Version 4.1

**O∗net** ®
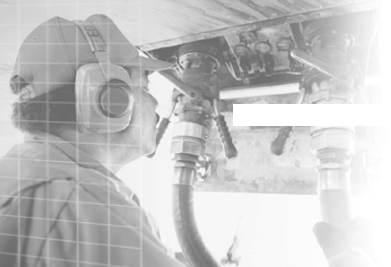
# ability profiler™

## User's Guide

U.S. Department of Labor
Employment and Training Administration

# Getting Started . . .

The complete O*NET® Ability Profiler™ consists of four packets:

### Instrument Packet
(includes: O*NET Ability Profiler Form; Using Your Results; Part 7 Answer Sheet; Answer Sheet)

### Administration Packet
(includes: O*NET Ability Profiler Administration Manual; User's Guide; Record of Apparatus Scores; Three-Dimensional Space Cutouts)

### Scoring Packet
(includes: Pre-marked Response Sheets for Scoring Calibration; CD-Rom containing the O*NET Ability Profiler Scoring Program (APSP) software and a PDF version of the APSP User's Guide)

### Training Packet
(includes: O*NET Ability Profiler Administrator Training Manual; Overhead Masters; Participant's Guide)

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To administer the O*NET Ability Profiler, you will need both the O*NET Ability Profiler Instrument Packet and the O*NET Ability Profiler Administration Packet.

To score the O*NET Ability Profiler, you will need the O*NET Ability Profiler Scoring Packet.

To conduct training on how to administer the O*NET Ability Profiler, you will need the O*NET Ability Profiler Training Packet.

To order additional instrument, administration, scoring, and training materials, contact the U.S. Government Printing Office (GPO), telephone: 202/512-1800 (DC area) or 1-866/512-1800 (toll free); or fax: 202/512-2104; or visit their online bookstore at: http://bookstore.gpo.gov.

To download various components, visit the National Center for O*NET Development web page, under the heading, "Career Exploration Tools" at: http://www.onetcenter.org/tools.html.

# SPECIAL NOTICE:  USER'S AGREEMENT

The O*NET® Career Exploration Tools are composed of the O*NET WORK IMPORTANCE LOCATOR, O*NET INTEREST PROFILER, O*NET WORK IMPORTANCE PROFILER, O*NET COMPUTERIZED INTEREST PROFILER and O*NET ABILITY PROFILER products and are owned by the U.S. Department of Labor, Employment and Training Administration (DOL/ETA).  All O*NET Assessment/Counseling Tools are copyrighted.  O*NET is a trademark of DOL/ETA.

The DOL/ETA developed the O*NET Career Exploration Tools as career counseling, career planning, and career exploration tools.  In order for each tool to provide an objective assessment, extensive research and development was conducted to ensure that the directions, format, items, and score reports lead to valid assessment.  The DOL/ETA adhered to the high standards of the American Psychological Association, the American Education Research Association, and the National Council on Measurement in Education in developing the O*NET Career Exploration Tools.  In developing the tools, fairness analyses were conducted to ensure that score results were equally valid both from a statistical and a usability perspective.

Results provided from the O*NET Career Exploration Tools are part of a whole-person approach to the assessment process.  They provide useful information that individuals can use to identify their strengths, the parts of work they like to do, and the parts of work that they may find important.  Individuals can use results to identify training needs and occupations that they may wish to explore further.  Individuals are strongly encouraged to use additional information about themselves with O*NET Career Exploration results when making career decisions.

As such, the use of the O*NET Career Exploration Tools is authorized for career exploration, career planning, and career counseling purposes only.  Each O*NET Career Exploration Tool must be used consistent with its own "User's Guide."  No other use of these tools or any part of the tools is valid or authorized.

All users are bound by the terms of "Special Notice: User's Agreement."  If you use any of the O*NET Career Exploration Tools, you have agreed to be bound by the terms of "Special Notice: User's Agreement."

**If any of the O*NET Career Exploration Tools are used for a purpose or purposes other than career exploration, career planning, and career counseling purposes, it is a violation of this Agreement and neither the U.S. Department of Labor nor the Employment and Training Administration is liable for any misuse of the tools.**  The DOL/ETA reserves the right to pursue all legal remedies for violations of this "Special Notice: User's Agreement."

Recipients of federal assistance from the U.S. Department of Labor must ensure that individuals with disabilities are afforded an equal opportunity to use services based on the O*NET Career Exploration Tools.

No additional license is required to obtain, copy in whole, use or distribute the O*NET Career Exploration Tools.  A user must not remove any copyright or trademark notice or proprietary legend contained within the O*NET Career Exploration Products.  Further, all copies and related documentation must include the copyright and trademark notices.  Users must abide by the following instructions on proper trademark usage when using the O*NET Career Exploration Products:

1.  Since O*NET is trademarked, users must acknowledge the use of the O*NET Career Exploration Tools in and on their products.  The trademark symbol must be properly displayed when referring to O*NET products.  When using the O*NET™ name, users must use "O*NET" as an adjective, not as a noun or verb, followed by the proper generic product name.  <u>For example</u>: "...with O*NET Career Exploration Tools," "...formulated from O*NET Career Exploration Tools," or "...includes information from the O*NET Career Exploration Tools," <u>not</u> "...includes O*NET."  In addition, the O*NET name must not appear in the possessive form.

    Proper trademark citation:
    O*NET™ is a trademark of the U.S. Department of Labor, Employment and Training Administration.

2.  The version number of O*NET Career Exploration Tools must be clearly stated in and on user products.

3.  "O*NET In It" bug with ™ symbol must appear in and on user products:



    This graphic can be obtained from the National Center for O*NET Development web site (http://www.onetcenter.org) under the listing, "Developer's Corner."

O*NET Career Exploration Tools are provided "AS IS" without expressed or implied warrantees.  Certain components and/or files of the software have been licensed by third parties to the U.S. Department of Labor.   Such third parties own and/or have copyrights or other rights in those components and these components of the software may not be distributed separately.  You may contact the U.S. Department of Labor or the National Center for O*NET Development for a list of such components and third parties.  Your use of this software and these components is subject to this "Special Notice: User's Agreement."

### SPECIAL NOTICE: O*NET DEVELOPER'S AGREEMENT

Users intending to develop other products, software, or systems applications using O*NET Career Exploration Tools products must follow the "O*NET Developer's Agreement," which can be found on the "Developer's Corner" at http://www.onetcenter.org, or contact the National Center for O*NET Development, North Carolina Employment Security Commission, P.O. Box 27625, Raleigh, NC 27611.

**Addendum**

This Version 4.1 of the Ability Profiler User's Guide reflects the inclusion of new Occupational Ability Profiles (OAPs) developed using occupational data from the O*NET 16.0 Database. This ensures that users of the Ability Profiler are presented with occupations for exploration based on the match between their scores and the most updated OAP information available. To learn about the development of the new OAPs see *Updating Occupational Ability Profiles with O*NET® Content Model Descriptors (2009)* available from the National Center for O*NET Development's Web site at http://www.onetcenter.org/research.html

# Table of Contents

# Acknowledgments

# Overview

The U.S. Department of Labor's Employment and Training Administration has developed the **O*NET Career Exploration Tools**, a group of career counseling assessment instruments. The tools are designed to assist a wide variety of users in identifying information about themselves. They can use this self-knowledge to guide their exploration of occupations included in the Occupational Information Network (O*NET), the automated replacement for the *Dictionary of Occupational Titles* (DOT; U.S. Department of Labor, 1991a).

The tools stress whole-person assessment. Users are able to take a variety of valid and reliable assessment instruments, each providing important information that can help them explore the world of work. The **O*NET Career Exploration Tools** include:

| Tool | Format | Purpose |
|---|---|---|
| **O*NET Interest Profiler** | Paper-and-pencil | Help individuals identify work-related interests |
| **O*NET Computerized Interest Profiler** | Computer-based | Help individuals identify work-related interests |
| **O*NET Work Importance Locator** | Paper-and-pencil | Help users decide what is important to them in a job |
| **O*NET Work Importance Profiler** | Computer-based | Help users decide what is important to them in a job |
| **O*NET Ability Profiler** | Paper-and-pencil | Help individuals identify what they can do well |

These assessment tools help individuals discover three important pieces of information that are valuable when exploring careers:

  1) what they like to do,

  2) what is important to them in their world of work, and

  3) what they do well.

**O*NET Career Exploration Tools** are designed to be interactive and flexible. Individuals are able to take one or all of the instruments, depending on their particular needs. They may also take the tools in conjunction with privately-developed career counseling tools. Additionally, many individuals may be able to administer the O*NET Interest and Work Importance tools to themselves with little or no outside assistance.

All of the tools provide individuals with results presented on score reports that are self-interpretable. The score reports include lists of O*NET occupations organized so that users can identify occupations that fit with their interests, work values, and/or abilities. They can then find more information about these occupations through use of O*NET OnLine (http://online.onetcenter.org). All of the tools and their associated reports are useful also for group settings, such as vocational training programs, classrooms, and out-placement programs.

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**NOTE: The O*NET Career Exploration Tools are authorized for career exploration, career planning, and career counseling purposes only. No other use of this tool or any part of this tool is valid or authorized.**

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The *O*NET Ability Profiler User's Guide* was developed for programs (e.g., one-stop offices, schools, employment service offices, career information deliver systems, out-placement programs) that will incorporate the **O*NET Ability Profiler** into their career exploration services.

This Guide helps users:

1. Understand the theory behind the **O*NET Ability Profiler** (AP),

2. Understand the administration procedures for the AP,

3. Interpret AP results and score reports, and

4. Understand how the AP was developed.

User's Guides are available also for the other **O*NET Career Exploration Tools**. For more information on these guides or other O*NET products, contact the National Center for O*NET Development.

Internet:            **http://www.onetcenter.org**

E-mail:              **onet@ncmail.net**

Regular mail:        National Center for O*NET Development
                     Attention: Customer Service
                     Post Office Box 27625
                     Raleigh, NC 27611
                     FAX : (919) 715-0778

# Special Notice: Proper Use of O*NET Ability Profiler Results

Please pay particular attention to the proper use of the **O*NET Ability Profiler** results. Part of your responsibility as an administrator/user of the **O*NET Ability Profiler** is to ensure its proper use.

