O*NET®

PRODUCTS

AT

WORK

National Center for O*NET Development
Spring 2011
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INTRODUCTION

The U.S. Department of Labor, Employment and Training Administration introduced the Occupational Information Network (O*NET®) to the public in 1998. Since that time, its impact on workforce development, career counseling, educational programming and human resource activities has continued to grow, both in the U.S. and around the world.

Following are examples of the widespread use of O*NET products, including O*NET OnLine, the O*NET database, the Toolkit for Business and the O*NET Career Exploration Tools. Among the many users of O*NET products are:

- assessment and career information delivery systems
- educational and research institutions
- federal and state government agencies
- international users
- private companies and commercial products
- public workforce investment systems and workforce investment boards
- U.S. Armed Forces

The use of O*NET products and tools continues to grow. The O*NET program, through continuous improvement efforts based on user needs and advancing technology, makes every effort to efficiently develop products that meet customer demands in both the public and private sectors.
RECENT STORIES

**CareerScope**, developed by the non-profit Vocational Research Institute, enhances career and educational planning processes, including career development portfolios, transition plans, Individualized Educational Plans (IEP), and employee training and retention plans. Users include secondary schools, community and technical colleges, state and community vocational rehabilitation agencies, VA medical centers, and state adult and juvenile correctional facilities. Written at a 4th grade reading level, the valid and reliable interest and aptitude assessment is self-administered and easy to complete. Accommodation options include audio delivery, English with Spanish text, and untimed delivery. CareerScope’s comprehensive reports incorporate O*NET occupational data and provide career recommendations based on the evaluatee’s interest and aptitude results. ([http://www.vri.org/](http://www.vri.org/))

**My Next Move** is an easy to read web-based interactive tool for new job seekers, students, and other career explorers to learn more about their career options. Users can explore over 900 different O*NET occupations and see important information, presented in an easy to use format, including skills, tasks, salaries, and employment outlook. They can even look at related apprenticeships and training and search actual job openings. Users can find careers through a keyword search, by browsing industries, or through the shortened 60 item version of the O*NET Interest Profiler, a tool that offers customized career suggestions based on a person's interests and level of work experience. Career reports feature the most important knowledge, skills, and abilities needed to perform the work, explained in language that's easy to understand. My Next Move’s Job Outlook and Education sections let users find salary information, job postings, and training opportunities. The visual design enables users to identify a career's key points, or explore a career in depth.

A case manager for Michigan Works! has found My Next Move to be a very useful tool for her customers. She works with the 55+ Program -- a demonstration grant program which gives specialized assistance to individuals who are 55 or older, unemployed, and seeking employment. Her clients, the 55+ Program Navigators, are using the comprehensive, easy to use site as part of their career exploration and job search activities.

My Next Move was developed by the National Center for O*NET Development for the U.S. Department of Labor. ([http://www.mynextmove.org/](http://www.mynextmove.org/))
A team of researchers under the auspices of the **National Institute for Occupational Safety and Health** conducted a study to determine whether the O*NET database can be used to identify measures for psychosocial and environmental factors in the workplace which can be linked to national health surveys. Their goal was to examine associations between these workplace factors and health risk behaviors and outcomes. Their study concluded that psychosocial, work organization, and environmental job characteristics derived from the O*NET database can successfully be linked to large-scale health surveys to examine these associations through a data linkage method. The data linkage method used may provide other researchers with job descriptors for use in research, surveillance, and workplace redesign. Linkages between health data and occupational factors can provide surveillance data to monitor the changing associations between working conditions and specific disorders for workers in different occupations. If further research supports the methods and use of psychosocial factors derived from the O*NET database, occupational health and organizational specialists may be able to use these linkages to design and evaluate potential healthy workplace initiatives and interventions. ([http://www.ncbi.nlm.nih.gov/pubmed/19092496](http://www.ncbi.nlm.nih.gov/pubmed/19092496))

**Pathway Builder**, a division of Profiles International Educational Services Division, provides participants with an interactive, comprehensive, online experience to plan and monitor their progress from high school through postsecondary education and into the workforce. The Pathway Builder ePortal provides communication tools, educational modules, e-learning programs, site-approved Web site connections, comprehensive reporting, and career exploration tools. The assessments in the career-planning ePortal solution provide users with a link to their O*NET occupational matches. Additional features include job board technology and an email platform to assist with an education-training-workforce initiative to engage students and workers with career success. ([http://www.pathwaybuilder.com](http://www.pathwaybuilder.com/))

**Texas CARES** (Career Alternative Resource Evaluation System) is a Web site providing career exploration and occupational information. Created by the Texas Workforce Commission, the site offers versions of the O*NET Work Importance Locator and the O*NET Interest Profiler, as well as Best Match, a skills transferability program that matches users to O*NET occupations based on their current skill set. Occupational information for the many features available on the site is supported by the O*NET database. ([http://www.texascaresonline.com/index.asp](http://www.texascaresonline.com/index.asp))
The Texas Workforce Commission has also employed the O*NET-SOC Autocoder on one of its Web sites. This Web tool provides high-quality occupational classifications for job orders, unemployment insurance claims, and resume searches. The AutoCoder also interprets job titles written in Spanish and returns relevant O*NET-SOC codes. The O*NET-SOC AutoCoder performs by splitting the text of a job opening, resume, or UI claim into its individual words and phrases and makes matches to the words and phrases in the O*NET database. Analysts have weighted the words in the database so that the most important words for an occupation are given more importance in the match calculation. The O*NET-SOC AutoCoder provides the means to make consistent and high-quality occupational code assignments.
(http://autocoder.lmci.state.tx.us:8080/jc/onematch)
ASSESSMENT AND CAREER INFORMATION DELIVERY SYSTEMS

Organizations that want the most comprehensive, up-to-date occupational information for their assessment and career information delivery systems are relying on O*NET data for the power behind their products. From systems developed by non-profits to those designed for high-powered consulting firms, “O*NET-in-it” is everywhere. Community and faith-based organizations can easily provide career services to their clients with O*NET products, which are in the public domain. The online database of occupational information as well as free downloads of computerized career exploration tools are helping to broaden the career outlook for special populations.

Higher education institutions are some of the most prevalent users of O*NET products for assessment and career information systems. A Web search shows O*NET products at work in most state educational systems. A few examples include AlabamaMentor.org, CaliforniaColleges.edu, Cascadia Community College (Washington), University of Central Florida, CTMentor.org (Connecticut), IllinoisMentor, Middle Tennessee State University, MississippiMentor, Normandale Community College (Minnesota), PennsylvaniaMentor, TexasMentor, and Texas State University. Web links to these and other online sites offering career services based on O*NET products can be found in the O*NET Reference List (see Appendix A).

The American Foundation for the Blind (AFB) uses O*NET data to help the visually impaired expand their employment possibilities. CareerConnect™ is a free employment planning resource for persons who are blind or visually impaired. Sponsored by the AFB, the program helps these individuals learn about the range and diversity of occupations available in the labor market. It also provides mentors and information about assistive technology that can help them do the work. This practical, user-friendly resource incorporates O*NET data to supply essential information for career exploration and to expand the universe of jobs for persons with visual impairments.

AZCIS is a career information system offered by the Arizona Department of Education. The Web site provides education, career, and occupation information to middle school, high school, college, and adult students in both English and Spanish formats. The O*NET career tools and database are essential components of the career exploration process offered by AZCIS. Spanish translations of the O*NET Interest Profiler and the O*NET Work Importance Profiler will be available on this Web site in September 2010.
The Boys and Girls Clubs of America developed a career preparation program to help teens make sound educational decisions, explore a variety of careers, and develop skills for success in the workplace. A system, CareerLaunch™, supports this program. This expanded career preparation Web site incorporates O*NET data, enabling teens to find O*NET career profiles related to their interests. (http://careerlaunch.net/)

BrowseCareers.com is an informal career browsing engine dedicated to quick, early analysis of career options. BrowseCareers.com consolidates a variety of O*NET data tables to facilitate career searching based on the user’s personal characteristics. For example, interests can be used as a filtering criteria to show only those careers associated with the user’s interests. There are a number of criteria types to filter on, including personal style, knowledge, and skills, and more generally on salary, expected growth rate, and whether or not a career is considered 'green'. At any point, users can link to any of the O*NET published details for a given career.

BrowseCareers.com is intended for use by students and career changers as an initial step in their career search process. (http://browsecareers.com/)

California CareerZone was modeled after the popular New York CareerZone, a much-used career exploration and planning Web site designed for students. It guides students through self-assessments, including the O*NET Interest Profiler and the O*NET Work Importance Profiler. It also relies on the comprehensive occupational information in the O*NET database. (http://www.cacareerzone.org/flash/index.html)

Career Direct® Complete Guidance System from Crown Financial Ministries has been using O*NET data ever since it became available on CD-ROM. Its use of O*NET information has been integrated more directly with the guidance system since Career Direct went online a few years ago. Career Direct is a self-administered personality, skills, abilities, interests, and work/life values career guidance system. Because many of the system’s users have job titles with a religious element, Career Direct created a crosswalk, translating religious job titles to the closest O*NET occupations. This is similar to using the O*NET Code Connector between Military Occupational Codes and O*NET occupational codes. The system guides the user into exploring O*NET occupations that most closely align with their talents and personal goals. (http://www.onetknowledgesite.com/spotlight_on_bette_noble.cfm)

CareerDNA is an online career assessment with robust skills analysis and temperament assessments. It helps students and those in transition to assess their own strengths,
interests, and possible career paths based on the O*NET database. It provides users a comprehensive picture of personality, demonstrated skills, and career interests. (http://www.careerdna.net/static/home)

CareerJournal.com, the Wall Street Journal Executive Career Site, conducted a study designed to identify the “best careers,” those occupations for which workers report a high degree of satisfaction. CareerJournal contracted the polling firm Harris Interactive to survey workers about their jobs, whether they were satisfied, and what job qualities contributed to their satisfaction. Four factors emerged for jobs held by highly satisfied workers: intellectual stimulation, strong job security, high level of control and freedom of action, and extensive direct contact with customers or clients. After identifying the common factors reported by highly satisfied workers, CareerJournal used occupational data in the O*NET database, looking for O*NET occupations with high ratings related to three of the four contributing factors. (Job security was evaluated with BLS employment projections.) CareerJournal identified eight occupations providing the most satisfying work experience:

- curriculum and instructional coordinators,
- high school special education teachers,
- hospital and clinic managers,
- management consultants and analysts,
- medical researchers,
- physical therapists,
- sales, marketing, and advertising managers, and
- social workers, counselors, and related managers.

