

O*NET and the Standard Occupational Classification
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Thank you very much for the opportunity to speak with you today.

Perhaps more than most of your presenters, I am very pleased about the charge this Panel has undertaken. That is because I had the honor of chairing the Advisory Panel on the Dictionary of Occupational Titles, which issued recommendations in 1993 that led to the development of O*NET. The progress O*NET has made has been impressive, both the completion of the database from the data collection program and its outreach to and support of users and products.

I have been asked to talk with you about how O*NET was used in the revision of the Standard Occupational Classification. I will also take the opportunity to mention how my office in the Bureau of Labor Statistics uses O*NET in the development and presentation of our career information materials, specifically the *Occupational Outlook Handbook*.

O*NET and the SOC

As you know, the Standard Occupational Classification or SOC is used by Federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data. The SOC is issued by the Office of Management and Budget (OMB).

Adhering to a standard occupational classification allows data users to combine information from different agencies and programs into a coherent analysis. At BLS, for example, we use data from our own Occupational Employment Statistics survey, O*NET, and the Census Bureau's Current Population Survey and American Community Survey in the developing our projections. This works well because, since about 2000, all of these programs have used the same occupational classification.

The SOC is revised periodically to reflect changes in the U.S. economy and to update occupation definitions to reflect current technology, business practices, and other changes. The revision is conducted by the SOC Policy Committee, which prepares recommendations to OMB. BLS chairs the Policy Committee, and other members are from federal agencies involved in producing or using occupational data. The 2010 SOC structure was finalized by OMB in January 2009, and the Policy Committee is nearing completion of the manual for publication later this year. Further information on the SOC revision is in your meeting notebooks.

In developing the 2010 SOC, the Policy Committee was guided by the Classification Principles it established early in the process. The Policy Committee reviewed public comments submitted in

response to two Federal Register Notices. The first Notice was issued in 2006 soliciting input on what should be added to or changed in the SOC and comment on the Classification Principles. The second Notice came in 2008 and solicited comments on the proposed structure of the 2010 SOC.

The Policy Committee used O*NET in several ways.

First, ETA is represented on the Policy Committee by the O*NET team leader. Because O*NET is the only federal database addressing knowledges, skills, tasks, and similar types of characteristics, the knowledge O*NET staff gain through collection of O*NET data is unique. This knowledge is quite valuable to the Policy Committee, both in its development of the 2010 SOC, and, we expect, in the Committee’s future role in recommending clarifications of SOC definitions, placing new occupations within the existing structure, updating title files, and other maintenance activities.

Secondly and more specifically, at the beginning of the process O*NET contributed specific suggestions for changes to the SOC structure, based in their experience in collecting data below the SOC detail and on its new and emerging occupation research.

As you know, O*NET breaks some SOC occupations into further detail. The Policy Committee reviewed these instances in comparison with the Classification Principles to determine whether the 2010 SOC should provide this detail. In some instances, the same occupations were the subject of public comments in response to the Federal Register Notices, so O*NET may not have been the only consideration.

The end result is that the 2010 SOC includes 10 new occupations that are currently in O*NET at detail below the 2000 SOC, or are similar to these O*NET breakouts. These new occupations and their related O*NET occupations (or new and emerging occupations) are listed below.

2010 SOC code and title		O*NET code and title	
15-1122	Information Security Analysts	15.1071.01	Computer Security Specialists
15-1134	Web Developers	15-1099.04	Web Developers
15-1143	Computer Network Architects	15-1099.02	Computer Systems Engineers/ Architects
		15-1099.03	Network Designers
29-1151	Nurse Anesthetists	N&E	Nurse Anesthetists
29-1161	Nurse Midwives	N&E	Nurse Midwives
29-1171	Nurse Practitioners	N&E	Nurse Practitioners
29-2057	Ophthalmic Medical Technicians	N&E	Ophthalmic Medical Technologists & Technicians
29-2092	Hearing Aid Specialists	N&E	Hearing Instrument Specialists
29-9092	Genetic Counselors	N&E	Genetic Counselors
33-9093	Transportation Security Screeners	33-9099.01	Transportation Security Screeners
N&E – New and emerging, listed in O*NET New and Emerging (N&E) Occupations Methodology Development Report, 2006.			