**O*NET Ability Profiler** results provide useful information that individuals can use to identify their strengths. They can use results to identify training needs and occupations that they may wish to explore further. Individuals are strongly encouraged to use additional information about themselves when making career decisions.

The results of the **O*NET Ability Profiler** are authorized for career exploration, career planning, and career counseling purposes only. No other use of this tool or any part of this tool is valid or authorized.

Please read the **Special Notice: User's Agreement** before administering the **O*NET Ability Profiler**.

For further information on proper use of **O*NET Ability Profiler** results, contact:

National Center for O*NET Development
Attention: Customer Service
P.O. Box 27625
Raleigh, NC 27611

Phone: (919) 733-2790
FAX: (919) 715-0778
E-mail: onet@ncmail.net

# 1. INTRODUCTION

One of the U.S. Department of Labor's (DOL) **O\*NET Career Exploration Tools** is the **O\*NET Ability Profiler** (AP). From the **O\*NET Ability Profiler**, clients receive an accurate, reliable profile of their abilities that:

1. provides valuable knowledge about their occupational ability strengths,

2. fosters career awareness, and

3. directly links the client to the entire world of work via the 800+ occupations within O\*NET OnLine, http://online.onetcenter.org

The **O\*NET Ability Profiler** was developed as the result of a research effort to improve the technical and operational qualities of the General Aptitude Test Battery (GATB). The GATB has been used nationwide since 1947 by state employment service offices for occupational counseling and applicant referral. It also has been used in schools, universities, training programs, and vocational rehabilitation agencies for vocational and career counseling. New versions of the GATB were developed periodically to guard against overexposure, to ensure test security, and to allow for retesting

The **O\*NET Ability Profiler** marks a new era in ability assessment for the DOL. The DOL objective was to develop an assessment tool that could easily be incorporated into Workforce Investment Act initiatives and programs aimed at improving the workforce and workplace of the twenty-first century. The O\*NET Ability Profiler is a new multiple-ability assessment instrument that is technically and operationally improved over earlier DOL ability instruments. The O\*NET Ability Profiler incorporates the best of earlier DOL ability instruments, with psychometric, technical, and operational enhancements. These enhancements include, but are not limited to:

- reducing number of test items and subtests;
- including items free from bias;
- providing instructions that communicate the appropriate test-taking strategy for each of the subtests (power or *speeded*);
- grouping subtests so that users will take one type of subtest first (power) followed by the second type of subtest (*speeded*);
- reducing *speededness* of certain subtests;
- developing administration options—either with or without dexterity subtests;
- enhancing legibility and comprehension level of all written materials (test booklets and instructions, test items, answer sheets, introduction script, and Administration Manual);
- modernizing typography and layout format for test booklets, test items, answer sheet, and Administration Manual;
- developing a new self-interpretable O\*NET Ability Profiler Score Report that links user results directly to the world of work through O\*NET occupations and information;

- reporting results based on a comparison of the relative profile or shape of an examinee's results (when expressed as a bar graph) with the typical ability profile for O*NET occupations.

## EXERCISES

The **O*NET Ability Profiler** (AP) is a series of separately timed assessments. There are 11 parts or exercises. Each exercise measures an ability related to the world of work. Six of the exercises are non-psychomotor, administered by paper-and-pencil:

- Arithmetic Reasoning,
- Vocabulary,
- Three-Dimensional Space,
- Computation,
- Name Comparison, and
- Object Matching.

Five of the exercises are psychomotor, or working with your hands:

- Mark Making,
- Place,
- Turn,
- Assemble, and
- Disassemble.

**Note**: Even though Mark Making uses paper-and-pencil, it is a psychomotor assessment because it measures motor coordination.

## FAIRNESS EVALUATION

Two procedures were used to ensure fairness of the assessment items in the **O*NET Ability Profiler**. First, a sensitivity review was conducted to ensure that items reflected the multicultural nature of American society and that items did not contain language that perpetuated stereotypes, offended members of a particular group, or might otherwise distract examinees from the task at hand. Through the sensitivity review, any potential assessment material that might offend people on the basis of age, sex, disability, ethnic group, or race was eliminated.

The second procedure consisted of extensive statistical analyses that identified those questions on which one group of examinees outperforms other groups in spite of similar levels of ability. Questions that demonstrated different difficulty levels across groups (e.g., women, men) were scrutinized for the existence of possible bias to determine whether they should be eliminated from the **O*NET Ability Profiler**.

## THIS USER'S GUIDE

The *O\*NET Ability Profiler User's Guide* was developed for programs (e.g., one-stop offices, schools, employment service offices, career information delivery systems, out-placement programs) that will incorporate the AP into their career exploration services. The Guide helps users understand how to properly incorporate the AP results into their programs by providing technical development information, as well as administration information and guidelines. Suggestions for helping clients to sign-up for the AP and to use their results also are provided. The Guide summarizes information presented in several reports related to the AP. Refer to the following for more information on the **O\*NET Ability Profiler**:

- **Administration**—For more detailed information on administering the AP, see *O\*NET Ability Profiler Administration Manual* (National Center for **O\*NET Development**, 2002a).

- **Training**—For information on training administrators, see *O\*NET Ability Profiler Administrator Training Manual* (National Center for O\*NET Development, 2002b).

- **Scoring**—For more information on the scoring of the **O\*NET Ability Profiler**, see *O\*NET Ability Profiler Scoring Program User's Guide* (Silva, Lewis, Rivkin, & Koritko, 2009) and *O\*NET Ability Profiler Scoring Program Technical Manual* (Silva, 2002).

- **Development**—See research reports in References at the end of this guide. For a detailed description of the development of the **O\*NET Ability Profiler**, see *Equating Forms E and F of the P&P-GATB* (Segall & Monzon, 1995) and "Development of the GATB Forms E and F" (Mellon et al., 1996). To learn more about the work leading to the new forms, see *An Examination of the Speededness of the General Aptitude Test Battery Power Tests* (Sager, Peterson, & Oppler, 1994); *Past Operational Systems for Use of the General Aptitude Test Battery* (Boese & Stroupe, 1994); *Implications of Deleting the Form Matching Test from the General Aptitude Test Battery* (Gaines & Stroupe, 1994); and *Review of Issues Associated with Speededness of GATB Tests* (Peterson, 1993).

The remainder of the User's Guide contains the following chapters:

- **Administration of the O\*NET Ability Profiler**—describes the abilities measured by the **O\*NET Ability Profiler** and summarizes the basic administration requirements.

- **Scoring of the O\*NET Ability Profiler**—describes the scoring of the psychomotor exercises and the computerized scoring of the paper-and-pencil exercises.

- **Score Report for the O\*NET Ability Profiler**—provides an overview of the information provided in the AP Score Report, including abilities measured, percentile scores, occupations linked to the client's profile, Job Zones, and directions for using the information.

- **Development of the O\*NET Ability Profiler: An Overview**—provides an explanation of the development of the O\*NET AP. This includes changes to the GATB in response to a review by the National Research Council of the National Academy of Sciences (Hartigan & Wigdor, 1989).

  **Note**: This section contains some detailed technical information that is important to vocational researchers. It also contains information that will provide educators and vocational counselors with a better understanding of the steps that went into ensuring that the AP meets stringent technical standards.

Throughout the Guide you will find sections that present commonly-asked questions and possible responses to challenges clients may face in using the results of the AP. These sections should provide users with the information they need to effectively utilize the **O\*NET Ability Profiler** in their organization's career counseling program.

The **O\*NET Ability Profiler** has been arranged into four packets: Instrument Packet, Training Packet, Administration Packet, and Scoring Packet.

## 2. ADMINISTRATION OF THE O*NET ABILITY PROFILER: AN OVERVIEW

Understanding the administration procedures for the **O*NET Ability Profiler** will be helpful to you in planning for and conducting the assessment. The *O*NET Ability Profiler Administration Manual* (National Center for O*NET Development, 2002a) presents procedures for administering the **O*NET Ability Profiler**. It includes practical tools, checklists, guidelines, and other information for the administrator. You should refer to the Administration Manual when you want more detailed information about administration of the **O*NET Ability Profiler**. It also might be helpful for you to take the instrument yourself to become familiar with all of the AP's parts and procedures. This section summarizes important aspects of administering the **O*NET Ability Profiler** and will give you a better idea of how to use the instrument with your clients.

The **O*NET Ability Profiler Administration Packet** contains all the components that the assessment administrator will need to administer the **O*NET Ability Profiler**. The Administration Packet consists of the following components:

- O*NET Ability Profiler Administration Manual
- O*NET Ability Profiler User's Guide
- O*NET Ability Profiler Record of Apparatus Scores
- O*NET Ability Profiler Three-Dimensional Space Cutouts

**O*NET Ability Profiler Instrument Packet** contains all of the items needed by the participants/examinees to complete Parts 1 through 7 of the O*NET Ability Profiler.

- O*NET Ability Profiler Form 1: A Tool for Career Exploration
- Using Your O*NET Ability Profiler Results
- Part 7 Mark Making Answer Sheet, O*NET Ability Profiler
- O*NET Ability Profiler Answer Sheet (blank)

# BASIC ABILITIES MEASURED

As noted earlier, the **O*NET Ability Profiler** is composed of 11 separately timed exercises. The exercises are combined to measure 9 basic abilities related to the world of work. The **O*NET Ability Profiler** measures the following abilities:

### VA -  Verbal Ability
The ability to understand the meaning of words and use them effectively in good communication when you listen, speak, or write. This ability is important in such fields as communications, education, law, literary arts, and sales. Measured by the Vocabulary exercise.

### AR -  Arithmetic Reasoning
The ability to use several math skills and logical thinking to solve problems in everyday situations. It involves gathering and sorting through all information related to a problem, making educated guesses about how best to solve the problem, picking a likely way to solve it, and then explaining your decisions. This ability is important in such fields as engineering, construction, finance, sales, mathematics, science, and technology. Measured by the Arithmetic Reasoning exercise.