(“Best careers methodology—How we got our results,” 2006)

Catholic Community Services in Baton Rouge, Louisiana, offers a free Senior Employment Program for workers aged 55 years or older in the city and 17 other civil parishes, mostly rural. With more than 25 years of experience, the agency is now a mandated partner in Louisiana’s Workforce Investment Act initiatives. The program uses the O*NET Career Exploration Tools to help retirees and other older adults find jobs. The O*NET Interest Profiler is a key tool in the process that helps open clients’ minds to what the workplace offers them and what they can offer the workplace. (http://brgov.com/dept/planning/econdev/empservices.htm)
CDM Internet is an online tool for individual assessment and career exploration. Targeted at students ages 12 and above, the system may also be used by adults re-entering the world of work or transitioning between jobs. Backed by the O*NET database of occupational information, the tool allows users to explore their abilities, work values, and interests – leading to briefs on hundreds of related occupations, most with accompanying videos. (http://www.cdminternet.com/index.jsf)

Cengage Learning has developed a product called Career Transitions that uses the O*NET Interest Profiler and the O*NET database to help job seekers. Their Web site states that career research is the number one use of public libraries today, sometimes stretching staff to their limits. Career Transitions helps public libraries manage the number of people seeking job search help by providing a self-paced application that walks job seekers through the entire process from assessing strengths and interests, to exploring new job opportunities. (http://www.gale.cengage.com/careertransitions/)

Chattahoochee Valley Community College, in Phenix City, Alabama, used O*NET OnLine to help a non-traditional student qualify for financial aid. The student was ex-military and was required to document that completing Chattahoochee Valley’s program in Homeland Security would result in his being prepared to secure employment. Using the keywords, Homeland Security, resulted in a long list of related careers with common skills, tasks, and work context elements. The student was able to print out these elements of the database and show that the program at Chattahoochee Valley Community College addressed those requirements. (http://www.onetknowledgesite.com/spotlight_on_Janet_Ormond.cfm)

Colorado State University’s Department of Psychology has developed an interactive career assessment tool to be used by Colorado’s community college students. The Web site will help students find occupations that suit their personalities and choose courses to prepare them for careers in those fields. O*NET data, as well as O*NET Career Exploration Tools, are key components of the assessment tool. The program is called the Virtual Workforce Assessment Network (V-WAN) and is supported by an award from the U.S. Department of Education. The project is also creating a database of participant information which has potential for long-term research. As participants leave community colleges and find employment, they can opt to stay in the database, providing researchers with data for longitudinal studies. Researchers may investigate topics such as which human attributes (values, interests, abilities, etc.) are the strongest predictors of making satisfying career choices. (www.csuvwan.org)
At Edgewood Terrace in northeast Washington, DC, the **Community Preservation and Development Corporation** (CPDC) is helping unemployed and underemployed adults build career plans, develop job skills, and find employment. In one component of the CPDC career and skills enhancement program, staff use O*NET OnLine, among other resources, to help participants identify potential career goals. Participants leave the class with a long-term career plan fashioned as a résumé builder. Some go on to specialized training programs in information technology, others seek employment or further education in other fields, but all have an action plan, with next steps toward a better future. ([http://www.cpdc.org/CareerAssessment.php](http://www.cpdc.org/CareerAssessment.php))

**CRESMET is the Center for Research on Education in Science, Mathematics, Engineering and Technology at Arizona State University.** CRESMET developed the Automated Advisor, an online tool that connects students’ results from the O*NET Computerized Interest Profiler and Work Importance Profiler to related O*NET-SOC occupations. The Automated Advisor also directs students to related programs and schools. ([http://cresmet.asu.edu/autoadvisor/](http://cresmet.asu.edu/autoadvisor/))

**Elder Research, Inc.** is working on a project that assists people in finding the correct job by linking their queries to the occupational information in O*NET OnLine. Elder Research is a leader in the development of data mining software. ([http://www.datamininglab.com/HOME/tabid/119/Default.aspx](http://www.datamininglab.com/HOME/tabid/119/Default.aspx))

**Experience Works** is a national, charitable, community-based organization and the nation’s leading provider of training, employment, and community service for low-income older people. The primary program offered by Experience Works is the Senior Community Service Employment Program (SCSEP). This program, funded in part under Title V of the Older Americans Act, provides help to thousands of low-income individuals age 55 and older. Seniors benefit from training, counseling, and community service assignments at faith-based and community organizations prior to transitioning into the workforce. At Experience Works in Nebraska, O*NET information is used to create employment plans. Using O*NET OnLine, seniors can research job requirements, match requirements with their skills, define skill gaps, explore related occupations, and get help writing resumes. ([http://www.experienceworks.org/site/PageServer?pagename=State_Nebraska_Home](http://www.experienceworks.org/site/PageServer?pagename=State_Nebraska_Home))

**Goodwill Southern California** uses O*NET information within its placement services office. Their placement program assists clients with significant barriers to employment, such as:
• low income,
• history of incarceration or substance abuse,
• disabilities,
• lay-offs or terminated employment, and
• poor work history.

The Goodwill Southern California Web site provides clients with occupational skills information through a link to O*NET OnLine. (http://www.goodwillsocal.org/whatweoffer/jobseekers)

The staff of the Janice Capilouto Center for the Deaf-Easter Seals in Montgomery, Alabama rely on O*NET OnLine when counseling clients. When clients have trouble describing what they’ve done in their previous work experience, O*NET skills and tasks language is used to create comprehensive resumes that speak to prospective employers. O*NET information is also used in skills gap analyses to help clients understand the training or education they need to land a job in an area of special interest to them. (http://www.eastersealsca.org/programs.aspx?pid=54)

Keys2Work, a private, nonprofit organization, offers a community-based assessment and career development system that helps students, job seekers, employers, and providers of education and training. Using work-related skills assessments and online tools powered with O*NET data, the system demonstrates the relevance of school subjects to future careers and earnings, thereby contributing to talent development in schools. Using ACT’s WorkKeys®, students assess important work-related skills and match them to occupations. Keys2Work links these occupations to O*NET data, expanding students’ perspectives, allowing them to explore a wider range of occupations and obtain extensive information about them. Students can learn about common tasks and work activities; other knowledge, skill, and educational requirements; and interest profiles of workers. O*NET data provide the connection to related information on wages and employment outlook. Using O*NET data, Keys2Work shows students that what they earn in the future depends directly on the skills they acquire in school. (http://www.keys2work.org/)

Lehigh Carbon Community College in Pennsylvania has a federal demonstration grant to coordinate and develop curricula in three areas in nanotechnology at the postsecondary level and in two areas at the secondary level. Working primarily with Lehigh Career and Technical Institute, project staff find O*NET OnLine a handy, practical tool for faculty at both institutions. It offers an ideal starting point for occupational research essential to creating programs that respond to contemporary business and industry needs and that
contribute to talent development. O*NET OnLine provides detailed descriptions of occupations, including Semiconductor Processors, which is related to nanofabrication. Researchers used the tasks, activities, and other elements for this occupation as a basis for further research and discussions with industry experts and representatives. In addition, it was a good starting point for developing task statements that teachers could turn into performance objectives for courses. Moreover, project staff could identify and obtain detailed descriptions of other occupations related to those that they already target and that could become part of the new training. The use of O*NET OnLine is also recommended for reviewing existing secondary and postsecondary programs. (http://www.lcti.org/lcti/site/default.asp)

Minnesota’s public career information website, www.ISEEK.org, used O*NET skills data to create a free online skills assessment tool. The tool allows users to rate themselves on all 35 O*NET skills, then view occupations that are a good match for their skills profile. The tool also includes a “skills matchup” feature, which lets users see where their own skills differ from the average skills of those working in the occupation. The assessment works for novice career explorers and experienced workers alike. (www.iseek.org/careers/skillsAssessment)

The National External Diploma Program (NEDP) is a program of the Comprehensive Adult Student Assessment Systems (CASAS) which provides assessment and evaluation systems for adult education and workforce programs in the public and private sector. NEDP is a unique way for adult students to earn a high school diploma. Students who have acquired many of their high school level abilities through work, family, and community experiences can complete a high school diploma, opening the way to postsecondary education and improved employment options. In July 2010, the National External Diploma Program (NEDP) selected the O*NET Career Exploration Tools as the only official occupational tools for use by its students. Students using the career tools receive results correlated to the up-to-date, detailed, and comprehensive occupational information provided by the O*NET database. (https://www.casas.org/home/?fuseaction=nedp.welcome)

Health and medical science career exploration with LifeWorks™ is accomplished through an interactive career development Web site operated by the National Institutes of Health’s Office of Science Education. Driven by O*NET data, the LifeWorks search engine, or Career Finder, offers an array of information on more than 100 health and medical science careers. Staff designed the Web site for middle school and high school students, parents, mentors, teachers, and guidance counselors. As a first step, students
scan a list of O*NET Job Families and select the ones that most interest them. Second, they identify the kinds of jobs that suit their interests, using the O*NET interest categories. Third, they select skills they have or want to acquire. The Career Finder then generates a customized list of health-related careers, with brief descriptions, matching the students’ selections. By clicking on a title, students can view job-specific information on the summary page. If they like, they can access details about the occupation, including employment outlook, salary, suggested high school courses, related careers, and more. (http://science.education.nih.gov/Lifeworks)

Designed by the State Department of Labor, the New York CareerZone Web site is an O*NET delivery system that has revolutionized the way New Yorkers access career information. The NYCareerZone system is now a statewide resource for teachers, counselors, and career center staff. The system engages students and job seekers in career exploration and helps them develop their skills in career planning. Users build electronic portfolios linked to state learning objectives and O*NET-SOC occupational information. NYCareerZone developers incorporated the O*NET Interest Profiler and Skills Search capabilities into the portfolios to help students identify their interests and relate these interests to appropriate career possibilities. Using job profiles drawn from the O*NET database, students can explore specific occupations. The profiles include state-specific wage and outlook information related to the O*NET-SOC occupations and include a link to a state college database. (http://www.nycareerzone.org/)

The Ohio Career Information System (OCIS) provides accurate, comprehensive, current, and relevant occupational information to four target groups: middle-schoolers, high-schoolers, college students, and adult/agency users. Each version of the system is tailored to the needs of the specific group. This well-designed Web site includes special features, such as Spanish translations of the O*NET Interest Profile and Work Importance Locator. Highlights include information on O*NET New and Emerging occupations, such as Music Therapists and Nanotechnologists, and occupational interviews with interview questions on how the occupation is going “green.” (http://ocis.ode.state.oh.us/)

ORCA, the Occupational Researcher's Computer Assistant, is an easy to use computer application distributed by the State of Washington Employment Security Department to workforce development professionals. Occupational information featured in ORCA was extracted from O*NET. By combining an existing FoxPro software program with the O*NET database, the ORCA Team was able to deploy the new system at minimal cost, in record time. The program helps users to develop career options and
generates a complete career development plan.  
(http://www.doleta.gov/programs/ONET/washington.cfm)

**OSCAR** (Occupation and Skill Computer-Assisted Researcher) was developed by the Texas Workforce Commission/Career Development Resources (TWC/CDR) to help dislocated workers transition to new careers. As one of the first uses of the O*NET database, OSCAR includes Texas labor market information and integrates skills standards and job analyses to meet the needs of the business community.  
(http://www.ioscar.org/tx/)

**The Personal Success & Leadership Institute** has developed the Personal Success & Leadership Workshop. This free service was created primarily for high school students, but is also available online to any adult who wishes to chart a path to success. The career exploration portion of the workshop uses the O*NET Interest Profiler as well as other links to O*NET Web sites.  
(http://pslinstitute.com/workshop.html)

**Temple University’s Center for Professional Development in Career and Technical Education** in Pennsylvania supports professional growth and learning among all levels of educators who work with career-bound students. The center offers certification and degree programs for secondary career and technical education teachers, curriculum supervisors, cooperative education coordinators, and career and technical school directors in the 17 counties of eastern Pennsylvania. Center faculty and staff incorporate O*NET OnLine in their courses on program planning and evaluation, curriculum development, and cooperative education. They also use it as an aid in structuring occupational competency assessment committee reviews. With its wealth of data on occupations, O*NET OnLine provides a reliable and readily accessible resource for planning and evaluating programs and developing curricula in career and technical education.  
(http://www.temple.edu/cte/)

**The Traumatic Brain Injury Program at the Tennessee Rehabilitation Center** relies on O*NET OnLine to help clients identify jobs they want to do and can do well. Team members refer to detailed reports of the skills, knowledge, abilities, and other characteristics of occupations as they tailor their services to the individual’s interests and goals. Employers benefit from the program’s Job Placement Specialist’s assistance in finding competent workers, those workers well matched to the employers’ particular needs.  
(http://www.doleta.gov/programs/ONET/TNTBI.cfm)
The **Virginia Education Wizard**, a Web site launched in March 2009, was developed by Virginia’s community colleges to bring together information about careers, curriculum, and financial assistance. The site provides adaptations of the O*NET Interest Profiler and the O*NET Work Importance Locator to help students find suitable careers and educational programs that match their selections. The Web site also offers O*NET occupational descriptions to students exploring career options. The community college system hopes the site will encourage more adults to pursue higher education in high-growth career fields. ([https://www.vawizard.org/vccs/Main.action](https://www.vawizard.org/vccs/Main.action))

**Women Employed**, a national advocate for women’s economic advancement, developed **Career Coach**, a free online career development tool that helps adults explore career options, define career goals, identify education and training resources, and make step-by-step plans to reach their goals. The Web-based program provides users with occupational data available from the O*NET database. It also provides an online version of the O*NET Interest Profiler. ([http://www.womenemployed.org/index.php?id=38](http://www.womenemployed.org/index.php?id=38))
EDUCATIONAL AND RESEARCH INSTITUTIONS

The O*NET database of occupational information is contributing to research studies being conducted on a wide variety of topics by universities and other research institutions. Curriculum development, program evaluation, health studies, and other research projects use the comprehensive information freely available in the O*NET database.

