

Part 2

Acquiring Human Resource Capability

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Chapter 4

Work Analysis and Design

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OBJECTIVES

After reading this chapter, you should be able to

1. Understand what work analysis is and what its major products are.
2. Explain the purposes of and uses for work analysis data.
3. Compare and contrast methods for collecting data.
4. Describe commonly used and newer methods for conducting work analysis, including O*NET.
5. Describe the process of competency modeling and compare this method to other forms of work analysis.
6. Explain how work analysis information is applied to job design efforts.

A

OVERVIEW

Among the HR prescriptions cited in Chapter 1 as predictive of corporate performance was the use of “validated” selection procedures, the use of formal performance appraisal, and the percentage of the workforce working in self-managed work teams. These prescriptions require some form of work or job analysis. An analysis of work is considered a building block for most HR systems in organizations. Corporate restructuring processes, quality improvement programs, human resource planning, job design, recruitment strategies, training programs, succession planning, and compensation systems are among the other HR activities that are based on work analysis. Let us not forget the importance of job analysis in the legal context discussed in Chapter 3.

Work analysis, a term which includes traditional job analysis and job design, provides the basic information that leads to specific products used or actions taken by management to create and sustain **organizational capability**. While sometimes a highly formal system involving trained analysts and standardized instruments and other times a more informal process, work analysis should be the first step for actions within most of the functional areas of HR. Consider the following scenarios:

- G4S Secure Solutions is interested in the development of a new screening test for armed security guards. It wants to be certain that the test is legally defensible and “job related” and emphasizes the most important elements of the job. Having also read the previous chapter in this book on equal employment opportunity (EEO), the consultant recommends two methods of work analysis to gather information. Why two methods?

**Work analysis for
organizational capability**

- The Wage and Hour Division of the U.S. Department of Labor recently updated recordkeeping requirements for compliance with the Fair Labor Standards Act (FLSA). Employers are required to notify workers of their rights under the FLSA and to provide information regarding hours worked and wage computation. Also, employers that seek to exclude workers from the FLSA's overtime provisions are required to perform (and document) a job analysis and to retain that analysis for possible Department of Labor scrutiny. Is there a job analysis method that can help an organization comply with the new FLSA requirements?
- At Boeing, the competency models are used for many HR processes and practices, including structured interviews, reductions-in-force, and training and development. For example, the reduction-in-force process begins by selecting the competencies identified for any particular job family that are considered most critical for current and future performance. Employees are then appraised on these competencies. Also, Boeing's training and development programs are created to align the core and technical competencies that are needed for current job performance and also to prepare employees for future jobs.
- Louis Vuitton, maker of many luxurious items, was concerned about the inefficiencies in its handbag assembly process. Assembly was made up of about 25 workers who were performing highly specialized tasks. It took about 8 days to produce one bag with this process. The company thought that a more team-based approach to assembly would speed up the process. How did Louis Vuitton go about making this change?
- Like most U.S. cities, New Haven, Connecticut, must use competitive examinations to fill vacancies for police, fire, and other civil service positions. The exams must consider character, training, experience, and physical and mental fitness. The city may choose among a variety of testing methods, including written and oral exams or various work samples or performance tests that demonstrate applicants' skills and abilities to perform the necessary work. The content of the exams must be job related. How does New Haven establish this job-related exam?
- The State of Virginia passed a law mandating that state employee pay be based on performance. However, there was a need for the development of a new performance appraisal system. The first step in the development of the appraisal system was the use of the critical incident method to identify the critical outcomes and behaviors for each position to be evaluated. Why?
- Two laboratory technicians have similar job experience and education but are employed at different local hospitals. One technician makes \$5,000 more per year than the other. The lower-paid employee asks her HR department to review her pay based on the external compensation market. What information will the hospital need in order to establish fair compensation?
- O*NET, the federal government's online database for work analysis, proves to be very valuable for military personnel leaving the service and for their families. Veterans are using the O*NET to help with relocating or transitioning from military to civilian careers and for vocational guidance. Based on the O*NET database, the Military to Civilian Occupation Translator was developed to help service members match military skills and experience to civilian occupations. The database is also useful for disabled vets because job requirements and particular disabilities can be matched. The Military Spouse Resource Center, also known as MilSpouse.org (www.careeronestop.org/militaryspouse/), is designed to help spouses and their families with career and job decisions. O*NET is a critical component of this comprehensive service. How was the Military to Civilian Occupation Translator developed?
- The Monsanto Corporation has many jobs that stipulate specific physical requirements (e.g., must be able to lift 75 lb.). The company is concerned that some of the requirements are unnecessary and may be in violation of the Civil Rights Act or the Americans with Disabilities Act (ADA). Will a work analysis help?
- A division of Ford Motor Company decided to adopt autonomous work groups (AWGs) to reconfigure a factory floor. Teams, rather than individuals, would be assigned specific tasks. The teams would divide up the work, which was as clearly defined and

standardized as in typical American factories, but all team members would be expected to be able to perform any of the work tasks. What information did the HR department at Ford need in order to help redesign jobs into these AWGs?

- The James River Corporation uses a standardized job analysis questionnaire known as the *Position Analysis Questionnaire (PAQ)* to identify the best written tests to determine admission to its pipe fitter and millwright apprenticeship programs. Based on its understanding of *Griggs v. Duke Power* on the use of tests for hiring purposes, the James River Corporation attempts to establish the “job relatedness” of the tests based on the results from the PAQ. Will the PAQ results establish the “job relatedness” and support the legal defensibility of the test?
- Pratt and Whitney, the jet engine division of United Technologies, seeks to improve its competitiveness through the elimination of activities no longer essential to the business and the improvement of existing job functions in the context of customer requirements. Can work analysis help them?
- The State of Maryland asked the consulting firm of Booz, Allen, and Hamilton to determine the necessary knowledge, skills, and abilities required to perform the essential functions of certain social work positions for the state. The study led to the reclassification of some positions, stipulating that only a bachelor’s degree should be required to do the work rather than a master’s degree in social work. Could the reclassification save the state money?
- The City of Ft. Lauderdale, Florida, updates all of its job descriptions by identifying the “essential functions” of each job according to the Americans with Disabilities Act and incorporating this language into new job descriptions. How does this serve the city?
- The City of Chicago loses a lawsuit because it cannot justify a particular passing score on a test used to screen firefighter applicants. Could it have avoided this?

Work analysis information is needed for each of these situations to assist organizations in achieving certain objectives. Job descriptions and job specifications are needed to attract and select qualified (but not overqualified) employees and evaluate compensation systems. Job standards and performance criteria are used to evaluate employee and/or unit performance; job factors are needed to group jobs to assess wage and salary systems; and tasks and context factors are examined to redesign and evaluate jobs, restructure organizations, develop succession planning, and stay on the right side of the law. Almost all programs of interest to human resource specialists and other practitioners whose work pertains to organizational personnel depend on work analysis results.¹ This chapter describes the importance of work analysis for the field of HRM. Discussion centers on the purposes for work analysis as well as the major approaches for collecting data.

The nature of work is changing, and traditional work arrangements exist alongside contingent workers, independent contractors, outsourced activities, and work teams. But while the world of work may be changing, the basics of work analysis can (and should) be the cornerstone of HR activities. Good work analysis increases the probability that the “deliverables” from the HR suppliers will meet the requirements of their customers, both internal and external. This applies even though jobs are becoming more elastic and less static and even if we don’t call them jobs anymore but rather projects or roles. Of course, the context for all work analysis must be legal and regulatory compliance.

Work analysis: Cornerstone of HR

WHAT IS WORK ANALYSIS?

Work analysis is a systematic process of gathering information about work, jobs, and the relationships among jobs.² Figure 4-1 presents a chronology of the steps to be undertaken in a comprehensive (and effective) work analysis. This approach should focus first on outputs with quality and quantity measures of those outputs. The focus is on internal and especially external customers to identify the critical products, services, or performance

Knowledge, abilities, skills,
and other characteristics
(KASOCs)

outcomes that are required of the supplier. This list of carefully defined outputs should then be the frame of reference for the rest of the steps in the analysis of that supplier’s job, starting with the major tasks or activities necessary to achieve the required outcomes defined by the customers. The required outcomes as defined by customers are derived from the strategic planning of the organization.

G4S Secure System, for example, in one of the scenarios described earlier, required a cost-effective and job-related test that would help identify persons most likely to be effective guards who were more likely to keep the job. The product to be delivered by HR was the test, and the internal customers were managers who would have to make the hiring decisions. Of course, the main frame of reference for these managers must be the external customers, the many and varied G4S customers who contracted for security guards.

Once the outputs are defined and the tasks and activities have been identified, the relative importance, relative frequency, or essentiality with which the various tasks are performed can be assessed. Remember that word *essentiality*. Many methods now require the determination of *essential functions* for jobs because of the language of the Americans with Disabilities Act (see Chapter 3 discussion). This step should include work-flow analysis.

Next, the critical **knowledges, abilities, skills, and other characteristics** (or **KASOCs**) necessary to perform the tasks must be identified. KASOCs are also called “competencies.” This step is roughly equivalent to **competency modeling**, which is discussed later. **Knowledge** refers to an organized body of information, usually of a factual or procedural nature applied directly to the performance of a function. For example, computer programmers may need knowledge of specific languages such as Java. Your instructor in this class should obviously have knowledge of research and practice in human resource management.

An **ability** refers to a demonstrated competence to perform an observable behavior or a behavior that results in an observable product. Police officers, for example, are required to possess the physical ability to apprehend and detain a suspect and the cognitive ability to understand and complete arrest forms. Vigilance also may be such an ability. For example, while the ability to perform as an airport baggage checker may not require high levels of cognitive ability, the ability to be vigilant in a fairly boring task is a critical ability. NFL quarterbacks should possess high levels of cognitive ability to be able to read (and react quickly) to defense formations.

A **skill** is a competence to perform a learned, psychomotor act and may include a manual, verbal, or mental manipulation of data, people, or things. So, in the case of a police officer, she or he must demonstrate an acceptable level of driving skill and skill in operating and maintaining a weapon, among many others.

Finally, **other personal characteristics** include various personality characteristics, attitudes, or physical or mental competencies needed to perform the job. Even something as obvious as being courteous to civilians plays an important role in determining how well officers perform their jobs. When officers are unable to empathize with crime victims, are callous in treating witnesses, or are impulsive and destroy evidence at a crime scene, they demonstrate some shortcoming on personal characteristics that affects their job performance. Being able to tolerate the belligerence of customers and control one’s temper may

Figure 4-1
The Chronological Steps
in Effective Work Analysis

Step	Critical Questions
1	What are the required outputs (i.e., what is the product, service, or information and how do we measure it?)
2	What are the essential tasks, activities, behaviors required to meet or exceed the output requirements established at step 1? What are the relative importance, frequency, and essentiality of these tasks for achieving measures at step 1? How do the tasks relate to one another?
3	What are the raw inputs that are required for the outputs and what specific equipment is necessary?
4	What are the necessary knowledges, skills, abilities, and other characteristics or competencies required to perform the activities at step 2?
5	How should jobs/work be defined? Where does the work get done to maximize efficiency/effectiveness? Do we use individual jobs, work teams, independent contractors, full-time/part-time? Do we outsource?

be critical in certain circumstances. Being able to work in teams is another example of a critical characteristic for many jobs today. An analysis could conclude, for example, that armed security guards must not have a history indicating psychiatric problems.

As you can tell from these examples, the *products* of competencies or KASOCs are typically easy to observe and ultimately serve as the basic units of observation for analysis.³ For example, the customer of the computer programmer requires a Java program that meets certain specifications. Knowledge of a computer language such as Java can be determined from an interview, responses to a written test, the possession of a certain license or graduation from a certain class, or by observing an individual attempt to program. The knowledge required to teach a class in human resource management can be determined based on the possession of certain credentials (e.g., PhD in human resource management or industrial/organizational psychology) or through an interview or test.

Establishing that someone requires driving skill to perform a job is one thing, and ascertaining that an individual has this skill is another. It would be difficult in an interview or written test to measure the latter, as they do not afford an opportunity to observe the series of behaviors that demonstrate the application of this knowledge domain in the job environment. This would seem to require observations of actual motor vehicle operation. To establish that driving skill is a requirement in the first place depends on observation in the field and a work analysis.

What Are the Major Goals for Work Analysis?

As you've probably gathered by now, much of the success (i.e., validity) of work analysis efforts is a function of the accuracy of the inferences drawn about the job from observations, interviews, and/or questionnaire data gathered through the work analysis. One underlying objective of work analysis is to minimize the inferential leaps required to arrive at a conclusion. The context for work analysis should always be critical outputs that define strategy. Toward this end, the following are offered as goals that one should strive for in the course of work analysis:

Focus on observables

1. *Work analysis should start with a description of observables.* Often the behavior or competency necessary for performing the job is not observable but the products or outcomes, kinds of materials or work aids used, and the people included in the decision process can be reported. Work analysis should focus on observable behaviors and work outputs. A *job description* is the usual product of this analysis.

Describe work not persons doing work

2. *Work analysis should describe work behavior independent of the personal characteristics of particular people who perform the job.* Quite simply, work analysis describes how a job is performed and focuses on the position, not the person doing the work. **Performance appraisal** is used to describe how well individuals perform their jobs. The actual performance appraisal instrument may have been developed from work analysis and should be linked to the job description.

Data must be reliable

3. *Work analysis data must be verifiable and reliable.* The organization should maintain records of the data, document all decisions that are data based, and be able to justify every judgment and inference. The data must be reliable, indicating that different sources agreed on judgments about the work. The source of the data clearly matters.

Do We Really Need All the Specificity in Formal Job Analysis?

While most American workers have a detailed job description that describes their work, a strong trend is to reduce the specificity in job descriptions and to reduce the number of job classifications to foster greater flexibility on how (and who) gets the work done. Precisely defined job descriptions for individual workers have been criticized by many work experts. In Japan, for example, new employees are typically hired without a job description or specifications. Japan places much greater reliance on in-house training and job rotation to foster a versatility in the skills of each new employee. Japanese managers think job descriptions can be harmful to their team-building approach to management. Many experts in job design and organizational restructuring embrace this view and believe that

job descriptions should be written for units or teams with all team members responsible for (or at least qualified to perform) all unit functions or activities. Individual job descriptions and multiple job classifications are thought to be detrimental to work group effectiveness. However, as discussed in Chapter 3, job descriptions may be needed for legal reasons and can be written in such a way as to facilitate a team-oriented approach to work processes.

Detailed job descriptions are still quite common in Europe where they are frequently required by regulation or union agreement. Every employee at the Volvo plant in Sweden, for example, has a detailed job description based on a quantitative job analysis even though the assembly process at Volvo is team based rather than the traditional assembly line. There is some evidence that things are changing in Europe. At Volkswagen, for example, all narrowly defined job descriptions were replaced in 2006 by flexible, cross-functional team-based statements similar to descriptions at Toyota. The changes to how the work got done helped Volkswagen produce cars at the same pace as its major competitors.⁴

While work analysis is often used to derive specific information about particular jobs, the data can be aggregated to the unit or function level so that the end products such as job descriptions or job specifications are defined at the team level rather than for particular positions. Often this approach to defining the job in terms of team member competencies is coupled with skill-based pay systems where individuals are compensated on their potential to perform multiple tasks as opposed to a limited set of tasks specific to a job. So a team member may be expected to perform the tasks of another who is absent, rotate task assignments with others as needed, and provide additional expert opinion on task processes or products. In this way, the team member is cross-trained to perform a number of different tasks, perhaps even all of those involved in a specific work process. In other words, no one has a monopoly on a set of tasks, as the responsibility for performance of these tasks is shared by team members.

So what's the answer to the question about the value of specificity? Unfortunately for those seeking "specificity" in this answer, it really depends on the context! While in many situations organizations can retrieve general job descriptions right off the Internet through O*NET or other sources, there are other situations where great detail in the job description and job specifications may be required. For example, had a job analysis existed with greater specificity in the Chicago lawsuit mentioned earlier regarding a particular passing score that caused adverse impact, it might have helped the city in its defense.

Need for specificity depends on purpose for work analysis

What Is the Legal Significance of Work Analysis?

Job relatedness

See "Uniform Guidelines" at eeoc.gov

There has been strong interest in job analysis since passage of the Civil Rights Act, the ADA, and subsequent court rulings and government guidelines. As discussed in Chapter 3, the "**Uniform Guidelines on Employee Selection Procedures**" (see eeoc.gov) and the Supreme Court decisions in *Griggs v. Duke Power* and *Albemarle Paper Company v. Moody* have emphasized the importance of demonstrating the **job relatedness** of employer selection systems. One way to do this is by conducting a thorough work analysis to justify personnel job specifications such as passing scores on tests or particular credentials for the job.

There are a great number of court cases that focus on the results of (or the nonexistence of) a job analysis. For example, many women have filed lawsuits contesting the physical ability tests (e.g., push-ups, sit-ups) mandated for entry into police or firefighters' academies. They often claim "adverse impact" since a greater proportion of women than men are disqualified as a result of such tests. As in the Chicago case that focused on a particular passing score on a written test that caused adverse impact, the outcomes of such cases may turn on the quality of any work analysis that formed the basis of a test and a particular passing score on a physical or mental ability test.

There also have been a number of lawsuits filed on behalf of older workers who lost their jobs because of a mandatory retirement age. For example, an Indianapolis bus driver used the ADEA to challenge the mandatory retirement age of 55 (he lost). In this case, job analysis data were successfully introduced at trial to support the age limit. On the other hand, the American Association of Retired Persons has been active in challenging mandatory retirement ages using job analysis data. The Federal Aviation Administration raised the mandatory retirement age for pilots to 65 based on work analysis data.

May need work analysis to justify cut-off scores

As discussed in Chapter 3, statistics can be used to establish prima facie evidence of discrimination under the disparate impact theory of Title VII. The burden of proof then rests with the employer to show that the selection device or job specification (e.g., the test, test score, specified years of experience, educational requirement) is “job related” or a “business necessity.”

Firefighter candidates in Dallas, Texas, were required to scale a fence 6 feet high in a prescribed amount of time. Since a higher percentage of women than men were unable to scale the fence, the court asked the city to show how scaling a fence 6 feet in height was job related. The city presented data that demonstrated that the average fence in the jurisdiction was 6 feet high and that scaling fences was a frequent activity that must be performed by competent firefighters.

Legal challenges to job specifications involving physical attributes (e.g., strength, speed) and mental attributes have increased since the Americans with Disabilities Act took effect in 1990. The ADA specifies that employers must make “reasonable accommodations” that would allow qualified workers with disabilities to perform the “essential functions” of the job. According to the EEOC, these accommodations may include physical renovations to the job and the workplace.⁵ There are many other laws that require work analysis. For example, the new U.S. Department of Labor recordkeeping requirements for compliance with the Fair Labor Standards Act (FLSA) stipulates that employers must provide information regarding hours worked and what tasks are performed. Employers excluding workers from the FLSA’s overtime provisions of the law must perform a job analysis and retain this analysis for possible Department of Labor review for compliance with the new requirement regarding what particular jobs must be paid overtime (and which ones can be exempted). Many companies now use the **Position Analysis Questionnaire** analysis to help organizations comply with the new FLSA requirements.

What Are the Major Work Analysis Products?

Job descriptions

There are numerous products that can be derived from work analysis. The most frequently and commonly used products include “job descriptions” and “job specifications.” **Job descriptions** define the job in terms of its content and scope. Although the format can vary, the job description may include information on job duties, tasks, activities, behaviors, competencies, and/or responsibilities. An identification of critical internal and external customers, equipment to be used on the job, working conditions, relationships with co-workers, and the extent of supervision required is also typical in a job description. Figure 4-2 presents an example of a job *description* for a compensation manager. In a sense, you can think of a job description as being a report of the job situation. Job descriptions are often summarized in classified employment ads and, more recently, available on the Internet through various job placement services. Go to www.online.onetcenter.org for over 1,500 job descriptions.

Job specifications

Job specifications consist of the KASOCs needed to carry out the job tasks and duties. Specific educational requirements (e.g., PhD, MD, MBA, RN, JD, EdD, MSW), certifications or licenses (e.g., CPA, CFP), or other qualifications (e.g., years of experience) are often stipulated as job specifications. Cutoff scores on tests are also job specifications. Figure 4-2 also presents an example of the job *specifications* for a compensation manager. You will note that a college degree in human resources or a related field is required for the compensation manager job along with 3–5 years’ experience. Job specifications detail the specific KASOCs or competencies required. Work analysis should be the basis of each specification.

Validate job specifications using company records

Job specifications often are contested in court because they have adverse impact against groups protected by EEO laws. Certainly job specifications that result in adverse impact against groups covered by EEO legislation should be derived from a thorough (and documented) analysis. Where data are available in company records that shed light on the relationship between a given job specification and some measure of effectiveness, these data should certainly be used. A regional manager of a 500-store clothing retailer proposed that all assistant managers in his region should have college degrees. This specification would thus be a necessary but insufficient condition for any applicant for this job. However, research from the HR department indicated that there was no correlation between having

Figure 4-2 Job Description and Job Specifications for a Compensation Manager

Job Title: Compensation Manager DOT Code: 166.167-022
Reports to:

JOB DESCRIPTION

Responsible for the design and administration of employee compensation programs. Ensures proper consideration of the relationship of salary to performance of each employee and provides consultation on salary administration to managers and supervisors.

Principal Duties and Responsibilities:

1. Ensures the preparation and maintenance of job descriptions for each current and projected position. Prepares all job descriptions, authorizing final drafts. Coordinates periodic review of all job descriptions, making revisions as necessary. Educates employees and supervisors on job description use and their intent by participation in formal training programs and by responding to their questions. Maintains accurate file of all current job descriptions. Distributes revised job descriptions to appropriate individuals.
2. Ensures the proper evaluation of job descriptions. Serves as chair of Job Evaluation Committee, coordinating its activities. Resolves disputes over proper evaluation of jobs. Assigns jobs to pay ranges and reevaluates jobs periodically through the Committee process. Conducts initial evaluation of new positions prior to hiring. Ensures integrity of job evaluation process.
3. Ensures that Company compensation rates are in accordance with the Company philosophy. Maintains current information concerning applicable salary movements taking place in comparable organizations. Obtains or conducts salary surveys as necessary. Conducts analysis of salary changes among competitors and presents recommendations on salary movements on an annual basis.
4. Ensures proper consideration of the relationship of salary to the performance of each employee. Inspects all performance appraisals and salary reviews, authorizing all pay adjustments.
5. Develops and administers the performance appraisal program. Develops and updates performance appraisal instruments. Assists in the development of training programs to educate supervisors on using the performance appraisal system. Monitors the use of the performance appraisal instruments to ensure the integrity of the system and proper use.
6. Assists in the development and oversees the administration of all bonus payments up through the Officer level.
7. Researches and provides recommendations on executive compensation issues.
8. Coordinates the development of an integrated HR information system. Assists in identifying needs; interfaces with the Management Information Systems Department to achieve departmental goals for information needs.
9. Performs related duties as assigned or as the situation dictates.

JOB SPECIFICATIONS

Required Knowledges, Skills, and Abilities:

1. Knowledge of compensation and HRM practices and principles.
2. Knowledge of job analysis procedures.
3. Knowledge of survey development and interpretation practices.
4. Knowledge of current performance appraisal issues for designing, implementing, and maintaining systems.
5. Skill in conducting job analysis interviews.
6. Skill in writing job descriptions, memorandums, letters, and proposals.
7. Skill in making group presentations, conducting job analysis interviews, and explaining policies and practices to employees and supervisors.
8. Skill in performing statistical computations including regression, correlation, and basic descriptive statistics.
9. Ability to conduct meetings.
10. Ability to plan and prioritize work.

Education and Experience Requirements:

This position requires the equivalent of a college degree in personnel, human resources, industrial psychology, or a related degree, plus 3-5 years' experience in Personnel, 2-3 of which should include compensation administration experience. An advanced degree in Industrial Psychology, Business Administration, or Personnel Management is preferred.

Work Orientation Factors:

This position may require up to 15 percent travel.

**80 percent rule
Adverse impact**

or not having a college degree and performance as an assistant store manager. In addition, HR determined that the college degree specification would make it more difficult to fill the job and would drive up the salary. In addition there was likely to be an **80 percent rule** adverse impact against minorities. The manager was persuaded to change his mind about requiring the degree for the job.

Unnecessary job specifications can translate into higher labor costs. The State of Maryland, as mentioned in the opening of the chapter, was concerned about the number of state positions that required a master's in social work (MSW), a requirement that necessitated a higher starting salary. The consulting firm of Booz, Allen, and Hamilton (BAH) conducted work analysis of these jobs and determined the extent to which the knowledge acquired by the MSW was essential for these jobs. In addition, since many positions had some MSW-trained occupants and others doing the same work with only a bachelor's degree,

Glass ceiling effect

the consultant firm also could study whether the more advanced degree was related to better performance on the job (it wasn't). BAH also found that the MSW requirement hindered the state's ability to meet its diversity goals and caused adverse impact against minorities. They recommended that the MSW job specification be dropped for these positions. The state saved millions of dollars by dropping the higher degree requirement and was able to recruit from a much larger pool of potential candidates.

Many business schools now stipulate that a PhD is required for full-time faculty position although it is conceivable that a candidate with an MBA would be less costly and perhaps as (or more) effective as an instructor of undergraduate students. Job specifications such as reading level, formal education requirements, and the like must be established at a level that reflects the minimum necessary for job entry. Establishing specifications at too high a level often results in adverse impact and can hinder diversity and affirmative action goals. For this reason, such practices are closely scrutinized by the courts. The "**glass ceiling effect**" in certain industries may to some extent be caused by job specifications that block women from many key positions because they lack certain credentials or experience.

For example, requiring an advanced degree and a minimum number of years of previous experience are examples of job specifications that could hinder the ability of women or minorities to even compete for a job—and those specifications may have been set arbitrarily. It is in an organization's best interest to determine whether a particular job specification is really necessary for success on a job. After all, more education or more years of experience almost always translate into higher salaries and more difficulty recruiting. Organizations should constantly monitor their specifications. Larger companies often have the data available to be able to assess the correlation between job specifications and important outcomes like performance. If the data are available, they really need to test the validity of job specifications. Should an employment discrimination lawsuit ensue, the plaintiffs will surely examine these data very carefully and perhaps use their own analysis to support their theory of discrimination.

In addition to job descriptions and job specifications, work analysis is used for a variety of purposes and products for both the private and the public sectors, particularly in larger organizations (Figure 4-3). Many products are related to employee compensation. Smaller businesses are less likely to use formal approaches for conducting job analyses and less likely to even use formal job descriptions. In larger organizations, including state and federal government agencies, personnel are hired, trained, and classified as job analysts. In these positions, their primary duty is to perform work analyses for **job classification** and **job evaluation** (see Figure 4-3). A great deal of their work today concerns legal compliance and, in particular, compliance with the Americans with Disabilities Act (ADA). For example, as mentioned at the start of the chapter, job analysts employed by the City of Fort Lauderdale, Florida, developed a new job analysis method that incorporated ADA language regarding "essential functions."

Work analysis also is used for recruitment and selection purposes by many companies. For example, Office Depot developed a test and a structured interview using the *Management Position Description Questionnaire*, a standardized job analysis instrument, and the **critical incident technique**. Exxon Corporation and AT&T employ a standardized questionnaire to analyze their jobs in order to develop or identify personnel selection tests for their entry-level employees. The City of New York and the Monsanto Corporation also use a quantitative job analysis method to establish very specific physical requirements for certain jobs.

Job design

Work analysis is also used to **redesign jobs** and to determine how jobs relate to one another. Pratt and Whitney, a division of United Technologies, conducted work analysis as part of a corporatewide restructuring effort. Motorola Corporation and Ford used a standardized, task-based instrument known as the *Job Diagnostic Survey* to collect information related to the development of work teams. Numerous organizations also use work analysis to develop training curricula.

Managers concerned about efficiency need to have a thorough knowledge of how work processes result in the desired (or undesired) product or service outputs. This knowledge of work processes is critical for improving efficiencies and product quality. Louis Vuitton conducted a work-flow and process analysis to redesign the assembly process for its

Figure 4-3 Products of and Purposes for Job Analysis Information

Job Description. A complete job description should contain job identification information, a job summary, the job duties, accountabilities, and job specification or employment standards information.

Job Classification. Job classification is the arrangement of jobs into classes, groups, or families according to some systematic schema. Traditional classification schemes have been based on organizational lines of authority, technology-based job/task content, and human behavior-based job content.

Job Evaluation. Job evaluation is a procedure for classifying jobs in terms of their relative worth both within an organization and within the related labor market. Job evaluation is used to determine compensation.

Job Design/Restructuring. Job design deals with the allocation and arrangement of organizational work activities and tasks into sets where a singular set of activities constitutes a “job” and is performed by the job incumbent. Job restructuring or redesign consists of reallocation or rearrangement of the work activities into different sets.

Job Specifications. Personnel requirements and specifications for a particular job are the personal knowledge, skills, aptitudes, attributes, and traits that are required for successful performance. Job specifications may be identified as minimum qualifications, as essential characteristics, or as desirable specifications. Cutoff scores on tests, credentials, licenses, degrees, and previous experience are all job specifications.

Performance Appraisal. Performance appraisal is a **systematic** evaluation of employees’ job performance by their supervisors or others who are familiar with their performance. Job analysis is used to develop the criteria or standards for the appraisal.

Worker Training. Training is a systematic, intentional process of developing specific skills and influencing behavior of organizational members such that their resultant behavior contributes to organizational effectiveness.

Worker Mobility/Succession Planning. Worker mobility (career development and pathing) is the movement of individuals into and out of positions, jobs, and occupations. From the perspective of the individual, both self-concepts and social situations change, making the process of job/occupational choice continuous due to growth, exploration, establishment, maintenance, and decline.

Efficiency. Improving efficiency in jobs involves the development of optimal work processes and design of equipment and other physical facilities with particular reference to work activities of people, including work procedures, work layout, and work standards.

Safety. Similar to efficiency, improving safety in jobs involves the development of optimal work processes and safe design of equipment and physical facilities. However, the focus is on identifying and eliminating unsafe work behaviors, physical conditions, and environmental conditions.

Human Resource Planning. Human resource planning consists of anticipatory and reactive activities by which an organization ensures that it has and will continue to have the right number and kind of people at the right places, at the right times, performing jobs that maximize both the service objectives and/or profit of the organization. It includes the activities by which an organization enhances the self-actualization and growth needs of its people and allows for the maximum utilization of their skills and talents.

