

# Using the Department of Labor's O\*NET Database in Teaching HRM

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## ABSTRACT

*The Occupational Information Network (O\*NET) was developed to be the nation's primary source of occupational information. HRM faculty will find O\*NET useful because its website includes a continuously updated database of 900+ occupations and freely available tools. This article discusses how HR professors can use the database to show the importance of HR, to validate an occupation-oriented HR curriculum, and to guide the content of HR courses. The tasks of O\*NET's HR occupations are compared to SHRM's curriculum guidelines. This article also shows HR faculty members how to enhance their courses with up-to-date information regarding career exploration, occupational outlooks, job descriptions, and pay ranges.*

**Key words:** O\*NET, SHRM curriculum guidelines, career exploration, job descriptions, pay

## INTRODUCTION

Most HR faculty members know that the Occupational Information Network (O\*NET) is a database of occupational information. However, they probably don't know O\*NET well enough to use it in their teaching, research, and university service. The development of O\*NET has been described elsewhere (Peterson et al., 2001). Suffice it to say that it is primarily a database of information on over 900 occupations in the U.S. labor market. Research shows that its occupational descriptors are useful in other countries, too (Taylor, Li, Shi, & Borman, 2008).

The O\*NET Resource Center ([www.onetcenter.org](http://www.onetcenter.org)) is the place to start learning about O\*NET. It includes a description of the Content Model, the conceptual foundation of O\*NET. There is a description of how the occupational information is collected. The Resource Center includes free products that can help HR professors in their teaching, research, and service.

O\*NET OnLine ([www.onetonline.org](http://www.onetonline.org)) is the place to find information on 900+ occupations in the U.S. There are multiple ways to search the database. One can search the database using occupation-related factors (for example, career clusters), person-characteristics (for example, interests), work-characteristics (for example, work activities), and other classification systems' codes (for example, the Standard Occupational Classification).

## BRIEF LITERATURE REVIEW

The most comprehensive study on O\*NET is by the National Research Council (2010). It finds that the most common uses are in job analysis and job descriptions in support of various HR systems (especially recruitment and selection). Additional uses are aiding in job clustering

(job families and career ladders), providing supplemental information for companies' own job analysis efforts, and helping with person-job matching (especially in career planning). The study also evaluates O\*NET's strengths and weaknesses. For example, the report documents the HR community's view of O\*NET's strengths, which include its Content Model, rigorous data collection methods, and ease of use. The report also presented the HR community's view of O\*NET's weaknesses, primarily that it is too generic for a specific organization's applications.

Overall, the National Research Council (2010) concludes that the Department of Labor has done a good job of demonstrating the value and usefulness of a publically funded, nationally representative database of occupational information. The council recommends that the Department of Labor focus its efforts on collecting and maintaining high-quality data, leaving the development of new applications to the private sector, state and local governments, and educational institutions. Regarding HRM, one of the council's recommendations is to encourage others to develop new tools for knowledge dissemination about O\*NET. This paper responds to that call.

The O\*NET database has been used in many research projects. The O\*NET website includes a report on how the O\*NET database has been used in organizations (National Center for O\*NET Development, 2011). The section about educational and research institutions has abstracts of 18 research studies that have used the database. The author's own literature search found several other studies that have used the database. For example, one study linked O\*NET information to job requirement predictors (Jeanneret & Strong, 2003). Another example is a study using O\*NET data to help develop a work design questionnaire (Morgeson & Humphrey, 2006). A third example is the study that found correlations between certain O\*NET data and literacy tests scores on the National Adult Literacy Survey (LaPolice, Carter, & Johnson, 2008).

A convenience sample (HR textbooks on the author's bookshelf) shows that several textbooks mention O\*NET. The most extensive treatment of O\*NET in the sample is by Martocchio (2013). That compensation book devotes over five pages to describing it in relation to job analysis. Its companion casebook (Barcelona & Martocchio, 2011) requires students to use O\*NET to improve upon some very basic job descriptions given in the case. Most general HR textbooks devote one or two pages to O\*NET, describing it as a help or starting point in doing job analysis (Bohlander & Snell, 2004; Cascio & Aguinis, 2005; DeCenzo, Robbins, & Verhulst, 2013; DeNisi & Griffin, 2008; Dessler, 2012; Lussier & Hendon, 2013; Mathis, Jackson, & Valentine, 2014; Milkovich, Newman, & Gerhart, 2014; Noe, Hollenbeck, Gerhart, & Wright, 2011). A few HR textbooks do not mention O\*NET at all (Mello, 2011; Nkomo, Fottler, & McAfee, 2011).

## **USING O\*NET TO SHOW THE IMPORTANCE OF HR**

O\*NET can help convince students taking a required HR course of the importance of HR by showing them how important HR knowledge is in many managerial occupations. The HR tasks of non-HR occupations provide a guideline to the content of an MBA core course in HR.

### **The Importance of Personnel and Human Resources Knowledge**

Using O\*NET's Advanced Search function, one sees 33 knowledge areas. Think of the areas as academic fields of study (Biology, Business Management, Computer Science, Economics, Education, English, Fine Arts, Law, etc.). The *importance* of each knowledge area is meas-

ured by asking job incumbents to rate the area on a five-point scale (1 = not important, 5 = extremely important). O\*NET researchers transform these scores to a 0 – 100 scale. One of those knowledge areas is Personnel and Human Resources, which O\*NET defines as “Knowledge of principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems.”

The *level* of any knowledge area is measured by asking job incumbents to complete survey items on a seven-point scale, with each knowledge area getting its own anchors. The anchors for the Personnel and Human Resources knowledge area are: 2 = fill out a medical claim form, 3 = interview applicants for a secretarial position, and 6 = design a new personnel selection and promotion system for the Army (7 is labeled “Highest Level,” but it is not given a task/behavioral anchor). These scores are transformed to a 0 – 100 scale.

Tables 1 and 2 show the importance and level of HR knowledge in various business school-related occupations. There are many managerial occupations where HR is important, but there are many non-managerial occupations where HR knowledge is not important.