The AARP Public Policy Institute and the Urban Institute examined how job demands have changed over time and what they might look like in the future. In the paper, Employment at Older Ages and the Changing Nature of Work (Johnson, Mermin, & Resseger, 2007), the authors link detailed information on occupational characteristics from the O*NET database to the March 1971 and March 2006 Current Population Surveys. They found a sharp decline in the physical demands of jobs and the prevalence of difficult working conditions over the past 35 years. They also found that jobs have become more stressful and cognitively challenging. The implications of the study suggest that the decline in physical job demands increases the opportunities for older people to remain at work. However, more stressful, cognitively demanding jobs complicate the picture. The study proposes that the changing nature of work will likely promote old-age employment for most people, or at least not interfere with longer work lives.

ACT, formerly the American College Testing Program, conducted a study (ACT, 2006) showing that high school students who plan to enter workforce training programs after they graduate need math and reading skills similar to those of college-bound students. For the study, ACT looked at O*NET job zone 3 occupations that:

- do not require a four-year college degree,
- offer the potential for career advancement,
- are projected to increase in the future, and
- are likely to offer a wage sufficient for a family of four.

These occupations generally require some combination of vocational training and on-the-job experience or an associate's degree. They include electricians, construction workers, upholsterers, and plumbers.

ACT then compared academic skill levels of profiled job zone 3 occupations with the College Readiness Benchmarks established for the ACT test. The results show that the levels of math and reading skills needed for success in the first year of college are
comparable to those needed by high school graduates to enter 90 percent of the profiled occupations.

Based on this study, ACT urges high school educators to offer students a common academic program that prepares them for both postsecondary education and workforce training programs. (http://www.act.org/research/policymakers/reports/workready.html)

The Association of College and Research Libraries, a division of the American Library Association, provided the following information on the O*NET Web sites in their C&RL News.

Job seekers, students, workers, employment professionals, counselors, and others interested in exploring occupations and careers will find this site a great place to start. . .

O*NET Online is a well-designed search engine for exploring the database. . .

Beyond O*NET Online, this site is chock-full of information on the Consortium, other easily accessible O*NET products, career assessment guides and tools, research and technical reports, data collection methods, planned products and ways to contribute to the process. . .

O*NET Online alone, however, is worth the stop for students searching for relevant careers at any point in their academic journey. Through it they can explore occupations, match skills, find out about salary and trends, or just see what is out there. Researchers, employment specialists, and others can dig deeper and discover a wealth of information about the world of work likely available nowhere else. (Valentine, 2004, February)

The Center for Hospitality Research of Cornell University conducted a study titled, Ability versus Personality: Factors that Predict Employee Job Performance (Tracey, Sturman & Tews, 2007). The researchers used O*NET definitions, education and training requirements, tasks, and required knowledges, skills, and abilities as part of their research to test the hypothesis that cognitive ability is more important for predicting performance among inexperienced employees than among experienced employees in frontline restaurant jobs. In addition, they hypothesized that conscientiousness was more valid for predicting performance among experienced employees than inexperienced employees. These hypotheses were supported in their research.
Central Michigan University (2004) has used O*NET Content Model domains to identify the competencies for a leadership competency model for students. The model consists of five dimensions, each with multiple competencies drawn from the O*NET Content Model and an existing management taxonomy of work activities. Work requirements and worker characteristics were reviewed to identify skills, knowledge, abilities, work styles, generalized work activities, work context, and organizational context relevant for each dimension. Although the resulting model was intended for students and was distributed to members of the campus community, it was also distributed to interested employers because of likely relevance to a variety of organizations. (http://www.chsbs.cmich.edu/leader_model/model.htm)

The Editorial Projects in Educational Research Center, a non-profit tax-exempt organization, conducted a study published online in Education Week. The study, Learning and Earning (Swanson, 2007), was part of the Diplomas Count series which is supported by the Bill & Melinda Gates Foundation. The study examined the relationship between education and pay using the O*NET database and data obtained from the 2005 American Community Survey. The study was based on the strong correlation between educational attainment and O*NET job zones. Results showed that only a small percent of people working in low job zones have attained the levels of education or training associated with high job zones and vice versa. Researchers looked at median incomes within each of the five O*NET Job Zones. One of their findings was that median incomes for workers in Job Zone 1 occupations are about 20 percent of the median income for workers in Job Zone 5 occupations. (http://www.edweek.org/ew/index.html)

A study by the Federal Reserve Bank of New York titled Human Capital and Economic Activity in Urban America (Abel & Gabe, 2008) examined the relationship between human capital (educational attainment and other knowledge measures) and economic activity in U.S. metropolitan areas. The following is from their study.

To arrive at the knowledge variables used in our analysis, we matched occupational categories between the O*NET system and 2000 U.S. Census. In many cases, we combined multiple O*NET occupations into a single Census category. Following the general approach used by Ingram and Neumann (2006) and Lakdawalla and Philipson (2007), we utilized the average value of the knowledge importance or level across multiple occupations in the O*NET data. With this information then available for 470 Census occupations, we calculated a knowledge index that is the product of the knowledge importance and the knowledge level. Feser (2003) used the same approach, noting that it places a
greater emphasis on high knowledge that is relevant to a given occupation. 
(http://www.newyorkfed.org/research/staff_reports/sr332.html)

**Harvard Business School** students conducted a study (Hanna, 2008), to assess the potential for the offshoring of more than 800 occupations in the U.S. economy. The O*NET database served as the source of occupational information for the study on descriptors such as tasks, knowledges, and skills. The student researchers considered the information in the O*NET database and then rated occupations on a scale of 1 to 100 depending on whether the occupations’ tasks could easily be performed offshore. The students estimated that between 21 and 42 percent of all U.S. jobs are potentially offshorable. (http://hbswk.hbs.edu/item/6012.html)

The **John J. Heldrich Center for Workforce Development** is located at the Edward J. Bloustein School of Planning and Public Policy at Rutgers, the State University of New Jersey. The center teaches the use of O*NET information in its Working Ahead: The National Workforce and Career Development Curriculum. This credentialed 120-hour curriculum teaches career counseling and guidance to front-line staff in workforce development, community organizations, and community colleges. Working with a network of state departments of education and state career resource networks, the Heldrich Center is developing a training guide and student manual so that counselors and education staff can learn to use the O*NET database as a career exploration tool for middle school, high school, and college-level students. (http://www.eric.ed.gov/ERICWebPortal/custom/portlets/recordDetails/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED465911&ERICExtSearch_SearchType_0=no&accno=ED465911)

**Martin Prosperity Institute** conducted research to examine the relationship between wages and the skills required in the workforce within a regional area. Using the O*NET database, they performed a cluster analysis to identify three broad skill types - analytical, social intelligence, and physical skills. They also conducted a regression analysis using O*NET data to quantify how each skill contributes to regional prosperity. The institute found that analytical and social intelligence skills have a significant positive relationship with regional wages, while physical skills have a negative relationship. In addition, their research found that analytical skills are more closely related to regional wages than are social intelligence skills. They also determined that analytical and social intelligence skills increasingly result in positive impacts on wages over time and that the positive impact of physical skills on wages has decreased over time.
The Mid-Valley Special Education Cooperative in St. Charles, IL, employs O*NET information throughout its training programs. The school uses O*NET data to match the skills learned by the students with community-based work training opportunities. O*NET work context elements are used to help assess what accommodations may be required in the work environment. The cooperative also focuses on O*NET work styles, developing these soft skills within their training programs. When students are ready to find employment, standard O*NET language is used to develop resumes, including knowledges, skills, abilities, and work styles. (http://www.onetacademy.com/)

The National Academies of Sciences is evaluating O*NET information as a tool for making important human-capital decisions. As part of its research on changing worker requirements, the National Academies of Sciences commissioned a paper by the Human Resources Research Organization (HumRRO) to investigate the feasibility of O*NET information to assess changing worker skill requirements. The paper describes the key elements of the O*NET system, and provides examples of the many ways O*NET has been used by the education, public, and business communities to improve workforce decisions. The paper concludes that O*NET is a rich and important data source that can be used in many different ways to assess changing skills necessary for workers to be successful in today's workplace. (Tsacoumis, 2007, May)

The National Center on Education and the Economy prepared a background paper for the New Commission on the Skills of the American Workforce. The paper, America in the Global Economy (Uhalde & Strohl, 2006), merges O*NET occupational data with earnings and education data provided by the Current Population Survey (CPS) to identify competencies and skills which are highly valued by employers. The paper goes on to describe a model for determining the probability of off-shoring jobs based on similar merging of O*NET occupational attributes and CPS data.

The Research and Analysis arm of Indiana’s Department of Workforce Development completed a study (Leeuw, 2008) designed to guide individuals, educators, and workforce professionals in identifying occupations that share similar skills. The study used O*NET skills data to create a new career cluster model that emphasizes relationships between seemingly unrelated industries and occupations. These clusters are being used to prioritize and focus resources on programs and curricula that support
pathways to emerging high wage and high demand occupations.  
(http://www.incontext.indiana.edu/2006/december/6.asp)

**Rotman Research Institute** is using O*NET data for a National Institutes of Health study on occupation attributes and dementia. The O*NET database has proved to be an invaluable resource, providing comparable variables across a wide range of occupations. The database provides a basis for the assessment of the characteristics of patients' occupations and for the subsequent task of relating these characteristics to cognitive style and brain degeneration in various forms of dementia. (http://www.rotman-baycrest.on.ca/index.php?section=1)

**Seattle Washington Public Schools** uses O*NET data in its Health and Human Services Pathway program. Career educators use O*NET occupational information to structure their work in reorganizing courses of study. For the occupations in their curriculum, they use the common language of O*NET data to support the content a course should include. Educators also consider crediting courses across Pathways. For example, they might identify a Career and Technical Education course that also fulfills a requirement in art, social studies, or English by looking for O*NET abilities, skills, and work contexts that are common across multiple Pathways. (http://www.onetknowledgesite.com/spotlight_on_Roxanne_Trees.cfm)

A researcher in the Department of Management and Organizations at the **Tippie College of Business** in Iowa headed a team doing research to validate the WorkKeys Fit Assessment, a tool which uses occupational interests and work values to measure person-occupation congruence. The team used the O*NET database to develop and validate the assessment. Results of their work suggest that the fit between person and occupation predicts positive work attitudes and outcomes. This relationship is a useful concept that can be applied to personnel staffing. Organizations which include an interest-values assessment of person-occupation congruence may increase job satisfaction, job match, and job commitment among their employees. (Postlethwaite, et al., 2009)

At the **Workshop on Research Evidence Related to Future Skill Demands, the National Research Council Center for Education** presented a paper, Projecting the Impact of Computers on Work in 2030 (Elliott, 2007). This paper describes an approach to projecting new workplace skill demands based on increased use of computers in the decades to come. An analysis of the impact of computer technology on future skills used the O*NET database to provide definitions, anchoring tasks for ability levels, and occupational ratings for the set of human abilities that are broadly relevant to work. The
results of the analysis suggested that a serious and sustained effort is needed to project and prepare the American workforce for the extensive changes that are likely to occur as computers continue to displace human activity in the workplace.
FEDERAL AND STATE GOVERNMENT AGENCIES

Federal and state agencies have integrated O*NET products into their own products and services. The O*NET Career Exploration Tools and the O*NET database are used extensively by national and state organizations providing career guidance and job search assistance.