Legal/Quasi-Legal Requirements. Laws, regulations, and guidelines established by government agencies (e.g., EEOC, OFCCP, OSHA) have set forth requirements related to one or more of the job analysis products or purposes listed above.

Source: Adapted from R. A. Ash, “Job Analysis Questionnaire (PAQ),” in *The Job Analysis Handbook for Business, Industry and Government*, ed. S. Gael, vol. II, pp. 826–827. Reprinted with permission.

handbags into a team-based approach where about eight people would work as a unit in order to complete an entire product such as their hot-selling Evora MM handbag. Workers had to be cross-trained to perform the multiple tasks required. Previous to this team-based redesign, assembly was made up of individual workers and the typical line was made up of about 25 people who were doing specialized tasks such as leather cutting or stitching. The new team-based approach reduced the time to assemble a complete handbag from 8 days to 1 day. This expedited process enabled Louis Vuitton to more quickly meet (and adapt to) product demands.⁶ Of course a complete understanding of the various tasks to be performed was necessary to form (and train) the teams in order to ensure that all teams had the capability to perform all tasks at a high level of competence.

Performance appraisal

Work analysis is often used to develop **performance appraisal** systems. Office Depot conducted work analysis using **competency modeling** in order to develop a multirater assessment program that would be used for feedback and development for its store managers and as a possible source of data to be used for determining managerial potential for higher level management. One of your authors led groups of district managers and HR specialists in a process of refining the company’s mission/vision statement followed by the development of “core competencies” to meet new strategic business goals. This step was followed by a refinement of the competency definitions and the development of **behaviorally anchored rating scales** to be used by peers, subordinates, supervisors, and customers in the assessment of managers.

What Are the Major Methods of Work Analysis?

There are a variety of methods used to collect information about jobs, including observation of the job, actual performance of the job, interviews, identification of critical incidents, diaries, and organization records, including customer complaints and questionnaires. Figure 4-4 presents a list of the various data collection methods available along with some

of their relative advantages and disadvantages. As noted, an analyst, often the supervisor for the position under study, can simply observe the job and record his or her observations. The analyst also can actually perform the job. Many corporations now require high-level managers to spend time performing jobs where there is personal contact with the customer. Target, for example, makes its managers work the cash register on weekends and Xerox Corporation sends its top managers on sales calls. The basic idea is to better understand the customer's perspective on the business. Individual or group interviews can be conducted with clients or customer incumbents, supervisors, or subordinates for the position under study. Incumbents or observers can be asked to maintain a diary or to record critical incidents regarding their performance or behavior on the job. Available records of work activities or other relevant information such as job descriptions, an organizational chart, and policies and procedures manuals can be reviewed by the analyst to gain background data on the job. Relevant job descriptions can also be retrieved from the Internet through O*NET, a product of the United States Department of Labor.

Figure 4-4 Advantages and Disadvantages of Common Work Analysis Data Collection Methods

Collection Method	Advantages	Disadvantages
Observation: Direct observation of job duties, work sampling or observation of segments of job performance, and indirect recording of activities (e.g., film).	Allows for a deeper understanding of job duties than relying on incumbents' descriptions.	Unable to observe mental aspects of jobs (e.g., decision making of managers, creativity of scientists); may not sample all important aspects of the job, especially important yet infrequently performed activities (e.g., use of weapons by police officers).
Performing the Job: Actual performance of job duties by the analyst.	Analyst receives firsthand experience of contextual factors on the job, including physical hazards, social demands, emotional stressors, and mental requirements; useful for jobs that can be easily learned.	May be dangerous for hazardous jobs (e.g., firefighters, patrol officers) or unethical/illegal for jobs requiring licensing or extensive training (e.g., medical doctor, psychologist, pharmacist); analyst may be exposed only to frequently performed activities.
Interviews: Individual and group interviews with job incumbents, supervisors, subordinates, clients, or other knowledgeable sources.	Information on infrequently performed activities, and physical and mental activities can be collected; use of multiple sources instead of one source can provide a more comprehensive, unbiased view of the job.	Value of the data is dependent on the interviewers' skills and may be faulty if they ask ambiguous questions; interviewees may be suspicious about the motives for the job analysis (e.g., fearful it will alter their compensation) and distort the information they provide.
Critical Incidents: Descriptions of behavioral examples of exceptionally poor or good performance, and context and consequences in which they occur.	Since observable and measurable behaviors are described, the information can be readily used for performance appraisal and training purposes; may provide insights into job expectations as defined by incumbents.	Descriptions of average or typical behavior are typically not collected so the data may be less inclusive of the entire job domain; time-consuming to gather the incidents.
Diaries: Descriptions of daily work activities by incumbents.	Written in terms familiar to incumbents and supervisors so the data may be easier to use (e.g., in developing performance appraisal measures); may provide insights into the reasons for job activities.	Time-consuming to document; may be biased accounts; may not include mental activities (e.g., innovativeness) or a representative account of all activities.
Background Records: Analysis of relevant materials and data including: organizational charts, O*NET, company training manuals, organizational policies and procedures manuals, existing job descriptions, correlational studies relating work variables (e.g., job specifications) to important outcomes.	Provide analyst with job information that assists in developing interview questions or questionnaires; validating job specifications; is relatively easy to collect/and analyze; can help determine the value of job specifications; necessary in legal context.	Generally needs to be supplemented with data collected using other methods; may be outdated materials; usually provide limited information on specific KASOCs required as well as importance of ratings of tasks.
Questionnaires: Structured forms and activity checklists (PAQ, JDS, WDQ, MPDQ, JCQ) as well as open-ended or unstructured questions (see www.onetcenter.org/questionnaires.html for downloadable questionnaires on abilities, background, education and training, knowledge, skills, work context, and work style).	Commercially available questionnaires are generally less expensive and quicker to use than other methods; can reach a large sample of incumbents or sources, which allows for a greater coverage of informed individuals; responses often can be quantified and analyzed in a variety of meaningful ways (e.g., comparisons can be made across jobs or departments for compensation or selection purposes); can be integrated with O*NET database.	Questions may be interpreted incorrectly; difficult to assess how respondents interpreted questions; response rate may be low making the results less generalizable; often expensive and time-consuming to develop, score, or analyze; open-ended questions are difficult to quantify and require content analysis that is time-consuming.

Questionnaires or checklists also can be completed by incumbents, supervisors, clients, or subordinates. Respondents can be asked to list the major tasks they perform as well as to rate the importance, frequency, time spent, or “essential” nature of each task. Respondents also can indicate how important a specific knowledge, skill, or ability is for completing the tasks. Methods are available for determining the importance of job tasks. A variety of standardized questionnaires exist for conducting job analyses, and some of the more commonly used instruments are described in a later section. Questionnaires are also available through O*NET. Go to www.onetcenter.org/questionnaires.html for downloadable instruments in English and Spanish.

Background records

Background records should be used with organizational data directly relevant to the purposes for doing the work analysis when such data are available. For example, in the State of Maryland study of social workers described earlier, one of the primary purposes of the study was to determine whether a graduate degree was really essential for the actual work being done. Some past and present social workers for the state had graduate degrees while others did not. Fortunately, the State of Maryland had performance data on social workers and could thus conduct an empirical study correlating educational level (e.g., MSW or not) with job performance. This correlational analysis was the primary basis for recommending that the MSW should be dropped as a required credential for employment (the correlation between the degree and job performance was near zero). Of course such recommendations must be made with deference to critical licensing, certification, or accreditation standards.

Correlate specifications with performance

What Are the Dimensions on Which Work Analysis May Vary?

Types of Information

Work analysis methods can vary along several dimensions, including (1) the types of information provided, (2) the forms in which job information is illustrated, (3) the standardization of the analysis, and (4) the sources of job information.⁷ Each of these dimensions is described next.

Work analysis methods can solicit a variety of types of information. Some approaches are called **task-** or **job-oriented** methods since they indicate the tasks or duties required to perform the job. For example, “performing cardiopulmonary resuscitation” is considered an important task for a nurse. Similarly, “study and evaluate state-of-the-art techniques to remain competitive and/or lead the field” may be considered an essential task for a member of the management information systems (MIS) staff. Task/job-oriented approaches can be distinguished from the other two approaches we will discuss by their identification or, at least, implication of an end product. That is, task/job-oriented approaches tend to stress “what gets done on the job.” These approaches typically produce quite detailed descriptions of the objectives for each job. As a result, they are very good for fine-grained analysis of jobs but often are too specific to allow for useful comparisons across jobs.

Position Analysis Questionnaire

Other methods such as the **Position Analysis Questionnaire (PAQ)** are considered to be **person-** or **worker-oriented** approaches since information is more focused on the KASOCs or behaviors (e.g., decision making, communicating) needed to perform the tasks satisfactorily. In the nurse example, a person-oriented analysis may determine that “knowledge of disorders of the circulatory system” is critical for competent nursing. These approaches provide less detailed information than the job/task-oriented approach but tend to provide better information for the purpose of comparing jobs and identifying job specifications.

Finally, competency modeling or trait-oriented approaches focus more on bundles of KASOCs or latent traits (physical and mental abilities and sometimes personality or temperament) a worker must possess in order to perform the required behaviors that lead to specific ends. These approaches detail the competencies or traits necessary for job success. In a sense they generate a prototype of the ideal job incumbent. They ask, “Who can perform these behaviors?” Oftentimes several approaches are combined into a more comprehensive analysis. As you can imagine, it makes little sense to ask “Who can perform these behaviors?” without first answering the questions: “What behaviors are performed?” and “For what ends?” In fact, some courts have ruled that

Use different work analysis methods for different HR functions/purposes

detailed task analysis must precede any attempt to identify critical competencies or job specifications.⁸

Almost all systematic work analysis methods collect data on the machines, tools, and work aids used. More complete analyses also include records of contextual factors of the job (e.g., physical working conditions, environmental hazards, contact with co-workers). Some methods also provide information on work performance standards (e.g., quality and quantity standards, error analysis) and specific customer requirements. These latter pieces of information are essential to support personnel decisions based on performance appraisal such as terminations, assignment to training, or promotion.

The Form of Job Information

Work analysis information can be presented in qualitative or quantitative form depending on the method used. Most methods are **qualitative** in the sense that the job is described in a narrative, nonnumerical manner and results in verbal or narrative descriptions of job information. The critical incident technique (CIT), discussed later, is an example of a qualitative method. Other methods such as the O*NET questionnaires, PAQ, the Job Compatibility Questionnaire (JCQ), the Management Position Description Questionnaire (MPDQ), and empirical analysis of background data and performance relationships are **quantitative** and provide descriptive information in numerical form. Common examples include a listing of tasks and ratings of the relative frequency, essentiality, or importance with which they are performed and descriptions of the production or error rates per period. In most cases, work analyses include both quantitative and qualitative information.

The Standardization of the Work Analysis Content

Many HRM professionals have created a uniform or consistent method for work analysis. Some methods, for example, have a set number of questions or items to which responses are required. The job analyst may be asked to write the major objectives of the position, the most important or essential tasks or functions to be performed, the KASOCs or competencies that an occupant should have for the position, the major work products or outcomes, and the critical internal or external customers for the products or services. The quantitative approaches are more standardized. The PAQ, for example, has standard content for all the jobs that are under study. Other methods have a standardized content (listing of tasks) for a group of similar jobs, but another list may be used for a different set of jobs.

Another component of the standardization process is the response format. Many methods are completed using computer sheets, direct entry through a computer diskette, or, for many approaches now, through the Internet. Many questionnaires can be completed online with near instant results for the job analyst.

Recall the discussion of the elasticity of work itself and how jobs change so rapidly. So the recommendation here is not to have too much faith in an already standardized measure since many jobs, their duties, and necessary worker competencies can change dramatically. Who would have envisioned just 15 years ago that clerical workers would have so much of their job activity centered on the computer or that automobile assembly plants would require computer competencies to the extent they do today? As a more vivid example for you, think about how the role of human resource assistant has changed from the days when most jobs in the personnel office were largely clerical and centered around payroll issues.

Sources of Job Information

There are a number of potential sources for information about a job. Cameras can be used to observe tasks, and a variety of recording devices can be used to assess employees' physiological reactions. The most common source for information is job incumbents and supervisors for the job under study. Other possibilities include job analysts or specialists trained to conduct job analyses, outside observers or consultants, subordinates to the job under study, clients or customers, or persons simply in a good position to observe the job as it is performed. Most agencies of the federal government have job analyst positions whose major responsibility is analysis of other agency jobs. Obviously, more sources of information will probably more fully capture a job on a project. As we discuss later, the source of the work analysis data does have an impact of results.

WHAT ARE THE MOST USEFUL FORMAL APPROACHES TO WORK ANALYSIS?

A great number of formal approaches are available today. One of the best sources of information on traditional job analysis is the two-volume *Job Analysis Handbook for Business, Industry, and Government*. The handbook describes 18 different job analysis methods in use today.⁹ A very readable text for novices is *Everything You Always Wanted to Know about Job Analysis*, authored by one of the leading authorities in the field.¹⁰ This chapter concentrates discussion on methods that have been used to accomplish a specific purpose.

Position Analysis Questionnaire (PAQ)

Six categories of activities

The **Position Analysis Questionnaire (PAQ)** is a standardized questionnaire that assesses activities using 187 items in six categories.¹¹ These are

1. *Information input*—where and how does the worker obtain the information needed to perform the job (e.g., use of visual or sensory input)?
2. *Mental processes*—what reasoning, planning, decision-making, or information-processing activities are necessary to perform the activities?
3. *Work output*—what physical activities are performed, and what tools are used?
4. *Relationships with other people*—what relationships with other people are required to perform the job (e.g., negotiating, performing supervisory activities)?
5. *Job context*—in what physical and social contexts is the work performed (e.g., hazards, stress)?
6. *Other job characteristics*—what other activities or characteristics are relevant to the job (e.g., apparel required, work schedule, salary basis)?

Sample items for each of the six PAQ categories are presented in Figure 4-5. Items on the PAQ are rated using different scales, including importance, amount of time required, extent of use, possibility of occurrence, applicability, and difficulty.¹² The PAQ can be completed in about 2½ hours. An online scoring form is now available (www.paq.com). Each job is scored on 32 dimensions, and a profile is constructed for the job. Norms are provided so that the job profile can be compared to profiles of benchmark jobs. PAQ results are provided based on the user's purpose(s) for conducting the work analysis. For example, a user may request "test predictions" where the PAQ results identify particular tests with estimated validities for the job under study, or job evaluation points could be provided for compensation purposes. Figure 4-6 presents a printout from a PAQ analysis of a job analyst's job. This printout identifies "G" or general intelligence as the most valid factor underlying job performance as a job analyst and even recommends particular tests (e.g., Wonderlic) that can be used to measure "G" intelligence. The 0.33 "Predictive Validity Coefficient" is the estimated correlation between scores on a general intelligence or cognitive ability test and job performance. This correlation indicates that the construct of general intelligence and the tests that measure it are valid predictors for this job (and the most valid of those considered) based on a comparison of the PAQ responses for the job under study with the PAQ database.

PAQ results can identify useful tests

PAQ results and job relatedness

The extensive research that has been conducted with the PAQ makes it one of the most useful of the standardized job analysis instruments, particularly for selection and compensation purposes. For example, PAQ results were used to first select a particular test and then to successfully support an argument of **job relatedness** in a Title VII case involving a cognitive ability test that had caused adverse impact at the James River Corporation.¹³ The approach is also excellent for small businesses with little or no expertise in human resources. Considerable research supports the use of the PAQ. However, the PAQ must usually be completed by a trained job analyst rather than incumbents since the language in the questionnaire is difficult and at a fairly high reading level. The instrument also lacks the specificity that can be gained by a questionnaire developed within the company for one or more particular positions or one adapted from the O*NET. While in *Taylor v. James River* the company was able to successfully defend a test that caused adverse impact, the safest

Taylor v. James River

Figure 4-5 Sample Items from the PAQ

POSITION ANALYSIS QUESTIONNAIRE (PAQ)

1 INFORMATION INPUT

1.1 Sources of Job Information

Rate each of the following items in terms of the extent to which it is used by the worker as a source of information in performing the job.

1.1.1 Visual Sources of Job Information

- 1 | U | Written materials (books, reports, office notes, articles, job instructions, signs, etc.)
- 2 | U | Quantitative materials (materials that deal with quantities or amounts, such as graphs, accounts, specifications, tables of numbers, etc.)
- 3 | U | Pictorial materials (pictures or picturelike materials used as *sources* of information, for example, drawings, blueprints, diagrams, maps, tracings, photographic films, x-ray films, TV pictures, etc.)

Code	Extent of Use (U)
N	Does not apply
1	Nominal, very infrequent
2	Occasional
3	Moderate
4	Considerable
5	Very substantial

2 MENTAL PROCESSES

2.2 Information Processing Activities

In this section are various human operations involving the "processing" of information or data. Rate each of the following items in terms of how important the activity is to the completion of the job.

- 39 | I | Combining information (*combining*, synthesizing, or integrating information or data from two or more sources to establish new facts, hypotheses, theories, or a more complete body of *related* information, for example, an economist using information from various sources to predict future economic conditions, a pilot flying aircraft, a judge trying a case, etc.)
- 40 | I | Analyzing information or data (for the purpose of identifying *underlying* principles or facts by *breaking down* information into component parts, for example, interpreting financial reports, diagnosing mechanical disorders or medical symptoms, etc.)
- 49 | S | Using mathematics (indicate, using the code below, the highest level of mathematics that the individual must understand as required by the job)

Code	Importance to This Job (I)
N	Does not apply
1	Very minor
2	Low
3	Average
4	High
5	Extreme

Code	Level of Mathematics
N	Does not apply.
1	Simple basic (counting, addition and subtraction of 2-digit numbers or less)
2	Basic (addition and subtraction of numbers of 3 digits or more, multiplication, division, etc.)
3	Intermediate (calculations and concepts involving fractions, decimals, percentages, etc.)
4	Advanced (algebraic, geometric, trigonometric, and statistical concepts, techniques, and procedures usually applied in standard practical situations)
5	Very advanced (advanced mathematical and statistical theory, concepts, and techniques, for example, calculus, topology, vector analysis, factor analysis, probability theory, etc.)

3 WORK OUTPUT

3.6 Manipulation/Coordination Activities

Rate the following items in terms of how important the activity is to completion of the job.

- 93 | I | Finger manipulation (making careful finger movements in various types of activities, for example, fine assembly, use of precision tools, repairing watches, use of writing and drawing instruments, hand painting of china, etc., usually the hand and arm are *not* involved to any great extent).
- 94 | I | Hand-arm manipulation (the manual control or manipulation of objects through hand and/or arm movements, which may or may not require continuous visual control, for example, repairing automobiles, packaging products, etc.)

Code	Importance to This Job (I)
N	Does not apply
1	Very minor
2	Low
3	Average
4	High
5	Extreme

(Continued)

Figure 4-5 (Continued)

RELATIONSHIPS WITH OTHER PERSONS

4 RELATIONSHIPS WITH OTHER PERSONS

This section deals with different aspects of interaction between people involved in various kinds of work.

Code	Importance to This Job (I)
N	Does not apply
1	Very minor
2	Low
3	Average
4	High
5	Extreme

4.1 Communications

Rate the following in terms of how important the *activity* is to the completion of the job.
Some jobs may involve several or all of the items in this section.

4.1.1 Oral (communicating by speaking)

99 | I | Advising (dealing with individuals in order to counsel and/or guide them with regard to problems that may be resolved by legal, financial, scientific, technical, clinical, spiritual, and/or other professional principles)

100 | I | Negotiating (dealing with others in order to reach an agreement or solution, for example, labor bargaining, diplomatic relations, etc.)

4.3 Amount of Job-Required Personal Contact

112 | S | Job-required personal contact (Indicate, using the code below, the extent of job-required contact with others, individually or in groups, for example, contact with customers, patients, students, the public, superiors, subordinates, fellow employees, official visitors, etc.; consider *only* personal contact which is definitely *part* of the job).

Code	Extent of Required Personal Contact
1	Very infrequent (almost no contact with others is required)
2	Infrequent (limited contact with others is required)
3	Occasional (moderate contact with others is required)
4	Frequent (considerable contact with others is required)
5	Very frequent (almost continual contact with others is required)

5 JOB CONTEXT

5.1 Physical Working Conditions

This section lists various working conditions. Rate the average amount of time the worker is exposed to each condition during a typical work period.

5.1.1 Outdoor environment

135 | T | Out-of-door environment (subject to changing weather conditions).

6 OTHER JOB CHARACTERISTICS

6.4 Job Demands (cont.)

172 | I | Following set procedures (need to follow specific set procedures or routines in order to obtain satisfactory outcomes, for example, following check-out lists to inspect equipment or vehicles, following procedures for changing a tire, performing specified laboratory tests, etc.)

173 | I | Time pressure of situation (rush hours in a restaurant, urgent time deadlines, rush jobs, etc.)

Source: E. J. McCormick and P. R. Jeanneret, "Position Analysis Questionnaire (PAQ)," in *The Job Analysis Handbook for Business, Industry and Government*, ed. S. Gael, vol. II, pp. 826–827. Reprinted with permission.

Figure 4-6
Option 4A: Job Profile—Part I

IDENTIFICATION INFORMATION										
PAQ Number: 002335 Organization: DOTPAQ Job Title: JOB ANALYST Dept/Unit: ADMIN SPEC Analyst(s): AVERAGE/DB Completed: 01/91 Dot Number: 166267018 N Dot Coded By: ORGANIZATION Processed: 08/20/08					Organization Number: 1 Group #: 2335 Record #: 0001 NUMBER OF ANALYSTS/TYPE Incumbents: Analysis: Supervisors: Unknown: WORKFORCE ANALYSTS (optional) Number of Job Incumbents: 39 % FM: % WH: %BL: % HS: % TO:					
JOB EVALUATION, FLSA EXEMPTION AND JOB PRESTIGE PREDICTIONS										
Job Evaluation Points:					Equation(s) Used to Calculate Job Evaluation Points (2)					
Reported Median Monthly Compensation:					816					
Probability this Job is EXEMPT from the Fair Labor Standards Act: 1.000										
Job Prestige Score: 55.1										
TEST PREDICTIONS										
GATB TESTS* *General Aptitude Test Battery	Predicted Score Range			Prob. of Use	Predictive Validity Coefficient	SIMILAR TESTS	Predicted Score Range			
	Low	Avg	High				Low	Avg	High	
G-Intelligence	102	115	128	.93	(.33)	–	Adaptability	17	20	25
							Learning Abilt	37	43	49
							Wonderlic P.T	19	26	33
V-Verbal Aptitude	99	113	127	.37	.27	–	EAS-Verbal	13	18	22
							PTI-Verbal	24	33	40
							SET-Verbal	24	37	46
							DAT-Verbal	.	.	.
							Rsn	.	.	.
							DAT-LU	.	.	.
							Sentenc	.	.	.
							DAT-LU	.	.	.
							Spelling	.	.	.
N-Numerical Apt.	100	113	127	.60	.28	–	Arith	31	36	40
							Fundmntl	40	47	53
							Arithmtc	25	34	43
							Index	28	34	39
							EAS-Numerical	14	20	24
							FIT-Arithmetic	28	40	50
							PTI-Numerical	.	.	.
							SET-Numerical	.	.	.
							DAT-Numrcl	.	.	.
							Abil	.	.	.
S-Spatial Apt.	92	109	126	.16	.18	–	EAS-Spatial	17	27	34
							FIT-Assembly	8	11	14
							Mn Ppr Frm	42	50	57
							Brd	.	.	.
							DAT-Space	.	.	.
							Rltn	.	.	.
P-Form Percept.	94	111	128	.19	.18	–	None	.	.	.
Q-Clerical	101	116	131	.50	.23	–	EAS-Visual	83	96	111
Percept.							Spd	113	136	165
							Mn Clrcl-	28	34	42
							Names	.	.	.
							SET-Clerical	.	.	.
							DAT-Clercl	.	.	.
							Spd	.	.	.
K-Motor Coord.	95	112	129	.20	.17	–	None	.	.	.
F-Finger Dexterity	81	101	120	.01	.15	–	None	.	.	.
M-Manual	83	104	124	.07	.14	–	None	.	.	.
Dexterity								.	.	.
MYERS-BRIGGS TYPE INDICATOR (MBTI) (est. % of incumbents with high score on):										
Extraversion	54	Sensing	52	Thinking	50	Judgment	62			
Introversion	46	Intuitive	48	Feeling	50	Perception	38			

Technical feasibility

approach would be to use PAQ results to recommend particular tests for hiring, but as soon as it is “**technically feasible**,” an empirical study relating test scores to job performance should be done (“technical feasibility” means at least 100 pairs of scores).

As with almost all questionnaires, results must be interpreted with caution and with consideration of the “hidden agendas” of the source of the data. The PAQ was administered to a graphic artist of a specialty mail-order firm. The graphic artist job was part-time and paid about 50 cents per hour above minimum wage. The job entailed creating original stencils for use in casting and dying. The current incumbent had approximately 6 months’ experience at the job and was taking courses part-time at a local community college. PAQ analysis of the job revealed that the job required a PhD in art history or related areas and that compensation appropriate for the work was \$55,000 per year! This result can be explained in large part by two factors. First, in the course of the analysis, answers were recorded just as the incumbent provided them to the analyst despite observations of the work performed that indicated the incumbent was grossly exaggerating the behavioral requirements of the job. And perhaps more importantly, there had been a rumor in this organization that the job analyses were to be used to revise current compensation practices. The lesson here is that the organizational context can strongly influence the validity of work analysis.

Management Position Description Questionnaire (MPDQ)

Although the PAQ has been and can be used to study managerial positions, other instruments are more suitable for executive and managerial jobs. The most heavily researched of such instruments is the **Management Position Description Questionnaire (MPDQ)**, a standardized instrument designed specifically for use in analyzing managerial jobs. The 274-item questionnaire contains 15 sections, one of which is presented in Figure 4-7.¹⁴

Two and one-half hours are required to complete the entire MPDQ. In most sections, respondents (usually the managers above the position under study) are asked to indicate how significant each item is to the position. For example, they may state that “marketing decisions” are of substantial significance to the position. A computer program generates eight reports, including a management position description, a position-tailored performance appraisal form, and a group comparison report, among others.¹⁵ The data provided by this report are particularly valuable for determining areas of emphasis in hiring, training, and staff development. For example, Office Depot relied on the MPDQ results to develop testing materials to be used in hiring its district managers. Figure 4-7 also presents a portion of Office Depot’s results. General Cinema relied on the MPDQ to construct a job-related behavioral interview and a test for theater managers.

MPDQ results, however, will not tell you whether a particular job specification is necessary for any given position. For example, Office Depot dropped its new requirement that associate store managers have college degrees not based on MPDQ results but rather a study showing no statistical relationship or correlation between having a graduate college degree and manager performance.

Competency Modeling

Although the term is confusing and, some would argue, describes a process similar to job analysis, most experts contend that **competency modeling** is focused more on how objectives are accomplished than on what is accomplished. In addition, the process of competency modeling is usually concentrated on managerial positions and should be more closely linked to business goals and strategies. Competency modeling attempts to identify and define the individual competencies that are common or core for an occupational group or the organization as a whole. By contrast, job analysis methods such as the PAQ and the MPDQ attempt to draw distinctions across jobs. The most common purpose for competency modeling is to derive performance management and training programs.

Software, now available for competency modeling through PeopleSoft, SAP, and Oracle, is very popular as the starting point for comprehensive enterprisewide resource planning systems. Try www.Haygroup.com for a popular competency modeling approach.

The focus on core competencies to drive HR systems and applications is very popular today despite the general lack of rigor in the derivation of the so-called competencies. The integration of the measurement rigor of methods such as the PAQ and the MPDQ with

Figure 4-7 **Sample Portion of**
MANAGEMENT POSITION DESCRIPTION QUESTIONNAIRE (MPDQ) and results

NAME:	B. B. BARKER	ORGANIZATION:	CDBA
EMPLOYEE I.D.:	222	SUPERVISOR:	D. D. DUNCAN
POSITION TITLE:	MANAGER	SUPERVISOR'S TITLE:	MANAGER
FUNCTIONAL AREA:	HUMAN RESOURCES	% OF JOB DESCRIBED:	90%
SUPERVISORY LEVEL:	SUPERVISOR	DATE COMPLETED:	9/11/12

I. GENERAL INFORMATION

A. HUMAN RESOURCE RESPONSIBILITIES

- Management responsibility for **7** employees: **5 (71%)** Full Time—Salaried Exempt
2 (28%) Part Time—Salaried Nonexempt
- 7** report directly and **0** report on a dotted line basis.
- Highest direct subordinate: **SR. PROGRAMMER**
- No** geographically separate facilities managed directly.

B. FINANCIAL RESPONSIBILITIES

- No annual operating budget.
- Sales for last fiscal year: **\$ 78,000.**
- Sales objective for current fiscal year: **\$ 220,000.**
- Revenue for last fiscal year: **\$ 275,000.**
- Revenue objective for current fiscal year: **\$ 230,000.**

II. POSITION ACTIVITIES

A. DECISION MAKING

Decision Making: **5%** of jobholder's time is spent on this function and it is **VERY IMPORTANT** to this position.

—Related activities and their significance:

Significance	Item No.	Activity
CRUCIAL	5	Consider the long-range implications of decisions.
CRUCIAL	8	Make decisions in new/unusual situations without clear guidelines on basis of precedent/experience.
CRUCIAL	11	Make critical decisions under time pressure.
CRUCIAL	18	Process and evaluate a variety of information before making a decision.
CRUCIAL	21	Make decisions that significantly affect customers/clients.
SUBSTANTIAL	4	Make decisions concerning the future direction of operations.
SUBSTANTIAL	7	Consider legal or ethical constraints, as well as company policy or goals, when making decisions.
SUBSTANTIAL	12	Make major product/program/technology/marketing decisions in implementing strategic business plan.
SUBSTANTIAL	14	Make decisions without hesitation when required.
MODERATE	1	Evaluate the costs/benefits of alternative solutions to problems before making decisions.