### CM -  Computation
The ability to use arithmetic operations of addition, subtraction, multiplication, and division to solve everyday problems involving numbers. This ability is important in such fields as engineering, finance, mathematics, science, and technology. Measured by the Computation exercise.

### SA -  Spatial Ability
The ability to form pictures of objects in your mind. It involves easily understanding how drawings represent real objects and correctly imagining how parts fit together. This ability is important in such fields as architecture, carpentry, engineering technology, the visual arts, interior design, and clothing design. Measured by the Three-Dimensional Space exercise.

### FP -  Form Perception
The ability to quickly and accurately see details in objects, pictures, or drawings. It involves noticing little differences in shapes of figures, shading, and lengths and widths of lines. This ability is important in such fields as craft arts, craft technology, jewelry making, production technology, production work, and quality control. Measured by the Object Matching exercise.

### CP -  Clerical Perception
The ability to quickly and accurately see differences in detail in printed material. The material may be text or numbers on a page, in lists, or in tables. It involves noticing if there are mistakes in the text and numbers, or if there are careless errors in working math problems. This ability measures "speed of perception," which is required in many industrial jobs, even when these jobs do not have verbal or numerical content. This ability is important in such fields as administration, claims processing, library services,

office machine operation, packaging, and word processing. Measured by the Name Comparison exercise.

**MC - Motor Coordination**
The ability to quickly and accurately coordinate eyes with hands or fingers when making precise hand movements. This ability is important in such fields as appliance repair, beauty services, office machine operations, packaging, and typing. Measured by the Mark Making exercise.

**MD - Manual Dexterity**
The ability to quickly and accurately move hands easily and skillfully. Ability to work with hands in placing and turning motions. This ability is important in such fields as painting, auto body repair, equipment operations, production work, vehicle operations, and woodworking. Measured by the Place and Turn exercises.

**FD - Finger Dexterity**
The ability to move your fingers skillfully and easily. It involves using your fingers to handle small objects quickly and accurately. This ability is important in such fields as assembly work, barbering, bindery work, dentistry, and watch making and repair. Measured by the Assemble and Disassemble exercises.

## ADMINISTRATOR TRAINING REQUIREMENTS

The **O\*NET Ability Profiler** can be administered in any setting that meets the physical requirements for examinees. The essential element is a trained administrator. The *O\*NET Ability Profiler Administrator Training Manual* (National Center for O\*NET Development, 2002b) is available to train administrators. All AP administrators should complete this one-day training either by attending a training session or by reading and studying the *O\*NET Ability Profiler Administration Training Manual* and *O\*NET Ability Profiler Administration Manual*. The administrator may be a member of any of the various counseling and work-force development professions. This includes employment service staff members, career counselors, guidance counselors, etc. If you need help in identifying **O\*NET Ability Profiler** administrator training sessions or possible locations for your clients to take the AP assessment, contact the National Center for O\*NET Development at:

Internet:      http://www.onetcenter.org

e-mail:      onet@ncmail.net

regular mail:  Customer Service
National Center for O\*NET Development
Post Office Box 27625
Raleigh, NC 27611
FAX: (919) 715-0778

**O\*NET Ability Profiler Training Packet** includes materials for providing training in how to administer the O\*NET Ability Profiler.  The Training Packet consists of the following items:

- *O\*NET Ability Profiler Administrator Training Manual*

- *O\*NET Ability Profiler Administrator Training Overhead Masters*

- *O\*NET Ability Profiler Administrator Training Participant's Guide*

## FLEXIBLE ADMINISTRATION

The **O\*NET Ability Profiler** has three options that allow for flexible administration. These options are:

Option 1: **Administer the 11 separately timed exercises (approximately 2½ hours and may require some additional apparatus set-up time)**. This option provides the most information to the examinee about his or her abilities and how they relate to all occupations. This option should be selected if information is needed about all occupations, including those that require psychomotor abilities.

Option 2: **Administer the 6 paper-and-pencil exercises plus Mark Making (Parts 1 through 7; approximately 1½ - 2 hours).** With this option, information about some occupations that require certain psychomotor abilities may not be available to the examinee. This option should be selected if information is NOT needed about occupations that require manual dexterity or finger dexterity.

Option 3: **Administer the 6 paper-and-pencil exercises (Parts 1 through 6; approximately 1½ - 2 hours).** With many occupations, scores on the psychomotor exercises are not needed. This option should be selected if information is NOT needed about occupations that require motor coordination, manual dexterity, or finger dexterity.

While all the options have good validity, for the many occupations that do not require manual dexterity, there is sufficient validity with either Option 2 or Option 3. When clients are interested in occupations that require manual dexterity, all of the psychomotor exercises should be included (Option 1).

## ADMINISTRATOR-EXAMINEE RATIO

The **O\*NET Ability Profiler** should be administered to groups of two or more examinees. The group should never be so large that the assessment administrator cannot give adequate attention to all examinees.

For Parts 1 through 6, one administrator can assess a maximum of 10 people *(i.e., 1:10 administrator/examinee ratio for these paper-and-pencil exercises)*. With larger groups, one assistant is needed for every 10 additional people. For example, an administrator and one assistant are needed for a group of 11 to 20 people, while an administrator and two assistants are needed to assess a group of 21 to 30 people.

For Parts 7 through 11, one administrator can assess a maximum of 5 people *(i.e., 1:5 administrator/examinee ratio for the apparatus exercises).* With larger groups, one assistant is needed for every 5 additional people. For example, an administrator and one assistant are needed for a group of 6 to 10 people, while an administrator and two assistants are needed to assess a group of 11 to 15 people.

A smaller administrator-examinee ratio is recommended when assessing individuals requiring additional assistance (e.g., physically disabled, low reading skills, or not familiar with following assessment directions).

## BASICS OF ADMINISTRATION

The **O\*NET Ability Profiler** is an **O\*NET Career Exploration Tool** that must be administered under standardized conditions. You will need to prepare in advance for this administration by making sure you have the necessary materials and facilities to conduct a standardized administration session. The benefit of taking this assessment under standard conditions is confidence that your client's results are truly representative of his or her potential, knowledge, skills, and abilities. If you have any indication from your client or from information on the score report that there were poor assessment conditions, you should exercise caution in using the results. You also may want to encourage the client to retake the AP. There should be a six-month wait before administering the assessment again, unless there was some irregularity in the administration conditions. In this case, the client should be allowed to take the AP again as soon as possible. The basics of administration are described below. For complete administration instructions, see the *O\*NET Ability Profiler Administration Manual* (National Center for O\*NET Development, 2002a).

Examinees must be at least 16 years old, must be able to read English at the sixth grade level or higher, and should not have taken the **O\*NET Ability Profiler** (National Center for O\*NET Development, 2002c & 2002d) within six months of the assessment date. Examinees should consider the assessment worthwhile and be willing to do their best. During the assessment, examinees should not be stressed by physical discomfort, such as illness or fatigue.

All assessment materials, answer sheets, and supplies should be prepared before the session begins. The physical setting for the **O\*NET Ability Profiler** should be free from distracting influences, such as noise, poor lighting, or extreme temperatures. Each examinee must have a flat, smooth surface on which to work, and it should be large enough to hold all the materials easily and allow for adequate working space.

The exercises in the **O\*NET Ability Profiler** are administered from standardized scripts found in the *O\*NET Ability Profiler Administration Manual*. These scripts provide for consistency across different administrators. The **O\*NET Ability Profiler** also has a standard order of administration. The six paper-and-pencil exercises should be given first and in order starting with Part 1. Again, the psychomotor portions of the AP are optional. See the *O\*NET Ability Profiler Administration Manual* (National Center for O\*NET Development, 2002a) for more details on the different administration options.

## MAKING REASONABLE ACCOMMODATIONS

Reasonable accommodations can be made for examinees with special needs to enable them to take the **O\*NET Ability Profiler**. Interpretive materials developed for the instrument, however, were developed with a set of standardized materials following standardized procedures. Validity evidence associated with the instrument is based on these materials and procedures. Thus, modifications to materials or procedures can affect the accuracy and relevance of information provided to individuals who take the **O\*NET Ability Profiler**.

Examples of accommodations to the **O\*NET Ability Profiler** are presented below. These examples are not meant to be exhaustive and are provided to give examples of the reasoning that goes into determining whether accommodations are reasonable. Following these examples, contact information is listed for several organizations that may be able to provide assistance in determining reasonable accommodations.

Time Limits. Reasonable accommodation to the **O\*NET Ability Profiler** may include increasing time limits for Parts 1, 2, and 3, since these are considered power tests, and time limits were developed so examinees would have ample time to complete all questions. Thus, you may consider increasing time limits for these parts if the examinee has a learning disability such as dyslexia. It would not be appropriate to increase time limits for Parts 4, 5, or 6 because these are *speeded* tests, where a person's ability to work quickly contributes significantly to his or her results.

Print Size. Another reasonable accommodation may be to increase the print size of the **O\*NET Ability Profiler** questions in Parts 1, 2, 3, and 5 for an examinee with visual impairments. However, it would not be reasonable to increase the print size for Parts 4 and 6, since a person's ability to detect differences in shapes and shading may be affected by their vision.

Directions. The **O\*NET Ability Profiler** is not intended to measure an examinee's ability to understand directions and follow instructions. Thus, your client is provided with practice exercises as part of the assessment. A reasonable accommodation would be to encourage clients who may have difficulty understanding directions to ask questions or ask for further explanation.

The following organizations may be able to provide assistance in determining whether or not the **O\*NET Ability Profiler** is appropriate for your clients, what reasonable accommodations you can make to the instrument, and/or what are some alternative assessments that may be more appropriate to your clients' particular needs:

The Job Accommodation Network:  (800) 526 -7234
National Business and Disability Council:  (516) 465-1516
The American Foundation for the Blind: (800) 232-5463
Office of Disability Employment Policy:  (866) 633-7365
Disability and Business Technical Assistance Centers: (800) 949-4232

## RETEST

If your client needs to schedule a retest of the AP, consider how long it has been since the previous assessment. A six-month wait before administering the assessment again is advisable. This period of time lessens any possible practice effect and helps your client obtain the most useful and valid results.