**Table 1: Importance of HR Knowledge for Various Occupations**

<b>0-19 Not Important</b>	<b>20-39 Somewhat Important</b>	<b>40-59 Important</b>	<b>60-79 Very Important</b>	<b>80-100 Extremely Im- portant</b>
<ul style="list-style-type: none"> <li>• Sales reps</li> <li>• Quality control analysts</li> <li>• Customer service reps</li> <li>• Credit analysts</li> <li>• Tele-marketers</li> </ul>	<ul style="list-style-type: none"> <li>• Loan officers</li> <li>• Advertising mgrs.</li> <li>• Convention planners</li> <li>• Financial analysts</li> <li>• Economists</li> <li>• Slot machine supervisors</li> </ul>	<ul style="list-style-type: none"> <li>• Sales mgrs.</li> <li>• 1<sup>st</sup> line supervisors</li> <li>• Chief execs</li> <li>• Accountants</li> <li>• Marketing mgrs.</li> </ul>	<ul style="list-style-type: none"> <li>• Training mgrs.</li> <li>• General and operation mgr.</li> <li>• Management analysts</li> <li>• Lodging mgrs.</li> <li>• Treasurers</li> <li>• Medical service mgrs.</li> </ul>	<ul style="list-style-type: none"> <li>• HR mgrs.</li> <li>• I-O psychologists</li> <li>• Comp and benefits mgrs.</li> <li>• HR assistants</li> <li>• HR specialists (staffing)</li> </ul>

**Table 2: Level of HR Knowledge for Various Occupations**

<b>0-19</b>	<b>20-39 Fill out medical claim forms</b>	<b>40-59 Interview an appli- cant</b>	<b>60-79 Design an HR sys- tem</b>	<b>80-100</b>
<ul style="list-style-type: none"> <li>• Quality control analysts</li> <li>• Customer service reps</li> <li>• Credit analysts</li> <li>• Telemarketers</li> </ul>	<ul style="list-style-type: none"> <li>• Slot machine supervisors</li> <li>• Financial analysts</li> <li>• Economists</li> <li>• Sales Reps</li> </ul>	<ul style="list-style-type: none"> <li>• Advertising mgrs.</li> <li>• Convention planners</li> <li>• Lodging mgrs.</li> <li>• Marketing mgrs.</li> <li>• 1<sup>st</sup> line supervisors</li> <li>• Accountants</li> <li>• Loan officers</li> </ul>	<ul style="list-style-type: none"> <li>• HR mgrs.</li> <li>• General and operation mgr.</li> <li>• Chief execs</li> <li>• Treasurers</li> <li>• Sales mgrs.</li> <li>• Medical service mgrs.</li> <li>• Management analysts</li> <li>• Training mgrs.</li> <li>• Medical service mgrs.</li> </ul>	<ul style="list-style-type: none"> <li>• I-O psychologists</li> <li>• Comp &amp; benefits mgrs.</li> <li>• HR specialists (staffing)</li> </ul>

## Important HR Tasks in Representative Business School Occupations

Various occupations' task descriptions in O\*NET show the importance of specific HR-related tasks in non-HR occupations. To show students this, first determine the top concentrations in your business school. Then use O\*NET to find occupations related to each concentration. Sometimes there is a good match, but some concentrations do not clearly relate to an O\*NET occupation. In the latter cases, you must use your best judgment. Remember, the purpose is to determine the importance of HR tasks, so perfect matches are not necessary. Table 3 presents my analysis of my business school's MBA concentrations.

**Table 3: Matching MBA Concentrations with O\*NET Occupations**

<b>MBA Concentration (no. of 2012 graduates)</b>	<b>O*NET Occupation</b>
Finance (92)	Treasurers
Leadership & change management (51)	Management analysts
Behavioral finance (35)	Financial analysts
Entrepreneurship (34)	General and operations managers
Real estate finance/investment (33)	Financial analysts
Operations management (29)	General and operations managers
General business (28)	Chief executives
Marketing (26)	Marketing managers
Accounting (19)	Accountants
Brand management (17)	Marketing managers
Strategy, execution, and valuation (17)	Accountants
Marketing and managing change (16)	Marketing managers
Marketing strategy and planning (16)	Marketing managers
Human resource management (14)	Human resources managers
Health care management (13)	Medical and health services managers
Financial analysis (12)	Financial analysts
Financial management and control (11)	Financial managers
Investment management (11)	Investment fund managers
International business (10)	[no clear match]
Information systems (10)	Computer and information systems managers

The next step is to examine the tasks listed in O\*NET for occupations representative of the more popular concentrations, looking for HR-related activities. Here are some examples:

- The Treasurers and Controller occupation's tasks include nine related to HR, for example, "Monitor and evaluate the performance of accounting and other financial staff, recommending and implementing personnel actions, such as promotions and dismissals." On a scale of 0 – 100, job incumbents rate the importance of this task at 84.
- The General and Operations Manager occupation includes three related to HR, for example, "Determine staffing requirements, and interview, hire and train new employees, or oversee those personnel processes." Its importance score is 66.
- The Chief Executive occupation includes 6 HR-related tasks, for example, "Direct human resource activities, including the approval of human resource plans or activities, the selection of directors or other high-level staff, or establishment or organization of major departments." Its importance rating is 74.

- The Marketing Manager occupation includes one HR-related task, that is, “Direct the hiring, training, or performance of marketing or sales staff and oversee their daily activities.” Its importance rating is 72.

Table 4 is the result of analyzing the tasks of occupations related to popular concentrations in my school’s MBA program. This implies that the topics for an introductory HR course in a business core curriculum would include:

- Organizational HR policies
- HR laws
- Hiring
- Training
- Performance management (especially performance appraisal)
- Compensation and benefits costs

**Table 4: Using O\*NET to Help Determine Topics for a MBA Core Course in HR**

Occupation	Company Policies	Laws	Hire	Train	Managing Performance	Pay	Health Insurance	Dismiss
Treasurers, controllers	X	X	X	X	X		X	X
Management analysts				X	X			
Financial analysts								
General & ops mgrs.	X		X	X	X			
Chief executives	X	X	X		X	X		
Marketing managers			X	X	X			
Accountants						X	X	
Human resource mgrs.	X	X	X	X	X	X	X	X
Medical managers	X		X	X	X			
Financial managers			X		X		X	
Investment fund mgrs.			X		X			
Computer managers			X	X	X			

## USING O\*NET TO VALIDATE AN OCCUPATION-ORIENTED HR CURRICULUM

O\*NET can help validate the importance of general education and business core courses to HR and the importance of the courses in the HR concentration. As noted above, one way to search the O\*NET database is to use the career cluster function. This function shows 16 categories of occupations. Of course, many occupations are not related to business school degrees, for example, Education, Health Science, and Law. The career clusters that are related to business school degrees are Business Management and Administration; Finance; Marketing, Sales and Service; Transportation, Distribution and Logistics; and for some business schools, Hospitality and Tourism.