SIGNIFICANCE

THE DUTIES OF THIS POSITION REQUIRE YOU TO:

- 1. Define areas of responsibility for supervisory/managerial personnel.
- 2. Schedule activities of subordinates on a day-to-day basis to maintain steady work flow.
- 3. Interact face-to-face with subordinates on an almost daily basis.
- 4. Delegate work and assign responsibility to subordinates.
- 5. Facilitate the completion of assignments when subordinates are unable to meet commitments.
- 6. Provide detailed instructions to subordinates when making assignments.

(Continued)

Figure 4-7 (Continued)

-
- 7. Coach subordinates on technical aspects of the job.
 - 8. Provide on-the-job training for employees.
 - 9. Frequently review and provide feedback concerning the accuracy and efficiency of subordinates' work.
 - 10. Motivate employees through interpersonal interactions rather than through external incentives (e.g., pay, promotion, status, etc.).
 - 11. Motivate subordinates to improve performance through a process of goal setting and positive reinforcement (i.e., incentives).
 - 12. Work with subordinates to identify and correct weaknesses in performance.
 - 13. Conduct formal performance appraisals with subordinates.
 - 14. Develop executive-level management talent.
 - 15. Establish formal career development plans with employees.
 - 16. Implement career development and management succession plans.
 - 17. Identify the training needed for employees to acquire the skills/knowledge necessary for advancement and ensure that the appropriate training is obtained.
 - 18. Work with employees in highly emotional situations concerning personal or career problems.
 - 19. Arbitrate conflicts between supervisors and employees.
 - 20. Investigate and/or settle employee grievances/complaints.
 - 21. Take necessary action to prevent and/or resolve alleged discriminatory practices.
 - 22. Interpret, administer, and enforce personnel policies and practices (e.g., employee benefits, training or education reimbursement, affirmative action).
 - 23. Interpret and administer union contract agreements in the supervision of subordinates.
 - 24. Interview and hire individuals for approved positions.
-

What is a competency?

this focus on core competencies for HR applications should make competency modeling a more effective method for whatever purpose the data are collected.

Competency modeling is a popular form of work analysis today. A competency is defined as an “underlying characteristic of a person which results in effective and/or superior performance on the job” or as a “cluster of related knowledge, skills and attitudes that affects a major part of one’s job (role or responsibility), that correlates with performance on the job, and that can be measured against well-accepted standards.”¹⁶ The set of competencies is usually called the competency “model.” Competencies are not significantly different from KASOCs although the “modeling” approach tends to be more focused on organizational strategy goals and important performance or outcome measures. At Microsoft, for example, a small set of “foundational” or “core” competencies is identified across all competency models within the company. These foundational competencies are considered essential for success in any role at Microsoft. These core competencies are then supplemented by more job-specific competencies for particular jobs and job families.

Competency modeling typically derives job specifications based on an organization’s strategic plans. The competencies are then used to generate a “common language” across HR practices and products such as personnel selection, performance appraisal, training, and compensation. The approach is compatible with the numerous calls for the strategic alignment of HR practices with an organization’s strategic plans. Compared to other work analysis methods, the focus is much more on identifying the competencies underlying (and distinguishing between) superior and average performance.

The U.S. Department of Labor, Employment and Training Administration (ETA) is currently 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.

It is estimated that over 75 percent of companies have some form of competency-based application.¹⁷ It is estimated that firms spend \$100 million per year developing,

implementing, and revising competency models. One popular, two-level competency model distinguishes “can-do competencies” (skills and knowledge derived from education and experience) from “will-do competencies” (personality and attitudinal characteristics that reflect an individual’s willingness to perform).¹⁸

The three major differences between traditional job analysis and competency modeling are as follows: (1) Job analysis (JA) is more focused on tasks or behaviors while competency modeling is focused on the KASOCs required to perform the tasks effectively; (2) While most JA methods collect and analyze survey data from subject matter experts, competency modeling tends to be more (but shouldn’t be) qualitative; and (3) Competency modeling tends to be more future oriented and driven by the strategic plans of the organization. Perhaps the most significant difference between traditional job analysis methods and competency modeling is that executives tend to pay more attention to competency modeling, which can ultimately have a large impact on actual managerial decisions. One clear common goal of traditional JA and competency modeling is that both approaches are directed at attempting to understand the necessary requirements for performing a job effectively.

The process of deriving competencies requires a significant “inferential leap” from actual job tasks or behaviors to the competencies. This “leap” can cause legal problems. The **Uniform Guidelines on Employee Selection Procedures** (discussed in Chapter 3) require demonstrable linkages between job specifications and important job behaviors.

In an illustration of this rigorous approach, competencies were defined as clusters of measurable and relevant behaviorally based characteristics or capabilities of people.¹⁹ The capabilities were described as descriptors reflecting abilities to perform specific work activities and included specific skills or specific knowledge. The goal was to define all competencies with specific, observable, and verifiable descriptors that were reliably and logically classified together.

The researchers used a variety of methods and data to derive competencies for assessment. First, they used the **Critical Incident Technique** for associate and store manager jobs. They also reviewed company records and performance assessment criteria and conducted correlational studies of the relationship between store managers’ characteristics (and performance). Next, they interviewed subject matter experts (SMEs) and administered a questionnaire that derived ratings of the importance of various managerial tasks, activities, behaviors, knowledge, skills, and abilities for retail management positions within the company.

Four groups of SMEs—made up of trained HR specialists, district managers, and store managers—drafted and refined a list of competencies based on both the strategic business goals for the company and questionnaire results. The descriptor content for each competency was then refined into the list of competencies. A different group of SMEs was then asked to evaluate the “relative importance” weights for each competency and “relative predictive” weights for each competency. Seven competencies were identified as “core” or “generalizable” competencies such that each was judged to be a critical and independent underlying competency for successful performance at two levels of management. These categories were: technical knowledge, oral presentation/communication, written communication, interpersonal skills, planning and organizing, decision making, and leadership. These competencies were judged to be important for and representative of relatively stable and important work activities for three layers of retail management jobs within the organization.

While there are a number of so-called validated models available for managerial jobs, competency modeling usually does not determine what *specific* job specifications to require for a particular job or assignment. For example, the typical competency modeling process would require an inferential leap to determine particular educational credentials or the number of years of experience, the types of specifications most often written into want ads and provided to recruiters for searches. In general, much like the discussion in Chapter 3 regarding validation and job relatedness, the recommendation here would be to use whatever data you have to assess particular job specifications. If it’s possible to correlate the possession of a particular job specification with job performance, do the study. If EEO difficulties (e.g., prima facie evidence) should arise because of a particular job specification that has been used to screen job candidates, the plaintiffs will make every attempt to obtain data and conduct such a study.

Critical incidents

Core competencies

Competencies vs. Traits

Driven by the availability of vendor software, many companies use competency modeling to evaluate the performance of their managers. The performance appraisals are then used to make important decisions about these managers. A problem here could be the difficulty in distinguishing between competencies and psychological traits. For example, the managerial competencies utilized by the American Management Association include self-confidence, positive regard, self-control, spontaneity, stamina, and adaptability. Jaguar Cars reported complaints from managers who received low performance ratings on the “integrity” competency as a part of the performance appraisal process. Office Depot evaluates its store managers on their “personal maturity.” Store managers often disagreed with ratings indicating they needed to work on their personal maturity. Ratings on these types of competencies can cause the legal difficulties covered in Chapter 3 when ratings are used to make important personnel decisions about people such as promotions, terminations, or raises. Assessments of competencies should be clearly distinguished from measures of performance on any given job.

Figure 4-8 presents a set of best practices for competency modeling based on published research, and the experiences from major perspectives on the topic, including two major companies (Microsoft and Boeing), a major consulting firm, an academic expert on the topic, a government agency, and the Society for Industrial and Organizational Psychology (SIOP) taskforce on competency modeling.

The Boeing Company has incorporated its competency models into many HR processes, including structured interviews, reductions-in-force, and training and development.

Figure 4-8 Best Practices in Competency Modeling

ANALYZING COMPETENCY INFORMATION (IDENTIFYING COMPETENCIES)

1. Consider the organizational context—models should be tailored to the organization.
2. Link competency models to organizational goals and objectives—develop (and align) the competency model by defining organizational goals or objectives.
3. Start at the top—begin information collection with top executives.
4. Use rigorous job analysis methods to develop competencies (e.g., multiple data collection methods, sound survey, sampling and statistical methods)—assess reliability of the data and validate the model with important performance/outcome criteria linked to objectives.
5. Consider future-oriented job requirements—focus on long-range business strategies and identify the key competencies required to execute those strategies.
6. Use additional unique methods—use in-depth interviews with senior executives, and collect detailed information on past situations on the job (the critical incident technique is a good approach here).

ORGANIZING AND PRESENTING COMPETENCY INFORMATION

7. Define the anatomy of a competency (the language of competencies)—competencies best defined as KASOCs, with behaviors used to describe or illustrate the observable actions/outcomes on the job as a result of the competencies.
8. Define levels of proficiency on competencies—define levels in terms of observable behaviors and outcomes and include contextual factors.
9. Use organizational language—use an organization's unique language (e.g., common expressions, acronyms, technology, job titles, business unit titles, products).
10. Identify and include both core or fundamental (cross-job) and technical (job-specific) competencies—“fundamental” competencies because they refer to basic capabilities versus unique or job-specific or “technical” competencies.
11. Use competency libraries—this is efficient but use these “off-the-shelf” competencies as a starting point; tailor competency labels, definitions, and proficiency levels to particular organizational needs.
12. Achieve the proper level of granularity (number of competencies and amount of detail)—limit the total number of competencies to a reasonable number considered most important to distinguishing superior from average performance; can be hierarchically arranged so they are divided into categories and subcategories.
13. Use diagrams, pictures, and heuristics to communicate competency models to employees—keep these aids simple; focus on the core idea of the model. Not every detail of the model needs to be included.

USING COMPETENCY INFORMATION

14. Use organizational development techniques to ensure competency modeling acceptance and use—involve many employees from various levels in the creation of the model (critical for getting people to use the model).
15. Use competencies to develop HR systems (hiring, appraisal, promotion, compensation)—competency models are easier to use in creating HR systems than traditional job analysis methods.
16. Use competencies to align the HR systems—alignment facilitated because of small number of competencies stated at a level of generality so that their relationships with different HR systems are apparent.
17. Use competencies to develop a practical “theory” of effective job performance tailored to the organization—they should explain how and why competencies are related to job performance and organizational goals.
18. Use information technology to enhance the usability of competency models—use a single IT source of model information to enhance use and interpretation.
19. Maintain the currency of competencies over time—having a plan for updating competencies is critical.
20. Use competency modeling for legal defensibility (e.g., test validation)—if models are developed in scientifically rigorous manner, they should be appropriate (and could be advantageous) for demonstrating job relatedness.

Source: Adapted from Campion, M. A., Fink, A. A., Ruggeberg, B. J., Carr, L., Phillips, G. M. and Odman, R. B. (2011). Doing Competencies Well: Best Practices in Competency Modeling. *Personnel Psychology*, 64, 225–262.

Competency Modeling at Boeing

For example, the structured interview process incorporates behavioral anchors describing low to highly effective behaviors, and interview questions are written to align to the entry, career, and advanced levels of the job. The reduction-in-force process begins by selecting those competencies identified for a job family that are most critical for current and future performances. Employees are then evaluated on those competencies using an anchored rating scale. Finally, training and development opportunities were created to align to general and technical competencies needed for current job performance and also to prepare employees for future jobs and career paths.

Competencies at Microsoft

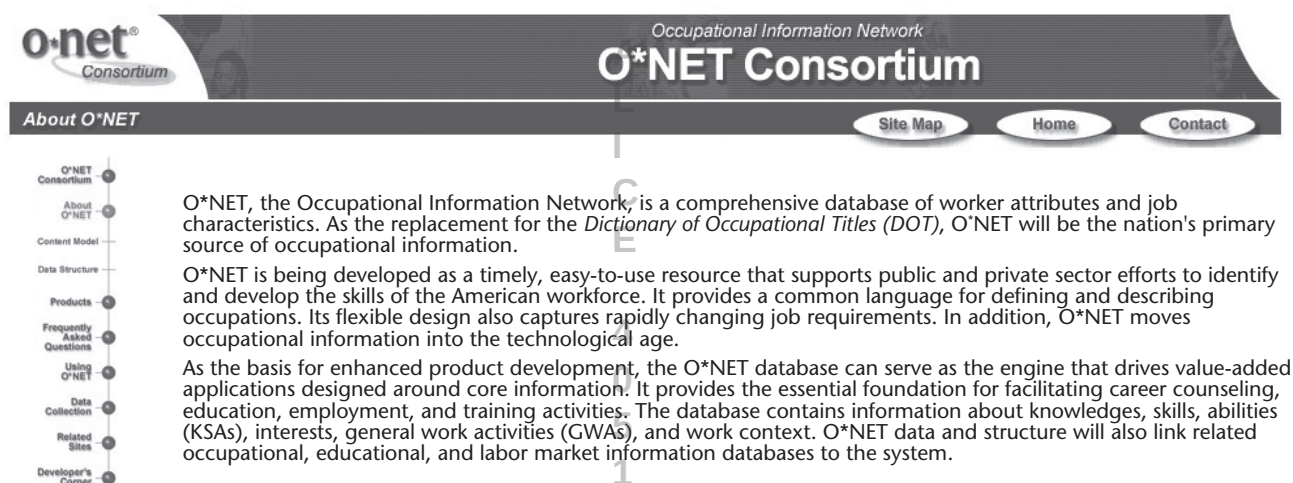
At Microsoft, the competency models are the center of its midyear career discussion (MYCD) process. During MYCD, employees and their managers each complete competency and career stage profile (CSP) assessments. These assessments then form the basis for developmental planning and for targeting future work and roles that are a good fit for an employee's present (and planned) competencies.

At the U.S. Department of State, the competency models guide promotion panels that review the performance appraisal reports to determine promotions, required training courses for each career level, and to organize course offerings for the State Department's internal university, the Foreign Service Institute. The model is also used to organize information in a skills profiling system. Its competency model integrates and aligns each HR system in order to create a development-oriented HR system that ensures the readiness of the workforce, a fundamental requirement for an organization whose main purpose is to handle each new international diplomatic crisis.

O*NET

The Occupational Information Network, or O*NET, provides an automated database for collecting, describing, and presenting reliable and valid occupational information. O*NET is now the federal government's primary source of information about occupations (see Figure 4-9 for a summary of what O*NET can do). O*NET uses multiple descriptors to reveal "multiple windows" on the world of work that can be used to address different uses for the information.

Figure 4-9 What Is O*NET?



O*NET may be used to:

- Align educational and job training curricula with current workplace needs.
- Create occupational clusters based on KSA information.
- Develop job descriptions or specifications, job orders, and resumes.
- Facilitate employee training and development initiatives.
- Develop and supplement assessment tools to identify worker attributes.
- Structure compensation and reward systems.

(Continued)

Figure 4-9 (Continued)

- Evaluate and forecast human resource requirements.
- Design and implement organizational development initiatives.
- Identify criteria to establish performance appraisal and management systems.
- Identify criteria to guide selection and placement decisions.
- Create skills-match profiles.
- Explore career options that capitalize on individual KSA profiles.
- Target recruitment efforts to maximize person-job-organizational fit.
- Improve vocational and career counseling efforts.

WHAT IS THE FOUNDATION OF O*NET?**Common Language**

O*NET offers a common language for communication across the economy and among workforce development efforts. It provides definitions and concepts for describing worker attributes and workplace requirements that can be broadly understood and easily accepted. Using comprehensive terms to describe the KSAs, interests, content, and context of work, O*NET provides a common frame of reference for understanding what is involved in effective job performance.

The goal of O*NET's common language is straightforward: "improve the quality of dialogue among people who communicate about jobs in the economy, generate employment statistics, and develop education and training programs." It provides the shared foundation of language upon which to build private and public sector workforce development efforts. Employer hiring requirements will have the same meaning for human resource practitioners, workers, education and training developers, program planners, and students.

Conceptual Framework

The conceptual foundation of O*NET is called the Content Model. The Content Model provides a framework for classifying, organizing, and structuring O*NET data.

O*NET is used by many employers now and for a variety of purposes. Boeing used O*NET to help laid-off employees in Seattle find new jobs. Some state agencies have used O*NET's emerging occupations data to plan (and fund) training and educational programs. 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, public workforce investment systems and workforce investment boards, and the U.S. Armed Forces.

O*NET has more than 275 standardized descriptors of skills, knowledges, tasks, occupation requirements, and worker abilities, interests, and values to assist managers in the building of accurate job descriptions. Organizations can also use the *O*NET Questionnaires* for free to apply O*NET descriptors to their own particular work situation. O*NET information and tools can be used to identify important elements of a job for developing or choosing training materials, to identify skill requirements to align job needs with more qualified applicants, and to define success factors for promotion and advancement.

O*NET uses "generalized work activities," which are broader than traditional task statements so that the same descriptors can be used across jobs. Because of the many intended uses for O*NET, the descriptors for each job include tasks, behaviors, abilities, skills, knowledge, styles, and work context. O*NET is based on a six-domain content model that attempts to provide a descriptive framework for describing jobs in greater detail. Figure 4-10 presents the content model and major categories within each of the six domains of the model. All of the questionnaires used to describe work using the O*NET model can be completed by job incumbents, which will be the primary source of information about work. Unlike many popular methods (e.g., PAQ), the reading level for the questionnaires allows for most incumbents to participate. All questionnaires can be downloaded from the O*NET website (onetcenter.org).

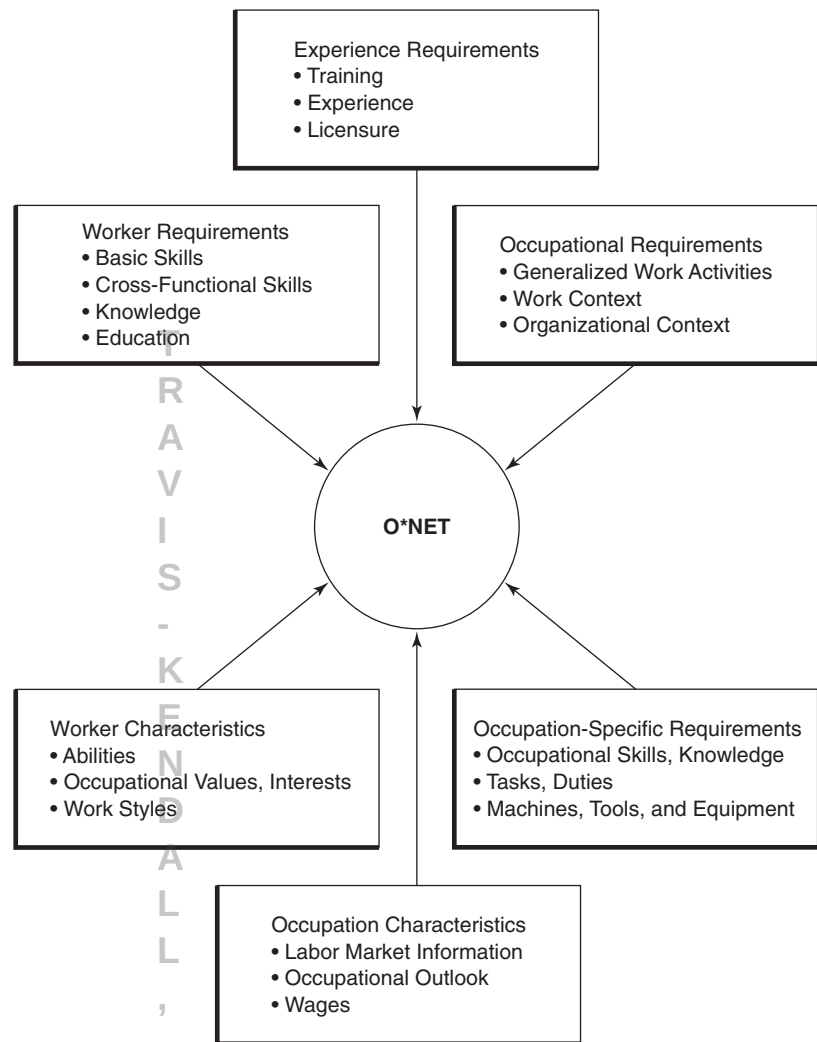
O*NET useful for developing hiring procedures

One of the many unique features of O*NET is that it classifies jobs according to worker personality and dispositional styles. Jobs are classified according to seven general style categories and 17 subcategories. The seven style categories are achievement orientation, social influence, interpersonal orientation, adjustment, conscientiousness, independence, and practical intelligence. This information can be useful for the development of selection procedures for hiring employees and for vocational counseling.

Download job descriptions from O*NET

O*NET is the most comprehensive methodology for describing occupations and workers. Figure 4-11 presents some recent illustrations of O*NET use. One showed that O*NET data can help practitioners identify useful tests for employee selection.²⁰ Many companies

Figure 4-10
O*NET Content Model



Source: N. G. Peterson et al., "Understanding Occupational Information Network (ONET): Implications for Practice and Research," *Personnel Psychology* 54 (2001), p. 58. Reprinted by permission of Wiley-Blackwell.

now use O*NET to download basic job descriptions (there are over 1,000 job descriptions). Figure 4-12 presents a portion of the job description for human resources managers retrieved from O*NET. Occupational data, including salary information, are also available. The information is obviously a great start on a detailed job description for any HRM job. Completion of the work context questions will add useful detail. The O*NET database also provides very useful compensation data at both the state and national levels (see Figure 4-12).

Critical Incident Technique (CIT)

Four characteristics of a good critical incident

The **critical incident technique** is a qualitative approach for obtaining specific, behaviorally focused descriptions of work or other activities. The technique originally was developed as a training needs assessment and performance appraisal tool.²¹ In this regard, individuals recalled and reported specific behavioral examples of incidents that reflected exceptionally good or exceptionally poor performance.

A critical incident should possess four characteristics. It should be *specific*, focus on *observable* behaviors that have been exhibited on the job, describe the *context* in which the behavior occurred, and indicate the *consequences*, outcomes, or products of the behavior. A critical incident also must be sufficiently detailed so that knowledgeable people will picture the same incident as it was experienced by the individual. One vivid example of a critical incident characterizing extremely poor performance was provided by a police

Figure 4-11 Recent Illustrations of O*NET product and Data Use

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.

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 used occupational data in the O*NET database

Colorado State University's Department of Psychology has developed an interactive career assessment tool to be used by Colorado's community college students.

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 reentering the world of work or transitioning between jobs.

Corporate Gray Online is a website devoted to linking employers with transitioning or former military personnel.

The Job Skills Transfer Assessment Tool (JobSTAT) is a web-based tool offered by the Minnesota Department of Employment and Economic Development.

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.

JobZone is a career information and management system for adult jobseekers used in all of New York's regional One-Stop Employment Centers.

MyPlan.com is a comprehensive preparation website for school curriculum planning and career exploration. It presents valuable information to job seekers and students who want to make informed career-planning decisions. Wackenhut

my Skills myFuture is a website 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.

The American Foundation for the Blind (AFB) uses O*NET data to help the visually impaired expand their employment possibilities.

Health and medical science career exploration with Life Works™ is accomplished through an interactive career development website operated by the **National Institutes of Health's Office of Science Education**. Driven by O*NET data, the Life Works search engine, or Career Finder, offers an array of information on more than 100 health and medical science careers.

Figure 4-12 Job Description from O*NET

o-net® OnLine Occupational Information Network **O*NET OnLine**

Related Links | OnLine Help | Home Occupation Quick Search: Go

SUMMARY REPORT FOR: 11-3040.00—HUMAN RESOURCES MANAGERS

Plan, direct, and coordinate human resource management activities of an organization to maximize the strategic use of human resources and maintain functions such as employee compensation, recruitment, personnel policies, and regulatory compliance.

Sample of reported job titles: Human Resources Manager, Director of Human Resources, HR Director (Human Resources Director), Employee Benefits Manager, Employee Relations Manager.

View report:

Summary	Details	Custom
---------	---------	--------

Tasks | Knowledge | Skills | Abilities | Work Activities | Work Context | Job Zone | Interests |
Work Styles | Work Values | Related Occupations | Wages & Employment

Tasks

- Administer compensation, benefits and performance management systems, and safety and recreation programs.
- Identify staff vacancies and recruit, interview, and select applicants.
- Allocate human resources, ensuring appropriate matches between personnel.
- Provide current and prospective employees with information about policies, job duties, working conditions, wages, opportunities for promotion and employee benefits.
- Perform difficult staffing duties, including dealing with understaffing, refereeing disputes, firing employees, and administering disciplinary procedures.
- Advise managers on organizational policy matters such as equal employment opportunity and sexual harassment, and recommend needed changes.
- Analyze and modify compensation and benefits policies to establish competitive programs and ensure compliance with legal requirements.
- Plan and conduct new employee orientation to foster positive attitude toward organizational objectives.
- Serve as a link between management and employees by handling questions, interpreting and administering contracts and helping resolve work-related problems.
- Plan, direct, supervise, and coordinate work activities of subordinates and staff relating to employment, compensation, labor relations, and employee relations.

Knowledge

Personnel and Human Resources—Knowledge of principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems.

(Continued)

Figure 4-12 (Continued)

English Language—Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Customer and Personal Service—Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

Administration and Management—Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.

Law and Government—Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.

Clerical—Knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology.

Education and Training—Knowledge of principles and methods for curriculum and training design, teaching and instruction for individuals and groups, and the measurement of training effects.

Economics and Accounting—Knowledge of economic and accounting principles and practices, the financial markets, banking and the analysis and reporting of financial data.

Psychology—Knowledge of human behavior and performance; individual differences in ability, personality, and interests; learning and motivation; psychological research methods; and the assessment and treatment of behavioral and affective disorders.

Mathematics—Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

Skills

Active Listening—Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Management of Personnel Resources—Motivating, developing, and directing people as they work, identifying the best people for the job.

Reading Comprehension—Understanding written sentences and paragraphs in work-related documents.

Writing—Communicating effectively in writing as appropriate for the needs of the audience.

Speaking—Talking to others to convey information effectively.

Negotiation—Bringing others together and trying to reconcile differences.

Time Management—Managing one's own time and the time of others.

Social Perceptiveness—Being aware of others' reactions and understanding why they react as they do.

Critical Thinking—Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Monitoring—Monitoring/assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Abilities

Oral Comprehension—The ability to listen to and understand information and ideas presented through spoken words and sentences.

Oral Expression—The ability to communicate information and ideas in speaking so others will understand.

Written Comprehension—The ability to read and understand information and ideas presented in writing.

Written Expression—The ability to communicate information and ideas in writing so others will understand.

Speech Recognition—The ability to identify and understand the speech of another person.

Speech Clarity—The ability to speak clearly so others can understand you.

Problem Sensitivity—The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

Deductive Reasoning—The ability to apply general rules to specific problems to produce answers that make sense.

Inductive Reasoning—The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).

Originality—The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.

Work Activities

Establishing and Maintaining Interpersonal Relationships—Developing constructive and cooperative working relationships with others, and maintaining them over time.

Communicating with Supervisors, Peers, or Subordinates—Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.

Making Decisions and Solving Problems—Analyzing information and evaluating results to choose the best solution and solve problems.

Staffing Organizational Units—Recruiting, interviewing, selecting, hiring, and promoting employees in an organization.

Getting Information—Observing, receiving, and otherwise obtaining information from all relevant sources.

Judging the Qualities of Things, Services, or People—Assessing the value, importance, or quality of things or people.

Resolving Conflicts and Negotiating with Others—Handling complaints, settling disputes, and resolving grievances and conflicts, or otherwise negotiating with others.

Guiding, Directing, and Motivating Subordinates—Providing guidance and direction to subordinates, including setting performance standards and monitoring performance.

Evaluating Information to Determine Compliance with Standards—Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.

Coaching and Developing Others—Identifying the developmental needs of others and coaching, mentoring, or otherwise helping others to improve their knowledge or skills.

(Continued)

Figure 4-12 (Continued)**Work Context**

Telephone—How often do you have telephone conversations in this job?

Indoors, Environmentally Controlled—How often does this job require working indoors in environmentally controlled conditions?

Structured versus Unstructured Work—To what extent is this job structured for the worker, rather than allowing the worker to determine tasks, priorities, and goals?

Contact With Others—How much does this job require the worker to be in contact with others (face-to-face, by telephone, or otherwise) in order to perform it?

Electronic Mail—How often do you use electronic mail in this job?

Spend Time Sitting—How much does this job require sitting?

Freedom to Make Decisions—How much decision making freedom, without supervision, does the job offer?

Importance of Being Exact or Accurate—How important is being very exact or highly accurate in performing this job?

Face-to-Face Discussions—How often do you have to have face-to-face discussions with individuals or teams in this job?

Letters and Memos—How often does the job require written letters and memos?

Job Zone

Title	Job Zone Four: Considerable Preparation Needed
Overall experience	A minimum of two to four years of work-related skill, knowledge, or experience is needed for these occupations. For example, an accountant must complete four years of college and work for several years in accounting to be considered qualified.
Job training	Employees in these occupations usually need several years of work-related experience, on-the-job training, and/or vocational training.
Job zone	Many of these occupations involve coordinating, supervising,
Examples	Managing, or training others. Examples include accountants, chefs and head cooks, computer programmers, historians, pharmacists, and police detectives.
SVP range	(7.0 to ≤ 8.0)
Education	Most of these occupations require a four-year bachelor's degree, but some do not.

Interests

Enterprising—Enterprising occupations frequently involve starting up and carrying out projects. These occupations can involve leading people and making many decisions. Sometimes they require risk taking and often deal with business.

Social—Social occupations frequently involve working with, communicating with, and teaching people. These occupations often involve helping or providing service to others.

Conventional—Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.

Work Styles

Concern for Others—Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.

Attention to Detail—Job requires being careful about detail and thorough in completing work tasks.

Integrity—Job requires being honest and ethical.

Initiative—Job requires a willingness to take on responsibilities and challenges.

Independence—Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

Persistence—Job requires persistence in the face of obstacles.

Dependability—Job requires being reliable, responsible, and dependable, and fulfilling obligations.

Stress Tolerance—Job requires accepting criticism and dealing calmly and effectively with high stress situations.

Leadership—Job requires a willingness to lead, take charge, and offer opinions and direction.

Self Control—Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.

Work Values

Achievement—Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

Independence—Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

Related Occupations

11-3011.00	Administrative Services Managers
11-9111.00	Medical and Health Services Managers
11-9131.00	Postmasters and Mail Superintendents
13-1073.00	Training and Development Specialists

Wages

Median Wages (2011) \$42.95 hourly, \$89,330 annual

Source: Bureau of Labor Statistics, Occupational Employment Statistics Survey.

officer in describing an ex-partner. He wrote, “while on duty, this officer went out of his assigned duty area, went into a bar, got drunk, and had his gun stolen.”

