locating  
Information; Reading for Information: 4.00/Assessment

Observation; Teamwork: 7.00/Assessment

Listening Only: 13.50/Assessment

Writing Only: 12.50/Assessment

Combined Listening and Writing: 16.00/Assessment

SOURCE: ACT Work Keys-83  
2201 North Dodge Street  
P.O. Box 168  
Iowa City, IA 52243-0168

## Workplace Success Skills (WSS) 1994

### INTENT:

Provide an industry-validated, education-tested and SCANS-based system that assesses skills critical to workplace success.

To assess and document an individual's unique job-related skills and abilities required by employers.

TEST POPULATION: High School Students, Community College Students, and Adult Learners

TESTING TIME: Interacting With Others: 1 Hour, 15 Minutes

Listening: 20 Minutes

Structuring Work Activities: 12 Minutes

Trainability: 23 Minutes

Graphs and Charts: 29 Minutes

Complete Video: 2 Hours, 39 Minutes

TEST FORM(S): Five Video Modules

One Form For All Test Sub-populations

### DESCRIPTION:

The Workplace Success Skills system measures the following skills.

**Interacting With Others:** Behaviors associated with working effectively as a member of a group, commitment to quality, influencing the action and thinking of others, customer service orientation, and problem solving. Participant observes a series of video vignettes depicting job-relevant work situations.

**Listening:** Understanding factual information and implied meanings presented orally. Participant observes several video vignettes.

**Structuring Work Activities:** Organizing work activities for self and others in order to facilitate task accomplishment. Participant observes a video vignette.

**Trainability:** Ability to absorb and apply new information. Participant observes a training session.

Graphs and Charts: Ability to extract and interpret information presented in a graph or chart format.

SPECIAL FEATURE(S):

A Comparability Form to assess the amount of similarity between the demands of the video test and workplace activities of the actual work environment.

Feedback reports detail the skills, strengths, and weaknesses of the test taker and identify developmental strategies.

COST: 1995 Information.

Testing, Scoring and Reports: 10.00/Person

SOURCE: Learning Resources, Inc.  
700 Canal Street  
Stamford, CT 06902-5921

## Employee Reliability Inventory [ERI] 1989

### INTENT:

Provide a pre-interview questionnaire designed to help employers identify reliable and productive employees.

TEST POPULATION: High School Age and Adults

TESTING TIME: 15 Minutes

TEST FORM(S): One Form For All

### DESCRIPTION:

The Employee Reliability Inventory provides information to be further explored during a job interview. Results provide an indication of the likelihood of job disruption. The subscore measures are:

- a. Alcohol/Substance Abuse,
- b. Honesty,
- c. Long Term Job Commitment, and
- d. Conscientious Job Performance.

The 81 items require a true/false response. Responses can be handscored and interpreted by publisher via phone or scored and interpreted via IBM compatible software.

### SPECIAL FEATURES(S):

The Employee Reliability Inventory is sold only to employers.

COST: 1996 Information

Test, Scoring and Analysis: 125.00/10 Administrations

SOURCE: Wonderlic Personnel Test, Inc.  
1509 N. Milwaukee Avenue  
Libertyville, IL 60048-1387

Multi-Dimensional Self-Esteem Inventory (MSEI) 1988

INTENT:

Provide a measure of self-esteem and self-concept.

Help individuals awaken their own sense of self-worth.

Help individuals progress in career and personal development.

TEST POPULATION: High School and Adults

TESTING TIME: Not Provided

TEST FORM(S): One Form For All

DESCRIPTION:

The Multi-Dimensional Self-Esteem Inventory contains a Part 1 consisting of 61 items for describing an individual and a Part 2 consisting of 55 items on how often an individual experiences a particular situation. The following eight components comprise the Inventory.

- a. Competence
- b. Lovability
- c. Likability
- d. Personal Power
- e. Self-Control
- f. Moral Self-Approval
- g. Body Appearance
- h. Body Functioning

SPECIAL FEATURE(S):

MSEI has a tenth grade or higher reading level.

Scores are transferred to a profile form.

COST: 1996 Information

Booklets and Forms: 51.00/Pkg 25

SOURCE: CTB/McGraw-Hill  
20 Ryan Ranch Road  
Monterey, CA 93940

Reid Report (RR) 1992

INTENT:

Measure attitudes toward conscientiousness and counterproductivity in the workplace.

TEST POPULATION: Adults and Job Applicants

TESTING TIME: 15-60 Minutes

TEST FORM(S): One Form With Four Sections

DESCRIPTION:

The Reid Report Integrity Attitude Scale measures attitudes toward honesty and integrity. The aim is to predict dishonest acts on the job. The scale is comprised of 80 yes-no items. Possible evaluations of an applicant are "Recommended", "Qualified", "Not Recommended", and "No Opinion".

The following Questionnaires comprise the other three sections of a form.

- a. Social Behavior Questionnaire - Information about previous criminal behavior and relevant job experience.
- b. Safety & Substance Use Questionnaire - Admissions of recent drug use and information on safety attitudes and experiences.
- c. Personal Achievements Questionnaire - Biographical and work history information.

SPECIAL FEATURE(S):

Test has a self-report format.

Reid provides scoring options by FAX, phone, mail, and on-site profile software.

COST: 1996 Information

Test Form: 160.00/10 Forms

SOURCE: Reid Psychological Systems  
200 South Michigan Avenue  
Suite 900  
Chicago, IL 60604-2401

## Student Adjustment Inventory (SAI) 1989

### INTENT:

Provide an instrument for identifying common affective-social problems.

TEST POPULATION: Upper Elementary, High School, and Beginning College Students

TESTING TIME: 30 Minutes

TEST FORM(S): Available in Pencil and Paper or Microcomputer Versions

### DESCRIPTION:

The Student Adjustment Inventory is a 78 item, seven scale instrument assessing reactions to affective-social problems. The following areas are assessed using responses of "Often", "Sometimes", or "Never".