The Alabama Department of Rehabilitation incorporated O*NET information into their Employment Institute, a two-part training program required for everyone who provides direct services to clients. Trainees are shown how to use O*NET OnLine to address the vocational goals of clients, looking at tasks, skills required, work environments and potential barriers. Training also shows counselors how to use the O*NET Code Connector to link a client’s past job title to an appropriate O*NET occupation. (http://www.rehab.state.al.us/Home/default.aspx?url=/Home/Welcome/Main)

To address the pressing need for talented and skilled computer 3-D graphic artists and traditional animators, California's Employment Development Department (CAEDD) conducted an industry study with the endorsement of the California Skillsnet Consortium. O*NET’s survey data collection instruments and other materials were used in the study. Relying on O*NET data, human resources personnel modified local training and education initiatives to help close the gap between industry needs and local workers’ skills. Training programs defined the skills and requirements for the evolving occupations of computer 3-D graphic artists and traditional animators. State and local leaders forged important partnerships with local establishments, educators, WIBs, community-based organizations, and other stakeholders to meet industry demands and develop needed talent. (http://www.doleta.gov/programs/ONET/ca-dc.cfm)

The CAEDD also assisted workers at Boeing's Monrovia, California plant as Boeing prepared to close the plant in response to changing business needs. CAEDD staff used the O*NET's Skills Survey to interview workers, identifying the skills used in their jobs. The skills information was used with the O*NET database and state and local labor market information to create a report describing how Boeing employees could use their skills in jobs outside the aircraft manufacturing industry. (http://www.doleta.gov/programs/ONET/boeing.cfm)

California Labor Market Information (LMI) has used O*NET information as part of the state’s rapid response to mass layoffs. LMI’s guide for workforce development
professionals assists dislocated workers in reevaluating their skills and relating those skills to other occupations, particularly in high-demand fields and among new and emerging jobs. The guide outlines a step-by-step process enabling a dislocated worker to build an occupational profile with Skills Search and Detailed Reports in O*NET OnLine, together with multiple LMI data sources. From the Detailed Reports pages, an applicant copies and pastes Task statements, Detailed Work Activities, and other descriptors used to enhance resumes. Skills Search is used to compare the applicant’s job skills to similar skills in new careers. (http://www.calmis.ca.gov/file/occmisc/model-dislocated-worker-process.pdf)

**CareerOneStop**, sponsored by the **U.S. Department of Labor, Employment and Training Administration**, offers job seekers, students, businesses, and workforce professionals the most comprehensive set of career resources and workforce information on the Web. O*NET products are integrated throughout the site, including the O*NET database, O*NET Career Exploration Tools, and O*NET Tools and Technology (T2). (http://www.careeronestop.org/)

**The Connecticut Department of Labor** used O*NET data to respond to the Workforce Investment Act requirements that states assess (1) current and future job opportunities in the state, (2) the skills necessary to obtain these jobs, and (3) the skills necessary to meet the economic development needs of the state. To meet these requirements, it collected and analyzed labor market information and published an extensive report. O*NET Skills and skill descriptions were used in the report sections describing skills necessary for Connecticut’s high-demand occupations and industry sectors important for state economic development. (http://www.doleta.gov/programs/ONET/ct.cfm)

The **Department of Labor, Employment and Training Administration (ETA)** is working with business leaders, educators, and others to develop comprehensive industry competency models in economically important industries. Competency models are used for developing curricula, selecting training materials, setting licensure and certification requirements, writing job descriptions, recruiting and hiring, and performance reviews.

Part of ETA’s effort includes a database of competency-based resources providing information for use in regional economic and workforce development projects. The database includes resources such as sample curricula, assessment instruments, skill standards, and apprenticeship work process schedules. When the resources are related to an occupation, a link is provided to that occupation in the O*NET database, providing access to the knowledges, skills, and abilities needed to perform the work.
The database resources provided are linked to industries that are economically important, projected to have long-term growth, or are being transformed by technology and innovation. They include the following.

- Advanced Manufacturing
- Aerospace
- Automation
- Construction-Heavy
- Construction-Residential
- Energy
- Financial Services
- Hospitality/Hotel and Lodging
- Information Technology
- Retail

(http://www.careeronestop.org/COMPETENCYMODEL/default.aspx)

**IHaveAPlanIowa** provides users a planning sequence to help them identify training needs related to career aspirations and local education resources to meet those requirements. Flexible tools help users create resumes and portfolios to organize credentials, experiences, and goals. Users can conduct job searches by exploring local and state job markets. Integrated with the system are professional tools for support staff to allow for review of client portfolios and generation of reports. The online tool relies on both the O*NET database and O*NET Career Exploration Tools. (http://www.IHaveaPlanIowa.gov)

**The Job Skills Transfer Assessment Tool (JobSTAT)** is a Web-based tool offered by the Minnesota Department of Employment and Economic Development. Users begin by entering the title of their current or previous job, or selecting an occupation title from a list of O*NET occupations. JobSTAT matches the user’s marketable skill attributes against existing job openings that require similar skills. (http://www.positivelyminnesota.com/apps/Imi/ota/OccupationSelectA.aspx)

**JobZone** is a career information and management system for adult jobseekers used in all of New York’s regional One-Stop Employment Centers. The JobZone system provides information on over 900 occupations from the O*NET database, including military titles. JobZone tools allow users to assess career values, interests, and skills and apply the results to the job search process. There have been over one million portfolio accounts
created within the two New York systems – JobZone and CareerZone (a career exploration system targeted to students). (http://www.nyjobzone.org/)

**The Maine Department of Labor** uses O*NET information in their effort to attract new business to the state. Businesses provide descriptions of the jobs they need to fill and the Maine Department of Labor searches O*NET data to match occupations to the knowledges, skills, and abilities provided in the job descriptions. In addition, small businesses are helped to develop their employees through training strategies based on O*NET occupational skills information.

O*NET information has also been used by the state of Maine to help dislocated workers make informed decisions about employment opportunities after a layoff. Based on a comparison of knowledges, skills, and abilities, the jobs the workers were leaving were first linked to O*NET occupations in order to identify likely opportunities requiring similar skills. O*NET information was supplemented with state-level wage information, job openings, and information about retraining possibilities so workers could choose reemployment opportunities best suited to them.

Another use of O*NET data was employed for a boat builder in Maine who needed to move his operation to reach a workforce with the new skills and technological knowledge required for a changing industry. The Maine Department of Labor helped identify alternative locations by first linking the skills required for boat building to O*NET occupations. Then, Labor Market Information (LMI) occupational data showed where in the state the labor market included people working in these occupations. The company decided to relocate to one of those areas. (http://www.onetknowledgesite.com/spotlight_on_John_Dorrer.cfm)

**The Maryland Career Development Association** offers an online course titled, Using O*NET in Your Work as Career Advisors. The course is self-paced and instructs users on the most important components of O*NET OnLine information for their work with clients. The course covers topics such as Using the O*NET Descriptor Search, Finding Tools and Technology Used in Occupations, Helping Military Transition to the Civilian World of Work Using Crosswalk, and Help People Make a Career Transition Using Their Skills. Professional development credit is awarded for completion of the course. (http://www.mdcareers.org/mc/page.do?sitePageId=96146&orgId=macda)

**The Maryland Division of Rehabilitation Services** provides career exploration services in the Workforce & Technology Center. Clients learn about their values, interests, talents,
and abilities by using a variety of assessments. O*NET OnLine provides an avenue to use this information to explore careers. The convenience of a Web-based system allows clients who have difficulty coming in to a state office the option of doing research at home and sending results to the office via email.

(http://www.doleta.gov/programs/ONET/MDDORS.cfm)

The Minnesota Department of Employment and Economic Development created the Occupational Transferability Analyzer (OTA) using O*NET knowledge, skills, and abilities data. The OTA computes a single transferability score that allows users to consider the feasibility of moving from one occupation to another. The score ranges from -100 to +100 and provides a measure of the comparability between two different occupations based on knowledge, skill, and ability levels.

www.deed.state.mn.us/lmi/tools/ota/OccupationSelectA.aspx

The Montana State Human Resource Division relies on O*NET information for employee classification using their broadband classification system. The detailed occupational information in the O*NET database determines the most appropriate title and placement for a given position. O*NET information is compared to the tasks in position descriptions and to required competencies. State job titles and codes are aligned with the O*NET taxonomy to expedite the use of O*NET data for classification and compensation. When government job titles are difficult to match, O*NET task lists, knowledges, skills, abilities, and work activities assist in making needed distinctions.

(http://hr.mt.gov/hrpp/classification.mcpx)

mySkills myFuture is a Web site sponsored by the U.S. Department of Labor, Office of Workforce Investment. The site functions as a skills transferability tool, helping laid-off workers and other career changers find new occupations and job openings to explore. Users enter the title of a current or previous job. The Web site responds with a list of occupations related to their experience through O*NET data on skills, knowledges, and abilities. Users can compare the list of occupations, view occupation details and compare skill requirements, learn about related licenses and apprenticeship programs, and apply for jobs in their local area. (http://www.myskillsmyfuture.org/)

The Newton Transformation Council, in Newton, Iowa, used a U.S. Department of Labor Regional Innovation Grant (RIG) to respond to the closing of the region’s biggest employer, Maytag. Economic Modeling Specialists, Inc. (EMSI) was contracted to provide an analysis of the characteristics of the available workforce, using their O*NET-based analysis system. Relying on the results of the analysis, regional leaders were able
to recruit alternative energy and high tech companies. Within two years, 1,200 jobs have been developed within industries such as wind turbine blade and steel tower manufacturing, utilities, and information technology companies.
(http://www.economicmodeling.com/resources/661_cbs-news-highlights-economic-revitalization-in-newton-ia/)

The Office of Foreign Labor Certification within the U.S. Department of Labor/Employment & Training Administration has developed policy guidelines that require state workforce agencies to utilize the O*NET database, including O*NET Job Zones, in determining prevailing wage levels for applications by employers wishing to hire foreign workers. The O*NET database is used to determine the appropriate occupational classification, based on the requirements stated in the employer’s job offer. O*NET Job Zones help with wage determinations by categorizing occupations into levels of experience, education, and training required for the job.
(http://www.foreignlaborcert.doleta.gov)

The Oklahoma Employment Services Commission presents O*NET overviews to business councils and at job fairs and incorporates O*NET OnLine into Job Skills Workshops. Employers are shown how to use the Oklahoma Job Link system to code their job openings with a standard O*NET-SOC code. During the Job Skills Workshops, job seekers explore the skills data in O*NET OnLine and learn how to use O*NET Details Reports to help them build resumes.
(http://www.ok.gov/oesc_web/)

The Tennessee Valley Authority (TVA) used O*NET information as presented in the Economic Modeling Specialists, Inc. (EMSI) Career Pathways tool to evaluate workforce competencies in northeastern Mississippi. Rebecca Houchin, TVA Research Manager, describes how Career Pathways was able to show that competencies of workers in the declining furniture industry in northeastern Mississippi were 98% compatible with the needs of the auto industry. As a result, a Toyota plant was brought to northeastern Mississippi, providing employment to displaced workers.
(http://www.economicmodeling.com/)

The Texas Labor Market and Career Information Department (LMCI) has infused all of its occupational information products with the O*NET database. One application is the Strategic Workforce Assessment Project (SWAP). SWAP uses the O*NET Detailed Work Activities (DWA) database as a proxy for occupational skill sets in the effort to identify the critical workforce needs of the state’s industry cluster initiative. LMCI staff performed an extensive analysis of how DWAs could be used as a foundation
for an Internet application that automates a process of analyzing industry clusters, creating custom cluster staffing patterns, and building occupational skill sets. Related efforts include the assignment of DWAs to the Classification of Instructional Programs (CIP) and the regionalization of the O*NET DWA statements to match Texas employer hiring requirements. The goal is for Texas economic development programs to identify key industry clusters in their regions, to know the critical occupations for those clusters, and then to identify specific work activities that regional education and training systems must provide. SWAP’s goal is to connect education and the economy through an integrated data system. O*NET data provided a solid foundation on which to base this project. ([http://www.onetknowledgesite.com/spotlight_on_Texas_ONET.cfm](http://www.onetknowledgesite.com/spotlight_on_Texas_ONET.cfm))

The United States Agency for International Development (USAID) in El Salvador, through its Economic Growth Office, has issued a Request for Task Order Proposal (RFTOP) to implement a workforce development program titled “Enhancing Skills of Salvadorans in the New Century.” The objective of this Task Order is to improve the functioning of the Salvadoran labor market by matching the country’s supply of skilled workers with private sector demands for labor. Occupational research could be used to jump-start curriculum development processes and provide trainers with industry experience and standards. USAID suggests that adapting O*NET classifications of occupational knowledges, skills, and abilities would be one way to help trainers to effectively design curriculum and skills assessments for their trainees.