Within the Business Management and Administration career cluster, O\*NET provides six career pathways: Administrative Support, Business Analysis, Business Finance and Accounting, Human Resources, Management, and Marketing. There are nine occupations in the Human Resources career pathway: Business Teachers - Postsecondary; Human Resources Managers; Human Resources Specialists (mainly staffing duties); Training and Development Managers; Training and Development Specialists; Compensation and Benefits Managers; Compensation, Benefits, and Job Analysis Specialists; Labor Relations Specialists; and Human Resources Assistants.

### General Education and Business Core

The HR curriculum is embedded within a larger curriculum. HR professors sometimes advise HR students on which particular courses to take within some broad curricular categories. Table 5 presents the importance of the various knowledge areas for six of the occupations within O\*NET's HR career pathway. This analysis does not include the Labor Relations Specialist because the O\*NET researchers are currently collecting its knowledge data. The analysis does not include the college-level business teacher since it covers all college-level business teachers, not just HR teachers. The HR Assistant is not included since college curricula are not aimed at clerical positions. Table 5 shows the ranges of those scores across the six HR occupations, as well as the mean scores for the top 20 knowledge areas.

The most important courses in an HR student's overall curriculum are those covering the knowledge areas rated 80-100: personnel and human resources (obviously) and English language. The next most important are those rated 60-79: general management, customer service, and education/training. The third most important are those rated 40-59: math, clerical, psychology, law, communications/media, computers, and economics/accounting/finance.

Some of the results reported in Table 5 are very surprising, given where many academics say the field is going. It is surprising how important clerical knowledge is, even though the HR Assistant is not included in this analysis. It is surprising to see how low the job incumbents rate economics, accounting, finance, sales, marketing, and production knowledge. Given all the talk about HR being a strategic business partner, it appears that most HR job incumbents are not walking that talk. But that's looking at the glass as being half empty. Looking at the glass being half full, HR job incumbents are saying that traditional business topics are somewhat important.

**Table 5: Importance of Various Curriculum Areas for Six HR Occupations**

<b>Knowledge Area</b>	<b>Importance Rating Range</b>	<b>Importance Rating Mean</b>
Personnel and human resources	66-97	85
English language	72-89	80
Administration & management	60-81	75
Customer service	50-84	66
Education & training	38-94	60
Math (including statistics)	39-69	53
Clerical (word processing, records)	41-76	52
Psychology	31-69	51
Law & government	31-66	50
Communication & media	29-67	45
Computers	29-60	44
Economics, accounting & finance	31-54	41
Sociology & anthropology	18-58	38
Sales & marketing	16-52	33
Public safety & security	16-42	28
Therapy & counseling	9-42	28
Philosophy & theology	6-36	23
Telecommunications	12-37	21
Production	8-38	21
Foreign language	3-22	14

### **HR Occupations and the HR Concentration**

O\*NET includes nine occupations in its HR career pathway. Eliminating the college professors and the HR Assistant, we are left with seven HR occupations related to five courses:

1. The Human Resources Manager occupation applies to an Introductory HR course;
2. The Human Resources Specialist occupation applies to a Staffing course;
3. The Training and Development Manager occupation and the Training and Development Specialist occupation apply to an Employee Development course;
4. The Compensation and Benefits Manager occupation and the Compensation, Benefits, and Job Analysis Specialist occupation apply to a Total Rewards course; and
5. The Labor Relations Specialist occupation applies to an Employee Relations course.

### **O\*NET AND HR COURSE CONTENT**

#### **HR Occupations' Tasks and HR Course Content**

The tasks of the HR occupations help faculty prepare their students for jobs. Tables 6 to 10 include the important tasks (i.e., those rated at least 50 on the scale of 0 – 100) for seven of the occupations in O\*NET's HR career pathway. (The college Business Teacher and HR Assistant occupations are not included.) The tables present the tasks in an order that is logical for classroom presentation. The tables also compare the tasks to SHRM's curriculum guidelines.

Table 6 shows how the tasks of the Human Resources Manager occupation are related to and Introductory HR course. The HR professor can use Table 6 to help determine which topics to emphasize in class. For example, the table indicates that the professor should spend more class-time on Staffing and Total Rewards than on Training and Development.

**Table 6: Using O\*NET in an Introductory HR Course**

<b>O*NET's HR Manager's Tasks (importance)</b>	<b>SHRM Guidelines</b>
Serve as link between managers, employees (84)	<b>Strategic HR</b>
Assess industry trends (58)	HR's role
Direct company's HR activities (75)	Trends and forecasting in HR
Prepare HR function's budget (64)	Strategy implementation
	Strategy implementation
Advise managers on EEO & harassment matters (81)	<b>Employment Law</b>
	ADA, Title 7, EO11246, harassment, disparate impact/treatment, IRCA
Represent organization at hearings (74)	Enforcement agencies (EEOC, OFCCP)
	<b>Workplace Planning &amp; Talent Mgt.</b>
Prepare personnel forecast (62)	Forecasting requirements, availabilities
Allocate employees via job-person match (54)	Gap analysis, action plans
	<b>Staffing</b>
Identify vacancies, recruit, select (78)	Recruiting, Selection decisions
Provide recruits with job, company info (67)	External & internal recruiting
Conduct new employee orientation (79)	Organization entry & socialization
	<b>Training &amp; Development</b>
Analyze needs & design training (63)	Needs assessment, Various methods
	<b>HR Career Planning (secondary)</b>
Direct HR function's staff (76)	Developing leader skills
	<b>Performance Management</b>
Administer performance management system (71)	Performance improvement
	<b>Total Rewards: Comp &amp; Benefits</b>
Analyze compensation & benefit policies (82)	External competitiveness, Legal
Administer compensation & benefits systems (71)	Pay programs, Managing benefits
Oversee job classifications (62)	Internal alignment
Develop special reward projects (50)	Pay programs, Managing benefits
Investigate, report accidents for insurance (S64) *	Managing benefits
	<b>Employee &amp; Labor Relations</b>
Perform discipline, termination (80)	Discipline, Conflict management
Conduct exit interviews (63)	Attitude survey, Employee retention
Negotiate, interpret union contract (S86) *	Collective bargaining, Grievances
	<b>Outcomes: Metrics &amp; Measurement</b>
Compile statistical reports (63)	Quantitative analysis
Analyze data to improve HR policies (66)	Analyze and interpret metrics