- a. Self-Esteem
- b. Group Interaction
- c. Self-Discipline
- d. Communication
- e. Energy/Effort
- f. Learning/Studying
- g. Attitude Towards Learning Environment

Paper and pencil form uses an answer sheet scored by the publisher. The microcomputer version permits administration of the SAI and printing a report.

### SPECIAL FEATURE(S):

Results are reported in a Problem Profile, Personal Report, Item-Response Summary, and Score Summary.

SAI is available through a mail-in service as well as a microcomputer version.

COST: 1996 Information

SAI Manual: 10.00

Reusable Test Booklets: 10.00/Pkg 10

Answer Sheets: 10.00/Pkg 50

Mail-in Service Option (Report and Answer Sheet):  
59.50/Pkg 10

SOURCE: MetriTech, Inc.  
111 N. Market Street  
Champaign, IL 61820

## Student Styles Questionnaire [SSQ] 1996

### INTENT:

Provide a measure of learning, relating, and working styles of students.

TEST POPULATION: Grade 3-12

TESTING TIME: Less Than 30 Minutes

TEST FORM(S): One Form For All

### DESCRIPTION:

The Student Styles Questionnaire consists of 69 questions related to real-life situations. Individual is presented with an everyday event followed by two mutually exclusive alternative responses. The Student Styles Questionnaire evaluates students using the following four scales.

- a. Introversiion/Extroversion
- b. Thinking/Feeling
- c. Practical/Imaginative
- d. Organized/Flexible

The Student Styles Questionnaire is designed to enhance self-esteem by measuring the student's strengths, not weaknesses. Results are useful for understanding students' learning styles, grouping students for cooperative tasks and vocational decisions.

### SPECIAL FEATURE(S):

Results are hand- or computer-scorable. Computer software is available.

The Questionnaire requires a third grade reading level or questions may be read to students.

COST: 1997 Information

Test Booklets and Answer Sheets: 73.00/Pkg 25

SOURCE: Harcourt Brace Educational Measurement  
555 Academic Court  
San Antonio, TX 78204-2498

## FINDINGS

Employability skills from Workplace Basics: The Essential Skills Employers Want, What Work Requires of Schools, and Occupational Competency Analysis Profile: Employability can be combined into one comprehensive set of employability skills. The skills provide sufficient guidance in searching for measures of employability skills and evaluating the appropriateness and comprehensiveness of available employability skills measures.

The two searches for employability skills measures produced the identification of forty-one tests and assessment systems that met the selection criteria. Eighteen publishers or vendors market the instruments (Appendix L). Publication or revision dates (TABLE 10) reveal that over one-half of the measures are copyrighted or revised during a 1994-1997 period.

TABLE 10

### FREQUENCY OF PUBLICATION OR REVISION DATES

<u>DATE</u>	<u>FREQUENCY</u>
1986	1
1987	0
1988	1
1989	4
1990	4
1991	2
1992	3
1993	3
1994	10
1995	5
1996	7
1997	1

Employability skills measures are most abundant for students actually enrolled in high school. Thirty-five of the forty-one measures include high school students as a test population. Three of the remaining six measures are for only college students. Two

of these assessments (ASSET and CAAP) are frequently administered to community college students. Fifteen of the measures for high school students are appropriate assessments for elementary students.

The SS2000 assessment is not considered by the publisher as being an appropriate test for high school students, but a comprehensive review of the video tape test indicated it may be used with high school seniors. The publisher set the lower limit as being entering community college students which makes the age difference only approximately three months.

Adults with twenty-seven tests have the second highest frequency of available employability skills measures. This statistic is not surprising with the definition of an adult including high school age individuals who are dropouts or seeking alternative education avenues. Several of these measures (e.g., ABLE; TABE; SS2000; Work Keys (WKA)) could be administered to an adult by an employer.

Twelve of the forty-one measures are appropriate assessments for college students. Six of the twelve measures can be used to assess high school students and adults. Three of the twelve measures are unique measures for only college students.

An analysis of the assessments for "Basic Academic Skills" reveals that several "Reading," "Writing," and "Math" measures are available for each of the four test population levels. The identified set of tests include at least two or more measures of "Listening" and "Speaking" for each test population level. Only one "Listening" measure for college students is orally administered.

Some tests which measure "Basic Academic Skills" also measure some skills in the "Thinking Skills," "Personal Qualities," or "Interpersonal" skills categories. Eighteen of the tests measuring two or more "Basic Academic Skills" also measure skills in one or more of the categories classified as not being "Basic Academic Skills." Five of the tests meeting the criterion for measuring two or more "Basic Academic Skills" criterion measure skills in two or more of the "Thinking Skills," "Personal Qualities," and "Interpersonal" skills categories. Four tests measuring three or more "Basic Academic Skills" measure skills in two or more of the "Thinking Skills," "Personal Qualities," and "Interpersonal" skills categories.

Assessment in areas other than "Basic Academic Skills" is extensive with seven tests measuring skills in two or more areas other than "Basic Academic Skills" and not assessing any "Basic Academic Skills." Five tests for adults and four tests for high school students measure one or more skills in each the "Thinking Skills," "Personal Qualities," and "Interpersonal" categories of skills. Assessments for college students include seven tests assessing skills in two or more categories of the "Thinking Skills," "Personal Qualities," and "Interpersonal" skills categories. Six

measures assess skills of elementary students in two or more of the "Thinking Skills," "Personal Qualities," and "Interpersonal" skills categories.

College and elementary students are the only levels without measures for all the "Thinking Skills." No "Creative Thinking," "Critical Thinking," and "Decision Making" measures are identified for elementary students. "Creative Thinking" and "Decision Making" measures are not identified for college students. Measures for these skills most likely exist outside of the domain of employability skills or they are inherent to problem solving and reasoning situations.

Two or more measures exist for each level for all the "Personal Qualities" except "Change Adaptation" and "Integrity/Honesty." There is at least one measure of "Change Adaptation" for all levels. The "Integrity/Honesty" of adults is assessed by two measures.