Washington State Department of Personnel offers a Web site for human resources professionals, managers and supervisors, and state employees. In a section on competencies – “the measurable or observable knowledge, skills, abilities, and behaviors (KSABs) critical to successful job performance,” the site relies heavily on O*NET descriptions, data, and questionnaires – providing users with links to related O*NET Web sites. ([http://www.dop.wa.gov/strategichr/WorkforcePlanning/Competencies/Pages/default.aspx](http://www.dop.wa.gov/strategichr/WorkforcePlanning/Competencies/Pages/default.aspx))

The West Virginia Rehabilitation Center uses O*NET Online to help clients with career exploration. Many clients are students (ages 15-23) who are transitioning from school to work. Students use the Web-based tool to search on keywords related to occupational interests. Because students often have incomplete information about occupations, the data in O*NET OnLine fills out their perspective about the skills and training required for an occupation and provides links to wages and employment outlooks. Adults with disabilities also use O*NET information to transition to jobs using
related skills. A firefighter who had been seriously injured on the job discovered through O*NET OnLine that he had skills similar to insurance adjustors. He found a job with an insurance firm that needed adjustors to investigate fire-related claims.
(http://www.doleta.gov/programs/ONET/WVRehabCenter.cfm)
INTERNATIONAL USERS

O*NET data and career tools have quickly gained prominence in government and private industry products around the globe. One example is Australia’s government which has used the O*NET database as a 'behind the scenes' data set linked to their own Standard Classification of Occupations. Human resource professionals in Japan have adopted the O*NET Career Exploration Tools. Chinese researchers have relied on the O*NET database for their occupational studies. European and Central American countries are translating O*NET products for their own populations. In 2008, O*NET OnLine received visits from users in 191 countries. Countries logging hundreds of thousands of hits each include Australia, Canada, China, Egypt, the Netherlands, New Zealand, Puerto Rico, Singapore, Germany, Great Britain, Hong Kong, India, Indonesia, South Africa, South Korea, and Taiwan. Each year, the O*NET Web sites log millions of visitors from virtually every geographic region in the world.

CANEDCOM, a Canadian international education development company based in Toronto, is working to install a Career and Vocational Guidance System for the Ministry of Education in Oman in the Middle East. They are using the O*NET Interest Profiler as part of their project to provide career guidance services for high school students, college and vocational training center graduates, and other job seekers. After pilot tests resulted in dissatisfaction with other assessments, CANEDCOM selected the O*NET Interest Profiler because it is an “internationally accepted instrument that has been tested for reliability and validity.” The features that are most desirable for their purposes are:

- compatibility with Holland's R-I-A-S-E-C interest structure,
- rich and extensive research history,
- widely accepted and used by counselors,
- easy to use and well received by clients,
- interest items represent a broad variety of occupations and complexity levels,
- extensive and thorough development effort,
- client input during all stages,
- construct validity and reliability evidence, and
- self-administered and self-interpreted assessment.

(March 2007 email received by O*NET Customer Service from Michael B. Kennedy, Ph.D., Team Leader and Assessment Specialist, National Career Guidance Centre, Oman Ministry of Education)
E-Career Guidance.Com, Ltd. (ECG) is an Irish company that provides vocational and career counseling services. They developed an online career exploration tool, the CareerDecisionMaker® (CDM), which assesses a client’s standing on variables from four domains: vocational interests, work values, personality, and skills. The client’s score profile is matched to score profiles for occupations. The occupations having profiles that correspond most closely to the client’s profile are presented as career options that the client might explore.

ECG linked the CDM to the O*NET database and its occupations from the Standard Occupational Classification (SOC). Scores from two of the CDM domains link directly to O*NET data for Interests and Work Values. The CDM skills and personality domains, however, differ from the O*NET Skills and Work Styles domains (i.e., they are based on different taxonomies). ECG contracted with Human Resources Research Organization (HumRRO) to develop skills and personality profiles for O*NET’s SOC occupations that are commensurate with the CDM skills and personality profiles. In addition, HumRRO devised a profile matching algorithm that permits use of the entire four-domain CDM profile to identify promising career options for ECG’s clients. All project activities (e.g., development of stimulus materials for O*NET analysts, summary of personality ratings provided by O*NET analysts, data analysis, development of the profile-matching algorithm) are documented in a technical report (McCloy, Byrum, Munoz, & Tsacoumis, 2006). (http://www.careerdecisionmaker.com/ContactUs.aspx)

A developer in India wrote to O*NET Customer Service with the following remarks: “I am interested in the copy of software codes of the career exploration tools - Computerized Interest Profiler (CIP), Ability Profiler (AP) and Work Importance Profiler (WIP). As a counselor, I have been working in the field of education and career guidance for a number of years in Chandigarh (Northern part of India). I have plans to launch a career planning and development website to streamline and expand my business operations. I intend to adapt these tools with my system, so that I may be able to use it to help students make an ideal career choice to match their interests and values.”

NKOKA is a small technician training institution focused on training in a very specialized and technical environment in South Africa. This company is using O*NET data related to the occupation Electronics Technicians to structure their training programs. (http://www.nkoka.co.za/)

The Technical Education and Skills Development Authority (TESDA), a government agency attached to the Philippine Department of Labor and Employment, has employed
the O*NET Ability Profiler in its aptitude assessments of hundreds of thousands of high school students. In addition, TESDA is distributing the O*NET Computerized Interest Profiler to regional, provincial, and district offices, as well as to their training institutions, as part of their e-Profiling program, targeting out-of-school youth, career shifters, course shifters, and unemployed adults.


U21Global is an internationally recognized online graduate school, backed by a network of 21 leading universities in 11 countries. Included in the list of participating universities are Lund University in Sweden, Korea University in South Korea, Tecnológico de Monterrey in Mexico, and the University of Melbourne in Australia. U21Global students come from 60 countries in Asia, Africa, Europe, and the Americas. U21Global’s MBA program has been awarded the European Foundation for Management Development (EFMD) accreditation for technology-enhanced Learning (CEL). U21Global offers an Operations Management course which links students to the O*NET OnLine summary report for General and Operations Managers.

(http://www.u21global.com/Education/home)
PRIVATE COMPANIES AND COMMERCIAL PRODUCTS

Private companies are using O*NET information for both in-house purposes (human resources functions such as job description writing and employee development) and in commercial product development. The number of products with “O*NET in-it” continues to grow.

Adaptiqs, a software company specializing in survey and assessment development, conducted research using the O*NET framework to test an adaptive approach to surveys and assessments. The project used 5 O*NET questionnaires (Knowledge, Skills, Abilities, GWA, and Work Context) to create a tool that provides a list of jobs that are most applicable to individuals based on their responses. Because these questionnaires together contain over 400 questions, the study used Bbn (neural networks) to minimize, in real time, the number of responses required. On average, the Adaptiqs tool required 53 questionnaire items to generate a list of the top 10 occupations related to the respondent’s experience. The research also suggested that the Work Context questionnaire was the most valuable and the Abilities questionnaire was the least valuable for classifying people into the most probable occupations. (http://www.adaptiqs.com/)

Assessment Associates International (formerly Human Resource Consultants) has developed the Work Behavior Inventory (WBI), an assessment to measure Work Styles in employees. Work Styles are important characteristics related to competencies that underlie work performance. The WBI assesses Work Styles as defined in the O*NET system and provides the user with information that can be used to

- focus and guide leadership development efforts,
- pinpoint specific strengths that may help with career advancement,
- identify areas for training and skill enhancement,
- identify work environments that may support success for the individual, and
- help guide career choice and transition decisions.

(http://www.aai-assessment.com/products/work_behavior_inventory.php)

The corporation, Business and Legal Reports, uses O*NET data in the Job Description Manager module of its HR.BLR.com Web site. O*NET descriptors included in the Job Description Manager are occupation title, position summary, tasks, skills, attributes, and experience and education. (http://hr.blr.com/tour.aspx?view=jdm)
**Campus ToolKit**, a product of Corvus LLC, includes a variety of modules to help students on campus assess their personality, manage their time and finances, and develop paths to success. The O*NET database, as well as the Work Importance Profiler and the Computerized Interest Profiler are integrated into modules of the ToolKit. ([https://www.campustoolkit.com/index.php](https://www.campustoolkit.com/index.php))

**CareerNoodle** by Transcend Innovation Group provides an online suite of career exploration and planning tools for middle, high school, and college students. CareerNoodle relies on modern learning theories and human-computer interaction principles so that students are engaged, motivated, and in control of their career exploration process. Interactive activities to measure student work interests and values are adapted from the O*NET Career Exploration Tools. Occupational data comes from the O*NET database. Transcend Innovation Group’s David Burns says, "We use O*NET data and the career exploration tools. ...Thanks for providing us with such wonderful tools and information!" ([http://www.transcendinnovation.com/careernoodle.php](http://www.transcendinnovation.com/careernoodle.php))

**Career Ready 101** by KeyTrain is a program designed to provide an efficient and comprehensive career design/build experience for administrators, instructors, and students. The program addresses all aspects of career readiness training in one integrated system. O*NET data and O*NET career exploration tools are important components of the system. KeyTrain’s Stan Brodka says, "We have been tremendously impressed with the up-to-date nature and accuracy of O*NET data. This is the sort of element that helps learners see how their activities in KeyTrain and Career Ready 101 link to the real world. It adds real relevance in learning and is a great enhancement to our products." ([http://www.keytrain.com/index.asp](http://www.keytrain.com/index.asp))

**Choices® Planner** by Bridges Transitions provides the tools needed for students to build personalized plans for college and careers. An online career information delivery system, Choices Planner integrates O*NET data, as well as the O*NET Career Exploration Tools, into their online program. Bridges Transitions has included Spanish translations of all O*NET components so the system can be used by both English and Spanish speakers. ([http://www.bridges.com/us/prodbserv/choicesplanner_hs/index.html](http://www.bridges.com/us/prodbserv/choicesplanner_hs/index.html))

**Corporate Gray Online** is a Web site devoted to linking employers with transitioning or former military personnel. The online tool complements the organization’s military-to-civilian career transition books and Corporate Gray job fairs. The Web site provides users with a link to the O*NET OnLine Crosswalk Search. Users enter a military job code or
title and may view detailed occupational data on related civilian occupations.  
(http://www.corporategray.com/)

**Data Frenzy’s Gadball.com** is a free career portal for job seekers and One Stop Centers. One feature of Gadball.com is the Resume Builder, integrated with O*NET data to provide expertly written text describing occupational responsibilities, duties, and tasks. With one click, job seekers can add any of this text to their resumes, creating a professional, detailed resume in minutes. Resumes are given a score identifying how well the content of the resume fits the selected occupational category. The program provides tips for improving low scores. GadBall.com also provides an O*NET interest assessment which links clients to relevant O*NET occupations.  (http://www.gadball.com)

**Economic Modeling Specialists, Inc. (EMSI)** has developed a system that allows users to target competency gaps through a unique way of visualizing the makeup of occupations. Using O*NET knowledges, skills, and abilities data, EMSI’s Strategic Advantage is a Web-based analysis platform for use by workforce development and education professionals. It provides the data needed to help these professionals make informed decisions necessary for regional growth and development. (http://www.economicmodeling.com/webtools/)

**EMSI JobFinder** uses O*NET data to help unemployed workers look for jobs in their current fields, understand how their current competencies might transition to another career, or look for a local training provider that will help them build on their current skill set.  (http://www.emsijobfinder.com)

**The HR-XML Consortium** has used the O*NET database in developing specifications that allow organizations to capture occupational information and use it efficiently in their established human resources processes, such as building competency models, conducting job analyses, and developing performance appraisal systems. These firms include Adecco, Aetna, CareerBuilder, Cisco Systems, IBM, Kelly Services, Manpower, MetLife, Microsoft, and Monster.com, as well as many other technologically innovative companies. The O*NET Program is the featured content provider in an HR-XML schema explaining to member organizations and to the public how to capture and exchange skills, abilities, and related human resources information. (http://www.hr-xml.org/hr-xml/wms/hr-xml-1-org/index.php?language=2)

**iNQUATE Corporation** has incorporated O*NET data into its human-capital software application. With a patent pending, iNQUATE is an integrated seven-module application
that accommodates the development and communication of corporate goals and objectives, automates the performance management process, and engages managers in the best use of human capital while these managers analyze costs associated with maintaining a workforce. iNQUATE integrates with onsite databases or information available from external providers through Web services. All iNQUATE’s seven modules work together to simplify the process and eliminate duplication of information and effort. (http://www.inquate.com/)

**The Job Coach Reemployment Suite** is an online suite of tools designed to minimize unemployment duration and promote wage replacement. Developed by Hoover & Johnson, the product’s focus is getting the user back to work in an appropriate job as soon as possible. One tool within the suite allows the user to inventory their total transferable skills into a skills bank. Their skills bank is then compared to the skills required for O*NET occupations and the resulting matches are linked to job listings in the user’s selected job search geographic area. The Job Coach uses the O*NET taxonomy to cluster job listings from scores of job boards so the user is able to identify employment openings related to their skills bank.