A critical incident report references actual behavior in a specific situation with no mention of traits or judgmental inferences. The following is an example of a well-written critical incident. “I observed an employee looking through the scrap tub. Shortly later, she came to me stating that someone had thrown a large piece of cast iron piston into the scrap tub. We salvaged this piston and, a short time later, used this piece to make a pulley for a very urgently needed job.” The following example does *not* qualify as a well-written critical incident: “The employee completely lacked initiative in getting the job done. While there was plenty of opportunity, I couldn’t count on her to deliver.” This incident mentions a trait (initiative), does not describe either the situation or the employee’s behavior in any detail, and is judgmental in nature.

CIT is excellent for performance appraisal development

The critical incident technique has been used to study a variety of jobs such as those of airline pilots, air traffic controllers, research scientists, dentists, industrial foremen, life insurance agents, sales clerks, retail managers, and college professors. One major purpose of the use of CIT is to develop performance appraisal systems. CIT is also an excellent approach for the development of customer satisfaction instruments. Customers provide the examples of effective and ineffective customer service that are then used to develop a standardized customer service evaluation instrument. Burger King, Office Depot, and Continental Bank used the critical incident method to develop a performance appraisal instrument used by “professional customers” to assess compliance with company regulations regarding customer service. **The CIT is also very useful for developing highly detailed selection procedures such as assessment centers or behavioral interviews.** Office Depot developed its district manager assessment methods using both MPDQ and critical incident results.

Personality-Based Job Analysis

Personality inventories are quite popular now to help make hiring and promotion decisions. Researchers generally agree that personality is important for the prediction of job performance and most also agree that a useful taxonomy of personality is the **Five-Factor Model**, which we discuss in Chapter 6. These so-called Big Five personality factors are as follows: (1) neuroticism (or emotional stability); (2) extroversion/introversion; (3) openness to experience; (4) agreeableness/likability; and (5) conscientiousness. As we discuss in Chapter 6, there is evidence that higher or lower scores on these factors are related to job performance and that the relative predictive importance of the five factors differs as a function of the particular job.

It is argued that personality-based job analysis is particularly useful for cross-functional jobs that cannot be easily described in terms of simple tasks or particular abilities. The **Personality-Related Position Requirements Form (PPRF)** is a worker-oriented, job analysis method that assesses the extent to which each of the “Big Five” factors and its underlying facets is needed or important for a particular job.²² Subsequent development resulted in identifying 12 specific sets of items for the underlying facets of each of the Big Five. In a study of 260 jobs, PPRF data reliably differentiated among jobs. The PPRF technical report maps the results to a highly regarded Big-Five selection instrument. The report states that “This hypothesis table is not meant to be definitive, but rather is presented as a demonstration of how an existing set of personality measures might be mapped onto the PPRF; we believe that users can make their own informed connections of this type for their preferred instruments. . . . The PPRF is intended to help in hypothesis developments but is not a substitute for a user’s professional judgment.”

The method was used to identify the most important factors for the performance of snipers in the Canadian Army (probably besides shooting ability) and then used to construct a selection battery for this vital position. A recent study showed that an “on-line” training program could effectively reduce the biases using the PPRF.²³

Personality-Related Position Requirements Form

Fleishman Job-Analysis Survey (F-JAS)

The **Fleishman Job Analysis Survey (F-JAS)** is a system for describing jobs and tasks in terms of the abilities, skills, knowledge, and social-interpersonal attributes required for the job. It is one of the most thoroughly researched of the formal JA methods. The

system is based on Fleishman's Taxonomy of Human Abilities, Fleishman's taxonomies of knowledge and social-interpersonal attributes, and a taxonomy of skills.²⁴ F-JAS is used to identify characteristics of jobs and tasks that are related to the requirements people need to perform these jobs and tasks. Thus, the F-JAS method provides a direct link between job tasks and the characteristics of individuals required to perform these tasks effectively. The assumption is that tasks and jobs differ in the extent to which each selected attribute is required for successful performance of the task or job. The F-JAS provides a method through which an individual's attribute profile can then be compared with the requirements of the job identified in the job analysis.

The F-JAS web tool also helps with the identification or development of selection, training, and evaluation programs. A job analysis can use the attributes identified by the F-JAS result to select or develop job-related measures. For selection, consultants can link the F-JAS results with the commercially available tests listed in the "Handbook" that have been identified as valid measures of these abilities. The F-JAS is fairly easy to use and provides instant scoring and interpretation at a rather low cost (<http://www.managementresearchinstitute.com/f-jas.aspx>).

Job Compatibility Questionnaire (JCQ)

The **Job Compatibility Questionnaire (JCQ)** was designed as a work analysis method to be used in the development of personnel selection instruments and intervention strategies.²⁵ Unlike other work analysis methods, the JCQ gathers information on all aspects of the work experience that are thought to be related to employee performance, absences, turnover, and job satisfaction. The underlying assumption of the JCQ is that the greater the compatibility between a job applicant's preferences for work characteristics and the characteristics of a job as perceived by job incumbents, the more likely that the applicant will stay in the job longer and be more effective. The primary goal of the JCQ methodology is to derive perceptions of job characteristics from incumbents' perspectives and to develop selection instruments capable of assessing the extent to which job applicants' preferences are compatible with these perspectives. The selection instrument derived from the JCQ is designed to predict and ultimately increase the level of employee effectiveness. In addition, the instrument can be used to redesign jobs to increase group effectiveness and decrease absences and turnover.

The JCQ is a 200-item instrument that measures job factors that have been shown by previous research to be related to one or more effectiveness criteria (e.g., performance, turnover, absenteeism, job satisfaction). Items cover the following job factors: task requirements, physical environment, customer characteristics, co-worker characteristics, leader characteristics, worker compensation preferences, dispositional factors, task variety, job autonomy, physical demands, and work schedule.

The JCQ is administered to job incumbents, who are asked to indicate the extent to which each JCQ item is descriptive of the job. Thus, an incumbent is asked to indicate on a five-point scale how descriptive each item is of his/her job. A sample list of characteristics is presented next.

- Working alone all day.
- Having different projects that challenge the intellect.
- Staying physically active all day.
- Working at my own pace.
- Being able to choose the order of my work tasks.
- Working under the constant threat of danger.
- Having to copy or post numerical data all day.
- Having to make public speeches.
- Working under extreme time pressure.
- Having an opportunity to be creative at work.

The average time required to complete the JCQ is 30 minutes and can be reduced by removing items and factors that clearly do not apply to the job under study. There is also

Work analysis with JCQ generates a selection tool

a provision for adding important characteristics that are not covered on the JCQ such as those that may characterize organizational culture or climate.

Responses from incumbents on the JCQ are used to derive a selection instrument with a scoring key. The selection instrument items come directly from the items on the JCQ. Figure 4-13 provides some sample items that were derived from the JCQ approach to work analysis. This is part of a 35-item JCQ-based test that was developed for security guard jobs for one of the largest security guard companies in the world. The items in Figure 4-13 from within each pair with an * are the job characteristics identified as “very descriptive” of the job for which the test will be used for hiring purposes. The details of this process are discussed in Chapter 6.

Research indicates that the tests that evolve from the JCQ do a good job in predicting retention for low-wage jobs such as customer service representatives, theater personnel, security guards, telephone interviewers, and counter personnel. The JCQ is usually nested within a comprehensive test that also assesses applicants on their job-related competencies. The JCQ has not been validated (or used) for higher-level jobs (e.g., managerial) and is not recommended for such positions.

The JCQ also can be used to identify those characteristics of a particular job that are most highly correlated with important outcomes such as employee turnover and job performance. JCQ results are then used to redesign jobs. For example, at Tenneco Corporation, responses to the JCQ indicated strong preferences for a pay-for-performance system and a more stable work schedule. These work characteristics, shown to be related to employee turnover, were changed at relatively little cost and turnover was reduced by 14 percent, saving Tenneco over \$2 million over 3 years.

Work Analysis for Job Design

A popular application of work analysis today is for **job design** and redesign efforts. This application reflects an orientation toward either creating or, more often, changing the manner in which work gets done. There is now a strong interest in efficiencies, particularly as related to new technologies, and with goals related to increasing the quality or quantity of outputs and reducing costs. Many of these work analyses have focused on redesigning jobs to take advantage of technology in order to reduce “head count” (and thus costs). While this “lean production” orientation is evident (and very successful) in manufacturing, there is now more attention directed at services and getting more done for less.

Job design or redesign almost always requires an understanding of how jobs relate to one another. The **organizational structure** is defined as the network of relationships or the connections among the various jobs of an organization. These connections or relationships should transcend functional areas such as marketing or production and should be defined

Figure 4-13
Sample Test Items from
the Job Compatibility
Questionnaire

From each pair of statements select the one that you consider to be the most undesirable in a job you might have:

1. a. Having frequent face-to-face discussions with people?
b. Having to be very punctual at work?*
2. a. Having to make frequent speeches?
b. Having to wear a uniform at work?*
3. a. Having to provide information and ideas in writing?
b. Having the same routine every day at work?*
4. a. Having constant interactions with customers?
b. Spending most of my time at work alone?*
5. a. Having to write a lot of reports?
b. Working on a boring job?*
6. a. Dealing with people who complain a lot?*
- b. Selling a product that is not very good?
7. a. Having to closely monitor the behavior of others?*
- b. Having to frequently and quickly do math at work?
8. a. Having to work outdoors in hot or cold weather?*
- b. Having to work indoors with poor ventilation?

Note: * indicates characteristics that are “very descriptive” of the job being tested for.

in terms of both vertical (e.g., supervisors and subordinates) and horizontal relationships (e.g., peer to peer). Work analysis that is directed at improving productivity or efficiencies requires a thorough understanding of how jobs relate to one another and how critical outputs from the various jobs relate to one another as well. This understanding is particularly critical when the goal of the work analysis is to improve the competitive position of the organization by decreasing costs or improving the quality of outputs.

One major area related to technology is the use of artificial intelligence and “e-discovery” software capable of analyzing documents much faster than humans. Programs are now available that go beyond finding information based on key terms to do searches based on concepts. For example, in conducting legal research, there is some evidence that such computerized document analysis is not only much faster and cheaper than using lawyers, it may also be more accurate in identifying the pertinent information. Says Bill Herr, a lawyer at a major chemical company, “People get bored, people get headaches. Computers don’t.”²⁶ Another example is that many hospitals have created paperless processes because of great software and “apps” that are available for easy information entry and access to all pertinent medical information. This change has eliminated the need for medical records departments, copiers, and many other costs while increasing efficiencies and reducing errors. Nurses and doctors require fairly simple training on the use of the new technology and the paperless approach appears to be a very effective job design change.

Enriching jobs

Another somewhat contradictory focus for job redesign is “enriching” jobs so as to increase employee motivation and job satisfaction. Such enrichment efforts usually entail providing more meaningful work, greater responsibility, and greater worker autonomy. There is evidence that the enrichment approach is worthwhile. One review found that work design had a great impact on worker satisfaction and job performance, explaining an average of 43 percent of the variability in these outcomes.²⁷ Managers would do well to focus on both efficiencies and worker job satisfaction and motivation.

Oftentimes a goal for job design is increased efficiency (e.g., producing more with less) or improved quality. Here the manager is clearly interested in changing the way in which the work gets done. Thus while other job analysis methods focus on what is being done on the job, job design is focused on how work should be organized to foster greater efficiencies. The various approaches to job redesign clearly have trade-offs in the sense that the effort to increase efficiency has the potential to reduce the motivational aspects of a job. Managers would do well to focus on both efficiencies and worker job satisfaction and motivation. The result of this two-pronged approach can be motivated and satisfied workers operating in a highly efficient work environment.

Job Diagnostic Survey

The most well-known and well-researched job enrichment approach is the **Job Characteristics Model**, which uses the **Job Diagnostic Survey (JDS)** to measure work characteristics.²⁸ The Job Characteristics Model emphasizes enhancing the intrinsic aspects of an employee’s work to increase satisfaction and performance. The model states that workers will be more motivated and satisfied, produce better quality work, and have less absenteeism and turnover to the extent that they experience three psychological states: (1) they believe their *work is meaningful*, (2) they have *responsibility for the outcomes* of their work, and (3) they *receive feedback on the results* of their work.

Work Design Questionnaire is recommended over the JDS

There has been much criticism of the JDS and the Job Characteristics Model and the resultant research. A new and superior instrument is the “**Work Design Questionnaire**” (WDQ), which expands knowledge of work design.²⁹ The WDQ has been used to study the relationship between work design variables and important work outcomes such as job satisfaction and performance outcomes. Figure 4-14 presents the list of the 18 work characteristics and sample items representing each of the characteristics measured using the WDQ.

Predictors of job satisfaction: autonomy and social support

Research with the WDQ indicates that the two best predictors of job satisfaction are autonomy (i.e., the extent to which a job allows freedom, independence, and discretion to schedule work, make decisions, and choose the methods used to perform tasks) and social support (the degree to which a job provides opportunities for advice and assistance from others). Thus, if an organization has an interest in improving job satisfaction, it could work on expanding job autonomy or improving the social support for the work. However, changing a job so as to increase autonomy can also increase demands for more compensation and training, while increasing social support does not have these negative trade-offs.³⁰

Figure 4-14 Sample Items from the Work Design Questionnaire

Please respond to each item indicating your level of agreement that each statement describes the job you are analyzing:

1 = Strongly Disagree; 2 = Disagree; 3 = Undecided; 4 = Agree; 5 = Strongly Agree

Task Characteristics

Autonomy: Extent to which a job allows freedom, independence, and discretion to schedule work

Work Scheduling Autonomy

The job allows me to make my own decisions about how to schedule my work.

Decision-Making Autonomy

The job gives me a chance to use my personal initiative or judgment in carrying out the work.

Work Methods Autonomy

The job allows me to make decisions about what methods I use to complete my work.

Task Variety: Degree to which a job requires employees to perform a wide range of tasks

The job involves doing a number of different things.

Task Significance: Degree to which a job influences the lives or work of others

The results of my work are likely to significantly affect the lives of other people.

Task Identity: Degree to which a job involves a whole piece of work, the results of which can be easily identified

The job involves completing a piece of work that has an obvious beginning and end.

Feedback from Job: Degree to which the job provides direct and clear information about the effectiveness of task performance

The work activities themselves provide direct and clear information about the effectiveness (e.g., quality and quantity) of my job performance.

Knowledge Characteristics

Reflects the kinds of knowledge, skill, and ability demands that are placed on an individual as a function of what is done on the job.

The job provides the opportunity to learn

Job Complexity: Extent to which the tasks on a job are complex and difficult to perform

The job requires that I only do one task or activity at a time (reverse scored).

Information Processing: Degree to which a job requires attending to and processing data or other information

The job requires me to monitor a great deal of information.

Problem Solving: Degree to which a job requires unique ideas or solutions and reflects the more active cognitive processing requirements of a job

The job involves solving problems that have no obvious correct answer.

Skill Variety: Extent to which a job requires an individual to use a variety of different skills to complete the work

The job requires a variety of skills.

Specialization: Extent to which a job involves performing specialized tasks or possessing specialized knowledge and skill

The job is highly specialized in terms of purpose, tasks, or activities.

Social Characteristics

Social Support: Social support reflects the degree to which a job provides opportunities for advice and assistance from others.

I have the opportunity to develop close friendships in my job.

My supervisor is concerned about the welfare of the people that work for him/her.

Interdependence: Reflects the degree to which the job depends on others and others depend on it to complete the work

Initiated Interdependence: The extent to which work flows from one job to other jobs (initiated interdependence)

The job requires me to accomplish my job before others complete their job.

(Continued)

Figure 4-14

(Continued)

Received Interdependence: The extent to which a job is affected by work from other jobs

The job activities are greatly affected by the work of other people.

Interaction Outside Organization: Extent to which the job requires employees to interact and communicate with individuals external to the organization

The job requires spending a great deal of time with people outside my organization.

Feedback From Others: Degree to which others in the organization provide information about performance

I receive a great deal of information from my manager about my job performance.

Work Context

Ergonomics: Degree to which a job allows correct or appropriate posture and movement

The seating arrangements on the job are adequate (e.g., ample opportunities to sit, comfortable chairs, good postural support).

Physical Demands: Level of physical activity or effort required in the job, focus on the physical strength, endurance, effort, and activity aspects of the job

The job requires a great deal of muscular endurance.

Work Conditions: The environment within which a job is performed, the presence of health hazards, noise, temperature, and cleanliness of the working environment

The workplace is free from excessive noise.

The job takes place in an environment free from health hazards (e.g., chemicals, fumes, etc.).

Equipment Use: Reflects the variety and complexity of the technology and equipment used in a job

The job involves the use of a variety of different equipment.

Source: Adapted from: F. P. Morgeson and S. E. Humphrey. "The Work Design Questionnaire (WDQ): Developing and Validating a Comprehensive Measure for Assessing Job Design and the Nature of Work," *Journal of Applied Psychology*, (2006), 91, pp. 1321–1339.

What Is Strategic Job Analysis?

Before closing this section on work and design methods, let's review how job analyses can be conducted in situations where jobs don't already exist, such as when a new small business is started or where jobs are changing dramatically as might result from restructuring or workplace reengineering.

In instances where a job is being created or where an organization is undergoing significant strategy evaluation, work analysis takes on a rather predictive bent in that the idea is to describe a job through the anticipated tasks that need to be performed in order to meet organizational goals. This approach has been termed **strategic job analysis** as its purpose is to forecast what a job may be like in a new environment with new strategic goals, new technologies, increased customer contact, or expanded duties. Briefly, conducting a strategic job analysis involves the following steps:³¹

1. If the job currently exists, then a conventional job analysis procedure is used to describe it in detail. If the job isn't in existence yet, then subject matter experts (SMEs) and primary customers of the job's intended services are brought together to identify the tasks that constitute the job based on the new strategic plan. O*NET can be consulted to identify any existing jobs that are similar and can further inform job design.
2. Incumbents and/or SMEs discuss how changes to the job such as new technology or increased contact with external customers will change the tasks making up the job and how the job is performed.

3. Detailed descriptions of the job's tasks and the required KASOCs necessary for successful performance are generated by SMEs and others familiar with the job and the expected changes.
4. The results of the analysis of the projected job are compared to those of the current job to identify differences in tasks and KASOCs.
5. The comparison provides information relevant to developing performance standards, training content, KASOCs for personnel selection, the need for supervision and management, and the relationship between jobs (internal customers and suppliers).

**Strategic job analysis
requires extensive
organizational involvement**

The utility of this approach depends on how accurately the SMEs and other participants anticipate changes in the job or in anticipating what a job created from scratch may be like when actually performed by someone. This approach requires widespread involvement from organizational members, often from different functional areas. In addition, when the job change issue is one of introducing new technology, it may be necessary to involve the hardware or software manufacturer in the analysis of job changes. While more focused on tasks, this approach is similar to *competency modeling*.

AUTONOMOUS WORK GROUPS (AWG) OR SELF-MANAGING TEAMS

**AWGs: An example of
job design**

Autonomous work groups (also known as self-managing work teams) are employee groups given a high degree of decision-making responsibility and behavioral control for completing their work.³² Usually, the team is empowered or given the responsibility for producing (or providing) the entire product or service. A team essentially replaces the boss by taking over responsibilities for scheduling, hiring, ordering, and firing. AWGs are an example of a restructuring or job design work analysis.

Procter and Gamble and Corning are examples of major manufacturing facilities with work teams. At the Procter and Gamble plant in Lima, Ohio, which makes Liquid Tide, Downy fabric softener, and Biz bleach, teams are responsible for their own safety, production targets, quality goals, and improvements in customer service. Team meetings occur at every shift change, and the teams reorganize themselves as they deem necessary.

AWGs are also catching on in the services sector. Using a service quality audit, managers and quality-improvement teams at Ritz-Carlton Hotels identify errors and determine their frequency, assign costs of fixing (or not fixing) the errors, and identify steps to prevent them.

AWGs usually elect an internal leader. Management may appoint an external leader or coordinator as well. The external leader serves primarily as a facilitator rather than as a supervisor and, where the organization is converting to AWGs, may facilitate relationships among AWGs. He or she may assist the group members in receiving feedback on the quality and quantity of their performance as well as make any structural changes in the team design. The coordinator is also responsible for helping the team acquire needed resources (e.g., equipment) and technical assistance.

Self-managing teams may be involved in a number of different activities, including

- Recording quality control statistics.
- Making scheduling assignments.
- Solving technical problems.
- Setting group or team goals.
- Resolving internal conflicts.
- Assessing group or team performance.
- Making task assignments to group or team members.

- Preparing a budget.
- Training team members.
- Selecting new members.
- Allocating pay raises for members.

Suggestions for Using AWGs or Self-Managing Work Teams

For AWGs or self-managing work teams to be effective, training is critical. Training is necessary for team members on a variety of human relations skills, such as problem solving, group dynamics, conflict resolution, cooperation and participation, and technical skills such as statistical quality control and budget preparation. Training is also necessary for managers in their new roles as facilitators.

The Effectiveness of AWGs or Self-Managing Work Teams

The overall effects of AWGs on productivity have been mixed.³³ It often takes up to 2 years for some of the positive effects of AWGs to materialize. Managers need to be patient in expecting results and should guarantee job security to enable employees to feel comfortable taking risks and being creative and innovative.

There are many success stories. Based on the way in which the plant was reorganized into only three levels (one plant manager, 10 managers, and about 350 technicians working in teams), the Ohio Procter and Gamble plant was 30 percent more productive. At Pacific Bell, employees on craft, clerical, and engineering self-managed teams reported higher productivity and performance and satisfaction with their jobs, work units, and growth potential as compared to similar traditional work groups. At Ritz-Carlton, the quality audit found that the most common error at the front desk at one hotel was not posting late charges on a guest's bill, which cost the hotel an estimated \$250,000 per year.

Employees report that team membership provides them with more autonomy, flexibility, skill variety, training opportunities, and financial benefits (e.g., group-based bonuses). It is not surprising then that firms have found that members of AWGs experience higher job satisfaction and morale and lower levels of turnover.

AWGs can lead to higher job satisfaction

RATING SOURCE MATTERS: POTENTIAL BIASES IN WORK ANALYSIS DATA

There has been considerable research investigating whether the source of the job information influences the results of the data collected. It is clear that the rating source, the purpose for the data, and the type of ratings that are made will have an impact on results and the accuracy of information. Figure 4-15 presents a summary of the major findings in this area.

In general, incumbents tend to inflate the importance of their jobs compared to data from their supervisors or trained analysts. This effect is particularly potent when incumbents believe that the job analysis is connected to future compensation adjustments. However, incumbents may be the best source of information for the assessment of safety-related issues. If possible, customer data should be used, particularly for service-related jobs. When assessing skill requirements for a job, external job analysis experts who have experience evaluating a wide variety of jobs are probably the best sources of data. The idiosyncrasies and characteristics of particular raters clearly affect ratings. For example, Hispanics perceived bilingual language skills as significantly more important than non-Hispanics and that the Hispanic point of view was more compatible with the view of actual customers. Bottom line: Since most work analysis methods involve human judgment, the resultant data are inevitably subject to bias. Get more experts for more reliable assessments of job specifications and/or competencies and how these factors relate to outputs and strategy execution. And, if possible, get customers' and clients' perspectives, both internal and, ideally, external.

Figure 4-15 Potential Sources of Bias for Work Analysis Data-Major Research Findings

Experienced external analysts are the best source for rating skill levels
 Analysts have the highest reliability and incumbents have the lowest
 Incumbents tend to assign more (overall) importance to their jobs than do supervisors or trained analysts.
 The purpose of data collection matters (e.g., if it's related to compensation, incumbents tend to exaggerate importance.
 Incumbents and supervisors agree more about the tasks performed but less about the attributes required to perform the job well.
 Those who know more about a job tend to make more reliable and accurate judgments.
 Naive raters do not provide work analysis data equivalent to the information provided by experts at the job.
 Incumbents who are more effective at their jobs do not provide different information about their jobs than do low performers.
 Ratings on the frequency of tasks performed and the importance of tasks performed provided the most reliable data across different types of raters (e.g., incumbents, experts).
 Incumbents provide more accurate estimates of time spent on job tasks and assessing safety-related risk factors
 Supervisors are more accurate in assessing job duty importance.
 Expert ratings of job specifications in the form of specific KASOCs are more transportable across organizations.
 The characteristics of particular raters contributes the most to unreliability in the job analysis ratings.
 Hispanic incumbents perceived bilingual language skills as significantly more important than non-Hispanics (the Hispanic point of view was more compatible with the view of actual customers).
 Bottom line: Source clearly matters. Involve multiple perspectives and document choices. Get more experts for more reliable assessments of job specifications and/or competencies and how they relate to strategy execution. Involve customers (internal and especially external).

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HOW DO YOU CHOOSE THE BEST WORK ANALYSIS METHOD?

A number of studies have examined the relative effectiveness of specific work analysis methods. For example, one study asked experienced job analysts to indicate the extent to which four methods accomplished the various purposes for job analysis.³⁴ In addition, they were asked to evaluate the amount of training required to use the method, the sample sizes required for deriving reliable results, and the cost to administer and score the method. The results indicated that, of the methods evaluated, if the purpose is to generate a job description or to do job classification or job design, a good method is the PAQ. CIT is probably not as good for job classification purposes. The best method for job evaluation is the PAQ. The PAQ was also the best method for identifying specific tests to use for hiring. If the purpose of the analysis is to develop a performance appraisal instrument, detailed and job-related interview questions, or training programs, the recommended method is CIT. No method is ideal in terms of legal compliance, including ADA compliance. For companies in need of highly detailed information about a job, the development of their own job analysis method is probably preferable to an “off-the-shelf” type such as the PAQ, which would not give you the level of detail in describing the job, perhaps a critical issue if you are developing a training program.

Experts agree that organizations should “mine” their own data whenever possible to determine whether particular job specifications (e.g., a particular level of education or experience) are related to critical criteria such as job performance. This is particularly true if job specifications cause adverse impact or if there is a need to determine if a specification could cause adverse impact.

O*NET has a wealth of information that can be used effectively by organizations to accomplish most of the major purposes for which you do work analysis. The job descriptions you can retrieve from the website are a great start on a number of the work analysis products discussed in this chapter (if not finished products) and you can even retrieve up-to-date salary

PAQ is best for job evaluation and test identification

CIT is best for performance appraisal development

Mine data to validate job specifications

Choice of work analysis depends on purpose

information for your particular jobs and geographical areas. And it's all free! You can also download detailed questionnaires that can be adapted for whatever purposes you have in mind.

Experts also agree that the choice of work analysis method depends on the purposes to be served by the data and the desired product. There is no "one best way" to conduct work analysis. The purposes for the data and the practicality of the various methods for particular organizations must be considered. The most definitive finding from the research on the relative effectiveness of the various methods is that multiple methods of analysis should be used whenever possible. For example, a quantitative approach such as the PAQ should probably be augmented by a qualitative approach such as the CIT, which can provide more specific information about jobs than what can typically be derived from the quantitative methods.

SUMMARY

Jobs are important to people because they have surplus meaning beyond just providing a paycheck necessary to sustain their economic survival. People ask a lot of their jobs, as they become better educated and develop rising expectations about what jobs should supply. As a result of technology and the flattening of organizational structures, jobs are no longer the static entities they once were thought to be. Work has become more dynamic and the lines distinguishing the responsibilities of one job from another continue to blur. Recent research on job performance has shown that there are some generic dimensions of work behavior that apply across a broad spectrum of jobs while others that are more task-based are very specific to a limited set of jobs. Generic work dimensions influence the performance of virtually any job.³⁵ Examples are honesty and integrity, goal attendance, treating co-workers with respect, and maintaining good personal hygiene. The idea of generic work behaviors opens the possibility for more direct comparisons of employee performance regardless of the specific tasks for which employees are responsible. It also challenges the traditional idea that jobs and job performance can be neatly compartmentalized.

Yet one of the aims of work analysis is to identify differences between jobs so that selection tests, levels of compensation, training and development efforts, and performance standards are demonstrably relevant to job success. An increasing burden on work analysis today is to describe jobs in sufficient detail so that differences between them are recognized and appropriate criteria for personnel decisions result. At the same time, work analysis should be flexible enough to be applied to the study of jobs as they change in response to technological demands and the organization of projects and work. A detailed work analysis product is also considered to be a critical element of any possible outsourcing effort. Research on successful and unsuccessful outsourcing projects shows that one key variable is the specificity in the job description and the determination of the key outcomes from the customer perspective.³⁶

The once-traditional idea of "the job" is under challenge as more organizations adopt project-based work assignments. Work analysis remains an essential tool for HR professionals despite contemporary changes in the world of work and the new "team" orientation within many companies. There has been much discussion in the popular press about the "de-jobbing" of organizations.³⁷ In fact, formal work analysis may be even more significant in the context of a turbulent work environment and need for a more comprehensive work analysis. Regardless of the elasticity of the job, projects, and tasks, work analysis should be a starting point in the design of most HR systems, including restructuring, human resource planning, reengineering of recruitment strategies, selection processes, training and career development programs, performance appraisal systems, customer-based appraisal, job design efforts, compensation plans, and health and safety compliance and improvements. Even project-based employment requires hiring, training, compensation, and performance appraisal functions. The need to describe the work a prospective employee or contractor will perform before hiring still presupposes an inventory of the likely situational demands and worker competencies required to fulfill this broader mission. Work analysis helps to ensure that HR systems will be professionally sound. As noted in Chapter 3, HR systems that involve personnel decisions such as selection, pay, promotion, and terminations

Work analysis and outsourcing

"De-jobbing"

Work analysis with a customer focus

should be based on a determination of the important job duties and KASOCs necessary for successful job performance. Even if the legal mandate did not exist, effective HR practice dictates the linkage between these HR activities and work analysis.

While many contemporary management gurus preach that job descriptions promote individualism to the detriment of unit effectiveness, work analysis can facilitate more effective group and unit effectiveness through clearer definitions of responsibilities and a determination of the relative importance of tasks and working relationships between positions and individuals and how all are related to customer requirements. Job descriptions do not have to say, and they rarely ever say, that the incumbent will perform only those tasks defined on the description regardless of circumstances. To the extent that job descriptions foster an “it’s not my job” philosophy of work and a deviation in attention away from customer requirements, the gurus are right. The trick is to develop and use work analysis with customer requirements as the focus.