\*Supplemental Task

Table 7 shows how the Human Resources Specialist occupation is related to a Staffing course. The HR Specialist is a new occupation title as of 2010. Prior to that, O\*NET provided three occupation titles (Recruiters, Interviewers, and Placement Specialists). O\*NET analysts combined these into one title. As seen in the table, this occupation primarily includes recruitment and selection tasks, but it also includes other duties. Table 7 indicates that a Staffing course should emphasize recruitment and selection, but it can also include topics like training managers in interview techniques, advising managers about laws, and maintaining HR records.

**Table 7: Using O\*NET in a Staffing Course**

<b>O*NET's HR Specialist's Tasks (importance)</b>	<b>SHRM Guidelines</b>
Develop recruiting strategies (66)	<b>Staffing: Recruitment</b>
Perform searches for job candidates (71)	External and internal recruitment
Advise managers on recruiting (62)	External and internal recruitment
Inform applicants about job & policies (79)	External and internal recruitment
Contact applicants about their status (67)	External and internal recruitment
	<b>Staffing: Selection</b>
Review applications (72)	Initial assessment methods
Conduct background checks (72)	Initial assessment methods
Evaluate applicant for specified license (S56)	Initial screening
Interview applicants (67)	Structured interviews
Conduct various selection tests (S59)*	Ability, non-cognitive & contingent tests
Select or refer qualified applicants (73)	Selection decisions
Hire employees (80)	Job offers
Conduct new employee orientations (76)	Organizational entry
Evaluate selection criteria (S57)	Measurement concepts
	<b>Employee &amp; Labor Relations</b>
Maintain employee records (84)	Employee records
Maintain HR documents (76)	Managing handbooks
Develop HR policies (74)	Discipline, Conflict mgmt., Attendance
Address employee relations issues (78)	Conflict mgmt., Grievance mgmt.
Conduct exit interviews (71)	Termination, Attitude surveys
Advise managers on retention (62)	Employee retention
	<b>Employment Law</b>
Maintain knowledge of EEO laws (76)	ADEA, ADA, Title 7, EO 11246,
Explain HR laws and regulations (81)	USERRA, WARN, GINA, reasonable accommodation, negligent hiring, FCRA
	<b>Training &amp; Development</b>
Train managers in interviewing (70)	Competencies
Train managers in performance mgmt. (70)	Competencies
	<b>Outcomes: Metrics &amp; Measurement</b>
Analyze employment data (62)	Trends, yield ratios, benchmark, forecast
Evaluate selection tools via research (S52)*	Quantitative analysis

\*Supplemental Task

Table 8 shows how the two Training and Development occupations (managers and specialists) are related to an Employee Development course. The table indicates that most of the course should address Training and Development following the traditional topics of needs analysis, training design, training delivery, and training evaluation. However, the course can also include topics such as evaluating trainers, training's relationship to recruitment and selection, and how trainers can keep up to date. The table also shows some question marks indicating topics that are important on the job, but are not included in SHRM's curriculum guidelines.

**Table 8: Using O-NET in an Employee Development Course**

<b>O*NET T&amp;D Occupation Tasks (importance)</b>	<b>SHRM Guidelines</b>
	<b>Training &amp; Development</b>
Analyze training needs (Mgr. 77, Spc. 81)	Needs assessment
Confer with managers on training needs (Mgr. 71)	Needs assessment
Prepare training budget (Mgr. 81)	Determine return on investment
Develop training materials (Mgr. 63, Spc. 81)	Learning theories
Develop alternative training methods (Spc. 81)	Learning theories
Offer skill-training programs (Spc. 82)	Competency models
Schedule classes (Spc. 72)	???
Assign instructors (Spc. 72)	???
Train using various methods (Mgr. 73, Spc. 80)	Learning theories
Devise programs to develop exec potential (Spc. 61)	Employee development
Conduct training for training staff (Mgr. 74)	Competencies
Train supervisors in training techniques (Mgr. 63)	Competencies
Develop testing & evaluation procedures (Mgr. 61)	Training evaluation
Evaluate program effectiveness (Spc. 85)	Training evaluation
Monitor training costs (Spc. 73)	Training evaluation
	<b>Staffing: Recruitment &amp; Selection</b>
Conduct new hire orientation (Mgr. 71, Spc. 75)	Organization entry
Coordinate recruitment of trainees (Spc. 70)	Recruiting
Hire, assign workers using qualifications (Spc. S66)	Job offers
	<b>Performance Management</b>
Evaluate instructors' training materials (Spc. 79)	Performance appraisals
Evaluate instructors' performance (Mgr. 78, Spc. 70)	Performance appraisal
	<b>Employment Law</b>
Assure apprenticeships' legal compliance (Mgr. S69)*	Enforcement agencies (EEOC, OFCCP)
	<b>HR Career Planning (secondary)</b>
Read material to keep up to date (Spc. 71)	[Avoiding] skill obsolescence
Attend seminars to obtain info (Spc. 68)	[Avoiding] skill obsolescence
Negotiate contracts with clients (Spc. 65)	???