## The O*NET Ability Profiler
## Commonly Asked Questions

Below are some commonly asked questions that users have regarding this tool. The answers provided will enable you to ensure that clients enjoy their experience and receive accurate, meaningful results.

### What reading level is the O*NET Ability Profiler designed for?

The AP was designed for use with a wide variety of populations, including workers in transition, unemployed workers, college students, and junior high and high school students. It is suggested that clients have a minimum of a sixth grade reading level to take the AP. Clients below this level may not be able to adequately understand the information in the AP.

### What age levels was the O*NET Ability Profiler designed for?

The AP was designed for clients who are 16 years of age and older.

### How long will it take clients to complete the O*NET Ability Profiler?

The complete AP takes approximately 2½ hours to complete. Taking all 11 parts provides the most information to the examinee about his or her abilities and how they relate to all occupations. The 6 non-psychomotor, paper-and-pencil exercises plus Mark Making, parts 1 through 7, take approximately 2 hours to complete. This option is appropriate when information is not needed about occupations that require manual dexterity or finger dexterity. The 6 non-psychomotor, paper-and-pencil exercises, parts 1 through 6, also take about 2 hours to complete. This option is appropriate if information is not needed about occupations that require motor coordination, manual dexterity, or finger dexterity.

### Can clients complete the O*NET Ability Profiler on their own?

No. The instrument was designed to be completed under standardized administration conditions with one or more assessment administrators. This provides for the most useful and reliable information, which will help clients better understand their abilities and their relationship to occupations. The score report provided to clients, however, was designed to be self-interpretable.

# 3. SCORING OF THE O*NET ABILITY PROFILER

**O*NET Ability Profiler Scoring Packet** consists of materials necessary for scoring completed answer sheets for the **O*NET Ability Profiler**. The Scoring Packet consists of the following items:

- *O*NET Ability Profiler Scoring Program User's Guide (pdf on CD-Rom)*

- *O*NET Ability Profiler Scoring Program (APSP)*

- *O*NET Ability Profiler Pre-marked Response Sheets for Scoring Calibration*

Examinees record their answers for the first six exercises of the **O*NET Ability Profiler** on a scannable answer sheet. These responses must be scanned or hand-entered into a computer file for scoring. Mechanically scan the sheets. If machine scoring is not available, an examinee information file can also be created by entering data from the examinee response sheets into a file with the same examinee information file layout that is used when examinee response sheets are scanned. Then, the scoring is completed with the computerized scoring program; a description of this procedure is presented below. Scoring for the psychomotor exercises (Parts 7-11) of the AP is completed during the administration of the assessment.

## SCORING PSYCHOMOTOR EXERCISES

During the administration of the AP, at the beginning of Part 7, Mark Making, each examinee receives a score sheet. At the end of that exercise, the administrator and examinee count and record the number of marks. This same sheet has places for recording the results of Parts 8 through 11, also, or the administrator can use a separate form, the *O*NET Ability Profiler Record of Apparatus Scores.* The types of "apparatus" include a manual dexterity pegboard for Exercises 8 and 9 and a finger dexterity board for Exercises 10 and 11.

The *O*NET Ability Profiler Administration Manual* (National Center for O*NET Development, 2002a) covers all the details of administering and recording the scores for these psychomotor exercises. Each of Exercises 8 and 9, Place and Turn, involves three timed trials that are recorded and summed for a total raw score. Each of the raw scores for Exercises 10 and 11, Assemble and Disassemble, equals one timed trial.

For examinees who complete one or more of the psychomotor exercises, 7 through 11, the raw scores are copied onto the same scannable answer sheet used for the first six exercises. The total raw scores must be hand-entered onto the answer sheet in order to create a file with all of the examinee's information needed for the computerized scoring program.

To ensure that the psychomotor scores (raw scores – Parts 7-11) are hand-entered properly on the scannable answer sheets, the administrator should enter leading zeros if the score for any one part is not large enough to use all the available columns. The applicable oval in that column under the zero should be filled in. For example, if an examinee's raw score for Part 7 were 54, the numbers 054 should be entered into the spaces for the Part 7 raw score on the scannable answer sheet, and the applicable ovals in the columns below those numbers should be filled in.

**Note:** To help prevent invalid scores from being recorded on the answer sheet, the highest possible scores for the psychomotor tests are listed below. Any score beyond these is in error:

| | | |
|---|---|---|
| Part 7 ≤ 130 | Part 9 ≤ 144 | Part 11 ≤ 50 |
| Part 8 ≤ 144 | Part 10 ≤ 50 | |

## COMPUTERIZED SCORING PROGRAM FOR PAPER-AND-PENCIL EXERCISES

The *O\*NET Ability Profiler Scoring Program User's Guide* (Silva, Lewis, Rivkin, & Koritko, 2009) presents hardware requirements and details for installing and using the computerized scoring software. The O\*NET Ability Profiler Scoring Program (APSP) is an automated tool that scores the AP, produces AP Score Reports, and allows the user to view, print, and save reports for examinees.

The APSP expects to find examinee information in a computer file in a specific layout. This information will come from mechanical scanning of examinees' answer sheets.

> **Note:** If an examinee did not take the psychomotor exercises and zeros are entered onto the answer sheet, it will appear on the *O\*NET Ability Profiler Score Report* (National Center for O\*NET Development, 2009a) as if the client *scored* a zero, e.g., in manual dexterity and finger dexterity. Always check with the client to determine if the psychomotor exercises were completed before using results that appear on the report. (The administrator should leave the pertinent spaces on the answer sheet blank if the examinee did not take the psychomotor exercises, resulting in dashes [—] on the score report for those exercises.)

Once the APSP has been successfully installed, there are six steps in using the program:
1. Open ScanTool and scan examinee's answer sheets.
2. Start the APSP application.
3. Select the examinee information file to use.
4. Select examinees for whom to generate score reports—individual or group.
5. Select an option for the score reports: View, Print, Save, or Print & Save.
6. Exit APSP.

The *O\*NET Ability Profiler Scoring Program Technical Manual* (Silva, 2002) presents details of the layout for the raw data file, the scoring algorithm, the O\*NET occupation unit identification, the report template, and the code modules for the APSP.

# 4. SCORE REPORT FOR THE O*NET ABILITY PROFILER

This chapter presents the score report for the **O*NET Ability Profiler** (AP). Refer to the sample score reports in the AP Scoring Program Users' Guide. Following completion and scoring of the AP—whether the complete assessment or just the paper-and-pencil exercises were taken—clients receive an O*NET Ability Profiler Score Report (National Center for O*NET Development, 2009a) that is customized to their results. The score report was designed to be self-interpretable by clients.  However, as always, you may be able to assist your clients in understanding their results and using them to explore the world of work. The score report:

1. reviews the purpose of the AP and the information it provides,
2. explains the percentile scores shown on each client's ability profile,
3. describes the link between the profile and Job Zones,
4. suggests ways to explore careers using the information, and
5. presents lists of occupations, by each Job Zone, that fit the client's profile.

The following section walks you through these different parts of the score report. Part of a sample cover page is shown below.

---

O*NET Ability Profiler ™ Score Report

## O*NET Ability Profiler™ Score Report

Name _____     Test Date _____

### How can the Ability Profiler help you?

Recently, you took the Ability Profiler to learn more about your job-related abilities. This information can help you explore the world of work. With this knowledge you can identify and learn more about occupations that would give you the highest chances to use your abilities. You are much more likely to be satisfied with work that best uses your abilities.

Your Ability Profiler results will help you learn more about your strengths and areas where you might want to seek more education or training. You **should use** your results to explore the world of work by comparing your abilities to the abilities necessary for performing certain occupations. Your results **must not be used** for employment or hiring decisions. Employers, education programs, or other job-related programs should not use your results as part of a screening process.

This score report will help you better understand your Ability Profiler results and show you how to use them for career exploration and career development.

### What information does the Ability Profiler provide?

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The first two pages of the AP Score Report are the same for all clients—other than their names, identification numbers, and test dates. Information is presented under the subheadings, "How can the Ability Profiler help you?" and "What information does the Ability Profiler provide?" These pages review the nine abilities that make up the **O*NET Ability Profiler**. They also describe the percentiles that are reported in the profile and ways of viewing an individual profile and thinking about the strength of each ability that is shown.

## ABILITY PROFILE

Under the subheading, "What is your Ability Profile?," the next pages present the individual's summary of scores and percentiles for each exercise completed on the AP. The height of each bar column on the graphic profile provides a quick view of the client's strength on a particular ability as compared with that ability as it occurs in the general public. Each bar is a graphic representation of the percentile score for that ability. Viewing all the bar columns together provides a good picture of the client's overall ability profile; the relative strengths of the various abilities are made evident.



**Your Ability Profile – Percentile Scores**

VA   AR   CM   SA   FP   CP   MC   FD   MD
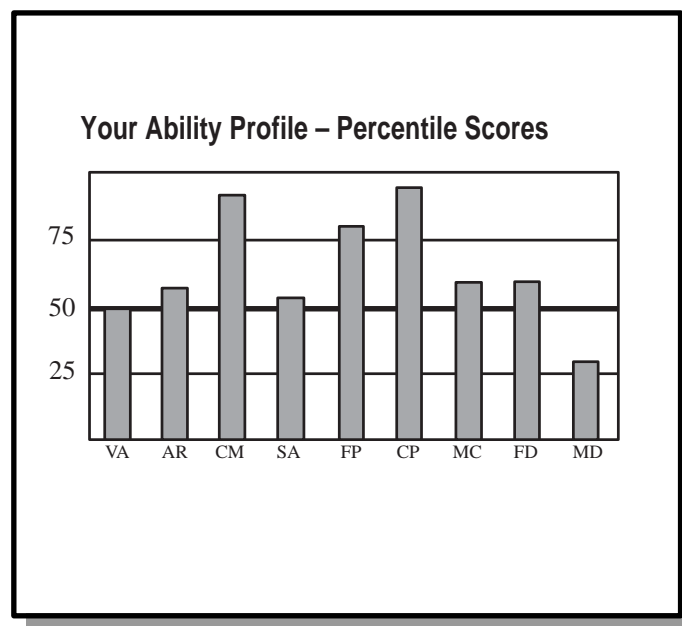
The "Your No. Correct/Total No. Questions" score, as shown on the next page, is simply a tally of the number of items the client answered correctly out of the total number of items on the exercise (for Computation, Form Perception, and Clerical Perception subtests, a deduction for wrong answers is subtracted from the number of right answers as a correction for guessing). The percentile score indicates the percentage of the norming group (a large sample exhibiting the characteristics of the general population) that scored at or below the level of the client. For example, a percentile score of 60 indicates that 60 percent of the norming group received a total-correct exercise score that was less than or

equal to the client's score. The average percentile score is 50, meaning that the average client would score at the 50$^{th}$ percentile for each ability. Percentile scores are provided for each AP exercise.