Although static unchanging jobs may be obsolete, work analysis as a tool for understanding and describing work activities will remain an essential HR competency for the foreseeable future. As the various HR functional areas are covered in the chapters to follow, more detail will be provided on how work analysis is used to supply internal and external customers with the most effective HR products.

Discussion Questions

1. What is meant by conducting a work analysis? How might you convince top managers of the importance of conducting work analysis?
2. Do you believe that having highly detailed job descriptions for every position can interfere with group effectiveness? If so, is there anything that can be done to avoid this?
3. For each of the following HR systems, what type of analysis is needed to develop a professional and legally defensible system?
 - a. Training program for new employees.
 - b. Selection system.
 - c. Performance appraisal system.
 - d. Compensation system.
 - e. Job design.
4. Describe the advantages and disadvantages of using interviews, observation, and questionnaires for collecting work analysis data.
5. How might you involve customers in the development of job descriptions and job specifications? Are there any constraints on what customers can stipulate in job specifications?
6. Do PAQ data provide sufficient argument for “job relatedness”? Explain.
7. How would you use O*NET for developing job descriptions and specifications?
8. A fast-growing small business decides to hire a human resources manager for the first time. What steps should be taken next?

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Chapter 5

Human Resource Planning and Recruitment

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OBJECTIVES

After reading this chapter, you should be able to

1. Understand the importance of human resource planning (HRP) to the organization.
2. Identify the six steps in the HRP process.
3. Explain the methods by which an organization can develop forecasts of anticipated personnel demand and understand labor markets.
4. Understand how an organization can stay apprised of and evaluate its personnel supply and, if necessary, implement a downsizing program.
5. Determine which recruitment methods are best for given situations, including the role of E-recruiting.
6. Understand the pros and cons of internal versus external recruiting.
7. Identify the most important features of recruitment strategy.
8. Understand the legal implications of recruitment and planning.

OVERVIEW

Kathryn Connors, a vice president of human resources at Liz Claiborne, described the ideal role for HR in strategic planning: “Human resources is part of the strategic planning process. It’s part of policy development, line extension planning and the merger and acquisition process. Little is done in the company that doesn’t involve us in the planning, policy or finalization stages of any deal.”¹ Unfortunately, as discussed in Chapter 1, the extent of involvement of human resources in strategic planning as practiced by Liz Claiborne is still rather unusual. While more companies now link HR planning to strategic planning, the linkage is usually focused mainly on the reduction of labor costs with limited consideration of other elements related to HR.² The typical practice is for an HRM unit to receive forecasting plans to reduce overhead by reducing labor costs. The role of HR is to devise the HR strategy for implementing the plan. Amazon.com had a more comprehensive approach to HR planning that involved business forecasting, customer demand, and labor force needs and options. It laid off 1,800 workers based on a thorough study of projected sales. Another company with great HR planning processes is Southwest Airlines. While other airlines laid off people post 9/11, Southwest transferred people, cut overtime, and changed some assignments. Not a single Southwest employee was laid off. This was still true in 2011.

IBM's "hot skills list"

IBM does systematic HR planning tied to its strategic objectives. Its planning includes the identification of the skills most likely to be in demand over the next 3 years (updated yearly). The 2011 "hot" skills list includes expertise in the life sciences, wireless networks, digital media databases, and Linux programming. IBM then spends \$400 million a year training its workers in these skills that the company is betting it will need soon. In terms of **competitive advantage** in the global economy, however, the "good" news is that most foreign competitors also conduct their HR planning and recruitment in a more reactive manner rather than as a fully integrated system. Particularly, given the greater HR constraints in reacting to business problems placed on some foreign competitors, especially European, there is opportunity for an HR-based competitive advantage for U.S. companies.

HR planning (HRP) should be an integral part of competitive strategy. The most effective approach to staffing, whether adding workers or eliminating them, is to assess staffing needs with a focus on meeting customer requirements and expanding the customer base.

Early HR involvement in outsourcing is critical

One important element of HR planning today is a consideration of outsourcing to reduce costs. **Outsourcing** is the relocation of a business process from one country to another. HR should be much more involved in assessing outsourcing and offshoring options. Says Jennifer Schramm, manager of workplace trends and forecasting at the Society of Human Resource Management (SHRM.org), "The participation of HR professionals in offshoring is necessary from the beginning stages of exploring the idea of offshoring as a viable option to the implementation stage. . . . HR should be involved in spearheading the country selection process—investigating the most viable offshore labor force—and then in orchestrating the recruitment of qualified staff."³

The goal for organizations of all sizes is quite simple: Keep the cost of labor as low as possible while meeting (or exceeding) customer demand and, if this is a part of the strategic plan, expanding the customer base. The realization of this goal for HR practice is obviously much more difficult. The goal also can be applied to the internal customers who require products or services from internal suppliers, including HRM staff. For example, an internal customer could be a district manager in retail who must hire a store manager for one of the stores in the district. One option could be to use an external headhunter group that specializes in retail, or perhaps the company relies on internal recruiters to compile a list of qualified candidates. Obviously, the company is very interested in the cost of the recruiting effort and the district manager may be particularly interested in filling the position quickly with someone who requires little or no training.

Two of the most important aspects of staffing are HRM planning and recruitment. **Planning** is the forecasting of HR needs in the context of strategic business planning and sales forecasting. The human resource planning process of the past was typically reactive with business needs defining personnel needs. However, with major changes in the business environment and increasing uncertainty, many organizations have adopted a longer-term perspective, integrating human resource planning with strategic business planning centered on a consideration of core business competencies.

Recruitment is the process of attracting applicants for the positions needed. As discussed in Chapter 1, recruiting Generation "Y" employees or the so-called Millennials poses some special planning and recruiting problems and opportunities for employers. Clearly, employers must do a little more than put ads in the paper these days to attract top talent.

This process *should* be fully integrated with the HR planning process and other HR activities, especially the selection process. Recruitment and other HRM activities are interdependent. For example, a change in a compensation or benefit package can have a profound effect on recruitment and retention. In a debate over a new GI education bill for returning vets, the Congressional Budget Office (CBO) projected that the better benefits offered in the legislation would decrease reenlistments by 16 percent. At a time when the ability of the army to recruit and retain good soldiers during wartime was hindered, a 16 percent reduction in "re-ups" would be a serious problem. But the CBO also predicted that the new benefit would increase the number of new recruits by 16 percent. The program could be a strong positive if the motivation to not re-up was offset by more incentives to reenlist. HR planning and recruitment should be carefully integrated.

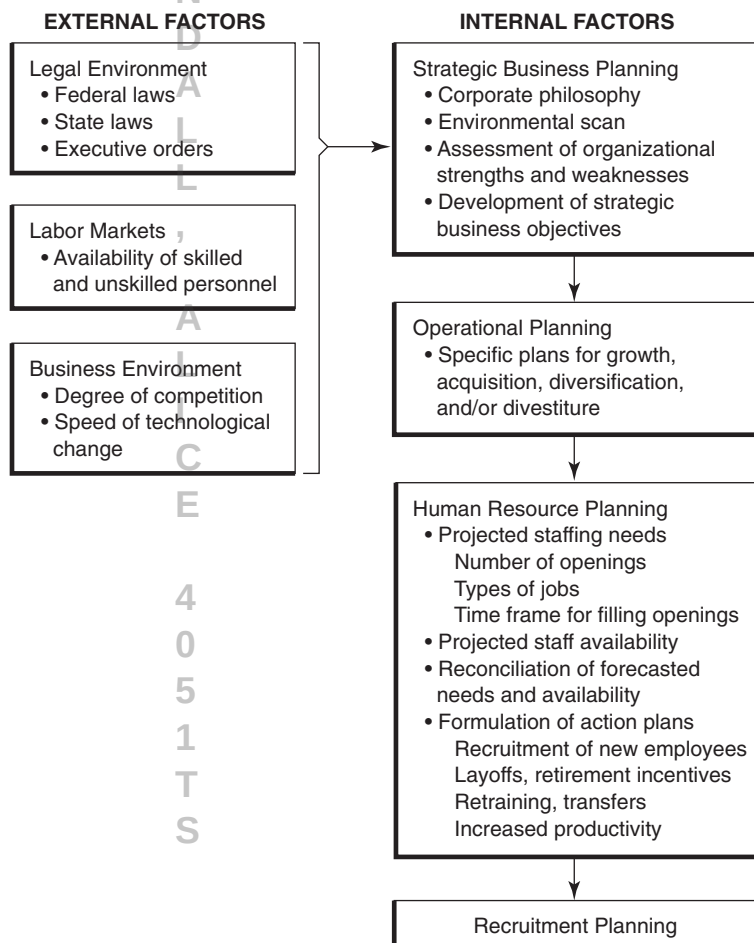
Here a data-driven approach to HR practices is very important. One retailer was considering the adoption of a mediation and mandatory arbitration policy as a condition for employment for all employees. However, HR was very concerned that the imposition of such a policy would hinder the company's ability to attract and hire its most desirable job candidates. The company conducted a controlled study across its four regions and determined that, when presented in a certain manner, requiring job candidates to agree to an arbitration policy had no negative effects of recruiting or hiring.⁴

This chapter provides an overview of the planning and recruitment process. The relationships among the various HR functions are discussed as are the process of downsizing and reengineering or restructuring, the various sources available for recruiting and their relative effectiveness, the advantages and disadvantages of internal and external recruiting, and the role of equal employment opportunity law and regulations in the planning and recruitment process.

EFFECTIVE HUMAN RESOURCE PLANNING

Organizations that integrate strategy with HR planning and recruitment have an HR competitive advantage. Recruitment planning should flow directly from HR planning. Figure 5-1 presents a model of this relationship. Effective HRP closes the gap from the current situation to a desired state of affairs in the context of the organization's strategy.

Figure 5-1
Simplified Model of External
and Internal Factors That
Influence Recruitment



Source: "Simplified Model of External and Internal Factors That Influence Recruitment." Adapted from *Employee Recruitment: Science and Practice* by James Breugh. Reprinted by permission of the author.

Figure 5-2 Steps for Effective HR Planning

1. **Environmental scanning.** Identify and anticipate sources of threats and opportunities, scanning the external environment (competitors, laws regulation) and internal environment (strategy, technology, culture).
2. **Labor demand forecast.** Project how business needs will affect HR needs, using qualitative methods (e.g., Delphi, nominal) and quantitative methods (trend analysis, simple and multiple linear regression analysis).
3. **Labor supply forecast.** Project resource availability from internal and external sources.
4. **Gap analysis.** Reconcile the forecast of labor supply and demand.
5. **Action programming.** Implement the recommended solution from step 4.
6. **Control and evaluation.** Monitor the effects of the HRP by defining and measuring critical criteria (e.g., turnover costs, break-even costs of new hires, recruitment costs, performance outcomes).

The process for determining this match is outlined in Figure 5-2. Effective HRP should involve (1) environmental scanning, (2) labor analysis, (3) supply analysis, (4) gap analysis, (5) action programming, and (6) evaluation. We examine each of these next.

Step One: Environmental Scanning

Environmental scanning helps HR planners identify and anticipate sources of problems, threats, and opportunities that should drive the organization's strategic planning. Scanning provides a better understanding of the context in which HR decisions are/will be made. Both external and internal environmental scans are critical for effective planning. Environmental scans should be very data driven. As discussed in Chapter 1, more data-driven decisions from an environmental scan are more likely to improve productivity than a reliance on managerial intuition or experience.⁵ These data-driven approaches include the use of analytical software that are instrumental for optimal HR planning. One example of this approach is Walmart's use of data for optimal scheduling of personnel. Walmart compiles and uses its historical store data to make very accurate predictions regarding specific employee needs for its stores by the hour and day. This labor scheduling software facilitates an efficient use of personnel.⁶

While there can be (and often are) situations with ambiguous problems, threats, and opportunities, the probability of reducing or eliminating the ambiguity is increased by a more thorough environmental scan. The idea here is to at least attempt to turn a threat into an opportunity with information. In general, the greater the amount of relevant information that managers have about a problem, the more likely that problem can be turned into an opportunity. Both external and internal environmental scans are critical for this information. Amazon is a good example here. Amazon closed a large and costly customer service center in Seattle despite projections of 20 to 30 percent sales growth because its study of global labor options indicated that it could meet its sales growth projections with a far less costly customer service center in India. Numerous other companies have turned to offshoring and outsourcing to save money. However, some U.S. and foreign companies have actually moved back to or set up operations in the United States. Recent (2011) economic data indicate a small turnaround in U.S. manufacturing trade. While the overall U.S. economy grew only 1.9 percent in the first quarter of 2011, manufacturing grew more than 9 percent. Volkswagen opened a new plant in Chattanooga, Tennessee, in 2011. Rising wages in China and falling wages in the United States have helped with the recent uptick in manufacturing. For the first time in over 10 years, the United States is creating more manufacturing jobs than losing them.

A clear (but somewhat sad) example of poor environmental scanning may be Levi-Strauss. For too many years, Levi-Strauss manufactured its jeans in the United States at a huge labor cost disadvantage to all of its major competitors. Levi-Strauss finally closed all U.S. plants in 2003 after a long struggle and estimated that it lost over \$20 million in its earnest effort to retain U.S. employees. Now this iconic company is in a much more favorable competitive position to compete on price.

Environmental scanning pursued for the purposes of HR planning should not lose sight of the fact that the frame of reference for such scanning should always be on strategic goals with a customer focus. A large law firm in Atlanta was losing young associates, many of

Scanning frame of
reference on strategic goals
with customer focus

Keep the “big picture” in mind

whom in exit interviews complained about “burnout” and conflicts with partners and more senior associates. The turnover rate spiked coincidentally with the loss of two major clients and almost 400 billable hours a week. While the loss of the associates was obviously important, the customer/client problem was more important. It turned out that the two were related in that partners were sending more work to associates. The clients were increasingly unhappy with work products, and were then complaining, before finally firing the law firm altogether. Another law firm noted the higher turnover among female associates and the increasing proportion of females the firm was recruiting from top law schools. The firm conducted exit interviews, gathered information, and set a goal to be a leading firm for female attorneys. It installed many profamily programs such as 90 days of paid maternity leave, coverage of fertility treatments, and concierge services. The firm, Alston and Bird, is now a perennial Fortune “Best company to work for” and a top-ranked best company for working moms. Most importantly, the firm now claims one of the lowest turnover rates among associates and reports improved recruiting success since implementation of the programs.

For any HR problem, an environmental scan should always keep the “big picture” in mind. While the “big picture” will mean different things to different organizations, the focus is on meeting or exceeding customer or client requirements and expanding the customer base. The environmental scan should never lose this focus. If customers have expressed concerns about some aspect of a product or service, what specifically are the customer complaints? Can we fix a systemic problem that may be causing customer problems, problems that may ultimately translate into an HR problem such as a need for more employees to hear and attempt to respond to these complaints. Reducing customer complaints may take care of the HR problem or sharply reduce it.

The Worker Adjustment and Retraining Notification Act (WARN)

Any environmental scan must be done in the context of the legal environment. Amazon closed its Seattle service center in compliance with the **Worker Adjustment and Retraining Notification Act (WARN)**. WARN provides protection to workers, their families, and communities by requiring employers to give at least 60 days advance notice of covered plant closings and covered mass layoffs. Employers are covered by WARN requirements if they have 100 or more full-time employees. Federal, state, and local government entities that provide public services are not covered by WARN. Employees who are entitled to notice under WARN include hourly and salaried workers as well as managerial and supervisory employees. Enforcement of the WARN requirements is through the United States federal district courts. Workers’ representatives of employees and units of local government may bring individual or class-action suits. WARN lawsuits were up in both 2009 and 2010.⁷ A covered employer must give notice if an employment site will be shut down and the shutdown will result in the loss of employment for 50 or more employees during any 30-day period. A covered employer must also give notice if there is to be a mass layoff (that does not result in a plant closing) that will result in an employment loss at the site during any 30-day period for: (a) 500 or more employees, or (b) 50 to 499 employees if they make up at least 33 percent of the employer’s active workforce.

Understanding the Labor Market for HR Planning

One critical component of environmental scanning for HR planning and recruitment is an understanding of the relevant labor market. Labor market conditions influence HR planning in terms of both the number and types of available employees. In a loose **labor market**, qualified recruits are abundant. This has been the case for most jobs in the United States since 2008. However, some labor markets are tight. For example, there are shortages in numerous cutting-edge technologies such as optics and laser technology as well as shortages in unskilled labor areas such as child care and nursing home assistance. Tight markets limit the availability of labor, drive up the costs for those employees who are selected, and even limit the extent to which the organization can be selective in its hiring procedures. A great deal of the innovation out of Silicon Valley derives from engineers leaving companies to join “start-ups” or to start their own company. From 2005 to 2010 Google had grown to over 23,000 employees from 5,000 and to \$23.7 billion in revenue (from \$3.2 billion). Google constantly worries that it will lose top talent and thus the next big idea. Now Google is perceived by some as too big and bureaucratic.⁸

Google has employed interesting approaches to attracting some of its top talent. On California's Highway 101 in 2004, Google paid for a billboard in Silicon Valley that asked interested parties to find the first 10-digit prime number occurring in consecutive digits (i.e., the decimal expansion) of the mathematical constant known as e , which is a transcendental number whose first few digits are 2.7182818284. . . . Of course the billboard led to coverage on NPR, *The Boston Globe*, and the *Oakland Tribune* and widespread notice on the Internet. It also posted the Google Labs Aptitude Test (GLAT) and asked readers of many computer technology magazines to mail in their answers. Google would then follow up with a recruiting pitch. Says Judy Gilbert, staffing programs director at Google, "It was a great PR move, and we got a lot of interest from it." Here are a few of the questions from the GLAT (go to <http://www.thegooglestory.com/glatpage1.html> for answers to these and all of the questions):

1. Solve this cryptic equation, realizing of course that values for M and E could be interchanged. No leading zeroes are allowed.
WWWDOT – GOOGLE = DOTCOM
2. Write a haiku describing possible methods for predicting search traffic seasonality.
3. Given a triangle ABC, how would you use only a compass and straightedge to find a point P such that triangles ABP, ACP, and BCP have equal perimeters? (Assume that ABC is constructed so that a solution does exist.)

"Acqhiring"

This is a great time for entrepreneurial software engineers. A new and rather expensive approach to recruiting has been labeled "acqhiring." Google, Facebook, and Zynga are among the companies now hiring top talent by buying "start-ups" to acquire the engineers who work there.⁹ The relevant labor market for an employer is defined by occupation, geography, and employer competition. Obviously, the job and the skills or job specifications play the greatest role in the definition of the relevant labor market and the ease (or difficulty) with which positions can be filled. The labor market is affected by geography but, because of technology, not nearly as much as in the past. **Outsourcing** and **offshoring** are having a significant impact on the definition of a labor market. Competing employers are the third factor defining the labor market. The number and type of employers seeking similarly qualified personnel or offering similar compensation in the same location also can serve to define the labor market. Google and Facebook are now rivals. They compete for the same rare talent and try hard to recruit employees directly from their rivals.

The Global Labor Market/ Offshoring

The world is the labor market for many jobs

The technological and communications revolution has truly changed the relationship between geography and labor supply. Thomas L. Friedman and Michael Mandelbaum, authors of "That Used to Be Us" emphasize the profound effects of globalization and information technology on the available labor supply and the impact on the American work force.¹⁰ As discussed in Chapter 2, an international division of labor has emerged. The outsourcing of the manufacturing/assembly process to a foreign location is now commonplace in most industries although there is some indication that the cost of shipping and other variables may have reversed this trend. Since 1960, manufacturing is down from 32 percent of the U.S. work force to about 9 percent. As of 2011, there were over 3.5 million fewer U.S. manufacturing workers than there had been in 2000. Some experts are now predicting a small U.S. "manufacturing renaissance" with companies like Caterpillar returning to U.S. production and companies from other countries moving production to the United States. Volkswagen recently opened a plant in Chattanooga, Tennessee with 2,000 new jobs.

The chances are also much greater now that the customer service representative you speak with over the phone or who processes your Internet order is sitting a long way from U.S. soil. According the National Association of Software and Service Companies in India, customer service business is expected to increase to 240,000 employees and over \$5 billion by 2012. One call center in Bangalore, 247customer.com, founded in 2000, includes several Fortune 500 companies and a major telecommunications company. General Electric and British Airways have large phone banks in India and are expanding this function because of the low cost and low turnover of personnel and the quality of the work. As of 2011, entry-level customer service representatives in India earn between \$4,200 and \$5,200 per

Offshoring skilled labor

year, a good salary by India's standards, which probably explains the low turnover. The total savings estimates for U.S. companies for this critical work is between 20 and 35 percent.

What also is becoming more common is that *skilled* labor is being "offshored" to lower-paid, overseas workers as well. Companies are now offshoring a wide range of service functions, including IT, payroll, finance and accounting, and logistics. Dallas-based software company I2 Technologies runs software centers in Bombay and Bangalore. Programming costs are estimated to be about one-third of the cost of an American programmer. However, this difference could change rapidly as the demand for Indian programmers grows. The consulting firm McKinsey and Company reports that by 2012, new jobs in accounting, software development, and transcribing will have generated one million new jobs and \$19 billion in revenue for India.

India is the most attractive offshoring destination

India is by no means the only attractive offshoring destination. Figure 5-3 presents the results of a 2011 study conducted by A. T. Kearney that derived an index of the most attractive countries for offshoring based on financial attractiveness, the business environment, and each country's "people and skills availability."¹¹

Technology has made workers from all over the world accessible and has expanded the labor market for U.S. companies. The result is lower labor costs for American companies and (usually) greater profits; the shipment of more American jobs overseas; and the continued stagnation of middle-class wages in this country. Rick Younts, executive vice president for international operations at Motorola, claims more than lower wages as the reason Motorola hires Asian programmers. U.S.-based programmers can work on a project during the day and then e-mail their work to Asian counterparts who can work on it while the U.S.-based programmers are sleeping. Younts estimates a 40 percent reduction in time to completion because of this work schedule. Companies that do not take advantage of the global labor market for labor will be at a competitive disadvantage as long as consumers do not place a heavy weight on the extent to which a product or service involves American workers.

E lance: Outsourcing model

One of the leading worldwide outsourcing firms is California-based Elance, which charges a fee for vendors to compete on "Requests for Proposals" submitted through its

Figure 5-3
India, China, and Malaysia
once again lead the Global
Services Location Index™

Rank	Country	Financial attractiveness	People skills and availability	Business environment	Total score
1	India	3.1	2.8	1.1	7.0
2	China	2.9	2.6	1.3	6.5
3	Malaysia	2.8	1.4	1.3	6.0
4	Egypt	3.1	1.4	1.4	5.8
5	Indonesia	3.2	1.5	1.0	5.8
6	Mexico	2.7	1.6	1.4	5.7
7	Thailand	3.0	1.4	1.3	5.7
8	Vietnam	3.3	1.2	1.2	5.7
9	Philippines	3.2	1.3	1.2	5.7
10	Chile	2.4	1.3	1.8	5.5
11	Estonia	2.3	1.0	2.2	5.5
12	Brazil	2.0	2.1	1.6	5.5
13	Latvia	2.5	0.9	2.0	5.5
14	Lithuania	2.5	0.9	2.1	5.4
15	United Arab Emirates	2.4	0.9	2.1	5.4
16	United Kingdom (Tier 2)	0.9	2.9	2.2	5.4
17	Bulgaria	2.8	0.9	1.7	5.4
18	United States (Tier 2)	0.5	2.9	2.0	5.3
19	Costa Rica	2.8	0.9	1.8	5.3
20	Russia	2.5	1.8	1.1	5.3

Note: The weight distribution for the three categories is 40:30:30. Financial attractiveness is rated on scale of 0 to 4, and the categories for people, skills & availability, and business environment are on a scale of 0 to 3.
Source: Composite Offshoring "Attractiveness" Scores by Country. Copyright AT Kearney (2005). All rights reserved. Reprinted with permission of the author.

website. Elance claims that over 60,000 registered and qualified professionals in more than 150 categories of work (e.g., software design, writing, website design, sales and marketing, management and finance, training and development, legal) are ready to bid on a project proposal, which is submitted to www.Elance.com. With bids, you also receive credentials, work samples, and a performance assessment on previous projects. Elance claims that companies have saved “over 60%” by outsourcing their projects through Elance. The service is free to outsourcing organizations (and individuals).

Lexadigm Solutions: Outsourcing legal work

U.S. companies are now outsourcing their legal work offshore. The leading firm in this area is Michigan-based Lexadigm Solutions that offers legal research conducted by Indian lawyers at substantially lower fees (see www.lexadigm.com). The Lexadigm website states that “by hiring India-based attorneys, we are able to take advantage of the large wage disparity between Indian attorneys and their U.S. counterparts, and our rates reflect this cost advantage. We are also able to be extremely selective in our hiring practices. Each of our India-based Research Specialists has graduated from one of the top five law schools in India, practiced law for at least three years, received extensive legal training from U.S. attorneys, and passed Lexadigm’s rigorous legal research and writing exam. In addition, a large percentage of our India-based attorneys have legal degrees from reputable U.S. law schools.”

Business Process Outsourcing

One of the fastest growing areas for outsourcing is in HR. **HR outsourcing (or HROs)** involves contracting certain HR activities to an external supplier. There are different approaches to this form of outsourcing. The fastest growing approach is business process outsourcing which involves the supplier managing specific HR activities such as payroll or recruitment. Other areas that are often outsourced include training and development, staff relocation, and employee data management. Shared service outsourcing concerns only the administrative aspects of an HR activity. While these approaches to HR can be cost effective, among the potential problems are the loss of some control and the possible negative effects on the employer/employee relationship. In addition to cost savings, an important advantage is that HR professionals will probably have more time to devote to more strategic issues related to HR and organizational effectiveness. A great (and growing) amount of HR outsourcing is now offshored. As one example, Accenture, one of the largest of the HRO suppliers, provides HR services for 200,000 Unilever employees in 20 languages with service centers around the globe, including Bangalore and Prague. Hewitt Associates provides HR services for 100,000 British Petroleum (BP) employees working with Hewitt staff in 80 countries. Among the many remote locations, Hewitt staff working on BP HR matters is in Scotland and Texas. Hewitt claims that BP saves 20 percent on HR costs.¹²

Since labor can constitute as much as 80 percent of operating expenses, and since most businesses compete at least partly on a price/cost basis, managing the labor market and the cost of labor is a crucial HR activity (the great increase in the proportion of adjunct professors at most universities is a good example of this). Companies usually look at labor first when their corporate performance measures do not meet expectations. Recall the discussion in Chapter 1 about the need to be flexible in this dynamic and more global economy. Compared to European countries, flexibility regarding labor reductions and cost cutting is relatively common in the United States. American companies certainly have a competitive advantage over European countries as they compete on price.

The trend line for offshoring American jobs is clearly up and for a growing number of professional service jobs as well. These jobs include high-level financial analyst positions. Some experts predict that the greatest growth in offshoring will be for services requiring higher skill levels.

The potential for more offshoring is great

IBM went from 9,000 software engineers to over 45,000 between 2003 and 2010 in India. Numerous other companies have greatly expanded their skilled offshoring employment in India in recent years. Offshoring has the potential to lower labor costs, increase a firm’s ability to adapt to a more globally integrated economy, and increase the talent pool. The potential for more offshoring is great. The least offshorable and fastest-growing U.S. jobs actually require less education and pay lower compensation. One study indicates that approximately 38 million American jobs are offshorable while 55 million are not.¹³ Another estimate put the figure at about 25 percent offshorable.¹⁴

51% of outsourcing contracts are terminated early

Of course, there should be more to outsourcing than saving on labor costs. One study by DiamondCluster International, a global management consulting firm, found that 51 percent of U.S. buyers of outsourcing services are dissatisfied with the service providers and terminating

***Affirmative Action/
Diversity Programs and
the Law: A Problem,
Threat, or Opportunity?***

contracts early. “The blame cannot be heaped solely on the shoulders of providers,” said Tom Weakland, who heads up an outsourcing advisory consulting practice. “Many buyers are now several years into at least one outsourcing relationship, but they still lack effective measures to gauge the success of their outsourcing initiatives, which are critical for knowing and getting what you want.” Many companies report that because of quality problems, “companies are learning that the tremendous cost-savings outsourcers have been promising are actually difficult to achieve. And they are learning more about the cost of losing good people and the value of their institutional knowledge.” Outsourcing buyers report that the greatest risks of outsourcing include the increased complexity of managing relationships, reduced operational effectiveness, and lower quality of output from their outsourcing providers.¹⁵

As discussed in Chapter 3, **government regulations** also influence HR planning and must be considered in any environmental scan. Equal employment opportunity legislation such as Title VII of the Civil Rights Act, the 1991 Civil Rights Act, the Age Discrimination in Employment Act, the 1990 Americans with Disabilities Act, and Executive Order 11246 require that companies pay close attention to the manner in which they treat protected class individuals.

Executive Order 11246 requires federal contractors and subcontractors to take affirmative action to ensure that all individuals have an equal opportunity for employment, without regard to race, color, religion, sex, national origin, disability, or status as a Vietnam era or special disabled veteran. Through the **Office of Contract Compliance (OFCCP)**, 11246 requires a contractor, as a condition of having a federal contract, to engage in a self-analysis for the purpose of discovering any barriers to equal employment opportunity.

The United States Office of Contract Compliance’s Revised Order #4 (see www.OFCCP.gov) describes affirmative action activities and several actions an employer may take to “improve recruitment and increase the flow of minority or female applicants.” One recommendation is to contact sources such as the Urban League, the Job Corp, and colleges with high minority enrollment. For example, many U.S. corporations actively recruit at Florida A&M in Tallahassee, Florida, a predominantly African American university with an excellent business school.

Section 706(G) of the Civil Rights Act allows a judge to order an affirmative action program as part of a settlement or if the employer is found guilty of intentional discrimination (the judge overseeing the Abercrombie and Fitch settlement used this order to craft the out-of-court settlement; A&F continues on this court-imposed and court-monitored affirmative action program). Let’s return to this issue since diversity goals are an important part of HR planning and recruitment for most large U.S. corporations and government in general.