\*Supplemental Task

Table 9 shows how the two Compensation and Benefits occupations (managers and specialists) are related to a Total Rewards course. The table indicates that the course should have almost an even split between compensation topics and benefits topics. It also indicates that a Total Rewards course can show how compensation and benefits are related to other HR activities such as strategic HR, employment law, and performance evaluation. The question marks in Table 9 mean that the SHRM guidelines do not cover certain tasks. For example, the guidelines include how job analysis results are used, but they do not include the methods of job analysis. Neither do the SHRM guidelines cover how to communicate compensation and benefits decisions.

**Table 9: Using O-NET in a Total Rewards Course**

<b>O*NET's Comp &amp; Benefit Tasks (importance)</b>	<b>SHRM Guidelines</b>
Form compensation policies (Mgr. 63)	<b>Total Rewards: Compensation</b>
Develop competitive compensation plans (Mgr. 89)	Various compensation plans
Prepare classifications and pay scales (Sp. 78)	External competitiveness
Evaluate positions for classification (Sp. 90)	Internal alignment
Advise on job class & salary complaints (Sp. 75)	Internal alignment
Negotiate union agreements (Mgr. S85)	Development of a base pay system
	Union role in wages
	<b>Total Rewards: Benefits</b>
Form benefits policies (Mgr. 63)	Various benefit plans
Design competitive & legal benefits (Mgr. 89)	Benefits plans, Regulations
Administer benefit plans (Mgr. 80, Sp. S89)*	Various benefits, Managing benefits
Research benefits, recommend changes (Sp. S64)*	Managing benefits
Implement quality of life benefits (Mgr. 75)	Education, EAP, Family-oriented, PTO
Mediate between providers and employees (Mgr. 60)	Managing benefits
Investigate accidents for insurance (Mgr. S60)*	Managing benefits
	<b>Total Rewards: Comp &amp; Benefits</b>
Direct distribution of benefits & comp info (Mgr. 81)	???
Manage tools that help employee decisions (Mgr. 75)	???
Advise managers on policies (Sp. 71)	Comp & benefit plans
	<b>Job Analysis &amp; Job Design</b>
Develop job analysis instruments (Sp. 62)	???
Collect job and organizational info (Sp. 60)	???
Research job requirements & relationships (Sp. 57)	???
Summarize job info (Sp. 71)	Career paths, Work management
	<b>Strategic HR</b>
Assess industry trends (Mgr. 56)	Trends and forecasting in HR
Prepare budgets for personnel operations (Mgr. 69)	Strategy implementation
	<b>Employment Law</b>
Study legislation (Mgr. 56)	EPA, FLSA, FMLA, COBRA, HIPPA,
Ensure legal compliance, reporting (Mgr. 83, Sp. 90)	ERISA, Lilly Ledbetter, Pregnancy
Advise managers on EEO issues (Mgr. S61, Sp. 71)	ADA, Title 7, EO11246, harassment, etc.
	<b>Performance Management</b>
Provide methods for evaluating workers (Sp. S82)*	Performance appraisal
	<b>HR Career Planning (secondary)</b>
Supervise subordinates (Mgr. 79)	Developing leader skills
	<b>Outcomes: Metrics &amp; Measurement</b>
Perform multifactor data & cost analysis (Sp. 67)	Quantitative analysis
Compile statistical reports (Mgr. 53)	Quantitative analysis
	<b>Employee &amp; Labor Relations</b>
Assist with records & handbooks (Sp. 58)	Handbooks, Employee records
Negotiate collective bargaining contracts (Sp. S75)	Collective bargaining

Table 10 shows how the Labor Relations Specialist occupation is related to an Employee and Labor Relations course. (That table does not show the tasks' importance ratings because the data collection is currently underway during 2013.) The table indicates that this course should include the traditional union-management activities of collective bargaining and grievance management. However, this course should also include non-union employee relations activities such as employee satisfaction, discipline, and employee rights.

**Table 10: Using O\*NET in an Employee & Labor Relations Course**

<b>O*NET's Labor Relations Tasks</b>	<b>SHRM Guidelines</b>
	<b>Labor Relations</b>
Advise managers on union matters	Grievance management
Monitor adherence with labor agreement	Grievance management
Investigate union complaints	Grievance management
Schedule grievance hearings	Grievance management
Select mediators or arbitrators	Grievance management
Present your party's position in arbitration	Grievance management
Assess risk levels of bargaining strategies	Collective bargaining
Recommend collective bargaining strategies	Collective bargaining
Negotiate collective bargaining agreements	Collective bargaining
Meet with union to discuss matters	Negotiation skills
Draft contract proposals	Negotiation skills
Propose resolutions	Negotiation skills
Identify alternatives to proposals	Negotiation skills
Assess impact of proposals	Negotiation skills
	<b>Employee Relations</b>
Develop methods to monitor employee satisfaction	Attitude surveys
Prepare reports about employee satisfaction	Attitude surveys
Review disciplinary actions	Disciplinary actions
Prepare evidence for disciplinary meetings	Discipline actions
	<b>Employment Law</b>
Submit government-required reports	WARN, OSHA
Research case law	Privacy, contracts, whistle-blowing, at-will, RLA, NLRA, LMRA, LMRDA
Provide expert testimony in legal proceedings	
	<b>Workplace health, safety (secondary)</b>
Develop health & safety policies	Safety management
	<b>Training &amp; Development</b>
Train managers about labor relations	Competencies

### **Comparing O\*NET Tasks and SHRM Guidelines**

This paper shows that the HR occupations in O\*NET are related to HR concentration courses. Table 11 presents the number of tasks in the O\*NET occupation descriptions in relation to the topics required by the SHRM curriculum guidelines (SHRM, 2013). Of the 17 topics that SHRM requires of HR graduate programs, the O\*NET occupations include 11. The six topics not covered are ethics, managing a diverse workforce, internal consulting, change management, globalization, and organizational development. Of the 13 topics that SHRM requires of under-

graduate programs, the O\*NET occupations include 11. The two topics not covered are ethics and managing a diverse workforce.