## USING THE SCORE REPORT INFORMATION

| Your Ability Percentile Scores | | Your No. Correct / Total No. Questions |
|---|---|---|
| Verbal Ability | [ 50 ] | [ 13 / 19 ] |
| Arithmetic Reasoning | [ 57 ] | [ 14 / 18 ] |
| Computation* | [ 92 ] | [ 32 / 40 ] |
| Spatial Ability | [ 53 ] | [ 15 / 20 ] |
| Form Perception* | [ 80 ] | [ 29 / 42 ] |
| Clerical Perception* | [ 95 ] | [ 76 / 90 ] |
| Motor Coordination | [ 59 ] | [ 72 / 130 ] |
| Finger Dexterity | [ 59 ] | — |
| Manual Dexterity | [ 29 ] | — |

*The percentile scores for these abilities include a deduction for wrong answers.

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### Possible Client Challenges—AP Profile

- **Clients may have trouble understanding the abilities that make up the AP.**
  - ☞ With the client, look at the descriptions of the nine abilities, which are presented on the first two pages of the score report. Mention the exercise that measured each ability and a basic description. For example: "The Vocabulary exercise you completed measures your Verbal Ability—that's how well you understand what words mean and how good you are at using words when you listen, speak, and write."
- **Clients may have a difficult time understanding Percentile Scores and the AP.**
  - ☞ Explain that percentile scores are a good way to compare the client's abilities with those of the general public. Each percentile on the score report shows how strong that ability is for the client compared to the nationwide sample.

The profile is followed by an explanation for using the score report information to explore occupations under the subheading, *What occupations are linked with your Ability Profile?* Clients' scores are linked to occupations based on the *shape* of their ability profiles compared with the *shape* of the ability profiles of occupations. Thus, even if the level of

> **What occupations are linked with your Ability Profile?**
>
> Now that you have learned about your Ability Profile and have seen how your different abilities compare with one another, you are ready to find the occupations that are linked with your Ability Profile.
>
> To help you identify occupations that can use your pattern of abilities, your Ability Profile was compared to the ability profiles of occupations. Your Ability Profile is linked to a set of occupations that has been grouped into five Job Zones. Each Job Zone contains occupations that require the same amount of education, experience, and training. Knowing your Job Zone can help you focus your career exploration.
>
> This score report provides five occupational lists based on your Ability Profile. There is one list for each of the five Job Zones. Read below to find out about the Job Zones and how to pick your Job Zone. **To explore occupations on this score report, you will need to know your Job Zone as well as your Ability Profile.**
>
> (*If you have already picked a Job Zone, turn to pages 7 and 16 and write your Job Zone(s) in the spaces provided.*)

the clients' profiles differs somewhat from the perceived requirements for a particular occupation, clients may be directed to that occupation if their strongest abilities are also the strongest abilities required for the occupation.

Next in the score report is an explanation of each Job Zone under *What is a Job Zone?*

## JOB ZONES

Pages 4 through 7 of the score report present the definitions and complete descriptions for each of the five Job Zones. Pages 7 and 8 explain how to select a current and/or future Job Zone to use in exploring careers based on the individual's profile.

Occupations are assigned to Job Zones based on the amount of education, experience, and training they require. This information is important for clients to consider when exploring careers. It helps clients get a more accurate picture of the amount of preparation required for an occupation. The Job Zone information informs them that even if their profile shape fits the profile of a particular occupation, they still must consider the "amount of work" that will be needed to qualify for that occupation.

**Note**: Occupations were placed in Job Zones based on data collected during the O*NET data collection. For an explanation of the Job Zone assignment process for occupations, see *Procedures for O*NET Job Zone Assignment*, the National Center for O*NET Development (2008).

The five Job Zones are:

**Job Zone 1** - Occupations that need *Little* or *No* preparation

**Job Zone 2** - Occupations that need *Some* preparation

**Job Zone 3** - Occupations that need *Medium* preparation

**Job Zone 4** - Occupations that need *Considerable* preparation

**Job Zone 5** - Occupations that need *Extensive* preparation

To help you explore occupations, you can think about Job Zones in two ways:

Your *Current* Job Zone and your *Future* Job Zone.

**Current Job Zone:** If you want to explore occupations at your *current* "level of preparation," choose the Job Zone that best matches the amount of education, experience, and training you have now. This is your Current Job Zone with jobs that need the knowledge and skills you have right now.

**Future Job Zone:** If you want to explore occupations based on your *future* "level of preparation," — for example, after you finish high school — choose the Job Zone that best matches the education, experience, and training you expect to have in the future. This is your Future Job Zone with jobs that you will have the knowledge and skills to do in the future.

Each Job Zone description summarizes the overall education, experience, and training associated with that zone. Example occupations are also provided. For instance, for Job Zone 3 (Medium Preparation Needed), users are told that:

- Vocational school training, prior experience, and/or an associate's degree may be required.
- Previous experience is generally needed.
- One or more years of job training may be needed.
- Examples of jobs in this zone include food service managers, electricians, and insurance sales agents.

When selecting a Job Zone, clients can think in terms of either the present or the future. An explanation is given under the subheading, *Which Job Zone suits you best?*

- Clients' Current Job Zone is comparable to the amount of education, experience, and training they have now. They can consider this amount of preparation when exploring careers, or they can use their Future Job Zone.
- Future Job Zone—the amount of education, experience, and training they expect to have in the future, after they finish high school, college, or a vocational training program.

Clients with less work experience their Future Job Zone to be more appropriate for exploring careers. It will give them broader exploration opportunities and will more accurately reflect their career aspirations. However, the Score Report does *not* tell clients which Job Zone

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**Which Job Zone suits you best?**

To help you decide if a Job Zone fits you, you might ask yourself:

1. "Do I have the education, experience, and training to do the work for occupations in this Job Zone?" (*Current* Job Zone)

2. "Am I willing to get the education, experience, and training needed to do the work for occupations in this Job Zone?" (*Future* Job Zone)

3. "Would I like to work in at least some of the occupations in this Job Zone?"

If you answered "yes" to these questions, then you have found your Job Zone(s).

If you answered "no" to these questions, you may want to look at the other Job Zone definitions to find one better suited to your situation.

Write the Job Zone(s) you picked in the space(s) below and **in the box on page 16**.

Your *Current* Job Zone: _____(1, 2, 3, 4, or 5)

Your *Future* Job Zone; _____(1, 2, 3, 4, or 5)

Compare your picks with the Job Zone occupations based on your Ability Profiler results. Read the next section to find out how you can use the information you have.

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type they should use to explore careers. It leaves the choice up to them.

Clients should be encouraged to review the information in all five Job Zones before selecting occupations to explore further. This ensures that they get a good feel for the different levels of preparation.

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**Possible Client Challenges—Job Zones**

● **Clients may have trouble understanding the Job Zone concept.**

☞ Before scheduling clients to take the AP, you could explain the concept of Job Zones. Give them a copy of the Job Zone descriptions and walk them through the descriptions, pointing out how each of the Job Zones differ. Show them how the levels of preparation increase as you go from Job Zone 1 to Job Zone 5.

● **Clients might have a hard time deciding whether to use their Current or Future Job Zone to explore careers.**

☞ Suggest that clients with little work experience, who have not yet decided how much education to pursue, select a Future Job Zone. This will allow them to consider a wider range of occupational goals.

**(Continued on next page)**

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**Possible Client Challenges—Job Zones** (continued)

- **Clients may have a difficult time understanding the concept of Future Job Zone.**

  ☞ Encourage clients to think about themselves in the future. What do they want their "occupational lives" to be like? Stress to clients that indicators of their abilities must be combined with actual or future education, experience, and training before suitable occupations can be identified. Explain how Job Zones relate to education and training: the higher the Job Zone, the more education and training they will need. Encourage them to spend time with the lists of occupations. If they are having a hard time comprehending it, work through it with them.

- **Clients might have difficulty distinguishing between Job Zones that are next to each other (e.g., the difference between Job Zones 3 and 4).**

  ☞ Clients should pay particular attention to the "Related Experience" category within Job Zones. This section of each description can help clients figure out the differences among Job Zones.

- **Clients might need more "familiar" examples of occupations that fit into a particular Job Zone to really understand the Zone.**

  ☞ You may want to look at related occupations, which are included in **O*NET OnLine**, to find other examples of occupations within a Job Zone. Encourage your clients to pay close attention to the information provided for each of the Job Zones. This includes descriptions of the type of education and experience required, as well as occupations that might fit in each zone.

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The next section of the *O*NET Ability Profiler Score Report*, *Exploring Careers Using Your Abilities and Your Job Zone*, provides several steps for using the list of occupations that were selected for clients under each Job Zone. These steps are:

1. Look at the list of occupations for your Job Zone.

2. Find out more about the occupations.

3. Still want more?

4. Want to know about a particular occupation not on your list?

The lists of selected occupations for each of the Job Zones are presented on the five pages that follow the discussion of Job Zones (see examples below). Each list shows the O*NET-SOC occupation code number and title, which can be searched in O*NET OnLine (http://online.onetcenter.org). Occupations are selected based on the correlation between the occupational ability profiles in O*NET and the client's ability profile as indicated by the AP. Note that a "strong match" is indicated with an asterisk (*). These are the occupations that are the most highly correlated with the client's ability profile. For more information on matching procedures and a description of how the ability profiles were developed, see McCloy, Campbell, Oswald, Rivkin, & Lewis, (2002a).