Hiring to promote a diverse workforce will probably remain a complicated issue because of the confusing state of the EEO case law, particularly in situations in which organizations embark on some form of preferential treatment as a part of a voluntary diversity or affirmative action program. The most contentious situation is one in which the employer shows some form of preferential treatment toward members of one group when there is no proven history of discrimination, and no court-ordered requirement. What organizations can and cannot do under a voluntary affirmative action or diversity program is unclear.

The ambiguity and potential illegality seem to occur when preferential treatment is shown toward members of groups by placing at least some weight on a job candidate’s gender or ethnicity. The controversy lies in whether such a characteristic should ever be considered and, if so, to what extent. The safest strategy for an organization today is to meet diversity goals by increasing the recruitment effort to attract women and minorities and, once the pool of candidates is established, ignore the gender or ethnicity of members of the pool and concentrate on only the job-related credentials of the candidates. The issue of diversity and affirmative action also comes up when companies are downsizing.

Out-of-court settlements with Abercrombie and Fitch, Texaco, Coca-Cola, Home Depot, and Office Depot have included provisions where managers would be accountable for meeting diversity goals. Yet these goals can be problematic when companies entertain downsizing options and consider maintaining the diversity goals they had attained when they conceptualized the downsizing steps. This was clearly illustrated in a settled and expensive age discrimination and Title VII lawsuit against the Ford Motor Company. The plaintiffs maintained that preferences were shown to women and minorities during the

**Diversity goals and
preferential treatment**

downsizing. There are also many rules and regulations that affect hiring for government agencies. For example, civil service rules for most governments, the federal government included, prohibit the consideration of political affiliation for civil service appointments.

Despite the legal confusion regarding EEO, organizations are continuing their efforts to promote diversity in their workforces. Walt Disney, for example, has minority hiring targets “at every level,” according to Marc Pacala, Disney’s general manager. Kentucky Fried Chicken maintains separate lists of minority candidates for its executive positions. Xerox continues with its “balanced workforce” program, which has measurable diversity hiring goals for all levels of management. Many companies hold managers responsible (and pays them) for meeting “diversity” goals.

Despite the legal controversy, one survey found that 70 percent of Fortune 500 companies engage in hiring where they consider the race of the applicant while only 14 percent said they hired by merit alone.¹⁶ The diversity issue is here to stay. Figure 5-4 presents some data and projections that illustrate trends in the U.S. workforce and U.S. businesses. Figure 5-5 presents a summary of research and implications for diversity initiatives. Specific recommendations are made to make diversity programs more effective.

Figure 5-4
The Growing Diversity
of the U.S. Workforce
and U.S. Work

- The fastest-growing labor force age group is 55 and older.
- Workers aged 25–34 will decline by over 3 million by 2016.
- As of 2009, over 50 percent of the U.S. workforce consisted of women, nonwhites, ethnic minorities, and immigrants.
- Women will constitute 47 percent of the labor force by 2016.
- Hispanics as a percentage of the U.S. workforce will be 16 percent by 2016 (estimated to be almost 27 million by 2016).
- African-Americans as a percentage of the U.S. workforce will hold steady at 12 percent by 2016.
- Asians, Native Americans, Alaska Natives, and Pacific Islanders will constitute 5.3 percent of the U.S. workforce by 2016.
- As of 2011, women held 15% of senior management positions in the U.S.
- As of 2007, Hispanics owned 2.3 million U.S. businesses (up 44 percent from 2002).
- As of 2007, women owned 7.8 million U.S. businesses (up 20 percent from 2002).
- As of 2007, blacks owned 1.9 million U.S. businesses (up 60 percent from 2002).
- Service jobs will constitute 88 percent of U.S. jobs by 2016.

Source: U.S. Bureau of Labor Statistics, “Employment Projections, 1996–2016.”

Figure 5-5
Research and Implications
for Diversity

Gaps between Diversity Rhetoric and Research

1. Increased diversity does not necessarily improve the talent pool.
2. Increased diversity does not necessarily build commitment, improve motivation, or reduce conflict.
3. Increased group-level diversity does not necessarily lead to improved performance.
4. Increased diversity does not necessarily improve organizational performance.

Implications of Research and Theory

1. Benefits of diversity are contingent on the situation.
2. Successful diversity programs are based on meeting specific goals.
3. Diversity initiatives should be framed as strengths and opportunities with individual merit emphasized over numerical measures.
4. Diversity programs are more likely to be successful when employees identify with their work teams and organizations rather than with whichever diverse social groups they are drawn from.

Actions Organizations Can Take to Manage Diversity Effectively

1. Build senior management commitment and accountability.
2. Conduct a thorough needs assessment of people, jobs, and the organization.
3. Develop a well-defined diversity strategy tied to business results.
4. Emphasize team building and group-process training.
5. Establish metrics and evaluate the effectiveness of diversity initiatives.

Source: Adapted from M. E. A. Jayne and R. L. Dipboye, “Leveraging Diversity to Improve Business Performance: Research Findings and Recommendations for Organizations,” *Human Resource Management*, 43 (2004), pp. 409–424.

Employee workforce audits, also known as **workforce utilization reviews**, are important for determining potential legal problems with the flow of employees through an organization. Organizations with a history of growing and promoting their own managers can be particularly vulnerable to legal challenges if the proportion of a protected class of employees at one level is significantly different than the proportion at a higher level. While such a statistical finding does not constitute illegality, it could be interpreted as a “red flag” and a precursor to legal or regulatory trouble down the road.

Step Two: Labor Demand Forecast

A forecast of labor demand derives from a projection of how business needs will affect HR. Each of the environmental forces discussed earlier is likely to exert pressure on HR demand—both in terms of the number and the types of employees required as well as the number and types of jobs utilized. The HR planner must anticipate these needs, add focus to an otherwise confusing array of possibilities, and set priorities for conflicting goals. Labor demand forecasting methods fall into two categories: qualitative and quantitative. As each category embraces certain assumptions, a combination of the two is preferred. Figure 5-6 presents a summary of the most common methods.

Qualitative Methods

Centralized is “top-down” approach

The simplest method for projecting labor demand is a **centralized, “top-down”** approach in which the HR department examines the current business situation and determines staffing requirements for the rest of the firm. While this approach is simple, it can be inaccurate. A top-down approach assumes that the central HR office has an accurate understanding of the business as well as the needs of each unit or function. In large complex firms, these assumptions typically do not hold. A more preferred method involves a **decentralized** process wherein each unit or functional manager subjectively derives his/her own staffing needs. These projections are aggregated to create an overall composite forecast for the company.

At jet engine maker Pratt & Whitney, for example, top management set a goal of 30 percent cost reduction for each functional unit after a study of competitors’ overhead. Unit managers were asked to conduct job analysis of each job under their jurisdiction and, after analysis, to submit proposals for workload reduction and other cost-reduction options. A procedure was established to present the various reduction options, including a method for the presentation of a rationale if the manager failed to make the 30 percent target reduction.

Figure 5-6 Advantages and Disadvantages of Labor Demand Forecasting Methods

	Method	Advantages	Disadvantages
QUALITATIVE			
Delphi	- Experts go through several rounds of estimates - No face-to-face meetings	- More futuristic - Incorporates future plans	- May ignore data - Subjective - Time consuming
Nominal	Face-to-face discussion	Group exchanges facilitate plans	- May ignore data - Subjective
QUANTITATIVE			
Markov	Incorporates past data for time period	Data-driven	Need adequate historical data
Regression	Regress staffing needs onto key variables	- Data-driven - Actuarial - Learning curve	- Large and representative sample needed - Difficult to understand
Trend analysis	Required staffing matched to desired outcomes	- Futuristic - Actuarial - Use business	- Many assumptions - Required factors

Some evidence shows that the Delphi method produces better forecasts

Other firms have experimented with formalized problem-solving methods such as the **Delphi technique** to minimize interpersonal and jurisdictional conflicts. The Delphi technique avoids face-to-face group discussion by the use of an intermediary. Experts take turns at presenting a forecast statement and assumptions. The intermediary passes on the forecasts and assumptions to the others. Revisions are then made independently and anonymously by the experts. The intermediary then pools and summarizes the judgments and gives them to the experts. This process is continued until a consensus forecast emerges or until the intermediary concludes that more than one perspective must be presented. In comparison with linear regression analysis (discussed later), the Delphi technique has been shown to produce better 1-year forecasts, but there can be difficulties in reaching consensus on complex problems.¹⁷

The full Delphi process can take considerable time. For example, The Gap, a clothing retailer, took over 4 months to forecast the number of buyers needed for the next year using a Delphi method. The use of networked computers can do much to reduce the time for Delphi forecasting.

The **nominal group technique** is similar to the Delphi method. However, experts join at a conference table and independently list their ideas in writing. The experts then share their ideas with the group in turn. As the ideas are presented, a master list of the ideas is compiled so that everyone can refer back to them. The ideas are discussed and ranked by member vote.¹⁸

Quantitative Methods

Quantitative methods are based on the assumption that the future is an extrapolation from the past. **Trend analysis** incorporates certain business factors (e.g., units produced, revenues) and a productivity ratio (e.g., employees per unit produced). For example, Pratt & Whitney calculated 16 jet engines per factory worker and almost 20 support, marketing, and management personnel for every 100 factory workers. Its external environmental scanning data indicated more favorable ratios for General Electric, Pratt's chief competitor. By projecting changes in the business factor and/or the productivity ratio, we can forecast changes in the labor demand. There are six steps in trend analysis:

1. Find the appropriate business factor that relates to the size of the workforce.
2. Plot the historical record of that factor in relation to the size of the workforce.
3. Compute the productivity ratio (average output per worker per year).
4. Determine the trend.
5. Make necessary adjustments in the trend, past and future.
6. Project to the target year.

Appropriate business factor is critical to trend analysis success

The use of the appropriate business factor is critical to the success of trend analysis.¹⁹ Learning curves assume that the average number of units produced per employee will increase as more units are produced. Such an increase is expected because workers learn to perform their tasks more efficiently over time. Learning curves are evident in virtually all industries. For example, in the automotive industry, learning curves for new models improve by over 50 percent through the life of the model. At Pratt, the learning curve for one particular engine exceeded 60 percent from start-up to the final production year. The business factor, of course, should be directly related to the essential purpose for the business. Universities typically use student enrollment by discipline, hospitals use patient-days, manufacturers typically use output needs, and retailers use sales adjusted by inventory.

Quantitative methods can improve accuracy by incorporating operational constraints

Regression analysis uses information from the past relationship between the organization's employment level and some important success criterion known to be related to employment. With this approach, companies establish a statistical relationship between sales or work output and level of employment. Such a relationship, however, is influenced by the learning curve which is **a graphical representation of a changing rate of learning for a given activity**. Learning curves can be studied and used to make more accurate projections of future employment levels. More complicated quantitative methods can improve accuracy by incorporating operational constraints (e.g., budgets, mix of labor) into the models. Through this elaboration, it is possible to forecast demand under varying business scenarios.

While our discussion of labor demand may suggest that planners attempt to establish a singular forecast, the outcome of this process is typically a set of potential scenarios. A scenario is a multifaceted portrayal of the mix of business factors in conjunction with the array of HR needs. As such, each scenario/forecast is an elaborate set of “if–then” statements; that is, “if” the business context presents us with scenario A, “then” our labor demand forecast would be B. Ideally, HR planning is as comprehensive as possible to provide leeway for a wide variety of business activities. Next we discuss labor supply forecasts that reveal some of the constraints placed on business planning.

Step Three: Labor Supply Forecast

Whereas the labor demand forecast projects HR needs, the labor supply forecast projects resource availability. This step of HR planning is vital in that it conveys an inventory of the firm’s current and projected competencies. This skill base sets an upper limit on the commitments and challenges the firm can undertake (all else being equal). From a problem-solving perspective, labor supply represents the “raw materials” available to address problems, threats, and opportunities. Supply forecasts are typically broken down into two categories: **external supply** and **internal supply**.

Internal Supply

Internal labor supply consists of those individuals currently available within the firm. Information on personnel is maintained in **Human Resource Information Systems (HRIS)**.²⁰ Although many systems are available, the new Workday HRIS, developed by the creator of Peoplesoft, is gaining considerable attention. Both Workday (go to Workday.com) and Peoplesoft offer a human capital management, web-based HRIS system that includes a competency or skill inventory, a comprehensive recruiting system, and an elaborate performance management and development system. Data from these systems can be used to make projections into the future based on current trends. These trends include not only the number and kinds of individuals in each job, but also the flow of employees in, through, and out of the organization. Specifically, a skills or competency inventory includes an assessment of the knowledge, skills, abilities, experience, and career aspirations of each of the present workers. This record should be updated frequently and should include changes such as new competencies, degree completions, and changed job duties.

HRIS can help with internal recruitment

These inventories also aid in the internal recruitment process. If these inventories are not updated, present employees may be overlooked for job openings within the organization. This may result in increased search costs in addition to dissatisfaction among employees who were overlooked. Accordingly, internal supply forecasts must take into account the company’s current practices pertaining to hiring, firing, transfer, promotion, development, and attrition. The best HRISs, Workday being one example, provide great flexibility for managing a global workforce for the process of recruiting, applicant tracking, hiring/placement, and even termination. Requisite components should have the following:

1. Applicant tracking for comparing the pool across the organization, job families, job profiles, and positions.
2. Managing the transition from applicant to employee (including temps).
3. Employee tracking with full worker histories, performance appraisals, and compensation, benefits, and Paid Time OFF (PTO)/leave history.
4. Employee movement system for tracking within the organization to aid in succession planning and internal staffing.
5. Managing the transition from working status to retirement and/or termination.

Succession planning and replacement charts also are used by some companies to identify individuals to fill a given slot if an incumbent should leave. These techniques are most useful for individual-level problems with short-term planning time horizons. Pratt used an HRIS system to project successions, early retirements, future openings, and overstaffing problems.

Two of the most important concerns regarding the use of electronic databases for personnel are privacy rights and security problems. The latter issues can be handled with the

right systems and software provisions. The privacy issue is much more difficult. Many states and many countries have privacy laws and regulations that may pertain to the use, content, and access of the HRIS.

More complicated transition models such as **Markov analysis** are used for long-range forecasts in large organizations. Markov analysis uses historical information from personnel movements of the internal labor supply to predict what will happen in the future. An estimate is made of the likelihood that persons in a particular job will remain in that job or be transferred, promoted, demoted, terminated, or retired using data collected over a number of years. Probabilities are used to represent the historical flow of personnel through the organization, a “transition matrix” is formed from these probabilities, and future personnel flows are estimated from this matrix.²¹ Figure 5-7 presents Markov data from one division of Progressive Tool and Industries, one of the largest tool companies serving the automotive industry (Progressive designs and manufactures the tooling for assembly lines). The transition probability matrix presents percentages or probabilities of employee movement through four positions within the division. These data were retrieved from personnel records and averaged over a 5-year period. The matrix shows that 70 percent of the assemblers remain in the position after 1 year with a turnover (quit or fired) rate of 20 percent. The matrix also shows that 80 percent of the more skilled machinist jobs are retained after 1 year with only a 5 percent turnover rate. These data were used by Progressive to plan its recruiting strategy based on its projected contracts. The data indicated a strong need to evaluate the assembler job to determine the causes of the high turnover rate and the need to concentrate recruiting at that level in anticipation of shortages of assemblers in the coming year when contracts were expected to expand.

Both Eaton Corporation and Weyerhaeuser have used Markov analysis successfully in their forecasts. However, two attempts at Corning Glass proved unsuccessful because the transition probabilities were unreliable. A minimum of 50 people in each job of the transition matrix is recommended to ensure adequate reliability in forecasting. At Progressive, for example, projections for oversupplies of foremen were based on small numbers and proved to be relatively inaccurate. More research is needed on Markov analysis to determine the key variables affecting its accuracy. Variables such as unemployment rate, changes in competitor status, and business plans or customer demand that differ significantly from the situation when the probabilities were established will have a profound effect on the usefulness of the Markov projections for the future.²²

Markov transition probabilities must be reliable

External Supply

External supply consists of those individuals in the labor force who are potential recruits of the firm (including those working for another firm). The skill levels being sought determine the relevant labor market. The entire country (or world) may be the relevant labor market for highly skilled jobs, whereas for unskilled jobs the relevant labor market is usually (but not always) the local community. Determining the relevant labor market also

Figure 5-7
Markov Analysis at
Progressive Industries

		A	M	F	S	Exit
Assemblers (A)		.70	.10			.20
Machinists (M)		.05	.80	.10		.05
Foremen (F)			.10	.75	.05	.10
Supervision (S)				.05	.90	.05
Staffing Levels		A	M	F	S	Exit
Assemblers (A)	250	175	25			50
Machinists (M)	120	6	96	12		6
Foremen (F)	40		4	30	2	4
Supervision (S)	20			1	18	1
Forecast		181	125	43	20	61

will determine what type of recruiting approach should be used. Several governmental and industrial reports (e.g., Bureau of Labor Statistics, Public Health Service, Northwestern Endicott Lindquist Report) regularly forecast the supply of labor and make estimates of available workers in general job and demographic categories. These forecasts are also extrapolations into the future based on current trends.

Employees must sign I-9 forms

What Is the Immigration Reform and Control Act (IRCA) of 1986? The labor pool should be a legal pool. While there is a global market for many jobs today, some jobs just have to be done in person (i.e., the worker is in the United States). The IRCA requires that every U.S. employer, no matter how small, not hire or continue to employ aliens who are not legally authorized to work here. The wave of immigrants entering the United States slowed in recent years as the economy faltered and governments stepped up enforcement of immigration and employment eligibility laws. Employers are supposed to verify the identity and work authorization of every new employee and to sign an I-9 form attesting to the legal status of each worker. Financial penalties for noncompliance can be harsh (from \$100 to \$1,000 per employee) and criminal penalties are possible. Immigration and Customs Enforcement (ICE) and the U.S. Attorney's Office have made individuals who work for companies that employ illegal aliens the targets of criminal prosecutions. This is a change in tactics. HR people and line managers are now serving prison time for conspiracy and harboring illegal aliens.

The use of illegals is rampant in some American industries as enforcement of the law is limited and criminal penalties are still enforced on a limited basis. Law-abiding companies in some industries such as construction can have difficulty competing on price against the cheaters. One roofing-business owner in Florida reported that he couldn't adequately staff his business without illegals and that he certainly couldn't compete in bidding jobs without low-wage illegals. In addition, he reported that he "saves a ton" on worker's compensation and social security expenses when he uses "illegals."

State laws aim to curb illegal immigration

State lawmakers, in response to Congressional inaction on immigration law, are giving local authorities a wider berth. States across the country have recently proposed or enacted hundreds of bills addressing immigration. Between 2009 and 2011, there were 222 laws enacted and 131 resolutions in 48 states, according to the National Conference of State Legislatures.²³ The **Immigration Reform and Control Act** states that this federal law overrides "any state or local law imposing civil or criminal sanctions (other than through licensing and similar laws) upon those who" recruit or hire "unauthorized aliens." However, in 2011, the Supreme Court appeared to endorse state laws that punish employers who intentionally hire illegal workers. "The most rational path for employers," Chief Justice John Roberts wrote, "is to obey the law — both the law barring the employment of unauthorized aliens and the law prohibiting discrimination — and there is no reason to suppose that Arizona employers will choose not to do so."²⁴

Immigration Reform and Control Act

In affirming the legality of the **Legal Arizona Workers Act** that allows a county attorney to bring a civil suit to suspend or revoke a business license if a business intentionally or knowingly hires an "unauthorized alien" worker, the Court ruling in **Chamber of Commerce v. Whiting** appears to also make legal similar laws in Alabama, Colorado, Mississippi, Missouri, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia. Other states may have passed similar laws since 2011.

Chamber of Commerce v. Whiting

E-Verify available to determine work eligibility

E-Verify is a free, Internet-based program run by the U.S. government comparing data from an employee's I-9 form with government records. If there is a match the employee is eligible to work in the United States, whereas a mismatch alerts an employer and the employee is then allowed to work while attempting to resolve the reason for the mismatch. E-Verify is run by the Department of Homeland Security (DHS) in partnership with the Social Security Administration. For most employers, the use of E-Verify is voluntary and limited to determining the employment eligibility of new hires only. Federal contractors and subcontractors are required to use E-Verify. Executive Order 12989 mandates the electronic verification of all employees working on any federal contract. E-Verify is also required for employers in certain states. Also as part of the **Chamber of Commerce v. Whiting** decision, the Supreme Court ruled that states can punish employers who violate mandatory E-Verify laws. In the same decision, the Court also upheld the provision of

**Error rate down for
E-Verify**

the same Arizona law that requires employers to enroll in the voluntary federal E-Verify program.

More than 238,000 employers are enrolled in the program with over 16 million queries run through the system in fiscal year 2010. There were over 3 million cases run through E-Verify in fiscal year 2011. According to a recent report from the Government Accountability Office (GAO), there has been a significant reduction in mismatch rates and fewer problems with fraud, privacy, and discrimination issues.²⁵

H-1B Visa

What Are the Immigration Options for U.S. Employers? Another employment option for U.S. employers is legally importing workers through work visas. The **H-1B visa** program allows employers to hire highly skilled or specialized foreign workers for temporary jobs in the United States. The program is designed for skilled workers in high demand and is capped at 65,000 for 2012 plus 20,000 additional slots with advanced and specified college degrees. An employer must file a labor condition application with the Department of Labor attesting to several items, including payment of prevailing wages for the position and the working conditions offered. Under current law, an alien can only be on H-1B status for 6 years at a time (go to <http://uscis.gov> for more detail). The legal limit of H-1B visas was reached for 2011 before the fiscal year even began.

Employers can also hire foreign workers to temporarily work in the United States or to receive training. Employers must file a petition for temporary foreign employees. There are many categories of temporary workers, and the categories vary by the maximum time such an employee may stay. One controversial program for temporary employees is the Intracompany Transferee **L-1 classification**. The purpose of these visas is to allow foreign companies to transfer employees into the United States. The number of these visas has risen in recent years. Unlike the H-1B visa, employers do not have to pay L-1 workers prevailing wages. Aliens with “specialized knowledge” or managerial responsibilities who are transferred to the United States by a foreign employer to work for the parent company in the United States qualify for L-1 visa status.

**L-1 programs
are controversial**

While the United States Citizenship and Immigration Service has specific definitions for “specialized knowledge,” “managerial,” and “executive” classes, there are accusations that the L-1 program has been abused to the detriment of the American worker. At present, L-1 workers can stay in the United States for a maximum of 7 years. Critics charge that L-1 visas are now used by foreign companies to bring workers into the United States who then do contract work for American companies, at times to replace American workers. There have even been accusations that American workers trained the L-1 contract workers before the Americans were fired.

**Step Four: Gap
Analysis**

Gap analysis is used to reconcile the forecasts of labor demand and supply. At a minimum, this process identifies potential shortages or surpluses of employees, skills, and competencies. In addition, however, planners can review several environmental forecasts with alternative supply and demand forecasts in order to determine the firm’s preparedness for different business scenarios in the context of business objectives. From a problem-solving perspective, gap analysis is used to match potential strengths and opportunities with solutions in order to evaluate how the firm might attack the future. This decision-making process involves (1) search for alternative solutions, (2) evaluation of alternatives, and (3) choice of solutions.

**Is There an Optimal
Way to Downsize
or Restructure?**

The evidence on the effects of downsizing is mixed. Strategic downsizing and restructuring can clearly be effective in improving a firm’s position, but strategic downsizing is more than just “cost reduction.” Figure 5-8 presents a summary of the research evidence.

**Strategic downsizing is
more than cost reduction**

One expert echoes the latest research showing that restructuring by downsizing does not necessarily make a company more profitable. In an excellent book entitled *Responsible Restructuring*, Professor Wayne Cascio presents a strategy for optimal restructuring.²⁶ Figure 5-9 presents Dr. Cascio’s prescriptions for enhancing the effectiveness of restructuring and downsizing. He makes a convincing argument that his approach can be an opportunity to focus on the most important elements (and people) of the organization where it has (or could have) a sustained competitive advantage.²⁷

Figure 5-8 Summary of Research on Downsizing and Outcome Variables

1. No consistent relationship between downsizing and post-downsizing financial performance.
2. Other cost-saving measures may be more effective (e.g., attrition).
3. Even when payroll is reduced, restructuring charges may offset benefits.
4. Negative effects on effectiveness and performance for some types of firms.
5. Effects can be more negative in service industries with high levels of customer contact.
6. Higher negative effects for firms engaged in "high involvement" work practices with team-oriented work designs and pay-for-performance systems.
7. Negative effects on survivors (that should be incorporated into calculation of effects). Survivors lose motivation, are risk-averse, and are more likely to seek employment elsewhere.
8. Can lead to a loss in valuable talent but also disrupts vital social networks that facilitate innovation and creativity.
9. Large sample studies indicate a general negative effect of layoff announcements on market-adjusted equity values.
10. Early retirement programs tend to realize positive response but the most valuable employees may accept buyouts.

Figure 5-9 Enhancing the Effectiveness of Employment Restructuring and Downsizing

1. Carefully consider the rationale behind employment downsizing.
2. Consider the virtues of stability.
3. Before making any final decisions about downsizing, executives should make their concerns known to employees and seek their input.
4. Top management should lead by example, and use downsizing as a last resort.
5. If employment downsizing is unavoidable, be sure that employees perceive the process as fair, and make decisions in a consistent manner.
6. Communicate regularly and in a variety of ways in order to keep everyone abreast of new developments and information.
7. Give survivors a reason to stay and prospective new hires a reason to join.
8. Train employees and their managers in the new ways of operating.
9. Examine carefully all management systems in light of the change of strategy or environment facing the firm.

Source: Adapted from W. F. Cascio and P. Wynn, "Managing a Downsizing Process," *Human Resource Management* 43 (2004), pp. 425–436.

Most companies implement downsizing as a reaction to loss of market share, increased competition, or lower productivity. Some look at downsizing as simply a workforce reduction process rather than a restructuring or reengineering of jobs in the context of corporate strategy or planning. As one CEO put it, "We lost the organization in the process . . . we basically fired people and called it re-engineering . . . we jumped on the re-engineering bandwagon without understanding its destination." Another CEO was even more disillusioned with job cutting posing as reengineering. "We cut costs, ruined quality and eliminated more customers than employees. . . . Re-engineering has replaced strategic thinking around here."

The most effective reengineering efforts are an opportunity to create or improve the company's competitive advantage through restructuring, overhead reduction, and more effective performance management with a constant focus on the core competencies of the organization and the current and/or future customer base. The process can create a frame of mind that could be sustained after the major downsizing effort is complete. The idea is to create and maintain a "lean and mean" mentality in management that would be sustained long after the specific downsizing goals are met and always in the context of meeting (or exceeding) customer requirements with measurement criteria that best define this customer focus. Reengineering that focuses on the core competencies of the organization and the core business and its customers can help support a clear and compelling organizational strategy. But as strategy expert Darrell Rigby puts it, "Cutting people whose experience is vital to the creation of customer value will never create superior results."

Over 130,000 IBM employees have taken early retirement since its first major downsizing effort in 1988. While the program helped IBM maintain its company policy of never laying off a single full-time employee, IBM lost some of its best employees who opted for one of the attractive termination programs. Later, IBM's downsizing program focused on offering early retirement to only noncritical employees, terminating marginal employees

Most effective reengineering improves competitive advantage

Poor performance appraisal systems problematic for performance-based downsizing

for cause, and offering less attractive transfer options to those who were not needed in their current jobs. One of the biggest problems in achieving its early downsizing goals, however, was the IBM performance appraisal system, which did not provide enough useful data to allow for performance-based decisions. It does now and IBM is doing very well.

There are many approaches to downsizing and some may be required due to union agreements. AT&T “selected” current employees for the new positions based on new job descriptions created by the overhaul of its divisions. The skilled-based résumés and the performance appraisals of the “applicants” for the new jobs were assessed in the context of the labor demands projected based on the new corporate strategy. Voluntary buyouts were one part of the options AT&T used to close the gap in its supply and demand for labor.

Most chief executives and senior managers viewed a customer focus as the framework for downsizing.²⁸ This focus included increasing the understanding of customer needs, expanding the customer base, and increasing product and service quality. Of course the relationship between labor costs and pricing is almost always on the top of the list in terms of customer focus. But the list must be longer than just cutting payroll to save money.

Professor Cascio asks, “Could it be that there is virtue in stability?” He reports that 80 of the 100 companies that made *Fortune*’s 2002 list of the “100 Best Companies to Work For” avoided layoffs in 2001; 47 of them had some form of policy barring layoffs. And remember there is a relationship between that list of the “best companies” to work for and actual corporate financial performance.²⁹

As indicated in Figure 5-9, some of the problems associated with downsizing (or “right-sizing”) can be minimized with good planning and strategy. In addition to examining performance data and redeployment options, such planning may include **outplacement** services for employees who have lost their jobs. Outplacement can involve job coaching, résumé preparation, placement services, and interview training. Every AT&T employee who was not selected for the restructured company was given access to a resource center that provided job counseling and access to job postings within the company and at other companies.

Such outplacement services are now available in Europe and even in Japan, where Japanese companies are faced with a need to downsize as well. It is generally believed that offering outplacement services to employees who have lost their jobs will reduce the probability of a lawsuit, such as a claim of age discrimination. (There is actually no definitive study on the subject.)

These prescriptions for effective (and limited) downsizing do not necessarily rule out strategic termination. A strong argument can be made that having the very best people in the most important strategic positions is a key to strategy execution. Former GE CEO Jack Welch often talks about having “A” players in the strategic “A” positions and that having “C” players in such positions can kill strategic execution. HR planning should emphasize the placement of the most qualified individuals in the most important positions. Strategic planning may also include a careful look at and action regarding those employees who could be replaced with more effective individuals.

As discussed previously, in HRP there are likely to be multiple scenarios that are worthy of consideration. Environmental scanning and labor forecasts identify a range of possible options. At this stage, the range of possibilities can be increased by seeking input from executives, line managers, employees, customers, and consultants in a “brainstorming” process. A qualitative approach such as *Delphi* can be used at this point as well.

As part of its HR planning process and after a thorough job analysis, pharmaceutical giant Upjohn asked line managers to answer four basic questions:

1. How does each job relate to the strategic plan of the work unit?
2. Are there alternatives to a full-time job that should be considered to accomplish the same objectives (e.g., temporary workers, part-time employees, independent contractors, job sharing, telecommuting, employee leasing, consultants, overtime)?
3. What are the projected costs of each job?
4. What specific impact will the job have on critical and clearly defined effectiveness criteria?