All "Interpersonal" skills except "Client/Customer Interactions" are included in the assessments for all test populations. A "Client/Customer Interactions" skill measure is not identified for elementary students.

The assessment techniques vary from paper and pencil to performing a behavior. Several of the test indicate a performance assessment (e.g., Listening Assessment for TAP/ITED; CTB Performance Assessment) in their titles. Tests such as the Workplace Success Skills and Success Skills 2000 use video situations as test items. The CAT/5 Listening and Speaking Checklist is for recording behavior in a natural environment. Some of the assessments consist entirely of workplace situations.

TABLE 11

COST OF MODULE OR KIT ASSESSMENTS  
(Dollars)

<u>Test</u>	<u>Cost</u>
APTICOM	6025
CAM (Total)	19995
CAM (VAB)	6495
CAM (Other)	375
SS2000	550
WinValuate	399
MacValuate	249

Some assessments are sold as modules or kits (TABLE 11). In some cases tests in a module can be purchased as separate tests (e.g., CAM). Costs of tests in TABLE 11 may appear high, but the buyer is purchasing the right to use the assessment multiple times. The cost of a test administration reduces along with the amount of test use.

The cost of a test administration varies from less than one dollar to sixteen dollars (TABLE 12) for non-modular or non-kit tests. Self-scoring tests are less expensive to administer. The higher cost assessments usually involve a scoring service. Dollar values in TABLE 12 are only cost estimates since a number of variables influence the actual cost of one administration of a test. Variables such as reusable booklets and number of students to be assessed influence costs. The cost estimates do allow for relative comparisons of cost to administer a test to one individual. Some tests are listed in more than one column because of different subtests or forms.

TABLE 12

COST FOR ONE ADMINISTRATION OF A TEST  
(Dollars)

	$\leq 1$	$>1 \leq 2$	$>2 \leq 3$	$>3 \leq 4$	$>4 \leq 5$	$>5 \leq 6$	$>6 \leq 7$	$\geq 10 \leq 16$
COPEs	AE	ABLE	CAPS	CBI	TALS	OVCA	CAAP	
ECS	CB	ASSET	NSRE	DAT		WKA	ECS	
	CLAS	BLSI	TABE-WR	TABE			WKA	
	CWAS	CAAP	TAP[HB]				WSS	
	DAT	CB	TAP[R]				ERI	
	ECS	CPA	TASK				RR	
	LATI	ECS	WKA					
	OASIS-2	ESI						
	PAITI	SLE						
	TABE-PS	TAP[R]						
	WAI	WBST						
	WBST	MSEI						
	SAI	SSQ						

Key: < less than  
 $\leq$  less than or equal to  
 > greater than  
 $\geq$  greater than or equal to

## CONCLUSIONS

Thirty-two employability skills classified into seven categories are an appropriate and comprehensive set of employability skills. These employability skills can be used as a basis for instruction and assessment.

Suitable tests and/or assessment systems are available for measuring employability skills. Grace (1994) arrived at this same conclusion after analyzing eighteen assessment systems for employability skills. Many of the measures included in the study titled Workplace Basic Skills Assessment Tools by Grace are described in this study.

The results from analysis of the available tests and/or assessments for employability skills appear to warrant the following conclusions.

1. Suitable measures are available for assessing the employability skills of elementary students, high school students, college students, and adults.
2. Suitable measures are available for assessing employability skills other than the skills in reading for information, applied mathematics, listening, and writing.
3. Available tests and/or assessments to measure employability skills contain a variety of testing and assessment techniques.

## DEFINITIONS

Acceptable Behaviors - Helps others to learn. Conveys job information to others. Allows others to see information applicability and relevance to tasks. Demonstrates accepted social and work behaviors such as accepted conversation skills, good manners, and personal hygiene. Demonstrates knowledge of a position. Exercise the rights and responsibilities of citizenship.

Change Adaptation - Demonstrates stability when confronted with flexibility. Can emotionally deal with change.

Client/Customer Interactions - Works and communicates with clients and customers to satisfy their expectations. (SCANS)

Competency - Skills, behaviors, or knowledge that can be demonstrated by an individual.

Creative Thinking - Shows an ability to produce a large number of appropriate and unusual ideas efficiently. Thinking patterned in a way which leads to creative results. The ultimate criterion of creativity is output.

Critical Thinking - Uses specific dispositions and skills to reach a conclusion. Thinking which involves a body of intellectual skills and abilities.

Decision Making - Uses thinking processes to choose a best response among several alternatives. Decision making involves a goal, identifying variables and relationships, generating alternatives, decision selection, and decision evaluation.

Design Systems - Develops a framework that accommodates the interaction of variables or components to achieve a particular outcome.

Enabling Thinking Skills - Uses basic cognitive operations in metacognitive reflection and in the thinking process. Processes which are essential to the functioning of thinking. Information in many forms such as graphs and mental pictures is processed.

Human Resources Management - Assesses knowledge and skills and distributes work accordingly, evaluates performance and provides feedback. (SCANS)

Integrity/Honesty - Chooses an ethical course of action. An individual can be trusted.

Leadership - Demonstrates processes of influencing and leading others to achieve specific purposes.

Learning - Knows how to learn by using efficient learning techniques to acquire new knowledge and skills. Knows how to use self-regulated learning.

Materials/Facilities Management - Acquires, stores, and distributes materials, supplies, parts, equipment, space, or final products in order to make the best use of them. (SCANS)

Measure - A device or strategy used to collect data. Can be called instrument, test, or assessment.

Money Management - Uses or prepares budgets, including making cost and revenue forecasts, keeps detailed records to track performance, and makes appropriate adjustments. (SCANS)

Monitor and Improve Systems - Constantly monitors a system for discrepancies in the operation of the system and seeks solutions to eliminate discrepancies in the operation of a system. Attempts to up-grade and improve systems.

Negotiation Skills - Uses processes to resolve a challenge by arriving at an agreement. A challenge may be any type that involves divergent interests.

Problem Solving - Uses thinking processes to resolve a known or defined difficulty. Problem solving begins with problem detection and ends with solution evaluation.