**Table 11: HR Occupations' Tasks versus SHRM Guidelines**

<b>SHRM Topic</b>	<b>HR Manager</b>	<b>HR Specialist</b>	<b>Training &amp; Development</b>	<b>Comp/Benefits</b>	<b>Labor Relations</b>
Employee & labor relations	3	6		3	18
Employment law	2	2	1	3	3
Ethics					
HR's role	1				
Job analysis & design				5	
Managing diverse workforce					
Outcomes: metrics	2	2		3	
Performance management	1		2	1	
Staffing: Recruit & select	4	14	3	2	
Strategic HR	3		2		
Total rewards	5			17	2
Training & development	1	2	15		1
Workforce planning	2			1	
Change management (grad)					
Globalization (grad)					
Internal consulting (grad)					
Org. Development (grad)					

Why is it that job incumbents do not rate some required SHRM topics as important? Are ethics and managing a diverse workforce really not important in HR occupations? Not necessarily. Table 11 is based on the tasks that job incumbents say are important on their jobs. Ethics is not a task. It is knowledge area that can be applied to many HR tasks. Recall that O\*NET reports the importance of various knowledge areas for each occupation. O\*NET's definition of Philosophy and Theology knowledge includes ethics. Four of the HR occupations (HR managers and specialists plus Training and Development managers and specialists) show that knowledge of Philosophy and Theology are "somewhat important" (with ratings ranging from 20 to 36 on a

scale of 0-100). This implies that ethics should be associated with an Introductory HR course or an Employee Development course.

Managing a diverse workforce is often discussed along with legal issues such as race, gender, religion, and affirmative action. Several of O\*NET's HR occupations (HR Managers, HR Specialists, Compensation and Benefits Managers, and Compensation and Benefits Specialists) have tasks such as advising managers about EEO issues. This implies that workforce diversity should be addressed in the context of employment law, not as a separate topic. That can be done in one or more of these courses: Introductory HR, Staffing, and Total Rewards.

Four SHRM required topics for graduate students only are not mentioned in O\*NET's task descriptions. These are globalization, internal consulting, change management, and organizational development.

But is Globalization really a task? Like Ethics, it can be called a knowledge area. Some of O\*NET's knowledge areas related to globalization are Economics (global labor markets), Sociology and Anthropology (cultural differences), Public Safety and Security (global security and terrorism), and Production (off-shoring and in-shoring).

Internal consulting, change management, and organizational development *are* HR tasks, but they do not appear to be a part of most HR occupations. O\*NET's Management Analyst occupation includes internal consulting and change management. The Industrial-Organizational Psychologist occupation includes change management and organizational development.

SHRM's talk is to include globalization, internal consulting, change management, and organizational development. However, many current HR job incumbents are not walking that talk. This implies that these tasks should only be included in occupation-based HR courses to the degree that faculty members want to encourage these new roles for HR professionals.

## USING O\*NET'S MATERIAL TO ENHANCE COURSES

An SHRM survey shows around half of the HR faculty respondents say that the introductory HR course is a core business requirement at their schools (SHRM, 2013). Even if it is not a business core course, it may be a required course in a major such as Business Administration or Management. So how can HR professors enhance the interest of the various students sitting in front of them? This paper suggests that O\*NET's career outlooks, pay data, the My Next Move exercise, and the job description writer can enhance the HR course for all business students.

### Career Outlooks

Within each occupation, O\*NET provides a section called Wages & Employment Trends. Information from the Bureau of Labor Statistics is shown for median wages, total employment, projected growth, projected openings, and the top two industries that employ that occupation.

Table 12 shows career outlooks for occupations in the HR career pathway. (Although Postsecondary Business Teachers are in that pathway, that occupation is not in the table because only some Business Teachers teach HR.) Two specialists are projected to grow faster than aver-

age: HR Specialists (mainly staffing duties) and Training & Development Specialists. Those two also have the highest current employment and the largest number of projected openings.

**Table 12: Career Outlook for HR Occupations**

<b>Occupation</b>	<b>Employment (2010)</b>	<b>Projected Growth (2010-2020)</b>	<b>Projected Openings (2010-2020)</b>
Human resource Managers	72,000	Average	26,900
Compensation & benefits managers	32,000	Slower than average	8,700
Training & development managers	30,000	Average	11,600
Compensation, benefit, & job analyst specialists	110,000	Slower than average	24,000
Training & development specialists	218,000	Faster than average	98,300
HR specialists & Labor re- lations specialists	442,000	Faster than average	165,300
Human resource Assistants	157,000	Average	61,600

Table 13 gives career outlook information about other business school occupations. It shows that the Financial Analyst occupation is also projected to grow faster than average. Marketing Specialists enjoy an even better outlook since they are projected to grow *much* faster than average. Those two occupations are projected to have about as many openings as the HR Specialists and Training & Development Specialists.

**Table 13: Career Outlook for Some Non-HR Business Occupations**

<b>Occupation</b>	<b>Employment (2010)</b>	<b>Projected Growth (2010-2020)</b>	<b>Projected Openings (2010-2020)</b>
Accountants	1,217,000	Average	452,100
Financial analysts	236,000	Faster than average	104,200
Financial managers	527,000	Slower than average	142,800
Marketing research & mar- keting specialists	283,000	Much faster than average	191,800
Marketing managers	178,000	Average	76,000

### **Bright Outlook**

O\*NET defines Bright Outlook occupations as those having at least one of these three characteristics:

- They are projected to grow much faster than average over the years 2010-2020 (currently 69 occupations),

- They are projected to have 100,000 or more job openings over 2010-2020 (currently 188 occupations), and
- They are new or emerging occupations in projected high growth industry (currently 152 occupations).

These projections come from the Bureau of Labor Statistics (BLS). The BLS makes an employment outlook for the combined occupation that it calls Human Resources, Training, and Labor Relations Specialists. That BLS occupation also includes compensation and benefits duties. On the one hand, we could argue that since the BLS projects 165,300 openings for that combined occupation, it should be a Bright Outlook occupation. On the other hand, if we divide the 165,300 openings evenly across the four specialties (staffing, training and development, compensation and benefits, and labor relations), there would be 41,250 openings for each specialty and none would be considered a Bright Outlook occupation. The current author's opinion is that O\*NET's Human Resource Specialist (which we have seen emphasizes staffing duties) should be a Bright Outlook occupation.