**Selected Job Zone 1 Occupations**
(Little or No Preparation Needed)

| O*NET-SOC # | O*NET-SOC Title |
| --- | --- |
| 41-2011.00 | Cashiers* |
| 47-5041.00 | Continuous Mining Machine Operators* |
| 53-6021.00 | Parking Lot Attendants* |
| 45-4021.00 | Fallers* |
| 39-3031.00 | Ushers, Lobby Attendants, and Ticket Takers* |
| 47-5011.00 | Derrick Operators, Oil and Gas* |
| 51-9198.00 | Helpers—Production Workers* |
| 45-4022.00 | Logging Equipment Operators* |
| 45-2093.00 | Farmworkers, Farm and Ranch Animals* |
| 53-3041.00 | Taxi Drivers and Chauffeurs* |
| * Strong match | |

**Selected Job Zone 3 Occupatuions**
(Medium Preparation Needed)

| O*NET-SOC # | O*NET-SOC Title |
| --- | --- |
| 53-4012.00 | Locomotive Firers* |
| 51-8092.00 | Gas Plant Operators* |
| 19-4051.01 | Nuclear Equipment Operation Technicians* |
| 43-3031.00 | Bookkeeping, Accounting, and Auditing Clerks* |
| 11-9012.00 | Farmers and Ranchers* |
| 51-8031.00 | Water and Liquid Waste Treatment Plant and System Operators* |
| 51-8021.00 | Stationary Engineers and Boiler Operators* |
| 51-8011.00 | Nuclear Power Reactor Operators* |
| 51-4035.00 | Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic* |
| 17-3024.00 | Electro-Mechanical Technicians* |
| * Strong match | |

**Selected Job Zone 5 Occupations**
(Extensive Preparation Needed)

| O*NET-SOC # | O*NET-SOC Title |
| --- | --- |
| 29-1061.00 | Anesthesiologists* |
| 15-2041.00 | Statisticians* |
| 29-1051.00 | Pharmacists* |
| 11-3031.01 | Treasurers and Controllers* |
| 19-2011.00 | Astronomers* |
| 19-1041.00 | Epidemiologists* |
| 15-2011.00 | Actuaries* |
| 19-2043.00 | Hydrologists* |
| 29-1064.00 | Obstetricians and Gynecologists* |
| 11-9041.00 | Engineering Managers* |
| * Strong match | |

Encourage clients to look at occupations in their current and future Job Zones and identify ones that are of particular interest. They can explore these further using O*NET OnLine (http://online.onetcenter.org). Ask them to think about whether they can picture themselves working in the occupations listed in their report. They also should look at the occupations on the remaining lists. This will give them a feel of how the "level of preparation" affects occupational choices.

The final three pages are standard across individual AP score reports. One provides suggestions for clients who still do not have a clear picture of careers that fit with their abilities. Another has brief descriptions of the other **O*NET Career Exploration Tools** and explains how clients can use the tools separately or together to identify occupations to explore.

**What if you still don't have a clear picture of careers that fit with your abilities?**

The Ability Profiler is only one of the tools you can use to help in your career search. Other O*NET Career Exploration Tools are listed in the next section. If you feel you don't have a clear direction yet, you can try a different route.

Your Ability Profile tells just some of the important information about you that can be used to explore the world of work. Other information you can use includes your work values and your interests.

In addition, you may have special skills or talents that you might want to think about when exploring careers. For example, you might work really well with people or you might be very outgoing. You may want to find a career that takes advantage of these important skills.

Also, you might have special knowledge you learned from hobbies or other activities that is important for certain jobs. You may want to consider this when looking at different occupations.

Maybe you know someone who works in an occupation that seems interesting to you. You can talk with the person to find out what the job is really like.

**The O*NET Career Exploration Tools**

As you explore your career options. you should know that other tools are available to

Exploration Tools. The other tools are:

❖ The **Interest Profiler** — helps you find out what your work-related interests are. It can help you identify occupations that you may find interesting.

❖ The **Computerized Interest Profiler** — is similar to the paper-and-pencil Interest Profiler, except that you answer and score the questions on a computer.

❖ The **Work Importance Locator** — helps you decide what is important to you in a job. It can help you identify occupations that you may find satisfying.

❖ The **Work Importance Profiler** — is similar to the Work Importance Locator, except that you answer and score the questions on a computer.

when exploring careers:
1. what is important to you in your world of work,
2. what you can do well, and
3. what you like to do.

You may use the tools separately or together. You can use them to identify occupations in the world of work that you may want to explore.

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# O*NET Occupations Work Page

Use this page to list the occupations you have picked to explore.

If you haven't already done so, copy your Job Zone(s) from page 7 in the box below.

Your **Current Job Zone**: _____          Your **Future Job Zone**: _____

As you look at the lists of occupations that are linked with your Ability Profile — those occupations that could make the best use of your abilities — write the occupations you want to explore below. You can list occupations for both your Current Job Zone and your Future Job Zone. Be sure to add to the list below when you pick other occupations to explore.

**Write Below the O*NET Occupations You Have Picked to Explore:**

| O*NET-SOC# | O*NET-SOC Title |
|---|---|
| 1. _____ | _____ |

The last page is a worksheet on which clients can note their current and future Job Zones and list the O*NET occupations they have chosen to explore further.

The work page is a good way to emphasize that using the AP results can be very flexible —that clients can keep working with the AP information until they are satisfied. The AP Score Report even includes instructions for what to do when clients want to learn more about an occupation that *isn't* on their Job Zone lists (#4 under Exploring Careers Using Your Abilities and Your Job Zone). The AP is a tool that should be used to explore the multitude of options available to clients. If they feel comfortable with their results and the current and future Job Zones they have selected, they should feel comfortable moving on to explore with O*NET OnLine (http://online.onetcenter.org).

---

**Possible Client Challenges—The Score Report**

- **Clients may feel that their results don't reflect their true abilities or the occupations that they would like to pursue.**

  ☞ Remind clients that they can look across all the Job Zone lists, and they can even explore occupations of interest based on their special skills, talents, or knowledge that are not listed.

- **Clients may want to discuss their results with someone else.**

  ☞ Encourage clients to talk to someone who may help them better understand their results. Someone who knows them may be able to help explain their results. Of course, a teacher or counselor who has a background in career counseling also may provide help.

- **Clients may be unsure of their results.**

  ☞ Remind clients that there are other **O*NET Career Exploration Tools** that they can use. The results of other tools may guide them to jobs similar to the ones indicated by the **O*NET Ability Profiler**, or they may point to different directions for exploring the world of work.

- **Clients may feel that the results aren't useful to them.**

  ☞ Remind them that the AP is only a tool. Provide them with other avenues for career exploration, such as O*NET OnLine. If they have strong feelings about what it is they would like to do, they should explore those paths.

  ☞ Advise clients that after six months they might want to take the AP again, especially if they weren't focused or had trouble understanding the procedures for completing the instrument.

Encourage the clients to keep a printed copy of the score report for their future reference.

## ADDITIONAL RESOURCES: LINKING TO O*NET ONLINE

Once clients have selected occupations to explore, they are instructed to use O*NET OnLine (http:\\online.onetcenter.org) to find out information about these occupations. O*NET OnLine contains detailed information on over 800 occupations. Users can obtain descriptions of occupations on a variety of dimensions, including worker characteristics, experience requirements, and occupational employment outlook. O*NET OnLine provides information at general and specific levels to suit the needs of many users. For more information on O*NET OnLine, use the contact information below.

**Note**: Clients should be able to use O*NET OnLine on their own for career exploration. You may, however, wish to hold a training session to help them locate the most important information in O*NET OnLine for career exploration.

For more information about the **O*NET Ability Profiler** and its Score Report, you can contact the National Center for O*NET Development at:

Internet:      **http://www.onetcenter.org**

E-mail:      **onet@ncmail.net**

Regular mail:      National Center for O*NET Development
Attn: Customer Service
Post Office Box 27625
Raleigh, NC 27611
FAX: (919) 715-0778

# 5. DEVELOPMENT OF THE O*NET ABILITY PROFILER: AN OVERVIEW

This section of the User's Guide provides a brief description of:

1. the basis for developing the **O*NET Ability Profiler** (AP),

2. the major changes incorporated into the forms,

3. data collection activities in support of AP development, and

4. the equating study conducted to compare the new **O*NET Ability Profiler** forms to previous GATB forms.

For more information on the development of the new **O*NET Ability Profiler** (Forms 1 and 2), you can read "Development of the GATB Forms E and F" (Mellon et al., 1996).

The **O*NET Ability Profiler** was developed as one of the **O*NET Career Exploration Tools,** which help determine a client's standing on abilities, interests, and work values. The occupations that have been linked to the **O*NET Career Exploration Tools** are the 949 occupational titles, 812 of which represent O*NET data-level occupations identified by the National Center for O*NET Development (National Center for O*NET Development, 2009). A client's score profile(s) from the completed assessment tool(s) is compared to occupational-specific information contained in O*NET related to the particular tool used. The occupations with score profiles that most closely correspond to the client's score profile are suggested as promising options for career exploration (McCloy, Waugh, Medsker, Wall, Rivkin, & Lewis, 1999c).

The development information provided here is at a fairly basic level of technical detail to give the wide range of users of the AP an introduction to the technical underpinnings of the instrument. It is important to have a fundamental understanding of the AP technical characteristics in order to be comfortable with the psychometric qualities of the instrument and to use the AP in a manner that is most beneficial to your clients. To gain a more thorough understanding of the AP development, you can read *Generation and Use of Occupational Ability Profiles for Exploring O*NET Occupational Units* (McCloy, Campbell, Oswald, Rivkin, & Lewis, 1999a), *Linking Client Assessment Profiles to O*NET Occupational Profiles* (McCloy, Campbell, Oswald, Lewis, & Rivkin, 1999b), *Equating Forms E and F of the P&P-GATB* (Segall, & Monzon, 1995), and *Updating Occupational Ability Profiles with O*NET Content Model Descriptors* (Allen, Tsacoumis, & McCloy, 2009).