Reasoning - Uses inductive and deductive thinking processes. Inductive thinking starts with specifics and ends with generalities. Deductive thinking starts with generalities and ends with specifics. General thinking is sometimes called reasoning. Mechanical reasoning is a special case of reasoning.

Relationships - Works well with men and women from diverse backgrounds. Cooperates with authority and maintains positive relations with others. Analyzes the effects of a family on work. Analyzes the effects of work on a family.

Responsibility - Exerts a high level of effort and perseverance toward goal attainment. Displays high standards of work ethic involving such things as attendance, punctuality, and enthusiasm.

Self-Esteem - Knows self and understands self (Self-Concept). Believes in own self-worth and knows own emotions and needs.

Self-Management - Knows how to assess own knowledge, skills, and abilities and uses own knowledge, skills, and abilities. Exhibits self-control and is a "self-starter."

Skill - A sequence of actions that acquire the characteristics of automatic processes. The action is fast, automatic, and relatively error free.

Sociability - Demonstrates understanding, friendliness, and empathy in new and on-going group settings. Takes an interest in what others say and do.

Standard - A desired condition of some aspect of education.

System - A set of components or variables that interact and influence each other.

Teamwork - Works cooperatively with others and contributes to group with ideas, suggestions, and effort. Demonstrating competence in participating as a member of a team includes doing own share of tasks necessary to complete a project. (SCANS)

Technology Applications - Selects and uses procedures, tools, or machines to accomplish a particular task.

Time Management - Selects relevant, goal-related activities, ranks them in order of importance, allocates time to activities, and understands, prepares, and follows schedules. (SCANS)

Utilize Systems - Knows how social, organizational, and technological systems work and operates effectively within them. (SCANS)

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APPENDIX A  
WORKPLACE BASICS

Basic Competency Skills

Reading  
Writing  
Computation

Communication Skills

Speaking  
Listening

Adaptability Skills

Solving Problems  
Thinking Creatively

Development Skills

Managing Personal Growth  
Managing Professional Growth

Group Effectiveness Skills

Interpersonal Skills  
Teamwork  
Negotiation

Influencing Skills

Understanding Organizational Culture  
Sharing Leadership

## APPENDIX B

### SKILLS IDENTIFIED BY THE SECRETARY'S COMMISSION ON ACHIEVING NECESSARY SKILLS (SCANS)

#### A THREE-PART FOUNDATION

##### Basic Skills

- Reading
- Writing
- Arithmetic/Mathematics
- Listening
- Speaking

##### Thinking Skills

- Creative Thinking
- Decision Making
- Problem Solving
- Seeing Thing in the Mind's Eye
- Knowing How to Learn
- Reasoning

##### Personal Qualities

- Responsibility
- Self-Esteem
- Sociability
- Self-Management
- Integrity/Honesty

#### FIVE COMPETENCIES

Resources: Identifies, organizes, plans, and allocates resources

- Time
- Money
- Material and Facilities
- Human Resources

Interpersonal: Works with others

- Participates as Member of a Team
- Teaches Others New Skills
- Serves Clients/Customers
- Exercises Leadership
- Negotiates
- Works with Diversity

Information: Acquires and uses information

- Acquires and Evaluates Information
- Organizes and Maintains Information
- Interprets and Communicates Information
- Uses Computers to Process Information

Systems: Understands complex inter-relationships

- Understands Systems
- Monitors and Corrects Performance
- Improves or Designs Systems

Technology: Works with a variety of technologies

- Selects Technology
- Applies Technology to Task
- Maintains and Troubleshoots Equipment

## APPENDIX C

### Occupational Competency Analysis Profile: Employability\*

#### Unit 1: Career Development

- Competency 1.1: Investigate career options
- Competency 1.2: Utilize career information
- Competency 1.3: Participate in a career exploration activity
- Competency 1.4: Assess the relationship educational achievement and career planning
- Competency 1.5: Develop an individual career plan
- Competency 1.6: Annually review/revise the individual career plan

#### Unit 2: Decision Making and Problem Solving

- Competency 2.1: Apply decision-making techniques in the workplace
- Competency 2.2: Apply problem-solving techniques in the workplace

#### Unit 3: Work Ethic

- Competency 3.1: Evaluate the relationship of self-esteem to work ethic
- Competency 3.2: Analyze the relationship of personal values and goals to work ethic both in and out of the workplace
- Competency 3.3: Demonstrate work ethic
- Competency 3.4: Demonstrate safety skills

#### Unit 4: Job-Seeking Skills

- Competency 4.1: Prepare for employment
- Competency 4.2: Develop a resume
- Competency 4.3: Complete the job application process
- Competency 4.4: Demonstrate interviewing skills
- Competency 4.5: Secure employment

#### Unit 5: Job Retention and Career Advancement Skills

- Competency 5.1: Analyze the organizational structure of the workplace
- Competency 5.2: Maintain positive relations with others
- Competency 5.3: Demonstrate accepted social and work behaviors
- Competency 5.4: Analyze opportunities for personal and career growth

#### Unit 6: Technology in the Workplace

- Competency 6.1: Demonstrate knowledge of technology issues
- Competency 6.2: Demonstrate skills related to technology issues

Unit 7: Lifelong Learning

- Competency 7.1: Apply lifelong learning practices to individual situations
- Competency 7.2: Adapt to change

Unit 8: Economic Education

- Competency 8.1: Analyze how an economy functions as a whole
- Competency 8.2: Analyze how an economic system is a framework within which decisions are made by individuals and groups
- Competency 8.3: Analyze the importance of making informed personal financial decisions

Unit 9: Balancing Work and Family

- Competency 9.1: Analyze the effects of family on work
- Competency 9.2: Analyze the effects of work on family

Unit 10: Citizenship in the Workplace

- Competency 10.1: Exercise the rights and responsibilities of citizenship in the workplace
- Competency 10.2: Prepare to work in a multicultural society

Unit 11: Leadership

- Competency 11.1: Evaluate leadership styles appropriate for the workplace
- Competency 11.2: Demonstrate effective teamwork skills
- Competency 11.3: Utilize effective communication skills

Unit 12: Entrepreneurship

- Competency 12.1: Evaluate the role of small business
- Competency 12.2: Examine entrepreneurship as a personal career option

\*This list consists of the Unit and Competency statements in Occupational Competency Analysis Profile: Employability by the Vocational Instructional Materials Laboratory, Center on Education and Training for Employment, The Ohio State University. Consult the document for a set of Competency Builders for each competency.