Special approaches are present for sub-populations, including veterans, dislocated workers, long term UI claimants, ex-offenders, TANF/ADC recipients, and recent job training graduates. (http://www.sameskills.com/Login4.aspx)

**Kuder Journey** offers an intuitive Web site with personalized content which helps job seekers plan for a career, make a career change, and keep their career on track. Users can easily navigate a flexible step-by-step process to take career assessments, explore new options using their transferable skills, make plans to further their education and training, prepare for job opportunities, and develop a shareable e-Portfolio. Kuder Journey relies on O*NET occupational data. (http://kuderjourney.com/)

**Manpower**, a worldwide provider of high-value staffing services with nearly 1,100 offices in North America and 4,500 offices in 80 countries, provides jobs to 5 million persons every year and services more than 400,000 clients worldwide. The O*NET occupational and skills taxonomy helps Manpower match the right person to the right job. The O*NET system also offers a systematic structure that enhances Manpower’s analysis of the employment marketplace and its tracking of staffing trends. By incorporating O*NET structure into its procedures, Manpower has benefited by being able to

- identify accurately the types of placements each field office makes;
• locate field offices where the highest need exists;
• more accurately consolidate information for various types of analysis, including marketing analysis; and
• begin the process of having Manpower offices in other countries map their occupations to O*NET, enabling Manpower to consolidate information for global reporting more efficiently. (http://www.doleta.gov/programs/ONET/Manpower.cfm)

**Metrix Learning SkillUp** is a service designed for the One Stop system that provides job seekers with unlimited access to over 5,000 courses to upgrade their current skills and learn new skills. SkillUp integrates online course delivery with skill assessments, helping clients set job goals using O*NET information and connecting to local job opportunities. (http://skillup.metrixlearning.com/)

**MyPlan.com** is a comprehensive preparation Web site for school curriculum planning and career exploration. It presents valuable information to job seekers and students who want to make informed career-planning decisions. It is integrated with O*NET data as well as career videos and salary statistics in an easy-to-view format. (http://www.myplan.com/careers/index.php)

**Northwest Wisconsin Concentrated Employment Program, Inc.** is a private non-profit agency that provides One-Stop Career Center services focused on the needs of businesses. It also serves job seekers and youth in 10 counties. The agency uses O*NET resources in multiple ways to help these diverse clients. To help businesses, O*NET information is often used as a starting point for customizing employer profiles and preparing job descriptions. O*NET data may also be used when employers seek their help with other human resources needs, such as succession plans and out-placement activities during downsizing or reorganizations. (http://www.nwcep.org/)

**OptimalResume™** provides colleges and universities with a customizable, comprehensive, Web-based application for students to create, present, and manage resumes. OptimalResume has integrated portions of the O*NET database into their online application. Students can reference O*NET information to create targeted resumes for specific employers and occupations. The Web application makes it easy to search careers by job family, high growth industry, or STEM discipline and view key occupational information, such as required tasks, knowledges, skills, abilities, and work activities. (https://www.optimalresume.com/optimalresume.html)
**Piedmont Natural Gas** is using O*NET tools to help reduce turnover among entry-level employees. It has used O*NET Career Exploration Tools and occupational data to create a formal system to better match entry-level job applicants’ talents, abilities, and preferences with the duties and working conditions of the jobs for which they are applying. Part of the project included conducting a job analysis on each job family. In addition to employee surveys, interviews, focus groups, observations, and job-specific training materials, Detailed Reports from the O*NET OnLine Web site provided information about the necessary knowledges, skills, and abilities for the targeted positions. ([http://www.piedmontng.com/](http://www.piedmontng.com/))

**Profiles International** (PI) is one of several assessment companies that incorporates O*NET data in customized workforce development tools for public- and private-sector use. PI’s products are designed to help businesses improve their hiring practices, reduce turnover rates and costs, and enhance workforce harmony and performance. O*NET information is used extensively with the company’s clients, including a number of public workforce agencies. In PI’s system, job seekers begin with an assessment of their “soft skills,” such as job behavioral traits, thinking style, and occupational interests. Their results are matched to O*NET occupations and presented in a Career Compatibility Report. The report lists occupations that may be a good fit, explains how to use O*NET OnLine to obtain more information about the occupations, and explains the results of the assessment. PI sets up private Web sites for its clients on which managers can post their job openings and screen for suitable applicants. In addition, the site describes O*NET OnLine and how to use O*NET information in drafting position descriptions and in other human resources activities. This resource is especially helpful to small and mid-size companies without large human resources departments or formal position descriptions. ([http://www.profilesinternational.com/](http://www.profilesinternational.com/))

**Resumefit** is a company that provides a comprehensive Web-based software solution to job candidates and companies trying to improve their selection and retention process. Resumefit is using O*NET data to calculate the candidate’s trait fit index. The trait fit index compares the candidate’s workplace traits and subtraits against a specific job category or role. ([http://www.resumefit.com/index.html](http://www.resumefit.com/index.html))

**Six Figures** is a start-up staffing agency that connects high salary earners with six figure jobs. The online site has its base in Australia and is expanding to serve employers and employees worldwide. Their business leaders turn to O*NET OnLine to help employers define the personal characteristics, essential skills, and experience required for the candidates they are recruiting. ([http://www.sixfigures.com.au/](http://www.sixfigures.com.au/))
The SkillsNET Foundation provides open-resource solutions for human-capital management, WIB regional skill systems, and other large-scale knowledges, skills, abilities, and competence framework systems. The SkillsNET Foundation has used the O*NET Content Model in the development of SkillObject Designer®, a Web-based job analysis tool. Included in this product are O*NET data on knowledges, skills, abilities, generalized work activities, and tools. SkillsNET Designer is a resource for large, complex organizations, requiring inputs from incumbents, subject matter experts, supervisors, and strategic decision makers. (http://www.skillsnet.net/WhitePapers/Web-Based_Job_Analysis_%20Usability_Best_Practices.pdf)

SkillSoft Courseware has created a product integrated with the METRIX Learning Platform (a system based on the O*NET database) which provides job seekers an efficient way to seek online learning and training opportunities through One Stop Centers. Job seekers at One Stop Centers can electronically assess their job skills, identify skill gaps, and develop a learning plan related to their occupational goals. The skills needed to perform occupations in the O*NET database have been mapped to more than 5,000 SkillSoft online courses, making it easy for job seekers to identify and minimize skill gaps. Through this innovative system at One Stop Centers, state governments are providing job seekers the technology-based training they need to fill skill gaps and reenter the workforce. (http://www.skillsoft.com/)

TORQ™, the Transferable Occupation Relationship Quotient, by Workforce Associates, Inc., relies on O*NET knowledges, skills, and abilities data to assess the relationships of worker requirements between occupations. The TORQ Web site explains that TORQ “generates a single number between 0 and 100, measuring the transferability of workers from one occupation to another. …TORQ expands the notion of career pathways into a interconnected web of possibilities based on the factors that really matter for career mobility – not a specific job that someone is doing or has done, but what someone is capable of doing.”

Labor market information systems can use TORQ as one of their tools for workforce development, economic development, and career exploration. Because TORQ integrates the latest O*NET data, it is consistently up-to-date and in sync with current LMI systems. (http://www.workforceassociates.com/torq.html)

Trustmark Insurance Company uses O*NET OnLine to collect information on job titles, tasks, skills, and to access salary data. Human resources personnel use this information to describe tasks associated with sales support activities and to align
managers’ job titles with appropriate occupations across industries. O*NET occupational
descriptions and data help to determine appropriate salary ranges for company positions
and provide validation of company salary survey data.
(http://www.trustmarkinsurance.com/internet/corporate/)

Valpar International manufactures and develops specialized test instruments and
software that measure work-related skills. Their products are used worldwide in
education, workforce development, and allied health. Valpar’s Aviator software uses the
O*NET database in conjunction with various assessments to aid users in identifying
occupations that fit their skills and interests. The following description is found on their
Web site.

Aviator’s multifunctional approach encompasses aptitude assessment, two
pictorial/audio interest surveys, and two databases - the standard and O*Net
databases each with approximately 1000 jobs. Using Valpar’s skills-based
assessment foundation, this fast, reliable, valid tool is easy to administer and cost
efficient. All subtests and surveys are computer-based and can be completed in a
remarkable 60 minutes. (http://www.valparint.com/index.htm)

Wonderlic is an organization that provides employment process solutions to thousands
of employers worldwide. Wonderlic supports the entire employment process, from online
recruiting to exit interviews. The Wonderlic Basic Skills Test (WBST) measures a
candidate’s basic verbal and math skills based upon job requirements. Wonderlic Basic
Skills Test content and results are directly tied to the O*NET database.
(http://www.wonderlic.com/sl.9/wonderlic-basic-skills-test-wbst.aspx)
PUBLIC WORKFORCE INVESTMENT SYSTEMS AND WORKFORCE INVESTMENT BOARDS

State workforce investment systems have always been among the primary users of O*NET products. Serving employers and the public through state-sponsored online career information systems and One-Stop centers, O*NET products are responding to the demand for information about high-growth industries and helping to build the connections needed for a strong workforce.

**Alabama’s ACLMIS' Dislocated Worker System** is a Web-based system providing assistance to individuals who have lost their jobs due to permanent layoffs or plant closings. Its skill survey questionnaire is based on O*NET data (abilities, knowledges, skills, and work activities). The system uses the O*NET occupational classification system for easy linkage to Alabama's labor market information. The ACLMIS System allows users to research occupations, analyze their skills to find suitable occupations, or find occupations similar to their current occupation. ([http://www.doleta.gov/programs/ONET/alabama.cfm](http://www.doleta.gov/programs/ONET/alabama.cfm))

The **California County of Humboldt Employment Training Division** uses O*NET occupational information to assist people with disabilities and those on public assistance. O*NET Career Exploration Tools help clients get a comprehensive picture of their fit with the world of work. Employers and potential employees are encouraged to consider the many facets of work other than basic skills. The training division presents classes to employees of social service branches, describing how to use O*NET OnLine to serve their clients. ([http://co.humboldt.ca.us/HHS/SSB/EmploymentTraining.asp](http://co.humboldt.ca.us/HHS/SSB/EmploymentTraining.asp))

**California’s Labor Market Information Division (LMID)** gathers, analyzes, and produces occupational information to inform people about California’s economy and to aid in labor-related decisions. In response to layoffs at Pillowtex (a large household textile manufacturer that closed plants employing 6,000 workers across eight states), California’s LMID created an instruction kit that incorporates parts of O*NET OnLine. Including the O*NET Find Occupations and Skills Search capabilities, this toolkit enables use of O*NET data and other resources to make dislocated workers aware of their current skills and suggests occupations that match these skills. ([http://www.doleta.gov/programs/ONET/PillowTex.cfm](http://www.doleta.gov/programs/ONET/PillowTex.cfm))

The **Colorado Department of Labor and Employment** uses O*NET occupational information in its LMI Gateway Web site. This comprehensive online resource for career exploration and job searching integrates the O*NET database into its Career Informer
service. In addition, users may complete a skills inventory that matches their skills to O*NET occupations. Job seekers often find their skills set is broader than they previously realized and that their skills are transferable to related occupations, opening up their job search to more possibilities. ([http://lmigateway.coworkforce.com/lmigateway/](http://lmigateway.coworkforce.com/lmigateway/))