Third, the Policy Committee found the O*NET descriptors helpful both in determining the structure of the 2010 SOC and in developing occupational definitions for new occupations and reviewing definitions for existing SOC categories. Most important descriptors were the tasks, since the SOC definitions describe the work activities performed.

Fourth, O*NET staff are contributing to development of the Direct Match Title File that will be issued as part of the 2010 SOC, and will participate in the Policy Committee's maintenance of the list over time. This file lists job titles that match to one and only one SOC, as agreed upon by the Policy Committee. This list will provide a very important tool for data collection staff in understanding how to classify occupations and for SOC users in understanding the content of data classified using the SOC. O*NET's experience in developing its own title files, as well as in titles found during data collection, adds to the Policy Committee's knowledge base.

I was asked whether there are any problems, barriers, or weaknesses in O*NET as it was used in the SOC revision. The O*NET database is very accessible, and the program's work on new and emerging occupations proved useful, as noted above.

The only issue I would mention is that, where O*NET breaks an SOC into one or more components, it does not provide any indication on the probable share of employment for each component.

This limitation is offset to some extent by O*NET's data collection experience. Many of the public comments in response to the Federal Register Notices requested new occupations. In some instances, O*NET's data collection experience for new and emerging occupations helped the Policy Committee evaluate these requests. It was useful to know whether the O*NET surveys did or did not have difficulty finding and collecting data on a proposed occupation. If yes, the occupation would very likely fail the SOC Classification Principle on collectibility. If not, it may meet the collectibility principle and further investigation of collectibility would be warranted.

Regarding the design of the data collection program, let me suggest that O*NET be judicious in the use of break-outs of SOC occupations into further detail. These breakouts were useful in the SOC revision and provide information of interest to many data users. However, no information is available on the share of SOC-level employment falling into the O*NET SOC sub-categories. Employment, wages, and other data are at the SOC level or higher. Presenting O*NET information at the SOC level, and attaching O*NET descriptors to employment is therefore problematic. More extensive use of sub-SOC breakouts would, I believe, limit the usefulness of O*NET in analyzing the labor market to understand the extent of demands for skills.

*Using O*NET in the Occupational Outlook Handbook*

Let me turn briefly to our use of O*NET in our career information products. The *Occupational Outlook Handbook* is the most widely used career information resource in the Nation. Its primary audiences are students and adults who are making career and training decisions, and the career counselors, teachers, and other intermediaries who assist them. These are also primary O*NET audiences.

Your meeting notebooks provide an example occupational statement for Engineering and Natural Sciences Managers. We use a standard structure for each statement, describing the nature of the work, training and qualifications, employment and job outlook, earnings, and related occupations.

You will note at the beginning of the statement, immediately following the title, the *Handbook* statement lists the O*NET codes that relate to or match the *Handbook* occupation. In this example, two O*NET codes are listed: 11-9041.00 Engineering Managers, and 11-9121.00 Natural Sciences Managers.

This information is provided primarily to assist counselors and teachers in relating the *Handbook* content to O*NET assessment results and the O*NET database.

We also have found that other career information providers, such as State and private career information system developers and career information publishers, want to relate the *Handbook* and O*NET to one another. Many of their products use O*NET in career exploration strategies that lead the user to information about specific occupations. Often this information is drawn from the *Handbook*. To assist these career information providers, we recently added to our web site a crosswalk matching O*NET codes with *Handbook* occupations.

(See <http://www.bls.gov/emp/empocc1.htm>)

Our *Handbook* analysts use O*NET data on education and training requirements, along with other quantitative data and qualitative information, when developing the training and qualifications portion of the statement.

The analysts also use O*NET in assigning education and training categories to occupations. These assignments allow for occupational searches based on education and training requirements, useful in career exploration. In addition, policymakers are very interested in tabulations of employment and job outlook by education and training categories. The results show, for example, that between 2006 and 2016, the share of all jobs generally requiring a postsecondary vocational award or higher is projected to go from 29.9 percent of all jobs to 31.2 percent.¹

Once again, thank you for the work of this Panel. I will be happy to respond to questions and look forward to your recommendations.

¹ “Employment outlook: 2006–16: occupational employment projections to 2016,” Arlene Dohm and Lynn Shniper, *Monthly Labor Review*, November 2007, p. 104.