## APPENDIX D

### COMBINED SETS OF EMPLOYABILITY SKILLS

#### BASIC SKILLS

Reading (SCANS) (Workplace)  
Writing (SCANS) (Workplace)  
Arithmetic/Mathematics (SCANS)  
Computation (SCANS) (Workplace)  
Listening (SCANS) (Workplace)  
Speaking (SCANS) (Workplace)

#### THINKING SKILLS

Creative Thinking (SCANS)  
Decision Making (SCANS)  
Problem Solving (SCANS)  
Seeing Things in the Mind's Eye (SCANS)  
Reasoning (SCANS)  
Knowing How to Learn (SCANS)  
Solving Problems (Workplace)  
Thinking Creatively (Workplace)  
2.1 Apply Decision-making techniques (OCAP)  
2.2 Apply Problem-solving (OCAP)

#### PERSONAL QUALITIES

Responsibility (SCANS)  
Self-Esteem (SCANS)  
Sociability (SCANS)  
Self-Management (SCANS)  
Integrity/Honesty (SCANS)  
Managing Personal Growth (Workplace)  
Managing Professional Growth (Workplace)  
1.5 Develop An Individual Career Plan (OCAP)  
1.6 Annually Review/Revise The Individual Career Plan (OCAP)  
3.1 Evaluate the Relationship of Self-Esteem to Work Ethic (OCAP)  
3.2 Analyze the Relationship of Personal Values and Goals to Work Ethic Both In and Out of the Workplace (OCAP)  
3.3 Demonstrate Work Ethic (OCAP)  
3.4 Demonstrate Safety Skills (OCAP)  
5.4 Analyze Opportunities for Personal and Career Growth (OCAP)  
7.1 Apply Lifelong Learning Practices (OCAP)  
7.2 Adapt to Change (OCAP)

#### INTERPERSONAL

Participates as Member of a Team (SCANS)  
Teaches Others New Skills (SCANS)  
Serves Clients/Customers (SCANS)  
Exercises Leadership (SCANS)  
Negotiates (SCANS)

Works with Diversity (SCANS)  
Interpersonal Skills (Workplace)  
Teamwork (Workplace)  
Negotiation (Workplace)  
Sharing Leadership (Workplace)  
5.2 Maintain Positive Relations With Others (OCAP)  
5.3 Demonstrate Accepted Social and Work Behaviors (OCAP)  
9.1 Analyze the Effects of Family on Work (OCAP)  
9.2 Analyze the Effects of Work on Family (OCAP)  
10.1 Exercise the Rights and Responsibilities of Citizenship  
in the Workplace (OCAP)  
10.2 Prepare to Work in a Multicultural Society (OCAP)  
11.1 Evaluate Leadership Styles Appropriate for the  
Workplace (OCAP)  
11.2 Demonstrate Effective Teamwork Skills (OCAP)  
11.3 Utilize Effective Communication Skills (OCAP)

#### RESOURCES

Time (SCANS)  
Money (SCANS)  
Material and Facilities (SCANS)  
Human Resources (SCANS)

#### INFORMATION

Acquires and Evaluates Information (SCANS)  
Organizes and Maintains Information (SCANS)  
Interprets and Communicates Information (SCANS)  
Uses Computers to Process Information (SCANS)

#### SYSTEMS

Understands Systems (SCANS)  
Monitors and Corrects Performance (SCANS)  
Improves and Designs Systems (SCANS)  
Understanding Organizational Culture (Workplace)  
5.1 Analyze the Organizational Structure  
of the Workplace (OCAP)

#### TECHNOLOGY

Selects Technology (SCANS)  
Applies Technology to Task (SCANS)  
Maintains and Troubleshoots Equipment (SCANS)  
6.1 Demonstrate Knowledge of Technology Issues (OCAP)  
6.2 Demonstrate Skills Related to Technology Issues (OCAP)

## APPENDIX E

### OCCUPATIONAL COMPETENCY ANALYSIS PROFILE: EMPLOYABILITY COMPETENCIES NOT SELECTED

#### Unit 1: Career Development

- Competency 1.1: Investigate career options
- Competency 1.2: Utilize career information
- Competency 1.3: Participate in a career exploration activity
- Competency 1.4: Assess the relationship between educational achievement and career planning

#### Unit 4: Job-Seeking Skills

- Competency 4.1: Prepare for employment
- Competency 4.2: Develop a resume
- Competency 4.3: Complete the job application process
- Competency 4.4: Demonstrate interviewing skills
- Competency 4.5: Secure employment

#### Unit 8: Economic Education

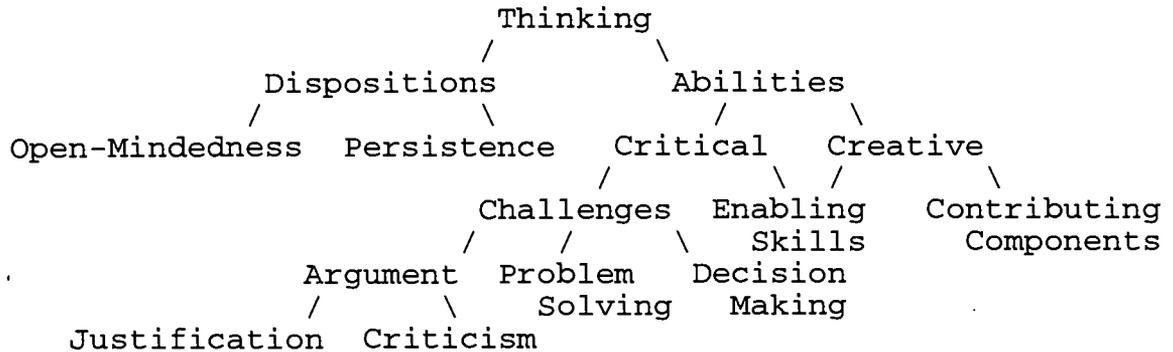
- Competency 8.1: Analyze how an economy functions as a whole
- Competency 8.2: Analyze how an economic system is a framework within which decisions are made by individuals and groups
- Competency 8.3: Analyze the importance of making informed personal financial decisions