The **Fairbanks Job Center** in Fairbanks, Alaska offers a weekly workshop, Planning Your Career. The workshop draws young and old participants who explore careers by first taking the O*NET Interest Profiler and Work Importance Locator. The O*NET Ability Profiler is offered as well. The participants are given the O*NET Occupations Combined List to find occupations which match their results. They are shown how to use O*NET OnLine to explore occupations and select language for their resumes. Participants find that the O*NET Related Occupations and Tools and Technology features are very helpful. One client had acquired a computer science degree in the 1970s, with a minor in geology. He looked at O*NET Tools and Technology for geologists and discovered that the university had the courses and training he needed to work in the occupation. Building the required knowledge sets and skills while searching for a job in the appropriate O*NET occupations, he found a job as an entry level geologist. ([http://www.onetknowledgesite.com/spotlight_on_Tonja_Horn.cfm](http://www.onetknowledgesite.com/spotlight_on_Tonja_Horn.cfm))

**Florida Agency for Workforce Innovation** uses O*NET information for job matching, reemployment analysis, and business recruitment. O*NET data is imbedded in FRED, the Florida Research and Economic Database. One key application is preparing labor supply studies for business recruitment. O*NET also plays a large role in Florida’s Reemployment LMI One-Stop Workshop. The workshop trains workforce development professionals to use the appropriate O*NET data sets and complementary tools for reemployment analysis: selecting the right tools, evaluating current skills, discovering transferable skills, studying related occupations, and finding growth industries. Workshop participants learn how to overlay pertinent local labor market information on the data from these dimensions of occupational information. The workshop enables staff members to help job seekers, employers, and workforce professionals to meet their respective challenges. ([http://fred.labormarketinfo.com/](http://fred.labormarketinfo.com/))

**The Hawaii Career Information Delivery System** (HCIDS) has integrated O*NET information into many of its tools and services, including developing a crosswalk from Hawaii job titles and occupations to the O*NET database. Career Kokua, a Department of Labor and Industrial Relations Web site for counselors, teachers, workers, students, and others engaged in career exploration, provides access to O*NET Career Exploration Tools, skills analysis, and occupational information. HCIDS originally focused on

**Indiana Workforce Development** is responding to dramatic shifts in the economy by helping workers transfer their skills from a declining occupation to one that is in economic demand. This workforce development agency uses the O*NET database as a primary tool for making multiple comparisons which identify where knowledges, skills, and abilities overlap or where gaps exist across occupations. When the Northern Indiana recreational vehicle industry declined, the skills of laid-off workers were compared with skills required to perform growth occupations in the region. Then community colleges in the area could develop curricula to train displaced workers in the skills that demand occupations require and that are currently lacking in the regional workforce. Skills that workers transferred from their former jobs paired with “gap skills” developed through new training prepared workers for jobs related to orthopedic products and medical devices manufacturing. ([http://www.onetknowledgesite.com/spotlight_on_Hope_Clark.cfm](http://www.onetknowledgesite.com/spotlight_on_Hope_Clark.cfm))

The **Iowa Data Dissemination Bureau** provides occupational publications and web reports for employers, job seekers, educators, and economic developers. The publications cover data such as the fastest growing jobs by educational achievement level, the top skill sets, high demand and high wage occupations, and education/training requirements. O*NET occupational skills data, by level of importance and education and training requirements, are used for these projects. ([http://iwin.iwd.state.ia.us/pubs/education/careereducationoutlook.pdf](http://iwin.iwd.state.ia.us/pubs/education/careereducationoutlook.pdf))

The **Kansas Department of Labor** used O*NET skills, knowledges, and abilities as a tool in their research for the report, *Profile of the Health Care Industry*. The report profiles the three health care industry sub-sectors and the occupations within these industries. The goal of the research was to assist workforce development planners and policy makers in decisions aimed at achieving desired turnover and retention rates and to develop necessary training programs. ([http://www.dol.ks.gov/lmis/healthcare_industry_profile.pdf](http://www.dol.ks.gov/lmis/healthcare_industry_profile.pdf))

The **Lancaster County Workforce Investment Board in Pennsylvania** uses O*NET information in research and service delivery activities designed to support economic development efforts in the county. Using an industry clusters model, The Lancaster WIB
cooperates closely with the economic development community. After the industry clusters are defined, the primary occupations are profiled and a Skills Map is developed. Information for all occupations and the various career ladders in the cluster are analyzed to identify common skills and attributes, as well as those unique to a particular occupation or career ladder. The resulting Skills Map is a helpful way to involve the educational community in addressing skills gaps, taking a systemic approach to the identification of industry’s skill needs. O*NET data are a key part of the Skills Map used to develop the profiles, providing extensive information about skills and knowledge requirements of occupations in each cluster. (http://www.doleta.gov/programs/ONET/pa-ONet.cfm)

The Business Strategies Team at Louisiana Works is empowering local employers by showing them available O*NET resources, including the O*NET Toolkit for Business. The team has also used O*NET information for career mapping, career lattices, and other research applications. It is used regionally when preparing briefings for the WIB directors and locally by many front-line staff helping clients with career exploration, writing better job orders, and helping businesses with job descriptions. (http://www.onetknowledgesite.com/spotlight_on_JenniferBarnett.cfm)

Maryland’s Columbia Workforce Center uses O*NET OnLine as an important component of their Early Intervention Workshop. Recipients of unemployment insurance receive instruction on how to find jobs, research job and employer requirements, and successfully compete for open positions. O*NET OnLine helps these job seekers build resumes by identifying tasks they have mastered on previous jobs. They are also encouraged to use the information in O*NET OnLine to prepare for interviews by thoroughly understanding the requirements of the occupation for which they are interviewing. Another key feature of the workshop is introducing the participants to the O*NET Career Exploration Tools as aids to making career path decisions.

Michigan’s West Coast WIRED Initiative uses the Career Readiness Certificate, based on WorkKeys® and O*NET Job Zone information, as a means of linking worker readiness to jobs available in the local economy. WorkKeys, an online assessment linked to O*NET occupations, measures foundational skills of Reading for Information, Applied Mathematics, and Locating Information. It assigns a score and grants a Career Readiness Certificate. The certificate is then related to jobs available in the local economy. The Career Readiness Certificate is being used in several other states as a part of state, regional, and local workforce development initiatives, including North Carolina,
Virginia, Indiana, Kentucky, and New Mexico. Many others are in the process of implementing a Career Readiness Certificate program. (ACT, 2000)

The Labor Market and Demographic Research arm of the New Jersey Department of Labor and Workforce Development uses the O*NET database to support economic progress in their region. This office gathers data, creates models, and crunches numbers to support their labor and workforce development research. An example of the impact of this research is the Fort Monmouth Reuse and Redevelopment Plan. Fort Monmouth is an Army installation selected for closure by the Base Realignment and Closure Commission (BRAC). The Department of Defense estimated that the closure would cost the area 9,737 jobs. Research was done to determine the skills, abilities, education, and training those jobs required. In conjunction with Occupational Employment Statistics (OES), the O*NET database provided the ability to quantify how much of each of these characteristics were available in the local workforce. The research benefited from the inclusion of importance, frequency, and level information in the O*NET database, allowing weighting to be applied to the model. The research made it possible to understand the dimensions of the workforce in the Fort Monmouth area and inform planners regarding what industries and occupations to attract.

(http://www.onetknowledgesite.com/spotlight_on_yustinasaleh.cfm)

In North Carolina One Stop Career Centers, case managers arrange a comprehensive assessment for workers seeking training. This assessment includes the worker’s education, skills, abilities, and employment history. After the initial assessment, it is determined if the worker has marketable skills or if training is required to meet the worker’s employment goals. If training is required, a selection of occupations are compared to the employment opportunities and potential salaries in the local labor market to assure the worker gains successful employment upon the completion of training. Throughout this process, O*NET information provides a thorough description of occupational tasks, tools, technology, knowledges, skills, abilities, and national trends accessed through O*NET OnLine. Clients walk away from One Stop centers knowing that the best and most up to date information regarding an occupation is in their hands. Using O*NET occupational information, case managers help clients determine appropriate goals, putting an end to clients’ uninformed employment decisions.

The Northern California Regional Competitiveness Network (NCRCN) analyzed data from U.S. Census Bureau nonemployer statistics for the Northern California WIRED Cluster study. This self-employment study identified occupations within clusters with career potential, high-mid-entry level wages, and small size occupations. Science,
technology, mathematics, and engineering (STEM) occupations were of particular interest. A focus was placed on occupations that offer workers the opportunity for upward mobility and lateral transfer among industries. The study used O*NET data concerning key characteristics of each occupation, including the description, wages, educational requirements, skills, knowledges, abilities, and work activities. The study provided a data-driven foundation for the economic and workforce development programs of the Northern California WIRED project and focused talent development on occupations that show job and wage growth. (http://nortec.org/wired/Imid/OccupationPaper_092908.doc)

The Ohio Bureau of Labor Market Information (BLMI) collaborated with the Georgia Career Information Center of Georgia State University to present high demand/high wage/high skill occupations to interested educators via the web-based Occupational Supply Demand System (OSDS). High skill criteria relied upon resources of the Ohio BLMI and the educational/training requirements of occupations found in the Ohio Job Outlook 2014 report and the O*NET database for the science, technology, engineering, and mathematics (STEM) disciplines related to occupations. A total of 9 states now utilize the OSDS web site to help direct their career training programs. (http://occsupplydemand.org/)

Washington State Employment Security Department offers a free Web site with Five Tools for Rapid Reemployment. It provides a comprehensive system for job searchers with three of the five tools linked to the O*NET database. Users can identify their specific job skills and match them to employers across a wide range of industries that use these basic skills. The site also allows users to identify O*NET occupational codes that are similar to their recent employment experiences. By comparing recent experiences with similar occupations, the user can identify and address skills gaps to make themselves more marketable. (http://www.workforceexplorer.com/)

The Welfare to Work Program in Pittsburgh, Pennsylvania has developed a set of binders that contain lists of O*NET occupational tasks. Clients hoping to reenter the workforce can compare their previous job experiences to the lists in the binders and select common tasks to include on their resumes. If the client does not find their particular set of skills in the prepared binders, they are referred directly to O*NET OnLine. Using O*NET OnLine, clients find the lists of In Demand occupations to be helpful as well. (http://www.paworkforce.state.pa.us/employers/cwp/view.asp?a=466&q=153422)

Wisconsin’s Department of Workforce Development (DWD) works with a network of 78 local Job Centers (the equivalent of One-Stops) across the state. Each has a resource
area and a mission to provide high-quality career information to job seekers and other customers. In many of the centers, local staff wanted or needed to become more knowledgeable about the career development needs of diverse clients and the array of resources available to assist them. To help staff improve their career development skills and services, DWD’s Division of Workforce Solutions developed a 3-day, competency-based training curriculum that includes an introduction to O*NET information. Students use O*NET OnLine, the O*NET Work Importance Locator, and the O*NET Interest Profiler. Staff have discovered that these O*NET tools provide a good foundation for approaching the career exploration process. ([http://dwd.wisconsin.gov/](http://dwd.wisconsin.gov/))

The **Workforce Central Florida** online tool provides employers assistance with their recruitment, retention, and training needs. Employers can post job opportunities and search the resume job bank. The Web site provides access to numerous human resources topics, articles, and other resources. Job seekers can post resumes, search the job bank, and keep abreast of career-related seminars, articles, and services. The Web site provides links to O*NET data and O*NET-based career tools. ([http://www.workforcecentralflorida.com/](http://www.workforcecentralflorida.com/))

The **Workforce Development Council in Snohomish County, Washington** has recently developed a career information system called Career Trees. The council created a front-end interface that links directly to O*NET OnLine. Their decision to use O*NET Online was based on familiarity with the application during years of use in One-Stop centers. Their goal was to create a workforce development system for Snohomish County that is:

- 100% globally competitive,
- able to meet industry needs by filling 100% of jobs with qualified candidates,
- able to help 100% of job candidates obtain and retain employment, and
- able to help 100% of businesses and job candidates to continuously enhance their productivity and prosperity.

This new initiative provides visual representations of educational, training, and apprenticeship pathways in nine local high-growth industry sectors. The following sectors are represented.