**Downsizing needs
a customer focus**

**Downsizing problems
can be minimized with
good strategic planning**

**Outplacement may
reduce the probability
of lawsuits**

**What Are Some
Alternative or Additional
Solutions?**

**Use Delphi method to
assess HRP options**

What Is the Role of Temporary Employment?

Temporary employment, part-time, telecommuting, job sharing, and employee leasing are popular ways to control costs

More and more companies have been asking similar questions regarding their workforce and coming up with rather creative answers. One of the strongest trends in this country is the use of creative labor arrangements. Temporary employment, part-time workers, telecommuters, job sharing, and employee leasing are among the most popular solutions to labor cost control and fluctuating demand. With **employee leasing**, a leasing company assumes complete responsibility for the employee, including pay and benefits. The major disadvantage for the employer is a loss of some control over the employee. This loss of control, of course, could affect the effectiveness of employees' performance, which could have a direct impact on the customer. There are few studies that compare the performance, productivity, absence rates, or any other criteria of permanent versus leased employees.

Another significant trend in creative HR planning is the use of permanent part-time employees.³⁰ For years, IBM's policy of maintaining a 10 percent part-time workforce enabled the company to maintain a labor pool in line with the business cycle and to preserve its sacrosanct policy of no layoffs. IBM has now increased the percentage to 20 percent and outsourced many functions, including a large share of its HRM functions. Many other companies, particularly in service, are now following suit. Ryder Trucks, UPS, and Walmart are among the major companies now maintaining a sizable percentage of their workforce with part-time status. According to the Bureau of Labor Statistics, 41 percent of the U.S. workforce worked part-time in 2010. Of this group, two-thirds were women.

Temporary employees can provide more HR flexibility

There is a growing use of temporary employees to provide more flexibility for HR. Through temporary employment agencies such as Manpower, Inc., employers often can get well-screened and well-trained employees who might also provide unique and positive perspectives on how the work gets done. Of course, on the downside, temporary employees are usually less committed to the organization and its customers. They may also be perceived as a threat to the job security of full-time employees. New temporary employees can be particularly problematic if a major downsizing has occurred recently.³¹ While working parents consider part-time employment a good thing, women's groups such as the National Organization for Women (NOW.org) decry the trend as fostering a marginal employment policy characterized by low wages and no benefits.

Over 30 percent increase in temporary employment

The National Association of Temporary Services reports a growth rate in temporary employment in excess of 30 percent. While employers generally report that temporaries are typically hired for emergencies, an increasing number of companies report considerable cost savings as well with "temps" judged to be as productive as permanent employees.³²

One form of temporary "employment" is the **internship**. Many organizations now use some form of paid or unpaid internship, particularly for college students or new graduates. From the organization's perspective, this is an excellent way to gather information on an individual for a full-time position.

60 percent of internships result in job offers

One recent study found that over 60 percent of such internships ultimately resulted in job offers. This same study found that interns who desired to be hired were more likely to use self-promotion and ingratiation as a strategy and that this strategy increased the probability of a job offer. Those organizations who wished to hire individuals were more receptive to interns' creativity, and this receptivity increased the interns' application intentions.³³

What are the criteria for classifying workers as independent contractors?

Many American workers are classified as independent contractors. Individuals providing services are employees or independent contractors. In general, employers must withhold income taxes, withhold and pay Social Security and Medicare taxes, and pay unemployment tax on wages paid to an employee. Employers do not have to withhold or pay any taxes on payments to independent contractors. The critical questions for determining a worker's status are: (1) Does the company control or have the right to control what the worker does and how the worker does his or her job? (2) Are the business aspects of the worker's job controlled by the employer (e.g., how the worker is paid, are expenses reimbursed, who provides tools/supplies)? (3) Are there written contracts or employee-type benefits (e.g., pension plan, insurance, vacation pay, etc.)? and (4) Will the relationship continue and is the work performed a key aspect of the business? According to the Internal Revenue Service (IRS), the key is to look at the entire relationship; consider the degree or

Internal Revenue Service: key issue for worker classification is the entire relationship

extent of the right to direct and control; and, finally, to document each of the factors used in coming up with the determination.

What Is Job Sharing?

Many employers offer some form of **job sharing**, in which two employees share the responsibilities, accountability, and compensation of one full-time job. Job sharing is more common among small employers.³⁴ Management support appears to be the key to the success of these programs. Many managers and supervisors express fear that job sharing will translate into extra work for management and extra expense for the employer. However, the limited research on the subject indicates that any additional compensation is offset by higher productivity and longer tenure. Job sharing has the potential to help with work flow, reduce turnover, and save on recruiting costs. The approach is responsive to employees' needs to balance work and family or other personal issues.

Job sharing success depends on a good partnership

The success of job sharing depends on a good partnership. Among the key questions the partners and management must answer are the following: (1) How will the work schedule be divided? (2) How will the partners handle critical meetings, deadlines, etc? (3) How will the partners divide salary and benefits? (4) How will the work team communicate (formal systems are better)? and (5) How will performance evaluations be conducted (individual appraisals are usually more effective)?

Technology has facilitated job sharing. Projects no longer have to stop at the end of the American workday. This is especially evident in the IT industry. Americans finish their workday and then turn over a project to computer programmers in India or Dubai who work while the Americans sleep. Needless to say, this 24-hour attention helps companies hit deadlines.

What Is Telecommuting?

Technology enables work to be done from almost anywhere. It is estimated that over 30 million American workers telecommuted in 2010.³⁵ The number is probably higher today as traffic becomes more problematic, the cost of gas continues to rise, and telecommunications technology improves. **Telecommuting** is an alternative work arrangement allowing workers to work at home or in some other location other than the employer's physical premises. When properly implemented, the evidence of its effectiveness and efficiency is quite strong. Companies are able to attract and retain effective workers with considerable cost savings.

Telecommuting has beneficial effects

The most comprehensive review of effects found that telecommuting had beneficial effects on job satisfaction, job performance, turnover intent, and role stress. Also, telecommuting that involved more than 2½ days of work per week increased the benefits regarding work-family conflict. However, although telecommuting had no general negative effects on the quality of workplace relationships, the longer hour types of arrangements did some harm to relationships with co-workers.³⁶

Is There a Conflict between Downsizing and Diversity Goals?

One of the more complicated issues regarding a major downsizing is the potential conflict between downsizing efforts and programs aimed at promoting workforce diversity. Ciba-Geigy, the pharmaceutical company, had a diversity challenge as a part of its retention process. In the assessment of employee performance, managers were asked to value a diverse organization by "proactively considering diversity in this process." After the initial retention decisions were made, "HR challengers will review retention decisions with respect to diversity . . . and to test for adverse impact." HR compared diversity data after the initial retention decisions to predownsizing data. According to documents in a lawsuit, "the result of this analysis may lead to a possible further challenge." Several older Ciba-Geigy employees who were fired maintained that the "diversity challenges" resulted in discrimination against older workers since they were not a part of the diversity programs.

Avoid preferential treatment in downsizing

Given the current state of EEO law regarding preferential treatment, if the plaintiffs could show that race or gender was actually considered in the retention process and that this consideration affected the status of older workers, would the older workers prevail in an ADEA case? This is a tough call and probably would depend on the process that was followed after the internal audit. If the plaintiffs could show that performance ratings were simply changed to avoid adverse impact against women or minorities and that changes were unfavorable to older workers, an ADEA claim could be successful.

Organizations that undergo downsizing while attempting to maintain diversity or affirmative action accomplishments should try to avoid showing preferential treatment on the

basis of any protected class characteristic. It is possible (and advisable) to actually evaluate past performance or even potential performance without even considering a protected class characteristic. While conducting adverse impact analysis such as hypothetical violations of the 80 percent rule is certainly recommended, violations of the guidelines should lead to a serious evaluation of the job relatedness of each step of the decision-making system, not the simple adjustment in ratings as a consequence of a protected class characteristic in order to avoid a violation of the 80 percent rule.

Step Five: Action Programming

Action programming is the final step of HRP that takes the adopted solution and lays out the sequence of events that need to be executed to realize the plan. In the previous four steps of HR planning, the task was to derive a solution that best addresses the issues identified through environmental scanning and labor forecasts in the context of the strategic plan. The purpose of action programming is to make certain that those decisions become reality. In general, there are two aspects of programming: internal and external.

Internal Programming

Many of the solutions in HRP rest on actions inside the firm with the current workforce. For routine issues, in particular, bureaucratic adjustments in HR practices can be easily programmed internally (e.g., job design/assignments). In addition, for some uncertain areas, adaptive adjustments such as training, career planning, and compensation design can be made internally.

These are the adaptive requirements many companies follow because of labor shortages in key areas. Taking a closer look at **organizational design** around changing technologies is one such example. IBM's "hot skills" program is a great illustration of the effective linking of corporate strategic planning with HR planning and HR recruitment.

External Programming

Other solutions in HRP require going outside the firm to interact with constituencies in the environment (e.g., labor unions, competitors, etc.). In particular, when plans require drastically different competencies from what employees currently possess and/or the time frame for change is quite short, the firm likely will need to recruit from the outside labor market. Motorola's experience with the coordinated efforts of U.S. and Indian programmers is one example of reacting to new time frames.

Step Six: Control and Evaluation

Control and evaluation monitor the effectiveness of human resource plans over time. Deviations from the plans are identified and actions are taken. The extent to which human resource objectives have been met is measured by the feedback from various outcomes. It has been suggested that, essentially, long-range planning activities require the attainment of short-run objectives. Examples include performance or productivity data, turnover costs, workforce reduction effects from early retirement programs, break-even costs of new hires/or consultants, and analysis of costs of recruits compared to the training and development costs of existing employees. Obviously, actual staffing levels compared to projected levels should be evaluated for accuracy. Doing evaluations such as cost-benefit analysis makes it easier to determine whether long-run planning objectives will be met.

The issue of evaluation of planning can be considered along with the evaluation of recruitment efforts since the criteria used for the evaluations are often the same. This is discussed later in the chapter. The critical consideration here should be the identification of the vital measurement criteria, which will provide for an assessment of the HR planning implementation in the context of the business strategy. Regarding outsourcing and alternative work arrangements, the most fundamental criterion should be cost savings but always in the context of meeting customer requirements.

When HR planning involves adding to the labor force, the organization must rely on the recruitment function to meet its employment needs. The whole point of the planning exercise is to accurately determine the optimal number of employees to meet internal and external customer requirements. If the gap analysis determines that employees are needed, that is where recruitment comes in. Discussion of this vital HR function is next.

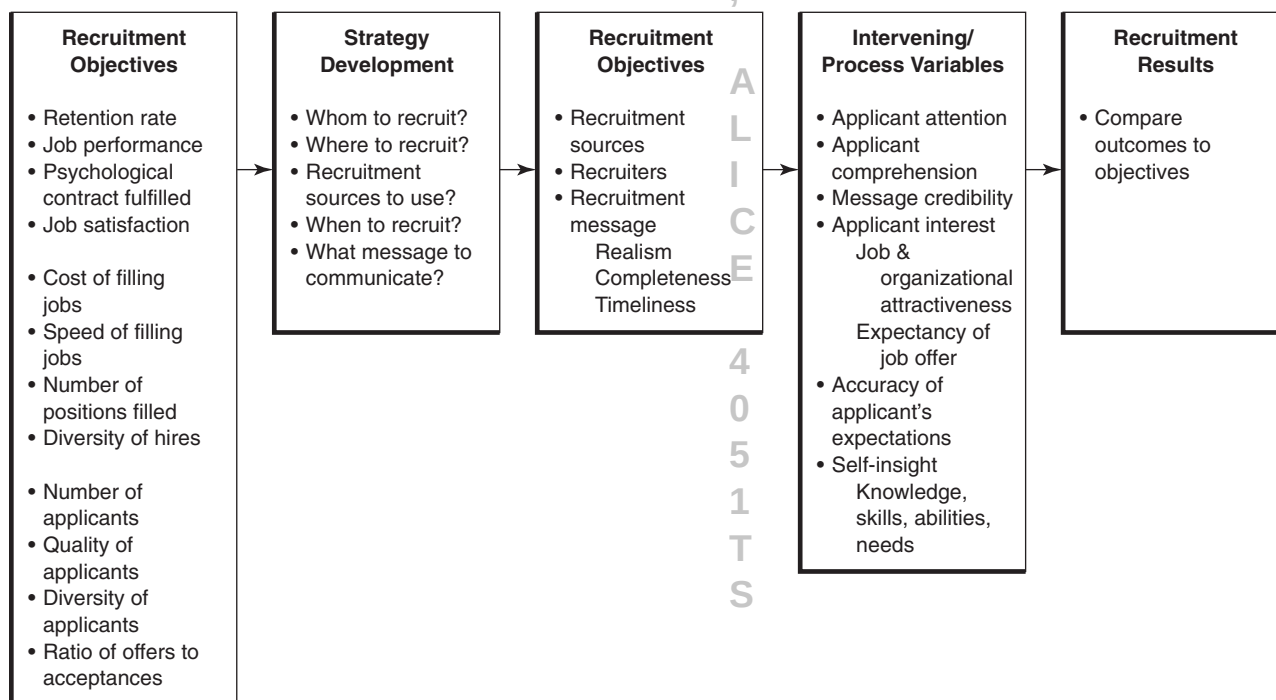
THE RECRUITMENT FUNCTION: PUTTING HRP INTO ACTION

Moving from HRP to recruitment is essentially a process of translating broad strategies into operational tasks. The major responsibility for this process typically rests within the HRM department, although most tasks are shared with line managers. While HR managers are responsible for determining recruitment policy, ensuring EEO compliance, training, and evaluating the recruiters, many organizations actively involve line managers and employees as recruiters. As mentioned previously, conflict between HR and line managers can occur when their priorities diverge. For example, line managers may be more concerned about filling a position quickly (i.e., when the new employee is needed), while HR managers may be more concerned about affirmative action guidelines or complying with EEO regulations. Their goals should be the same: hiring the most qualified person(s) when needed and without violating any laws or regulations. Figure 5-10 presents a model of the organizational recruitment process.

Recruitment, Other HR Activities, and Organizational Attractiveness

Recall the statement earlier about the interdependent nature of recruiting with other HR activities and the reputation of the organization. Decisions regarding employee testing, work policies and programs, compensation, benefits, and corporate image all can have an impact on recruiting. Here are some examples. A large retailer required high-level managerial candidates to travel to the company headquarters (for some, over 2,000 miles) to go through a 2-day selection process that was only offered at headquarters. Because of these requirements, many experienced managers who were working for other companies dropped out of the pool of candidates because they didn't have the time to commit to a 2-day assessment with 2 additional days of travel to the national headquarters. The Opryland Hotel in Nashville had difficulty attracting housekeepers, kitchen helpers, and laundry workers. It put

Figure 5-10 A Model of the Organizational Recruitment Process



Source: J. Breaugh and B. Starke. "Research on Employee Recruitment: So Many Studies, So Many Questions," *Journal of Management*, Vol. 26, p. 408. Copyright (2000) by Sage Publications, Reprinted by permission.

in a 7-day-a-week child care center and a bus service to transport workers. The two new employee benefits increased the number of applicants by 35 percent.

A company institutes a comprehensive drug-testing program that includes random drug testing with no probable cause for all employees. The company does not consider how the broader pool of candidates might view this and merely assumes that the policy will have an impact only by deterring applicants who would be most likely to use drugs. Weyco, a Michigan insurance benefits company, informed its workers that they would be subject to random testing for smoking. If they test positive for smoking, they will be fired. Rather than take the mandatory breathalyzer test, four employees left the company. Another company decides to reduce indirect compensation by reducing health benefits for new employees and increasing the premium. It has no idea what the change in policy will do to its ability to recruit. The company finds out later that recruitment costs have gone up along with the rate of offer rejections. It finally conducts an actual cost-benefit study of the change in policy and discovers that in fact the company lost money because of the interactive effect of the policy on staffing and the retention of valuable employees. **Recruitment, selection, and personnel policies are indeed interdependent.**

Of course recruitment and human resource planning should be done with the assumption that consideration will be given to where the work is performed. Technology now allows employers to consider many more options for getting the job done. As discussed earlier, along with telecommuting, more companies are now turning to offshoring and the outsourcing of work, particularly work that is strategically less important, can be done for less, and when shipping and the cost of oil do not wipe out the gain from lower labor costs. “Geography is history,” says Raman Roy, chairman of Wipro Spectramind, one of India’s largest customer service companies.³⁷ Over 750,000 American tax returns were prepared in India in 2011, most of them by SurePrep, headquartered in Bangalore. Indian tax preparers are paid between \$400 and \$500 per month versus \$3,000 to \$4,000 per month in the United States. In 2011, SurePrep did work for more than 200 American accounting firms. Morgan Stanley now has Indian stock analysts and Dell sends customer calls to India (estimated savings of around 50 percent on compensation). IBM employs about 350,000 people worldwide and only about 35 percent of them are in the United States. Even SAS, the North Carolina company discussed in Chapter 1 with the incredible employee benefits, now employs a growing percentage of computer tech specialists who live and work in India. Says Jerry Rao, Indian entrepreneur, “Any activity where we can digitize and decompose the value chain, and move the work around, will get moved around.” It is estimated that 750,000 American jobs went to China, Russia, and India between 2001 and 2010. See again Figure 5-3 for offshoring “attractiveness” scores by country.

While “geography may be history” regarding knowledge-based service work that does not require face-to-face contact with customers or clients, geography is not history with regard to manufacturing or any work involving expensive shipping. Also, because of the increased cost of shipping mainly due to the price of oil, some manufacturing is actually returning to the United States. “Cheap labor in China doesn’t help you when you gotta pay so much to bring the goods over,” says economist Jeff Rubin. “Made in the USA” now makes more sense for some companies. DESA, the company that makes the giant heaters you see behind the benches at NFL games, relocated back to the United States from China in 2008. Among the other companies practicing this “reverse globalization” are Crown Battery (from Mexico to Ohio) and Larouk Systems (1,000 jobs from China to Houston). “It’s not just about labor costs anymore,” says economist Rubin. “Distance costs money, and when you have to shift iron ore from Brazil to China and then ship it back to Pittsburgh, Pittsburgh is looking pretty good at 40 bucks an hour.”³⁸ But \$40 an hour may be more the exception than the rule for new U.S. manufacturing jobs. That new Volkswagen plant in Chattanooga, Tennessee is paying its 2,000 American workers \$14.50 an hour, far below the pay for the typical (unionized) U.S. auto worker.

Recent developments in China, particularly when combined with added costs because of the price of oil, could contribute to this momentum regarding manufacturing in the U.S. Chinese factory workers are demanding and getting better wages, working conditions, and benefits. Minimum wages have climbed 32 percent since 2004 (the average is from \$58 to \$81 a month, excluding benefits) in Shenzhen, Beijing, and Shanghai. Wages at the largest

“Geography is history”

Some manufacturing
is returning to the
United States

Automotive wage comparisons

factories operated by many American multinationals, paying between \$100 and \$200 a month in 2004, are now also rising. China's progress could bode well for workers in places like Cambodia, Bangladesh, and Madagascar, but the shipping costs might still direct the multinationals back to the United States at least for products sold mainly here. Factory owners may be complaining that they can't find workers in China, but that means they will do what they have always done in such cases: look for cheap labor elsewhere and more efficient logistics. Foreign auto companies employed over 140,000 people in the United States in 2011. Still, the typical General Motors worker in the U.S. costs the company about \$56 per hour (including benefits). In Mexico, a worker doing the same type of work costs the company \$7 per hour; in China, \$4.50 an hour, and in India, \$1 per hour. While G.M. reduced its hourly work force in the U.S. to 50,000 in 2010 from 89,000 in 2006, its Mexican hourly head count rose up 10% (to 10,000).

For jobs with high turnover rates, as stated earlier, consideration should also be given to telecommuting where a customer call "center" isn't a center at all. When you call JetBlue to make a reservation, you're probably talking to a Utah housewife working from her home. American Airlines is following the JetBlue lead with a growing number of its customer service representatives CSRs sitting in their homes throughout the United States. There is growing evidence that turnover rates and overall costs can be sharply reduced with telecommuting. Job applicants tend to like the approach, the pool of qualified job candidates grows, performance is on a par (or better) than "on-premises" workers, and the voluntary turnover rate is significantly lower compared to the "on-premises" folks. With the cost of gasoline high (and climbing), telecommuting is looking better and better to corporate America and to working America.

An organization's reputation affects recruitment success

Recruitment can clearly be made harder or easier by a whole host of factors. The state of the economy, the unemployment rate, the supply and demand for particular KASOCs or competencies, and HR policies and practices are all factors. Of course the attractiveness of the organization from the perspective of potential job candidates is also important. This attractiveness factor is related to many factors that go into an organization's reputation. As discussed in Chapter 1, an organization's reputation in terms of its effectiveness or as a "socially responsible" employer can clearly affect recruitment. Google may now be the leader in IT applications because of its reputation. No doubt an organization's reputation as a great place to work with an optimistic outlook and a stable history, as a company with great potential for growth, or as a socially responsible company will make a recruiter's job a whole lot easier. Have you noticed how many ads are on television now extolling the virtues of Walmart as a great place to work and how much Walmart is doing for the local community? This PR campaign is probably to some extent a response to the negative news about Walmart in these same areas and its generally unfavorable reputation as an employer. Obviously, Walmart wants its reputation to attract and keep good workers and, of course, loyal customers.

The Three Essential Steps for Recruitment Planning

Based on the gap analysis, an organization should have a fairly good idea of its overall recruitment or downsizing needs. This information must be operationalized and communicated to those who will be taking the action. Three essential steps for translating future needs into specific operational terms are (1) work analysis, (2) time lapse data, and (3) yield ratios.

Work Analysis

Recruiters and HR planners rely on two aspects of work analysis to identify the critical skills for which they will recruit. First, **job descriptions** provide an outline of the responsibilities, duties, and tasks to be performed by the potential employee. Second, the **job specifications** outline the knowledge, skills, and abilities required of the applicant. In general, the more specific the recruitment design, especially in terms of job specifications, the more efficient and effective it is, assuming of course that the specificity is important for the job. Poorly designed recruiting is more expensive and takes longer.

For example, job specifications are sometimes written that are not essential for the job and are sometimes unnecessary and costly. One retailer stipulated 3 years' experience as a store manager in order to be eligible for consideration as a store manager for the company.

The VP of operations drew up specifications unilaterally and based on his “sense” of what was required in the job. The result was a small pool of applicants, higher advertising costs, and fewer otherwise qualified females and minorities with such experience.

Work analysis information that accurately reflects the requirements needed for the job can have a direct impact on the effectiveness of any recruitment and planning effort. Work analysis information can also be used in a downsizing effort as jobs are restructured based on the new organizational structure or individuals are repositioned based on a new strategy. As discussed in Chapter 4, specific work analysis strategies are available for writing job descriptions and specifications based on an organization’s competitive strategy.

Work analysis can also determine where work should be done for maximum efficiency. Office Depot cut 900 call center jobs and then contracted with Willow CSN Corp. in Miramar, Florida, to provide the “home-based” service to customers. Technology now allows for telecommuting where most (or all) work is performed at home. Alston and Byrd, an Atlanta-based law firm, allows lawyers considerable latitude in determining when to go into the office and when to stay home and work. With its entire law library now online and many other communication vehicles available, lawyers don’t miss a beat on productivity and they avoid the horrendous Atlanta traffic.

The need for accurate job descriptions and job specifications is particularly critical for web-based recruiting of any kind. There are numerous examples of Internet recruiting that can quickly get you an overwhelming number of résumés, the vast majority of which are irrelevant to the jobs you are trying to fill.

While HRP provides the number of jobs needed and work analysis provides the specifications for the jobs, management must know when to start a recruiting process and how extensive the search should be. This is where time lapse data and yield ratios come in.

Time Lapse Data

Time lapse data (TLD) provide the average time that elapses between points of decision making in recruiting. For example, if the recruitment plan calls for newspaper advertisements, records may reflect that the job is ultimately filled an average of 2 months after publication of the ad. Thus, the ad should be placed at least 2 months before the job has to be filled. Data also may be available on the time lapse between interviews and offers, and offers and acceptances. When combined with yield ratios, the TLD can provide useful information for planning and scheduling a recruitment effort.

Time lapses have been reduced for some companies taking advantage of the automated recruiting options available through the World Wide Web. All of the country’s largest newspapers now have job listings services on the Internet. Careerjournal.com is an online job board that allows employers to post positions on multiple websites. Currently, there are over 150 sites that “partner” to cover many job specialties.

Yield Ratio or Percentage

A **yield ratio** for any recruiting step reflects the number of candidates available at a step compared to a previous step. For example, a series of newspaper ads may result in 1,000 applications for employment. Of these 1,000 applications, 100 are judged to meet some minimum qualifications (to be in the “ball game” so to speak). Thus the yield ratio at this initial stage is 10 percent. Of the group of 100 candidates, 50 accepted invitations to be interviewed (yield ratio is 50 percent for this stage); of the 50, 10 were given job offers (20 percent yield ratio). These ratios can (and should) be calculated for recruitment sources.

Assuming that the labor market has not changed dramatically from when the yield ratios were derived and that similar methods of recruiting are to be used (e.g., advertising in the same papers, using a web service or a headhunter), the ratios can be used as the basis for planning future recruitment efforts. By going backward from the calculated yield ratios, the recruiter can estimate how many applicants will be necessary in order to fill a certain number of positions. The recruiter then can adjust the recruiting effort accordingly with more (or less) advertising, more (or fewer) trips to college campuses, more “Monster” ads, and so on.

The use of time lapse data and yield ratios is another area where there is a wide gap between what academic texts and scholarly research recommend and the extent to which such data are collected in organizations to drive future recruitment planning. While almost every

Discrepancy between academic research and personnel practice: The use of yield ratios

scholar on the subject recommends a recruitment evaluation process that includes yield ratios to assist decision makers in efficient recruitment planning, few companies actually collect these data as a part of a recruitment evaluation.

Recruitment is a never-ending process for many jobs where there are critical shortages of highly specialized skills. As discussed previously, there are tight labor markets for some occupations and indications that markets will get even tighter, particularly for knowledge-intensive jobs. Many hospitals recruit for nurses on a continuous basis because they are constantly understaffed. Advertisements for nurses today often promise not only high pay, but more of a say in their jobs and hospital management, bonuses of \$3,000 or more for signing up, bonuses for staying on the job a certain length of time, flexible work schedules, child care, and free tuition for advanced courses. Some employers even offer maid service and free housing for nurses who are willing to work at various locations based on demand. Many high-tech manufacturing firms recruit for engineers and computer programmers year-round as well.

Some companies have difficulty filling even the unskilled positions. The fast-food industry, for example, beset by turnover rates in excess of 200 percent (two incumbents for every job in 1 year), often advertises and takes applications for counter personnel throughout the year for many locations. Many companies have mobile recruiting units that visit high schools and shopping malls to solicit applications. McDonald's cooperates with the American Association of Retired Persons to attract senior citizens for hard-to-fill counter-personnel positions. Despite 9 percent unemployment in 2011, many companies still reported difficulties in recruiting unskilled workers in many geographical areas. McDonald's was offering a \$300 signing bonus for certain North Dakota locations where there were major labor shortages in 2011.

The Two Sources of Recruiting: Internal and External

There are two general sources of recruiting: internal and external. Internal recruiting seeks applicants for positions from among the ranks of those currently employed. With the exception of entry-level positions, most organizations try to fill positions with current employees. Figure 5-11 summarizes the advantages and disadvantages of each source of recruiting.

Advantages and Disadvantages of Internal and External Recruiting

There are several major advantages of internal recruiting. First of all, it is considerably less costly than external recruiting. Second, organizations typically have a better knowledge of internal applicants' skills and abilities than that which can be acquired of candidates in an external recruiting effort. Through performance and competency assessment, decision makers typically will have much more extensive knowledge of internal candidates and thus make more valid selection decisions. The third advantage to internal recruiting is that an organizational policy of promoting from within can enhance organizational commitment and job satisfaction. These variables have been shown to be correlated with lower employee turnover rates and higher productivity.

A policy of internal recruiting is one component of **high-performance work practices**, which are discussed in Chapter 1. Companies that practice internal recruiting are more likely to be successful financially than companies that rely on external recruiting for top

Internal recruiting is a high-performance work practice

Figure 5-11
Advantages and Disadvantages of Internal versus External Recruiting

Recruitment	Advantages	Disadvantages
Internal	- More valid assessment of candidates - Reduces training time - Faster - Cheaper - Motivates current employees	- Creates vacancies - Can stifle politics diversity - Insufficient supply of candidates
External	- Increases diversity - Facilitates growth - Can save training time - New/novel problem solving	- Expensive - Slower - Less valid data on candidates - Stifles upward movement of personnel

talent. Ted LeVino, senior vice president at GE, argues that its internal recruiting policy has fostered stability and continuity in the managerial ranks of the company. Deloitte and Accenture have policies in which newly hired college grads receive a career planning guide that describes the typical timetable for progression within the company for the best employees and steps to take in order to get there.

One of the great advantages of detailed work analysis is that **succession planning** programs can be developed so that management (and employees) can have a good idea of the sources for internal recruiting. At Ford, for example, associates complete a competency-based job analysis describing their current knowledge and skills required for their present job and what knowledge or skills they would like to acquire. These responses are then linked to particular vacancies and jobs within the company, descriptions of which already have been completed by managers of these positions.

Succession planning should involve first identifying key (or core) jobs within the organization. Next, assessments of current employees' skills and interests should be done in order to identify from three to five employees with the potential to occupy each of these key positions down the road. The most effective succession planning programs include training and development programs for these individuals. Such a program can be very motivating for these high-potential employees and decrease the probability that they will look outside the firm for employment.³⁹

There may be disadvantages to internal recruiting. Continuity is not always such a good thing. If the organization has decided to change its business strategy, for example, entrenched managers are probably not the "change masters" you want. One theory of internal recruiting is that it promulgates the old ways of doing things, that creative problem solving may be hindered by the lack of "new blood" or a sort of "managerial inbreeding." However, there is no solid research that supports this belief that internal recruiting impedes creativity and innovative thinking, and one recent study at a Fortune 500 company found just the opposite. Creative and innovative solutions to problems within the company and the industry were generated in a staffing exercise conducted by a consulting firm. Experts from the consulting firm and the firm's top management then rated the potentiality of the solutions. Proposals from internal job candidates were judged to be more innovative by both the outside firm and the top management.⁴⁰

One well-documented managerial blunder is to irrationally stay committed to an initial course of action, particularly if you initiated the action. This misdirected persistence, or **escalation bias**, is more likely when internal versus external recruiting is emphasized, especially if the internal candidates were personally involved in a particular course of action.⁴¹ For example, one U.S. company faced new competition to an established product line from a foreign competitor. The senior managers, all of whom had been at the company for at least 15 years and had great ownership in the product and how it was marketed, agreed to deal with the new competition as they had always dealt with competition—by competing on price. This manner was unfortunately out of step with the upstart competitor's strategy, which included competing on price. The result was a disaster for the company with over 30 percent of its workforce laid off because of a loss of market share. A new manager might have been better able to conduct a more rational analysis of the situation.