#### Unit 12: Entrepreneurship

- Competency 12.1: Evaluate the role of small business
- Competency 12.2: Examine entrepreneurship as a personal career option

APPENDIX F

DIAGRAM OF THINKING



Note: The above diagram of thinking is an incomplete diagram. Only two members out of appropriately fourteen dispositions are included. The thinking abilities segment has many more members.

The diagram shows dispositions and abilities as the two major categories in thinking. Critical thinking and creative thinking are the two major categories of thinking abilities. Enabling thinking skills are connected to both critical thinking and creative thinking.

## APPENDIX G

### OUTLINE OF ENABLING THINKING SKILLS

- A. Focusing
  - 1. Defining Problems
  - 2. Setting Goals
- B. Information Gathering
  - 1. Observing
  - 2. Formulating Questions
  - 3. Interpreting
- C. Remembering
  - 1. Encoding
  - 2. Recalling
- D. Organizing
  - 1. Comparing
  - 2. Classifying
  - 3. Ordering
  - 4. Representing
- E. Analyzing
  - 1. Identifying Attributes and Components
  - 2. Identifying Relationships and Patterns
  - 3. Identifying Main Ideas
  - 4. Identifying Errors
- F. Generating
  - 1. Inferring
  - 2. Predicting
  - 3. Elaborating
- G. Integrating
  - 1. Summarizing
  - 2. Restructuring
- H. Evaluating
  - 1. Establishing Philosophical Criteria
  - 2. Establishing Psychological Criteria
  - 3. Verifying

## APPENDIX H

### MODEL STANDARDS

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## APPENDIX I

### EXAMPLES OF FRAMEWORKS WITH APPLICATIONS OF KNOWLEDGE

1992 NAEP Framework - Aspects of Reading Literacy (ETS, 1995)

	Constructing, Extending, and Examining Meaning			
	Initial Understanding	Developing an Interpretation	Personal Reflection and Response	Demonstrating Critical Stance
Reading for Literary Experience				
Reading for Information				
Reading to Perform a Task				

Standard 9: Curriculum and Evaluation Standards for School Mathematics (NCTM, 1989)

In grades 9-12, the mathematics curriculum should include the study of trigonometry so that all students can -

apply trigonometry to problem situations involving triangles;

explore periodic real-world phenomena using the sine and cosine functions;

#### Example Problem Related to Standard 9

Cartographers are frequently confronted with the following problem.

Determine the angle of depression between two markers on a contour map with different elevations.

## APPENDIX J

### EXAMPLES OF ITEMS FROM DIFFERENT SOURCES

#### Example 1:

Quik Call charges 18 cents per minute for long-distance calls. Econo Phone totals your phone usage each month and rounds the number of minutes up to the nearest 15 minutes. It then charges \$7.90 per hour of phone usage, dividing this charge into 15-minute segments if you used less than a full hour. If your office makes 5 hours 3 minutes worth of calls this month using the company with the lower price, how much will these calls cost? (ACT (1995), Work Keys, Applied Mathematics, Test Descriptions, p. 5)

#### Example 2:

A bus pass costs \$18 per month. The cost of a one-way bus ride is \$.50. If a person rides the bus to and from work an average of 20 days per month, which of the following represents the approximate amount that would be saved in one year by purchasing monthly bus passes? (The University of Iowa (1993), Iowa Tests of Educational Development, Form L, Level 17/18, Test Q: Ability to Do Quantitative Thinking, p. 40)

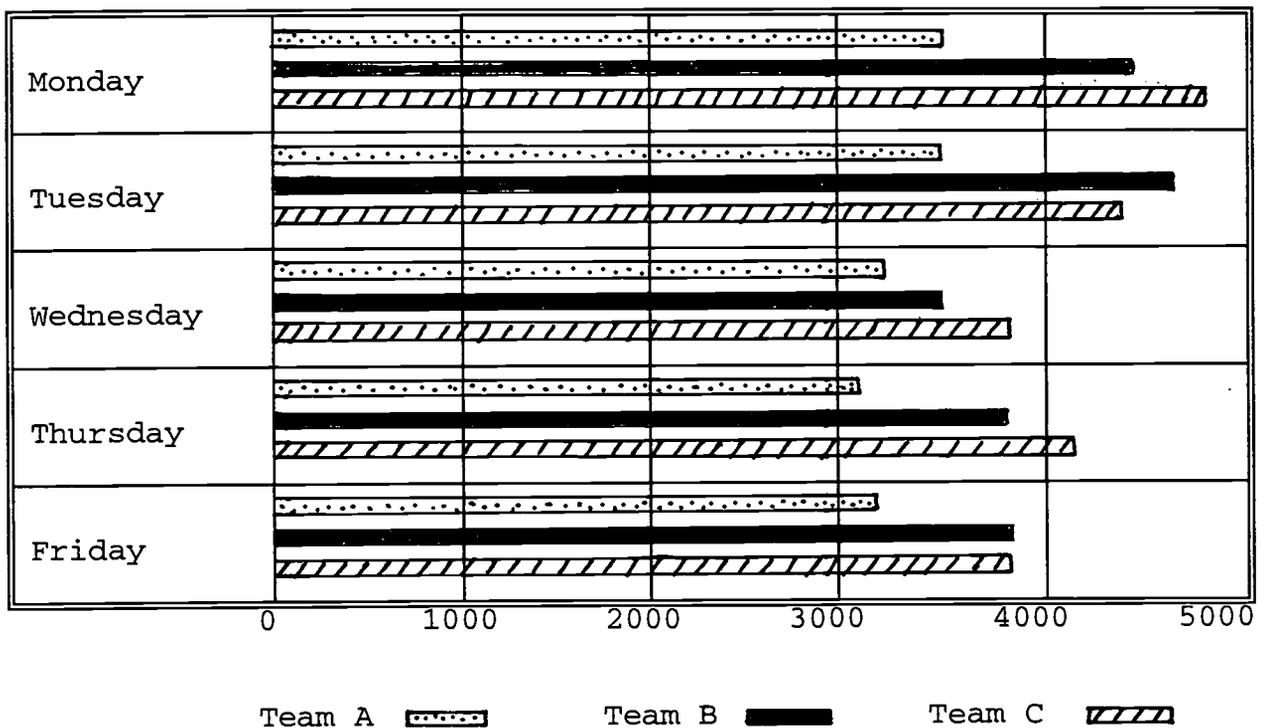
Note: Without bibliographical information, it would be nearly impossible to guess the origin of Examples 1 and 2. Tests are not always different due to the test titles. Examples 1 and 2 both involve similar mathematical operations. When thinking skills are involved, especially enabling thinking skills, it is sometimes difficult to detect a difference between items. Items on a math or science test may look like the items on a reading for information test.