- Agri-Business
- Bio-Tech & Bio-Medical Devices
- Business Services
- Construction
On the Web site, the user selects a job sector and is then presented with the option to select an O*NET Job Zone and view a list of occupations within that Zone. Clicking on an occupation’s title takes the user to O*NET OnLine and complete information about the occupation. ([http://careertrees.org/about/index.html](http://careertrees.org/about/index.html))

The Workforce Investment Board of Southwest Missouri was called on to provide data to attract a germanium wafer (a solar cell semiconductor component) manufacturer to Quapaw, Oklahoma. Oklahoma is part of a four-state WIRED region, so workforce data on all four states was analyzed, using EMSI’s labor market tool, Strategic Advantage. Strategic Advantage uses O*NET data to define the knowledges, skills, and abilities available to employers in a region. With this data, the WIB was able to clearly demonstrate the skills and availability of workers in the area. The manufacturer was convinced that the small town of Quapaw had the necessary workforce, resulting in a $51 million investment and 250 new jobs. ([http://www.economicmodeling.com/resources/527_workforce-data-critical-as-oklahoma-town-attracts-solar-cell-plant/](http://www.economicmodeling.com/resources/527_workforce-data-critical-as-oklahoma-town-attracts-solar-cell-plant/))

The Workforce Oklahoma Career Connection Center One-Stop partner agencies are using the O*NET Program in a broad effort to identify and meet specific employer needs in a timely, effective, and cost-efficient way. The center uses a survey of employer needs in customizing a service mix to meet these specific needs. O*NET information is built into this survey to help employers clearly define their employment needs by job title and skill bundles. For one such employer, center staff developed a series of job descriptions for skilled welders. These job descriptions were used as a basis for an in-house certified training program for welders. ([http://www.doleta.gov/programs/ONET/okla.cfm](http://www.doleta.gov/programs/ONET/okla.cfm))

WorkSource in Florida is presenting O*NET Online resources to veterans in their Transitioning Assistance Program (TAP). Veterans are shown how to use O*NET information for identification of skills and resume development. The thorough understanding of occupational knowledges, skills, and abilities that veterans gain from O*NET OnLine custom reports improves their interview skills and helps them to
overcome barriers to civilian employment.
(http://www.worksourcefl.com/employers/hiring_veterans)
THE U.S. ARMED FORCES

The U.S. military has recognized the value of O*NET data and career tools in various transition programs, recruiting activities, and human systems development projects.

HireVetsfirst.gov uses O*NET OnLine as a military skills translator to help veterans returning from active military duty reenter the workforce. Using their military occupational classification in O*NET OnLine’s crosswalk function, they can identify equivalent civilian occupations. They can view typical tasks, skills, knowledges, and abilities; look up wage levels and employment outlooks, both nationally and in their own localities; and search for actual job openings in areas of their choosing. ([http://www.hirevetsfirst.gov/](http://www.hirevetsfirst.gov/))

Military Personnel in Transition at Offutt Air Force Base in Omaha, Nebraska, provides a comprehensive 5-day Transition Assistance Program (TAP) for personnel leaving military service. As part of this program, the Nebraska Workforce Development Labor Market Information Center presents information on career exploration, employment searches, and training opportunities in the civilian job market. O*NET OnLine is prominently demonstrated as a tool to help TAP participants relate their skills and military experience to appropriate occupations and learn about a wider range of career possibilities as they transition to civilian life and employment. Military personnel can thus tap into the entire range of O*NET occupational information to explore career possibilities in the civilian sector. O*NET OnLine is a key element of the TAP for military personnel in transition. ([http://www.doleta.gov/Programs/onet/ne-offutt.cfm](http://www.doleta.gov/Programs/onet/ne-offutt.cfm))

The Military Spouse Resource Center (MilSpouse.org) is a Web portal created jointly by the Departments of Defense and Labor for military spouses and other family members facing career or educational needs. The site offers thousands of links to employment, training, education, and other community resources. O*NET OnLine and the O*NET Interest Profiler are key career exploration tools for spouses entering the job market. MilSpouse.org users can access step-by-step guidance on using O*NET resources before beginning a job search, including determining their skills and researching occupations of interest. Military personnel are also using the Web site when transitioning from military to civilian careers, using the Military Crosswalk feature of O*NET OnLine. ([http://www.doleta.gov/programs/ONET/MilitarySpouse.cfm](http://www.doleta.gov/programs/ONET/MilitarySpouse.cfm))

The Navy Manpower Analysis Center (NAVMAC) uses O*NET data in its work to develop Occupational Standards (OCCSTDS). Navy OCCSTDS serve as a basis for
training and career development in areas such as formal school curricula, onboard training, development of Personnel Advancement Requirements, and development of Navy-wide advancement examinations. The O*NET skills taxonomy is used to categorize task statements as part of the process to develop the Occupational Standards.  
(http://www.npc.navy.mil/AboutUs/NAVMAC/)

Another project of the Department of the Navy is a Web portal that will be used to collect and analyze Human Systems Integration (HSI) data. The portal will incorporate the O*NET database as well as many of the supporting documents from the O*NET Resource Center, such as the Toolkit for Business and the O*NET taxonomy information. (http://www.nps.edu/or/hsi/) Other Navy projects using O*NET information include the Job Family Structure Working Group charted by Fleet Forces Command Human Capital Object Governance Board (Navy Manpower Analysis Center, 2006), the Navy Integrated Learning Environment (Naval Personnel Development Command, 2004), and the Naval War College Joint Capability Focused, Competency Based Research (Zelibor, Suttie, & Potter, 2008).

The North Carolina Military Foundation teamed with the North Carolina Military Business Center to create a database and interactive Web site which enables businesses to link their needs to the competencies of troops exiting the military. One of the challenges faced by troops and business leaders alike is identifying the knowledges, skills, and abilities shared by military and civilian jobs. Using a keyword related to a job opening, employers are able to search for related military occupations and information on how many military personnel in these occupations are returning annually to civilian jobs. The user can view additional information about these occupations, including a list of related civilian job titles. Further exploration is available through a link to the related occupations in O*NET OnLine. This Web site helps employers and transitioning military personnel come together through the common language of the O*NET system. (http://www.ncmbc.us/)

The Office of the Secretary of Defense enlisted the RAND National Defense Research Institute (NDRI) to convene a panel of experts to provide assistance in refining the implementation of the Department of Defense Human Capital Strategy (HCS). The goal of HCS is to develop a foundation for military personnel management. A major component of this goal is a competency-based occupational analysis system. In the Final Report of the Panel on the Department of Defense Human Capital Strategy (Hanser et al., 2008), the panel members concluded that O*NET “has the potential to provide a
framework for developing much of the common language and functionality desired in a new DoD system.”

The U.S. Army Research Institute for the Behavioral and Social Sciences contracted Human Resources Research Organization (HumRRO) to evaluate the O*NET system’s usefulness for selection and classification purposes. The evaluation studied the following O*NET descriptors: abilities, skills, generalized work activities [GWAs], and work context. Army Subject Matter Experts (SMEs) as well as trained occupational analysts collected ratings on these descriptors for several Army occupations.

Results of this study indicate that an Army occupational analysis system using O*NET descriptors as a foundation would provide a useful common language system with strong links to the civilian occupational database. Such links would provide substantial benefits for recruitment and rapid mobilization efforts. (Russell, et al., 2008)

The U.S. Department of Defense’s Armed Services Vocational Aptitude Battery (ASVAB) Career Exploration Program offers tools to help high school and postsecondary students learn about career exploration and planning. Developers of the ASVAB Program wanted to change its philosophy to emphasize wider career exploration and decision making among its participants. Completely redesigned, the program now uses O*NET data to broaden occupational choices for nearly a million ASVAB participants at more than 14,000 of America’s high schools annually. Students are encouraged to explore a variety of career possibilities suited to their interests and learn to make decisions based on information about themselves and about careers, instead of exploring just a few occupations that match their current abilities.

(http://www.doleta.gov/programs/ONET/asvab.cfm)
O*NET PRODUCT DOWNLOADS AND WEB ACCESS
(JANUARY 2002 – NOVEMBER 2010)

The O*NET Resource Center Web site (http://www.onetcenter.org) and the O*NET OnLine Web site (http://online.onetcenter.org) provide comprehensive descriptions of and access to O*NET products. A brief summary of Web use and product users follows.

- Downloads of O*NET data
  - 85,400 + database downloads
- Downloads of O*NET Career Exploration Tools
  - 591,100 + downloads from the O*NET Resource Center
- Access via O*NET OnLine
  - 59 + million visits
  - 293 + million page views
  - 1.3 + billion hits

Sample of Database User Certification Respondents

Appalachian Crossroads (Vocational Rehabilitation Services)

AR Associate Counselors, Inc. (Educational Services), Puerto Rico

Arizona Department of Commerce (Government/Public Administration)

Arkansas Rehab Services (Vocational Rehabilitation Services)

Bethel Business Systems (Computer Systems Design/Programming Services)

Boston Career Link (Employment Services)

Brighten Labs (Computer Systems Design/Programming Services)

Center for Governmental Research, Albany NY

Colorado Department of Labor and Employment (Government/Public Administration)

Co-Create Your Future LLC, Career Advisor (Individual and Family Services)

CorVel Corporation (Employment Services)

EEOC (Government/Public Administration), Washington, DC
Employment Security Commission of North Carolina (Government/Public Administration)

Esco (R & D - Social Services and the Humanities)

Future Co (Educational Services), Egypt

Hortus S. A., (Manufacturer of fertilizers), Peru

Indiana Business Research Center (Educational Services)

Instituto Rougier A.C. (Educational Services), Mexico

Instituto Superior Nicolas Avellaneda (Educational Services), Argentina

Job Service North Dakota (Government/Public Administration)

JVS (Jewish Vocational Service), San Francisco CA

Kaplan Publishing, New York NY

LACOE (Educational Services)

Leading Dimensions Consulting, LLC (H. R. and Executive Search Consulting)

Los Angeles County Office of Education (Educational Services)

Minnesota Department of Employment and Economic Development (Government/Public Administration)

National PASS Center (Educational Services)

New Pathways (Employment Services)

New York State Department of Labor, Division of Research and Statistics (Government/Public Administration)

North Carolina State University (Educational Services)

Noviacom (Employment Placement Agencies), Saudi Arabia

NYS Dept of Labor- Alien Certification (Government/Public Administration)

OECD Organisation for Economic Co-operation and Development (Government/Public Administration), France
Pan America Corporation (Educational Services)
Paypal (Government/Public Administration)
Performance Proxies, LLC (Software Publishers)
PPWFC - Youth Work Zone (Employment Services), Colorado Springs CO
Puerto Rico Department of Labor (Government/Public Administration)
Rural Minnesota CEP, Inc. (Employment Services)
Social and Labor Institute (Government/Public Administration), Hungary
Soft-IT Consultants International Ltd (Computer Systems Design/Programming Services), Zimbabwe
Space Center Hydro & Tooling Lab, Greenville NC
State of Maryland DLLR Department of Labor, Licensing and Regulation (Government/Public Administration)
State of Wisconsin-DWD (Government/Public Administration)
Steel Center Area Vocational Technical School (Educational Services)
STPS (Government/Public Administration), Mexico
Telamon Corporation (Individual and Family Services)
Tennessee State Government (Government/Public Administration)
United Space Alliance
Universidad de Lima (Educational Services), Peru
University of Technology, Sydney (Educational Services), Australia
University of Wyoming (Educational Services)
US Navy (Military)
Vangent, Inc. (Employment Services)
Workforce Solutions (Vocational Rehabilitation Services)
Sample of source code requestors for O*NET Career Exploration Tools: Computerized Interest Profiler and Work Importance Profiler (CIP/WIP)

Advanced Research Management

Areas of Substantial Unemployment, Labor Market Information Division, CA

BEEHIVE (The Netherlands)

Canadian Northern Shield Insurance Company

Career Decisions (Limerick Ireland)

CollegeToolkit.com

Corvus, LLC

EdMetrix - Enabling Meaningful Education

EUREKA, the California Career Information System

Genesis Expert

Itelgua (Guatemala)

Krida Wacana Christian University (Jakarta Barat)

Magyar Tecnologia Ltda. (Brazil)

Marion County Schools

Michael Craig Limited Recruitment Services (Nigeria)

Pan America Corporation

Profile Asia Pacific (Phillipines)

Technology Based Solutions

Tennessee Board of Regents

The ASU Group

University of Houston
APPENDIX

O*NET REFERENCE List

This appendix includes publications and Web sites which reference or link to O*NET products.


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*O*NET Reference List, Spring 2011
Standard Occupational Classification (O*NET SOC) and New and Emerging Occupations.


*O*NET Reference List, Spring 2011


*O*NET Reference List, Spring 2011