There are many Bright Outlook occupations where job incumbents rate knowledge of Personnel and Human Resources as being important. Of those occupations, the ones related to business school majors (along with the importance rating for knowledge of Personnel and Human Resources) are:

- Human Resource Specialists (86)
- Medical and Health Service Managers (77)
- General and Operations Managers (75)
- Management Analysts (72)
- Financial Managers, Branch or Department (66)
- First-Line Supervisors of Non-Retail Sales Workers (65)
- Spa Managers (64)
- Treasurers and Controllers (62)
- Quality Control Systems Managers (62)
- Logistics Managers (60)
- Sales Managers (58)
- First-Line Supervisors of Retail Sales Workers (58)
- Chief Executives (57)
- First-Line Supervisors of Office and Administrative Support Workers (57)
- Supply Chain Managers (54)

## **Pay Data**

Each occupation in O\*NET has a section labeled Wages & Employment Trends. The wage data are drawn from the Occupational Employment Statistics Survey of the Bureau of Labor Statistics, and it is updated annually. The median hourly and annual wages are reported on each occupation's O\*NET page.

In the author's experience, many students think that they can get the median wage upon graduation. They don't think about differences in job incumbents' characteristics (degrees ob-

tained, experience, and performance), industry differences, and geographical differences. This gives the HR professor the opportunity to teach about pay ranges and different labor markets.

O\*NET provides a link to pay ranges and other information at Career One Stop ([www.careerinfonet.org](http://www.careerinfonet.org)), another organization sponsored by the U.S. Department of Labor's Employment and Training Administration. That website draws its national data from BLS and its state data from particular states' agencies. It also includes data from many metropolitan areas (for example, Chicago-Joliet-Naperville, IL; Honolulu, HI; Montgomery, AL; New York-White Plains-Wayne, NY-NJ).

Table 14 shows the pay ranges for various business management occupations. The occupations in that table are intended to appeal to students of several different business school majors. Since few students will obtain managerial jobs upon graduation, Table 15 shows the pay ranges for staff specialist occupations.

**Table 14: U.S. Managerial Pay Ranges, 2012**

<b>Occupation</b>	<b>10<sup>th</sup> percentile</b>	<b>25<sup>th</sup> percentile</b>	<b>50<sup>th</sup> percentile</b>	<b>75<sup>th</sup> percentile</b>	<b>90<sup>th</sup> percentile</b>
Financial mgrs., branch/dept.	\$59,600	\$79,900	\$109,700	\$149,400	\$187,200+
Sales managers	\$53,000	\$72,200	\$105,200	\$150,600	\$187,200+
Human resources managers	\$59,000	\$76,400	\$99,700	\$132,600	\$173,100
General & operations mgrs.	\$46,900	\$65,900	\$95,400	\$145,200	\$187,200+
Logistics managers	\$48,000	\$62,600	\$81,800	\$107,500	\$138,700
Property, real estate managers	\$26,600	\$37,100	\$52,600	\$77,000	\$113,400
Lodging managers	\$29,300	\$36,300	\$46,800	\$64,200	\$89,500

**Table 15: U.S. Staff Specialist Pay Ranges, 2012**

<b>Occupation</b>	<b>10<sup>th</sup> percentile</b>	<b>25<sup>th</sup> percentile</b>	<b>50<sup>th</sup> percentile</b>	<b>75<sup>th</sup> percentile</b>	<b>90<sup>th</sup> percentile</b>
Management analysts	\$44,400	\$58,600	\$78,600	\$104,900	\$142,600
Financial analysts	\$47,100	\$59,000	\$77,000	\$103,400	\$148,400
Logisticians	\$45,200	\$57,100	\$72,800	\$91,200	\$112,100
Accountants	\$39,900	\$49,500	\$63,500	\$84,200	\$111,500
Market research analysts	\$33,300	\$43,800	\$60,300	\$85,100	\$113,500
Human resource specialists	\$32,800	\$41,800	\$55,800	\$74,100	\$95,400
Appraisers, real estate	\$25,900	\$35,400	\$49,500	\$69,800	\$91,700
Meeting/convention planners	\$26,200	\$34,900	\$45,800	\$60,300	\$79,300

### **My Next Move**

My Next Move is an online tool to help students and job seekers search for occupations they might be interested in. There are three different ways to explore careers within My Next Move. The first is labeled "Search careers with key words." This is for people who have a pretty good idea of what they would like to do. For example, if students know that they want to work in

HR, they can type “HR.” That will give occupations such as Human Resource Assistants, Compensation and Benefits Specialists, and Industrial-Organizational Psychologists.

The second method is labeled “Browse careers by industry.” This is for people who think they want to work in a particular industry, but are unsure of a specific occupation. For example, people who want to work in the hospitality industry could choose “Hotel and Food.” This would give occupations such as Bartenders, First-Line Supervisors of Food Preparation & Serving Workers, and Lodging Managers.

The third method is labeled, “Tell us what you like to do.” This is for people who don’t know what they want to be when they grow up. It includes an Interest Profiler where people rate their interests on 60 activities using a five-point scale (strongly disagree to strongly agree). It is based on Holland’s (1997) theory that work interests are grouped into six categories: realistic, investigative, artistic, social, enterprising, and conventional. A meta-analysis of over 60 years of research strongly supports this theory (Nye, Su, Rounds, & Drasgow, 2012). People get a score on each of the six dimensions in Holland’s theory.

Then people are asked to choose a Job Zone based on either their level of current or their level of future preparation. For example, a junior in college might choose Zone 3: “Medium preparation” (occupations that usually required an associate’s degree). A senior in college expecting to graduate soon might choose Zone 4: “Considerable preparation” (occupations that usually require a bachelor’s degree). O\*NET uses the person’s top three interests and the chosen Job Zone to produce a list of suggested occupations. For example, a person whose interests are high on social, enterprising, and conventional at Job Zone 4 would see occupations such as Human Resource Manager, Human Resource Specialist, and First-Line Supervisor of Non-Retail Sales Workers.

When the person chooses a suggested occupation, O\*NET produces a very readable description. That description includes a job summary, representative tasks, knowledge, skills, abilities, personality characteristics, technology used, education usually required, the job outlook, the median salary, and links to other information.