Example 3:

1. According to the following bar chart, which team had the highest overall production for Week 38?

- A. Team A
- B. Team B
- C. Team C
- D. Team A and Team B had the same high production rate.
- E. Team B and Team C had the same high production rate.

Bottle Packaging Production  
Week 38

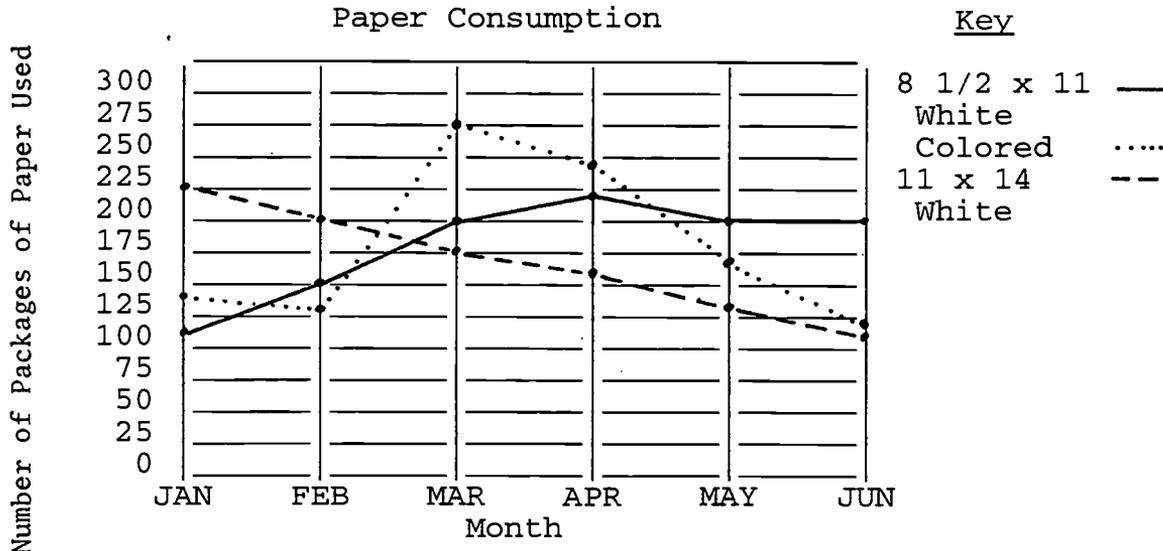


(ACT (1995), Work Keys, Locating Information, Test Descriptions, p.21)

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Example 4:

As the supply clerk in a busy office, it is your job to be sure there are enough supplies on hand at all times. To help you do this, you drew a graph and plotted the number of packages of paper used during that month. Study the graph. Then do Numbers 25 through 28.



25. In which month were the fewest packages of paper used?
- A. March
  - B. April
  - C. May
  - D. June

(Macmillan/McGraw-Hill School Publishing Company (1994), Tests of Adult Basic Education (TABE), General Form, Level D, p. 29)

Note: Examples 3 & 4 are similar items by involving graphs and combining information from a graph. Example 3 is called Locating Information. Example 4 is considered applied mathematics. It is not uncommon for tests involving thinking skills (e.g., problem solving; enabling thinking skills (graphs, tables); planning; prediction) to have similar looking items. Items on a science test can look like the items on an applied mathematics test. Items on a science or social studies test can look like the items on a locating information test.

Example 5:

Study this list of articles from a periodical guide. Then do Numbers 3 through 5.

Archaeologists

See also

Johnson, Renaldo

Archaeology

See also

Cave paintings

Egypt-Antiquities

Stone Age

Methodology

Cave age village life [recently published study of archaeological findings provides clues to social customs of prehistoric people: work of Phyllis Karenz] S. Clay. il Sci Wkly 97:52-7 D 29 '88

Modern technology used to hunt buried treasure. Tech Rev 134:74 D 15 '89

Study and teaching

Introducing archaeology in the classroom.

A. Jone. il Educ Today 51:43-5

O 6 '89

Quest [prehistoric Indian village excavated by high school students in Rhode Island] il Nat'l Sci World 107:13-29 N '87

Archaeology, Submarine

Lost treasures [discovered by Gary

Brown in the Mediterranean] J. Young

and S. Lee. il Discovery 27:42-8 O 11 '90

3. The article in Discovery begins on

A. Page 8

B. Page 11

C. Page 42

D. Page 90

(CTB Macmillan/McGraw-Hill (1992), California Achievement Tests, Fifth Edition, Level 21/22, Form A, p. 54)

Note: Does this item appear to be from a locating information test or reading for information test? It is from a study skills test.