## FORMS DEVELOPMENT PROCESS: CHANGES AND IMPROVEMENTS

The **O*NET Ability Profiler** was developed as the result of a Department of Labor research project to improve the General Aptitude Test Battery (GATB). Technical improvements were made to the instrument (Forms 1 and 2). In addition, extensive changes were made to the instructions and to the way in which scores are reported to facilitate the **O*NET Ability Profiler's** intended use for career counseling, career

exploration, and career planning purposes. The changes to the Score Report and interpretation of results reflect a focus on comparing an individual's profile of abilities with the profiles of occupations, rather than using cut-off scores.

The technical improvements to the O*NET Ability Profiler instrument were undertaken to improve on the cognitive portions of the GATB (Parts 1 through 6) while maintaining high professional standards. As the project evolved, other specific objectives were incorporated, based on recommendations by the National Academy of Sciences. The primary improvements included:

- reducing test *speededness* and susceptibility to coaching,
- *revising* scoring procedures,
- developing items free from bias,
- assembling tests as parallel to each other as possible,
- improving the aesthetics of the tests, and
- revising the answer sheets and other materials.

In addition to those recommended changes, other changes included:

- deleting the Form Matching test (this reduced the overall testing time without reducing validity),
- renaming the Tool Matching test to "Object Matching" (the new name more accurately represented the exercise), and
- administering the power tests before the *speeded* tests (this reordering allowed users to employ similar test-taking strategies for a group of subtests).

The abilities measured by the AP are:

| Ability Name | AP Exercise |
|---|---|
| Verbal Ability | Vocabulary |
| Arithmetic Reasoning | Arithmetic Reasoning |
| Computation | Computation |
| Spatial Ability | Three-Dimensional Space |
| Form Perception | Object Matching |
| Clerical Perception | Name Comparison |
| Motor Coordination | Mark Making |
| Manual Dexterity | Place and Turn |
| Finger Dexterity | Assemble and Disassemble |

*Data Collection*. In developing the new forms, extensive data collection was conducted. Each revision to the forms was subjected to a tryout phase, after which any warranted modifications were made to test items, to the test, or to the answer sheet. Briefly, the data collection involved the following:

- A primary sample of employment service local office applicants, which was considered representative of offices serving the working population in terms of gender, ethnicity, age, and educational level.

- Secondary sources of participants were identified from employed workers, community groups or associations, high school seniors and junior college students, and vocational training centers.
- Sample members could not have taken the GATB within a 12-month period immediately prior to testing.
- Sixteen test booklets and four scannable answer sheet formats were required. Each subject completed 1 of the 16 item-tryout booklets, which included a systematic arrangement of the two forms (E and F), the three *speeded* tests, the four power tests, and an anchor test for the power test.

Data analyses, which conformed to the particular needs of the power or *speeded* test items, produced item calibration and test dimensionality and led to the selection of items for the final versions of the **O*NET Ability Profiler**. For the power tests, items were selected to produce tests fair for candidates of all backgrounds, as parallel as possible, that improve upon measurement properties of prior GATB Form A, and with measurement that is uniformly precise over a broad range of abilities. For the *speeded* tests, items generally were selected to maximize the ability of the tests to discriminate between those high and low on an attribute, while minimizing any negative impact on various subgroups. The final step in the forms development was to assess the equivalence of the forms on a total test-score basis to ensure that expected scores of equally able persons were essentially the same.

*Equating Study*. An equating study was conducted between the **O*NET Ability Profiler** forms and the old forms of the GATB (A and B) (Segall & Monzon, 1995). GATB Forms A through D each include 12 tests that constitute 9 aptitude scores. The aptitude scores are scaled to a mean of 100 and a standard deviation of 20 in the GATB norming population. Mean GATB aptitude scores for each of 545 *Dictionary of Occupational Titles* (USDOL, 1991A) occupations are contained in the GATB validity database. The equating study was conducted to investigate how similar the forms were and whether the improvements made for the **O*NET Ability Profiler** forms would affect the ability to use existing validity data to support the **O*NET Ability Profiler**.

Three primary samples were included in the equating study:

- The independent-groups sample was used to equate the **O*NET Ability Profiler** forms and the old GATB forms. The 5,892 examinees were assigned in approximately equal numbers to complete one of three forms.
- The repeated measures sample was used primarily for comparing the reliability and construct validity of the new and old forms. Part of the sample was used as supplemental data for the equating analysis. Each of the 2,611 examinees was administered two forms of the GATB in a design of eight conditions.
- The psychomotor sample was used to examine the need for composite ratings and to examine construct validity issues involving the psychomotor tests. The 538 examinees received five psychomotor tests along with the non-psychomotor portions of two forms, with half of the group receiving the tests in one order and the other half receiving the reversed order.

The results of the equating study indicate that there is sufficient similarity between the new and old forms. Average subgroup performance levels were similar across the new and old forms, and reliabilities for the new forms were generally higher than for the old forms. Construct validity analyses indicate that GATB validity data can continue to be used for the new forms. For more detailed information about the equating study, see the study report by Segall and Monzon (1995).

## PROCEDURES FOR GENERATING THE OCCUPATION-SPECIFIC ABILITY SCORE PROFILES

Occupation-specific ability score profiles (OAPs) were developed for each O*NET occupation. These profiles would allow AP users to link their AP results directly to O*NET occupations, thus enabling them to conduct a more focused career search. The OAPs were originally developed using a combination of information from the Dictionary of Occupational Titles (DOT; U.S. Department of Labor, 1991) and archival validity data for GATB (McCloy et al., 1999). New OAPs were recently computed because (a) many occupations have changed in nature over the past 10 or more years, and (b) the O*NET database now contains a number of New and Emerging occupations that do not have profile scores (National Center for O*NET Development, 2009). Updates were accomplished using occupational descriptor data collected as part of O*NET's content model to create new profile scores. An overview of the procedures used to generate the updated occupational ability profiles is presented in this section. For more detailed information, see *Updating Occupational Ability Profiles with O*NET Content Model Descriptors (Allen et al., 2009).* All updated OAPs were conducted on the 2008 release of 13.0 O*NET Database.

Procedures for generating the updated O*NET occupation-specific ability score profiles required two stages:

Stage 1: New OAPs were computed using the most current ratings of the Knowledge, Skills, Abilities, and Generalized Work Activities (GWAs) describing each occupation in the O*NET 13.0 database. Extensive analyses were conducted to determine the most accurate approach to computing the new OAPs.

Stage 2: Computing and validating the new OAPs using (a) information from the O*NET system and (b) the previously computed OAPs. An overview of each of these stages is presented below:

**Stage 1: Determining the Most Accurate Approach to Computing New OAPs**

The first step in updating the OAPs was to link O*NET Content Model constructs (i.e., Knowledges, Skills, Abilities, and Generalized Work Activities) to the nine Ability Profiler dimensions by five occupational expert raters.

Expert raters linked O*NET constructs to the nine Ability Profiler dimensions only if they determined the construct underlying the Knowledges, Skills, Abilities, and Generalized Work Activities was the same as the construct underlying the Ability Profiler dimension. No Generalized Work Activities were linked to any of the nine Ability Profiler dimensions. Overall agreement among the five raters was high (98.1%). A meeting was held to discuss contested linkages and decisions were made during the meeting to retain or remove the contested linkages (see table below).

*O\*NET Knowledge, Skills, Abilities, (KSAs) linked to Ability Profiler Dimensions*

| Ability Profiler Dimension | O*NET KSAs Linked | Contested O*NET KSAs |
|---|---|---|
| Arithmetic Reasoning (AR) | **Mathematics (Knowledge)** [a]<br>**Mathematics (Skill)** [a]<br>**Mathematical Reasoning (Ability)** | Deductive Reasoning (Ability) |
| Verbal Ability (VA) | **Writing (Skill)** [a]<br>**Oral Comprehension (Ability)**<br>**Oral Expression (Ability)**<br>**Written Expression (Ability)** | **English Language (Knowledge)** [a]<br>**Reading Comprehension (Skill)** [a]<br>**Speaking (Skill)** [a]<br>**Written Comprehension (Ability)**<br>Speech Recognition (Ability)<br>Speech Clarity (Ability) |
| Spatial Ability (SA) | **Visualization (Ability)** | Spatial Orientation (Ability) |
| Computation (CM) | **Number Facility (Ability)** | **Mathematics (Knowledge)** [a]<br>**Mathematics (Skill)** [a] |
| Clerical Perception (CP) | **Perceptual Speed (Ability)** | |
| Form Perception (FP) | **Perceptual Speed (Ability)** | |
| Motor Coordination (MC) | | Control Precision (Ability)<br>**Wrist-Finger Speed (Ability)** |
| Manual Dexterity (MD) | **Manual Dexterity (Ability)** | **Control Precision (Ability)** [b]<br>**Wrist-Finger Speed (Ability)** |
| Finger Dexterity (FD) | **Finger Dexterity (Ability)** | **Control Precision (Ability)** [b]<br>**Wrist-Finger Speed (Ability)** |

*Note.* O*NET content model domain scales in bold were retained after the linkage meeting.

[a] Further analyses were performed, the construct was eventually retained in the OAP computations

[b] Further analyses were performed, the construct was eventually dropped from the OAP computations


Subsequent to the linkage process, extensive analyses were conducted to determine the most accurate approach to computing the OAPs. Results of these analyses suggested

the OAPs should be computed: 1) using a unit-weighted combination of the Importance and Level scales, 2) using all 3 scales measuring Knowledge, Skills, and Abilities, where appropriate, and 3) with the "Control Precision" descriptor from the Manual Dexterity and Finger Dexterity dimensions excluded (i.e., after extensive analyses, it was found "Control Precision" did not add any explanatory power to these scales).

**Stage 2: Computing and Validating the New OAPs**

Preliminary validation analyses were computed using data from the O*NET system and the previously computed OAPs (McCloy et al., 1999). Validation was gathered from 1) Job Zone evidence, 2) face validity evidence, and 3) comparison of the newly computed OAPs to previously computed OAPs.