## **Job Description Writer**

O\*NET has a link to Career One Stop ([www.careerinfonet.org](http://www.careerinfonet.org)) which provides a method for writing job descriptions. Rather than start from scratch, the job description writer uses occupational data from O\*NET to help one construct a job description. That data can then be modified to produce a company-specific job description. Here are the steps:

1. Get started by entering an occupation and a state.
2. Edit and/or exclude parts of the job information:
  - a. Purpose
  - b. Education and experience
  - c. Knowledge
  - d. Skills
  - e. Work context
  - f. Tasks

- g. Activities
  - h. Tools and technology
3. Review and download the final job description.

HR faculty members can show students this method. They might give an assignment to the students to use the method to actually write a job description.

## SUMMARY AND CONCLUSIONS

The Occupational Information Network (O\*NET) is a valuable tool for professors. It supplies them with free, up-to-date, real-world data. This paper offers many suggestions as to how they can use O\*NET in their HR courses:

1. The literature review shows O\*NET is useful to HR practitioners and that it is mentioned in many HR textbooks.
2. O\*NET's ratings of the importance of personnel/human resources knowledge shows why it is important for many non-HR students to take an HR course.
3. The HR-related tasks mentioned in business-related occupations help determine the topics for an HR course in the MBA core curriculum.
4. By examining all of the knowledge areas that job incumbents say are important, HR students see the need for particular general education and business core courses.
5. The HR occupations in O\*NET show students the need for certain HR concentration courses: The HR Manager occupation is related to an Introductory HR course. The HR Specialist occupation is related to a Staffing course. The two Training and Development occupations are related to an Employee Development course. The two Compensation and Benefits occupations are related to a Total Rewards course. The Labor Relations occupation is related to an Employee Relations course.
6. O\*NET's career outlooks show students how various occupations are projected to grow (or not).
7. Knowledge of personnel/human resources is rated as important in many "bright outlook" occupations.
8. O\*NET's wage data shows students the pay for various occupations.
9. O\*NET's My Next Move helps students determine an occupation related to their interests.
10. The Job Description Writer shows students how to write a good job description.

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## REFERENCES

Barcelona, D., & Martocchio, J. J. (2011). *Student manual: Building compensation systems*. Upper Saddle River, NJ: Pearson Education, Inc.

- Bohlander, G., & Snell, S. (2004). *Managing human resources*. Mason, OH: Thomson South-Western.
- Cascio, W. F., & Aguinis, H. (2005). *Applied psychology in human resource management*. Upper Saddle River, NJ: Pearson Prentice Hall.
- DeCenzo, D. A., Robbins, S. P., & Verhulst, S. L. (2013). *Fundamentals of human resource management*. Hoboken, NJ: John Wiley & Sons.
- DeNisi, A. S., & Griffin, R. W. (2008). *Human resource management*. New York, NY: Houghton Mifflin Co.
- Dessler, G. (2012). *Fundamentals of human resource management*. Upper Saddle River, NJ: Pearson Education, Inc.
- Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments*. Odessa, FL: Psychological Assessment Resources.
- Jeanneret, P. R., & Strong, M. H. (2003). Linking O\*NET job analysis information to job requirement predictors: An O\*NET application. *Personnel Psychology*, 56 (2), 465-492.
- Lussier, R. N., & Hendon, J. R. (2013). *Human resource management: Functions, applications, skill development*. Thousand Oaks, CA: Sage Publications, Inc.
- Martocchio, J. J. (2013). *Strategic compensation: A human resource management approach*. Upper Saddle River, NJ: Pearson Education, Inc.
- Mathis, R. L., Jackson, J. H., & Valentine, S. R. (2014). *Human resource management*. Stamford, CT: Cengage Learning.
- Mello, J. A. (2011). *Strategic human resource management*. Mason, OH: South-Western Cengage Learning.
- Milkovich, G. T., Newman, J. M., & Gerhart, B. (2014). *Compensation*. New York, NY: McGraw-Hill Irwin.
- Morgeson, F. P., & Humphrey, S. E. (2006). The work design questionnaire (WDQ): Developing and validating a comprehensive measure for assessing job design and the nature of work. *Personnel Psychology*, 91(6), 1321-1339.
- National Center for O\*NET Development. (2011). *O\*NET Products at Work*. Retrieved on August 27, 2013, from [http://www.onetcenter.org/dl\\_files/paw/Products\\_at\\_Work.pdf](http://www.onetcenter.org/dl_files/paw/Products_at_Work.pdf).

- National Research Council. (2010). *A database for a changing economy: Review of the Occupational Information Network (O\*NET)*. Panel to review the Occupational Information Network (O\*NET). Nancy T. Tippins & Margaret L. Hilton, editors. Committee on National Statistics, Division of Behavioral and Social Sciences and Education. Washington, D.C.: The National Academy Press.
- Nkomo, S. M., Fottler, M. D., & McAfee, R. B. (2011). *Human resource management applications*. Mason, OH: South-Western Cengage Learning.
- Noe, R. A., Hollenbeck, J. R., Gerhart, B. & Wright, P. M. (2011). *Fundamentals of human resource management*. New York, NY: McGraw-Hill Irwin.
- Nye, C. D., Su, R., Rounds, J., & Drasgow, F. (2012). Vocational interests and performance: A quantitative summary of over 60 years of research. *Perspectives on Psychological Science*, 7 (4), 384-403.
- Peterson, N. G., Mumford, M. D., Borman, W. C., Jeannert, P. R., Fleishman, E. A., Levin, K. Y., Campion, M. A., Mayfield, M. S., Morgeson, F. P., Pearlman, K., Gowing, M. K., Lancaster, A. R., Silver, M. B., & Dye, D. M. (2001). Understanding work using the Occupational Information Network (O\*NET): Implications for practice and research. *Personnel Psychology*, 54, 451-492.
- SHRM. (2013). *SHRM human resource curriculum: An integrated approach to HR education*. Alexandria, VA: Society for Human Resource Management.
- Taylor, P. J., Li, W., Shi, K., & Borman, W. C. (2008). The transportability of job information across countries. *Personnel Psychology*, 61, 69-111.