APPENDIX K

ACHIEVEMENT TEST BATTERIES

California Achievement Tests, Fifth Edition (CAT/5)

Iowa Tests of Basic Skills (ITBS), Form M

Iowa Tests of Educational Development (ITED), Form M

Metropolitan Achievement Tests, Seventh Edition (MAT7)

Stanford Achievement Test Series, Ninth Edition (Stanford 9)

## APPENDIX L

### LIST OF PUBLISHERS

American College Testing Program (ACT)  
2201 North Dodge Street  
P.O. Box 168  
Iowa City, IA 52240

Comprehensive Adult Student Assessment System (CASAS)  
8910 Clairemont Mesa Boulevard  
San Diego, CA 92123

Consulting Psychologists Press, Inc.  
3803 East Bayshore  
P.O. Box 10096  
Palo Alto, CA 94306

CTB/McGraw-Hill  
20 Ryan Ranch Road  
Monterey, CA 93940

Curriculum Associates, Inc.  
5 Esquire Road  
P.O. Box 2001  
N. Billerica, MA 01862-0901

EdITS  
P.O. Box 7234  
San Diego, CA 92167

Educational Testing Service  
Language Learning and Assessment  
Mail Stop 05-P  
Rosedale Road  
Princeton, NJ 08541

Harcourt Brace Educational Measurement  
555 Academic Court  
San Antonio, TX 78204-2498

Learning Resources, Inc.  
700 Canal Street  
Stamford, CT 06902-5921

MetriTech, Inc.  
111 N. Market Street  
Champaign, IL 61820

PESCO INTERNATIONAL  
21 Paulding Street  
Pleasantville, NY 10570

PRO-ED  
8700 Shoal Creek Boulevard  
Austin, TX 78758-9965

Reid Psychological Systems  
200 South Michigan Avenue, Suite 900  
Chicago, IL 60604-2401

Riverside Publishing  
425 Spring Lake Drive  
Itasca, IL 60143

Vocational Instructional Materials Laboratory (VIML)  
Center on Education and Training for Employment  
The Ohio State University  
1900 Kenny Road  
Columbus, Ohio 43210

Vocational Research Institute (VRI)  
1528 Walnut Street, Suite 1502  
Philadelphia, PA 19102-3619

Wilson Learning Corporation  
7500 Flying Cloud Drive  
Eden Prairie, MN 55344-3795

Wonderlic Personnel Test, Inc.  
1509 N. Milwaukee Avenue  
Libertyville, IL 60048-1387

## INDEX OF ACRONYMS

AAAS-American Association for the Advancement of Science  
ABLE-Adult Basic Learning Examination  
ACT-American College Testing  
[AE]-Ability Explorer  
ATB-Ability to Benefit Testing  
AWA-Assessment of Work Attitudes  
[BLSI]-Brigance Life Skills Inventory  
C-CAT-Cognitive and Conceptual Abilities Test  
CAAP-Collegiate Assessment of Academic Proficiency  
[CAM]-COMPUTE-A-MATCH  
CAPS-Career Ability Placement Survey  
CASAS-Comprehensive Adult Student Assessment System  
CAT/5-California Achievement Tests, Fifth Edition  
[CB]-College BASE  
CBI-Career Beliefs Inventory  
CII-Career Interest Inventory  
CITE-Center for Innovative Teaching Experiences  
[CLAS]-CAT/5 Listening and Speaking Checklist  
COPEP-Career Orientation Placement and Evaluation Survey  
COPS-Career Occupational Preference System  
[CPA]-CTB Performance Assessment  
CTB-California Testing Bureau  
[CWAS]-CTB Writing Assessment System  
DAT-Differential Aptitude Tests  
DOT-Dictionary of Occupational Titles  
ECS-Employability Competency System  
EdITS-Educational & Industrial Testing Service  
[ERI]-Employee Reliability Inventory  
ESI-Brigance Employability Skills Inventory  
ETS-Educational Testing Service  
GED-General Educational Development  
GOE-Guide of Occupational Exploration  
IRA-International Reading Association  
ITBS-Iowa Test of Basic Skills  
ITED-Iowa Test of Educational Development  
[LATI]-Listening Assessment for TAP/ITED  
MSEI-Multi-Dimensional Self-Esteem Inventory  
NAEP-National Assessment of Educational Progress  
NCTE-National Council of Teachers of English  
NCTM-National Council of Teachers of Mathematics  
[NSRE]-New Standards Reference Examinations  
NSTA-National Science Teachers Association  
OASIS-2-Occupational Aptitude Survey and Interest Schedule 2nd Ed.  
OCAP-Occupational Competency Analysis Profile  
OCAPA-Oral Communication Applied Performance Appraisal  
OOL-Occupational Outlook Handbook  
OVCA-Ohio Vocational Competency Assessment  
[PAITI]-Performance Assessments For ITBS and TAP & ITED  
RR-Reid Report  
SAGE-System for Assessment and Group Evaluation

SAI-Student Adjustment Inventory  
SCANS-Secretary's Commission on Achieving Necessary Skills  
SLE-Scholastic Level Exam  
[SS2000]-Success Skills 2000  
[SSQ]-Student Styles Questionnaire  
TABE-Tests of Adult Education  
TABE-PC-TABE Tests On Personal Computer  
TABE-PS-TABE Work-Related Problem Solving  
TABE-WR-TABE Work-Related Foundation Skills  
TALS-Tests of Applied Literacy Skills  
TAP[HB]-Test of Academic Performance [Harcourt Brace]  
TAP[R]-Tests of Achievement and Proficiency [Riverside]  
TASK-Stanford Test of Academic Skills  
TFA-Job Temperament Factor Assessment  
VAB-Vocational Aptitude Battery  
VII-Vocational Interest Inventory  
VIML-Vocational Instructional Materials Laboratory  
VRI-Vocational Research Institute  
WAI-Work Adjustment Inventory  
[WAM]-WinValuate and MacValuate  
WBST-Wonderlic Basic Skills Test  
[WKA]-Work Keys Assessment  
WSS-Workplace Success Skills



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