Job Zone validity analyses found that occupations in higher Job Zones (e.g., 4, 5) tended to score higher on cognitively loaded Ability Profiler dimensions, such as Arithmetic Reasoning. In contrast, occupations in lower Job Zones (e.g., 1, 2) tended to score higher on physical Ability Profiler dimensions, such as Motor Coordination. Considering Job Zone classifications are determined mainly from an educational requirement basis, this pattern of findings was consistent with expectations, providing Job Zone validation evidence for the newly computed OAPs.

Face validity evidence was obtained through results suggesting the newly computed OAPs were yielding logically consistent occupations from individual score profiles. For example, a sample profile that has high Arithmetic Reasoning and Computation scores on the Ability Profiler yielded the suggested occupations of Mathematicians, Actuaries, and Mathematical Technicians.

Lastly, the newly computed and previously computed OAPs overlapped to an extent, but were clearly distinct. Correlations between the two versions of the corresponding scales ranged from -.59 to .87 (Mean $r$ = .14). When the sample was limited to 50 occupations that have changed little over the last 10-15 years, the correlations ranged from -.43 to .84 (Mean $r$ = .29). This conclusion was further supported with pattern similarity analyses using a combination of cluster and discriminant function analysis.

From a qualitative perspective, these results suggest the newly computed OAPs are valid for matching individual scores on Ability Profiler dimensions to occupations. Overall, validation results suggest the newly computed OAPs will serve the intended purpose of matching job seekers to potential careers for which they are best suited.

## Linking Individual O*NET Ability Profiler Scores to O*NET Occupations

Since the **O*NET Ability Profiler** was developed from GATB forms, in order to permit proper interpretation, client scores must be compared to an appropriate norming group. GATB Forms A through D are linked to appropriate norming samples through score calibration procedures. This section describes the calibration procedures that link the **O*NET Ability Profiler** to the GATB norm group and thus allow for proper interpretation of **O*NET Ability Profiler** scores. All of these procedures are performed by the Ability Profiler Scoring Program (National Center for O*NET Development, 2009b). The information presented below provides an overview of the steps the software completes to provide meaningful **O*NET Ability Profiler** scores. The overview includes a description of the generation of a person's scores using equating information, the matching algorithm developed to link client scores to occupations, and the process of selecting occupations for display on the client's personalized score report, including the use of Job Zones.

Assume that a client has completed the **O*NET Ability Profiler**, Form 1. The client then has *raw scores* on 11 **O*NET Ability Profiler** exercises (if the psychomotor tests were completed). These 11 scores are first calibrated to the corresponding *converted scores* for GATB Form A. An equating study directed by Dr. Dan Segall (now at the Defense Manpower Data Center in Monterey, CA) provides the requisite information for beginning the calibration (Segall & Monzon, 1995). Specifically, the report for the equating study contains equating tables that translate **O*NET Ability Profiler** Forms 1 and 2 raw test scores to GATB Form A converted scores. Converted scores show the contribution of a given test to each composite of which it is a component. Equating tables are provided for the following tests: Arithmetic Reasoning, Vocabulary, Three-Dimensional Space, Computation, Name Comparison, and Object Matching. Several tests are missing from this list. First, Form Matching was excluded. Second, there are no versions of the psychomotor tests, so the related abilities require no equating-tables—rather a percentile score is obtained. (See McCloy et al., 1999a, for the detailed procedures for obtaining percentiles scores for these exercises.)

### Matching Algorithm

The purpose of the **O*NET Career Exploration Tools** is to identify the set of O*NET occupations that most closely correspond to a client's abilities, interests, and/or work values. The key consideration in choosing a matching algorithm was to maximize the potential career exploration opportunities for the client. The algorithm should not unduly restrict clients from exploring occupations that they might not currently have the ability or education to perform. The algorithm is needed to identify occupations that the client could attain, given appropriate education, training, and or experience, as judged from observing a client's current array of abilities.

The matching algorithm for the **O*NET Ability Profiler** compares the client's scores on the nine abilities to the estimated O*NET occupation-specific ability score profile. O*NET occupations with score profiles that most closely correspond to the client's score profile qualify as suggested candidates for the client's career exploration. The correlation coefficient serves as the index of correspondence. The correlation provides a numerical

index of the similarity of the shapes (but not the levels) of the client and occupation profiles and is the approach most vocational counselors prefer for describing profile correspondence.

If a client's profile correlates equally with two or more O*NET occupations, the O*NET occupations are ordered from lowest to highest on an analytical value ($d$, the Euclidean distance). This value forms an index of the proximity of the person profile to the occupation profile. This distance measure introduces level into the matching process. The goal is to increase the face validity of the selected O*NET occupation by minimizing the likelihood of strongly recommending occupations for which the person is highly under- or over-qualified.

## Using O*NET Education and Training Data for Assigning Occupations to Job Zones

To help users successfully explore careers, the O*NET program includes information on the level of education, experience, and training needed for each O*NET occupation. O*NET occupations are sorted in to five categories, called Job Zones, originally devel-oped using the DOT's Specific Vocational Preparation (SVP) data (Oswald, Campbell, & McCloy, 1999). The five Job Zones are ordered from Job Zone 1, with occupations requir-ing the lowest levels of education, experience, and training, through Job Zone 5, con-taining occupations with the highest needed education, experience, and training. Job Zones are provided with AP score profiles so that users can consider the level of prepa-ration needed for success in a particular occupation. Job Zones help users further focus their career exploration on occupations that more closely match their current or potential education, experience, and training.

To ensure currency, assigned Job Zones are re-evaluated and reassigned, according to incoming O*NET occupation data on needed education, experience, and training.  The five Job Zones are categorized/defined by these data, and occupations are assigned to Job Zones based on this information. Job Zone updates occur on the same schedule as data for other O*NET Content Model domains, such as Skills and Knowledges.  Job Zones are updated for approximately 100 occupations annually.


Four trained analysts follow an eight-step procedure in assigning each O*NET occupa-tion to a Job Zone:

1.  independent review of the occupation's characteristics, particularly its description and tasks;

2.  review of needed education level, as reported by survey respondents, and assign-ment of an initial Job Zone;

3.  review of related work experience and on-the-job training needed, as reported by survey respondents, and adjustment of the step (2) initial assignment, as appro-priate.

Education, experience, and training questionnaire responses relate to the five Job Zones as follows:

| Education | Related Work Experience | On-the-Job Training | Job Zone |
|---|---|---|---|
| Less than High School | None | None, short demonstration, or training up to 6 months | 1 |
| High School Diploma | Up to 1 Month | More than 6 months, up to 1 year | 2 |
| High School Plus | More than 1 month, up to 2 years | More than 1 year, up to 2 years | 3 |
| Bachelor's Degree | More than 2 years, up to 6 years | More than 2 years | 4 |
| Bachelor's Degree Plus | More than 6 years | | 5 |

4. comparison of initial Job Zone assignment with the occupation's previous assignment and its BLS education and training classification;

5. review of initial Job Zone assignment from a career ladder perspective. Occupations lower in career progression should be assigned to lower Job Zones and occupations higher should be assigned to higher Job Zones, such as Physical Therapists, Physical Therapist Assistants, and Physical Therapist Aides.

6. review of the occupation's initial Job Zone from an occupation similarity perspective, such as an engineering occupation's initial Job Zone as compared to final Job Zone assignments of other Engineering occupations.

7. comparison of the two analysts' initial independent Job Zone assignments for each occupation. Non-matching assignments are identified for detailed review by two senior analyst/managers; and

8. independent review of analyst-assigned Job Zones by the senior analyst/managers and final Job Zone assignment for each occupation.

By combining information on needed education, experience, and training in a single rating, an occupation's Job Zone provides the client with a single, interpretable indicator of vocational preparation.   This enables the client to use both their ability profile and their current or planned level of education, experience, and training to identify occupations appropriate for career exploration.

**Occupations Listed**

Once the client/O*NET occupation match is completed, the Ability Profiler Scoring Program selects a list of O*NET occupations considered most promising for career exploration. The client score profile must contain the following six ability scores: Arithmetic Reasoning, Computation, Verbal Ability, Spatial Ability, Clerical Perception, and Form Perception. Scores on the three performance abilities (i.e., motor coordination, manual dexterity, and finger dexterity) are used if they are available. After calculating the correlation coefficient between the client score profile and each O*NET occupation score profile, the scoring program next applies a series of decision rules to the results. The O*NET occupations that satisfy the various decision rules appear on the Ability Profiler Score Report (National Center for O*NET Development, 2009a).

The scoring program lists a minimum of 10 O*NET occupations on the score report for each of the five Job Zones, regardless of the magnitude of the client/O*NET occupation profile correlation. O*NET occupations are presented in descending order based on the correlation. The O*NET occupations for which the client/O*NET occupation correlation is of sufficient magnitude are denoted by an asterisk as "strong matches." The degree of correlation that must be attained depends upon the number of scores in the client profile. Hence, there is a separate cutoff for profiles having six, seven, eight, and nine scores. The Ability Profiler Scoring Program uses double precision math to calculate the correlation between client and O*NET occupation profiles. At a minimum, correlations are truncated to 10 decimal places. A client's score report may contain as many as 25 O*NET occupations in each Job Zone, but O*NET occupations 11-25 appear only if they represent strong matches.

## SUMMARY

The **O*NET Ability Profiler**, as part of the **O*NET Career Exploration Tools**, provides clients with a highly flexible, informative vehicle for exploring the world of work. Using information about individual attributes from any or all of the three Profilers (Ability, Interest, and Work Importance), clients are presented with the occupations that most closely correspond to their array of abilities, interests, and valued work outcomes.

Determining the fit of a client's score profile to the score profiles of occupations assumes the presence of occupation-specific profiles. Expert raters linked O*NET constructs to the nine Ability Profiler dimensions only if the construct underlying the Knowledges, Skills, and Abilities domains was the same as the construct underlying the Ability Profiler dimension. Extensive analyses were conducted and results determined the new OAPs should be computed: 1) using a unit-weighted combination of the Importance and Level scales and 2) using all 3 scales measuring Knowledge, Skills, and Abilities, where appropriate. Subsequent validation analyses provided support that the newly computed OAPs will serve the intended purpose of matching job seekers to potential careers for which they are best suited.

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