Entrenched managers sometimes have difficulty understanding that time and money already invested are "sunk costs" and should therefore not be considered in future planning. Managers who had something to do with a present course of action seem to have more difficulty in understanding this.

Some organizations complain of **unit raiding** where divisions may compete for the same people. GM, for example, reported raiding of the best design engineers from one division by another despite an agreement that such recruiting was not in the best interests of the company. Raiding is quite common in universities for clerical positions where position descriptions can be written in such a way that a secretary can move to another department because the new position pays more.

A third possible disadvantage of internal recruiting is that politics probably has a greater impact on internal recruiting and selection than does external recruiting. Thus, while more job-related information may be known about internal candidates, personnel decisions

**Succession planning
reduces turnover**

**Internal recruiting does not
impede creativity**

Escalation bias

Unit raiding

involving internal candidates are more likely to be affected by the political agendas of the decision makers and are also more likely to be contested legally than external staffing decisions.

“Peter Principle”

One survey of high-level federal government managers revealed that the easiest perceived way to get rid of a troublesome employee was to evaluate that employee so positively that the employee would be more likely to get an employment opportunity out of the unit (either within or outside of the same agency). The **“Peter Principle”** states that we rise to our level of incompetence. This survey found that, at least in the federal government, once we reach our level of incompetence, our boss may actually try to get us moved up a notch above our level of incompetence in order to get rid of us with the least amount of trouble. In other words, things may be even worse than the “Peter Principle.”⁴² HR managers must constantly monitor very precisely defined job descriptions or job specifications. While this may constitute well-focused recruiting based on precisely what the organization requires, it also can mean that a position has been “wired” for an internal candidate. An effective HR manager should be capable of making the distinction. The manager writing the job description and job specifications should be required to stipulate why highly specific credentials or areas of expertise are required in the context of the organization’s or unit’s strategic plan.

Internal recruiting programs should be carefully integrated with other HR functions. Effective HR succession planning, job analysis, personnel selection, and performance appraisal are all important for an effective system that can fill required positions with the most qualified personnel in the shortest amount of time. Administrators of such programs should be knowledgeable about EEO law as numerous lawsuits have been filed related to internal recruiting and placement decisions.

Job posting enhances internal recruiting effectiveness

While most large companies have formal succession plans at the managerial level, a much lower percentage of small- to medium-size firms have formal systems.⁴³ A **job-posting** system can enhance the effectiveness of internal recruiting. Job posting is a process where announcements of positions are made available to all current employees through company newsletters, bulletin boards, and so on. When properly implemented, job-posting systems can substantially improve the quality of the job placements that are made within an organization and protect the organization from EEO problems. The most effective job-posting systems take advantage of a corporate intranet where employees can access information about job openings through their connected computers. Many sophisticated human resource information systems (HRIS) are now available with competency-based, succession planning data.

External Recruitment Sources

External recruiting concerns recruitment from outside the organization. Most scholars argue that one of the biggest advantages of external recruiting is that the approach can facilitate the introduction of new ideas and thinking into corporate decision making. The “new blood” comes with no ownership of past strategies that can hinder an objective assessment of future strategy. A major disadvantage of external recruiting is that the introduction of new personnel may have a negative impact on work group cohesion and morale. Also, new personnel from outside the organization typically take longer to learn the ropes of the job and the organization. Another possible disadvantage is that external recruiting can be very costly. For example, companies have paid in excess of \$150,000 to executive search firms for locating a single, high-level manager. Figure 5-12 presents some examples of ads for professional and executive global positions.

Most Fortune 1000 companies post available jobs

The Internet has had a profound impact on the cost and the time involved in recruiting personnel, including that of managers. Most Fortune 1000 companies now post available jobs on their websites and more and more skilled employees are applying for these jobs through these sites. A formal job posting system for both internal and external recruiting can also give an employer some protection against legal claims based on simple “progression” statistics (e.g., nonsupervisory positions vs. supervisory positions by race or gender) derived from EEO-1 reports (see Chapter 3).

The final disadvantage of external recruiting is that you typically have less information about external candidates. There is thus a need for good assessment procedures that can

Figure 5-12

Ads for Global Executive and Professional Positions

INTERNATIONAL PROFESSIONALS In today's dynamic global environment, there are exceptional opportunities for individuals whose experience and skills equip them to live and work overseas. There are currently positions available to men and women throughout a wide spectrum of professional fields, including the sciences, engineering, information and computer systems, economics/finance, education, marketing, business, or management. If you have worked abroad in any of these areas, you have a definite advantage in securing an exciting new overseas career. These worldwide positions are being offered to people who are already confident and at home in foreign locations. You must be self-reliant and have the integrity to work without direct supervision. Reporting will require excellent verbal and written communications skills, and you must be conversant in at least one foreign language. Advanced degrees are preferred; a bachelor's degree in an appropriate area is a minimum requirement for consideration. We represent international employers who will pay all fees associated with your selection process. They require that all applicants be U.S. citizens (Legal Permanent Residents also may apply). These positions are open to individuals of all racial and ethnic backgrounds. Compensation and benefits are commensurate with your demonstrated qualifications. For consideration under strict confidentiality, send your résumé and a letter describing your credentials. As we are a third party and not an employer, no phone calls from applicants will be accepted. We will respond only to those applicants who are of interest to our clients. CAREER SYSTEMS INTERNATIONAL P.O. Box, Dept. IP- Philadelphia, PA 19103 <i>Representing equal opportunity employers.</i>	Manager-Expatriate Programs Philips Electronics North America Corp., a global consumer and electronic business with a significant number of employees on worldwide expatriate assignments, has an excellent career opportunity in Manhattan for a pro-active professional with 5–8 years' human resources expertise to design, develop, implement, and manage the expatriate program. This fundamental position will advise personnel on expatriate and immigration policies/procedures; develop worldwide compensation programs; implement program changes; and serve as an international liaison. To qualify, you must have 4+ years' immigration/expatriate and supervisory experience, plus a B.A. in business, human resources, or related discipline is highly beneficial. Top-notch organizational, technical, business, interpersonal, and communication skills are essential. We offer a competitive salary/benefits package and a stimulating work environment. For confidential consideration, please send résumé to: Human Resources/JM, Philips Electronics North America Corp., 100 East 42nd Street, New York, NY 10017. FAX: <i>EOE M/F/D/V. Principals only.</i> PHILIPS
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be used instead of reliable performance data on the external candidate. Good assessment procedures can be costly and bad assessment procedures and references can be downright deceptive or ineffective. Remember the survey of federal managers regarding using positive evaluations to get rid of incompetent employees. Inflated letters of recommendation or confidential interviews may be intended to land a troublesome employee in a job outside of the organization.

There are several methods available for external recruitment.

Walk-ins/Unsolicited Applicant Files: The most common and least expensive approach is to make use of direct applications where job seekers submit unsolicited material (e.g., a résumé) or simply show up in person seeking employment. Direct applications can provide a pool of potential employees to meet future needs. While direct applications are particularly effective in filling entry-level and unskilled positions, some organizations, because of their reputations or because of their geographical locations, succeed in compiling excellent pools of potential employees from direct applications for skilled positions.

The **Riley Guide** (www.rileyguide.com) presents an excellent overview for online recruiters with links to most major job banks and specialty job sites. Careerbuilder.com is an effective online source for small business. For \$450, a company can post one position and access, so the website claims, 25 million “candidates.”

The reputation of the company has a great deal to do with the usefulness and size of the pool of unsolicited applicants and résumés. Organizations such as Google, Coca-Cola,

What Methods Are Available for External Recruiting?

Apple, Facebook, SAS, GE, IBM, the *New York Times*, and Harvard University receive thousands of unsolicited applications every year. Many excellent candidates can be found in this pool. One of the reasons that companies actively campaign to make one or more of the many top 10 lists of the “best companies to work for” is because the rate of unsolicited résumés is directly related to this honor.

Not only do unsolicited résumés reduce the cost of recruiting, they also increase the probability of hiring the very best employees. The *New York Times* has led the world in Pulitzer Prize winners for years. It spends very little time recruiting the future Pulitzer winner, since some of the best writers just know where to work.

Many companies now scan résumés or applications and then conduct key-word computer searches to quickly get to a reasonable short list of candidates when positions become available. Software now exists to match fairly detailed job specifications with résumé information. The result is usually a much more efficient (and faster) recruiting effort. Monster’s “TARGET Reach” filters résumés by a company’s criteria (e.g., experience, location, education).

Referrals: Some organizations have formal systems of employee referral for occupations with great demand. Pratt & Whitney, for example, pays employees a \$2,000 bonus if electrical engineers who are referred are ultimately hired and work for the company for at least 1 year. While formal systems of referral are more effective in attracting interested applicants, there is also some evidence that the quality of the applicants is less than that which results from an informal system of referrals. Microsoft is presently offering referral incentives to its employees for Internet experts of all shapes and sizes.

Referrals by friends and family have been found to increase job tenure (and decrease voluntary job turnover) even for jobs with high turnover rates. The “referred” job candidates tend to have a more realistic understanding of the job when they take it and thus have more accurate expectations about the job and the organization. But before we get too excited about an employee referral program, let’s not forget about Abercrombie and Fitch. A&F encouraged its mostly beautiful but also mostly white sales staff to recruit its beautiful customers and friends to become sales personnel. The result was a Title VII race discrimination lawsuit that A&F settled for \$40 million.

The extensive use of employee referrals can thus cause EEO problems. In *EEOC v. Detroit Edison*, the court concluded that “the practice of relying on referrals by a predominantly white workforce rather than seeking new employees in the marketplace for jobs was discriminatory.”⁴⁴ Of course, this may not be a problem if the workforce is diverse to begin with, if the organization relies on other methods of recruiting as well, or if the organization offers a referral program that specifically targets minorities and women. Coca-Cola and Disney are among the many large corporations that offer targeted referral programs, another of the recommendations from the OFCCP Revised Order #4. Coca-Cola agreed to target African Americans in recruiting as a part of its out-of-court race discrimination settlement.

Advertising: A third common method for recruiting is advertising. Advertising can range from a simple classified ad to an elaborate media campaign through radio or television to attract applicants. The approach can be quite versatile in its ability to provide information about job opportunities while targeting specific labor markets in particular geographical areas. While the majority of advertising is in newspapers, many organizations go beyond the typical newspaper ads for tight labor markets. You have undoubtedly seen one of the commercials extolling the virtues of “starting your career” in our armed forces. Many companies use television to attract applicants for hard-to-fill positions. Many budgets for classified print ads have been cut because of the Internet. Diane Schlageter, director of employment for Adobe Systems in San Jose, says that Adobe has dropped its ad budget by 60 to 70 percent in favor of Internet. “A half-page ad in the San Jose *Mercury News* may be \$15,000 to \$18,000. You can do a lot of stuff online for that amount of money,” says Schlageter.⁴⁵

As discussed below, employer advertising on the web is now the norm.

Most experts agree that advertising through any media (including the Internet) should contain the following information:

1. The job content (primary tasks and responsibilities).
2. A realistic description of working conditions, particularly if they are unusual.

Software is available to match job specifications with résumés

Referrals by friends and family can increase tenure

EEOC v. Detroit Edison

Employer advertising on the web is now the norm

3. The location of the job.
4. The compensation, including the fringe benefits.
5. Job specifications (e.g., education, experience).
6. To whom one applies.⁴⁶

Since advertising can be very expensive, record keeping (and yield ratios) on the successes of the various media sources can help to identify the approaches with the biggest potential payoff for future recruiting. Figure 5-13 presents a summary of some of the advantages and disadvantages of the various media options. A section to follow examines online recruiting in particular.

EEO considerations are also critical for advertising. A men's clothing retailer decided to target younger men with its new fall line. As part of that effort, the retailer advertised for "young, energetic" assistant managers at the same time it was firing a 48-year-old man who had been with the company for 10 years. An ADEA lawsuit resulted in an out-of-court settlement in excess of \$100,000. Obviously, a person knowledgeable about EEO laws should review all ad copy for potential legal problems.

There are several excellent outlets for targeted advertising to minorities and women. Monster.com allows job seekers to search for positions using diversity organizations as a search criterion (see <http://diversity.monster.com>). Most highly regarded African American universities have websites that post résumés of new graduates.

Employment Agencies: Employment agencies are used by many companies for identifying potential workers. There are publicly funded agencies that provide free placement services and private agencies that charge either the employee or the employer for a placement or referral. The major functions of these agencies are to increase the pool of possible applicants and to do preliminary screening. Private agencies are most effective when (1) the organization has had difficulty in building a pool of qualified applicants, (2) the organization is not equipped to develop a sophisticated recruitment effort, (3) there is a need to fill a position quickly, (4) the organization is explicitly recruiting minorities or females, and (5) the organization is attempting to recruit individuals who are not actively seeking employment.⁴⁷

There are about 2,000 federally funded but state-run employment agencies under the **U.S. Training and Employment Service (USTES)**. All persons drawing unemployment

Targeted advertising to minorities and women

Figure 5-13

Advantages and Disadvantages of Recruitment Media

Medium	Advantages	Disadvantages
E-Recruiting	Global reach Excellent yield ratios Fast processing Relatively inexpensive Appeals to Millennials Technologically savvy More detail about job Can be adapted for Screening/ RJP's	Many unmotivated applicants EEO/Diversity problems Not effective for low-skilled jobs
Newspapers/Magazines	Local audience Tailored to audience Specialty outlets (Usually) Good circulation Good yield ratios for low-skilled jobs	Often ignored/not seen Expensive (per applicant) Long lead time
Direct Mail	Can be well targeted with good list Can attract people not seeking a job	Expensive (for better mailing lists) Long lead time
Television/Radio	Targeted locally More attention to ad	Very expensive Longest lead time

compensation must apply through one of these agencies. The most recent approach to job placement is to attempt a matching of applicants' aptitudes and interests with the requirements of the job. In general, neither employers nor employees are satisfied with the service that is offered, but efforts are being made to improve the service.⁴⁸

Search Firms: Search firms are private companies that help employers find and hire employees. These firms used to specialize in executive recruiting and placement, but there are now many specialized firms for specific occupations (e.g., IT, nursing, psychologists) and full-service companies that handle all aspects of recruiting. A growing number of companies now use **employment process outsourcing** (EPO), also known as recruitment process outsourcing (RPO). These are search and recruiting firms that can handle all or a part of a company's recruiting.

EPOs are a major outsourced component of HR

EPOs are the fourth-largest component of HR being outsourced and the fastest growing, according to Allan Schweyer, executive director of the Human Capital Institute (HCI). InSearch Worldwide Corp. surveyed 300 HR executives about professional-level EPO and found that more than 30 percent of companies are doing at least some recruitment outsourcing.

In selecting a search firm, experts recommend the following criteria.⁴⁹

1. The firm should recruit in a specific industry.
2. The firm pays its sales personnel based on the completion of an assignment.
3. The firm uses primary data sources rather than secondary sources such as computerized lists of potential candidates and association directories.
4. Firms that also do outplacement services are not recommended (outplacement is professional services for terminated employees that may include placement in another job). Many socially responsible organizations are turning to outplacement programs to assist terminated employees, especially after major downsizing actions.
5. Ensure that the firm provides a placement guarantee, typically 30, 60, or 90 days. This gives the organization a specified amount of time to review the employee on the job and receive a refund if a candidate's skills do not meet the requirements of the organization.
6. The firm should also have a recruitment strategy in writing. You would not allow a contractor to build your house without a blueprint, so why would you allow a search firm to staff your organization without a specific plan? This defined process also ties back to your placement guarantee.
7. The firm should not charge a fee to candidates. Charging a fee to candidates limits the number of qualified candidates the search firm can draw on, thereby dramatically limiting the pool of qualified candidates.
8. The firm should be able to provide references from both clients and candidates who have used its services in the past.

Targeted recruiting

Many search firms now specialize in **"targeted" recruiting** for many jobs.⁵⁰ Recruitment in a specific industry helps ensure that the search firm understands the specific needs of the organization and industry, thereby increasing the probability that the candidate placement will be a success. One of the largest firms is DHR International, which for one fee provides a list of candidates whose credentials match job specifications and, for an additional fee, completes the search process.

A good source for identifying a qualified search firm is Recruiterlink.com. This website helps managers who are responsible for identifying qualified search firms that specialize in over 50 areas, such as CEO search, financial services, consumer products, information technology, marketing, and telecommunications. Recruiterlink.com has a database of over 400 executive headhunters, from some of the largest firms such as Korn/Ferry to so-called boutique recruiters. These recruiters specialize in jobs starting at annual salaries of \$125,000. Recruiters pay a \$500-a-year fee to be included in the database.

At this website, an organization's representative identifies a specialty area, provides geographic specifications (including international), the average salary handled, and other criteria. A list of potential recruiters is then provided with fees and recent experiences/assignments. This is all free to the "searcher" of the search firm.

Research on effectiveness of search firms is mixed

In addition to negotiating fees, many organizations are developing partnerships with a select group of search firms, known as preferred vendors. The goal of the preferred vendor relationship is that the search firm is better able to match candidates not only on job specifications but also on fit to the organization's culture. In addition, the partnership allows organizations to maintain control over how the organization's open positions are marketed since the search firm has intimate knowledge of the company. The partnership relationship is often mutually beneficial to both parties since the company receives highly qualified candidates and the recruiter has inside knowledge of the "unwritten" needs of the organization. The fees for search firms can be very high with estimates ranging from 20 to 50 percent of the first-year salaries of the individuals placed.

The reviews on the effectiveness of search firms are mixed. According to one review, 50 percent of the fulfilled job searches take twice as long to fill as promised. Less than 50 percent of contracts to fill positions are ever fulfilled.⁵¹ More search firms are now charging a flat rate rather than a percentage of salary. Says one recruiter, "By charging a flat rate, we are able to remain objective in presenting candidates to the client. We do not show only the high-priced candidates; we show the most qualified." Many companies now demand the flat-fee approach because of the tendency of percentage-based recruiters to recommend high-priced candidates. A sliding scale fee structure can be negotiated so that as the total number of placements increases, the fee percentage decreases.

Campus Visits: One major source of recruiting for professional and managerial positions is the college campus. Many large organizations send recruiters to campuses once or twice a year to inform graduates and future graduates about career opportunities. One survey found that 59 percent of all managers and professionals with less than 3 years' experience were hired through college recruiting.⁵² There is no question that college recruiting is successful at filling vacancies. There is a question as to the extent to which the vacancies are filled with people most likely to be successful within the organization. Some companies report turnover rates in excess of 50 percent for new college graduates after only 1 year.

College recruiting costs are high

The cost of college recruiting can be high. Estimates are as high as \$6,000 per hired graduate.⁵³ Despite this substantial cost, program evaluation is rarely done and little attention is placed on recruiting processes. When evaluation has been done, the criterion for evaluation was simply filled vacancies or number of offers accepted rather than a measure of the quality of those who are recruited or retention rates. Recruiters often receive little guidance on interviewing procedures, despite evidence that the interviewing format is important for the accuracy of the predictions that are made.

The recruiting process should commence long before there are any visits to the campus. Recruiters should get familiar with the university and university personnel before their visit. Job descriptions and specifications should be mailed to the campus before the recruiter arrives.

Another good strategy is to set up internship programs through the university. In general, the most effective college recruiting efforts are those that facilitate a long-term relationship with the college through a variety of cooperative programs between the school and the organization. Again, record keeping on past experience will be very helpful in planning future campus recruiting. **Campus.monster.com** and **internshipprogram.com** are great sources for internships. Both sites help students locate internships by geography, industry, and salary.

Campus.monster.com and internshipprogram.com are great sources for internships

Growing in popularity today is the use of videoconferencing at college campuses. This allows for interviewing that is much more cost effective than traditional face-to-face interviewing. The extent to which videoconferencing is an effective approach to recruiting is another empirical question. There is now a need to compare the effects (and costs) of campus visits with recruiting (and interviewing) through the Internet. Most college students or graduates may not be adversely affected by highly efficient, computerized recruiting and interviewing and some may actually prefer it.⁵⁴

One of the largest recruiters of college graduates is the federal government. Research on the ability of the government to attract the most qualified graduates is not encouraging. One survey found only 38 percent of graduates interested in careers with the federal government. The private sector was viewed as offering more prestige and power than

the public sector.⁵⁵ The research also indicated that the government could do a better job recruiting graduates by more on-campus visits and greater effort at reducing its negative public image. If anything, the public image has actually gotten worse in recent years.

Two other sources for recruiting that should be mentioned are professional associations and computerized services. The first is professional societies or associations within specialized areas. College faculty for management departments, for example, are often recruited through the Academy of Management (www.aomonline.org) and other academic associations (e.g., www.nea.org, www.chronicle.com). The Society of Human Resource Management now has a placement service available for jobs in all areas of HR (SHRM.org).

Newly minted MBAs and companies seeking project-related help should consult **mbaglobalnet.com**. As of 2011, this site charged the employer to post a job for 60 days on the career center. The site then e-mails members new jobs every Tuesday. In addition, the site provides a project worker hiring service and charges 15 percent of the contract. MBAs register on the site for free.

Electronic Recruiting on the World Wide Web

Electronic recruiting (or E-recruiting) is a recruiting component for virtually all large U.S. companies. There is no doubt that E-recruiting can reduce costs and result in a larger number of applicants (and faster). Yield ratios are clearly superior with this approach.⁵⁶ Electronic job descriptions and résumés are now retrievable from numerous recruitment websites. The big three sites are **Monster.com**, **careerBuilder.com**, and **Yahoo Hot Jobs.com**, but there are an estimated 5,000 job boards on the web. Figure 5-14 presents a list of some of the major sites and the costs to the employer. Of course, Craigslist.org is free to all (and quite effective).

The most popular job site is Monster.com, which claims to have more than 500,000 jobs in its databank. *Forbes* magazine named Monster the best job hunting site on the web based on its design, navigation, content, speed, and customization. As of May 2011, Monster had

Figure 5-14 Recruitment Web Site Comparisons

Web Sites	Search Options	Job Search Database	Ease of Use for Searcher	Costs for One-Time Posting	Employer Benefits
Monster.com	Location Industry/ Job Keyword Employer	Position/Title —click and view job description Company —search by company name to see all job postings Posted date —sorted by most recent; can limit date range Salary —not searchable; must click job description to view	• Site easy to use • Can search by company from basic search	1 job/60 days/ \$385 on average (differs by state)	• Online database search • Track statistics of each job posting • Search agents (automatically generated list of potential candidates) • International postings available • Company profiles • Diversity section • Likely one of the most recognized job boards by job seekers
Hotjobs.yahoo.com	Location Industry/ Job Keyword Employer	Position/Title —click and view job description Company —click and view all job postings from specific company Posted date —sorted by most recent; can limit date range Salary —searchable in advanced search; must click job description to view	• Site easy to use • Can search by company; requires change in search option • Search by industry/job was easy to use since further specified state and city	1 job/30 days/ \$349	• Online database search • Unlimited job posting changes permitted • Track statistics on each job posting • E-mail potential candidates • Jobs can be posted in U.S. and Canada • Company profile

(continued)

Figure 5-14 (Continued)

Careerbuilder.com	Location Industry/ Job Keyword Employer	Position/Title —click and view job description Company —click and view all job postings (must conduct a search first) Posted date —sorted by most recent; can limit date range Salary —searchable in advanced search; listed on search results page	• Site easy to use • Can search by company; requires change in search option • Site moderately easy to navigate • Cannot search for positions from home page	1 job/30 days/ \$419	• Online database search • Additional services such as prescreened candidates, background checks, career fairs • International postings available • Company profile
Employmentguide.com	Location Industry/ Job Keyword Employer	Position/Title —click and view position Company —click and view all positions by employer (sorted alphabetically) Posted date —sorted by most recent; cannot limit date Salary —not searchable or provided separately	• Site moderately easy to navigate • Cannot search for positions from home page	1 job/30 days/ \$350	• Online database search • Entry level to middle management positions (hourly and nonexempt positions)
Careerjournal.com	Location Industry/ Job Keyword Employer	Position/Title —click and view position Company —click and view all job postings Posted date —sorted by most recent; cannot limit date Salary —not searchable or provided separately	• Site moderately easy to navigate • Cannot search for positions from home page	1 job/30 days/ \$325	• Online database search (300,000+ résumés) • Diversity career fairs • Brief company overview (Briefing Book) • Partnership with 150+ media sources so positions are posted to additional sites • International job postings
Flipdog.com	Location Industry/ Job Keyword Employer	Position/Title —click and view position Company —click and view all job postings Posted date —sorted by most recent; cannot limit date Salary —does not include a separate section listing salary	• Site moderately easy to navigate • Advanced search method is interactive and may be confusing for novice job board users	1 job/30 days/ \$125	• Online database search • International job postings
Idealist.org	Location Sector/ Job Keyword	Position/Title —click and view job description Organization —click and view all positions by employer (once original search has been completed) Posted date —sorted by most recent Salary —not searchable but is listed in the search results	• Site easy to navigate	Free	• Online database search • International postings • Non-profiles provided

Source: Contributed by Renee Bartlett.

over 80 million searchable résumés with an average of 27,000 résumés being added daily and over 1.9 million job postings. Job seekers conduct over 4 million job searches *daily* at Monster. There are many niche sites on the web too. Computer-related specialists should check out techies.com or dice.com. There are specialty sites for doctors, pharmacists, toxicologists, and even highly paid executives (check out The Ladders.com). Those seeking nonprofit work should check out Idealist.org.

Nearly 100 percent of global 500 companies are now posting jobs on their own websites. Some companies accept only online applications. When Hewlett-Packard (HP) was looking for an engineer with specific programming skills and 5 years' experience who could speak Spanish, the software screened the résumés and identified three applicants who met these specifications. While the efficiency of this approach should be obvious, some problems with the software as it reads the résumés can create errors in the search and eliminate applicants who otherwise would have survived at least the initial screening. For example, if you misspell a key word, you could be out of luck.

Excellent software tracking is now available. **Resumix Inc.**, for example, contains 10 million terms related to various industries, including terms such as *application design* and *general ledger* for specialized programmer and accounting applications. Some companies report substantial savings in recruiting and advertising due to this type of software tracking system. HP claims to have over 330,000 résumés in its database. Needless to say, it avoids a paperwork nightmare with the "virtual recruiter" system. HP recently received over 100,000 résumés in the staffing of 1,400 new hires.

Recruiting in the very near future may go something like the following for many large companies.

"Virtual" Recruiter system

Streamlined recruiting / selection

1. A line manager completes a standardized online job analysis questionnaire identifying employment needs for the unit; the questionnaire may include job location and other details of the job in addition to the critical job specifications.
2. The completed questionnaire is then automatically converted into a job posting on the Internet and matched with a current database of "candidates" whose credentials are entered using the same terminology as the job analysis.
3. A list of candidates is identified based on the match of job specifications with job credentials and data related to job/work compatibility.
4. Almost instantaneously, the line manager has a list of minimally qualified candidates with whom she/he can interact.
5. A testing and interview format (with job-related questions), in compliance with all EEO guidelines, is derived from the same job analysis information completed in step 1.
6. Using the testing/interview material, additional data are collected on the candidates through e-mail and/or web camera and a list of top candidates is compiled.

Note that the word *candidates* is used first rather than *applicants* because résumés of qualified persons may be retrieved from web databases and personnel websites and these potential candidates may or may not be interested in a particular job opportunity. They are simply alerted to the new job and then decide whether they wish to become applicants. A hot HR position today is "Internet" or "cyber" recruiter. These folks are specialists in locating and placing people off job websites. Many also coordinate all web recruiting activities for companies. There are already 20,000 members of the **Association of Internet Recruiters** (see Recruitersnetwork.com). One of these cyber recruiters boasts that he can access the résumé of every IBM employee.

It is clear that the Internet has great potential for expediting the recruiting process. The preceding scenario should be contrasted with the more traditional methods of recruiting we have described. Of course, the Internet approach depends on potential job applicants being aware of this convenient method and amenable to the process. A great place to start for both employers and job seekers is the **Riley Guide**, which provides loads of free information and links to numerous recruitment sites.

A great website for college students is **www.campus.monster.com**. The site has internships, résumé services, and job listings for students and partnerships with over 1,000 universities. Monster's site is a comprehensive source for first-time job seekers with excellent information on valuable internships.

A concern for organizations is reaching "diversity" candidates online. The digital divide between white users and minorities has been a concern of many HR practitioners. However, there is evidence that the differences in Internet access are closing fast. According to the Pew Internet & American Life Project, 75 percent of whites have access to the Internet, while 64 percent of African Americans and 68 percent of Hispanics have Internet access. Also, the yearly Internet adoption rate is growing rapidly in African American and Hispanic households.⁵⁷

What Methods of Recruiting Are Most Effective?

The largest recruiting sources for new employees

There have been few studies that have compared the effects of different methods for recruitment. The criteria that have been used in these studies also differ and include cost per hire, number of résumés, time lapse from recruiting to filling the vacancy, interview/invitation ratio, applicant performance on the job, and job tenure or turnover. One critical question is obviously how people are finding jobs these days.

A study (conducted by an Internet consulting firm) found that, on average, the largest sources of new employees were first linked to the hiring organization through (in this order)

1. Online job boards.
2. Staffing and executive search firms.
3. Tips from friends and family members.
4. Networking in a business context.
5. Career/job fairs.
6. Newspapers.

Of course, this order does differ as a function of the particular industry, the particular company, and the particular job. In general, the preceding are the best sources for effective recruiting from the perspective of the job seeker. What are the worst?

Least helpful sources for employment opportunities

According to one survey of 11,500 Americans seeking employment, here are the top five *least* helpful sources for employment opportunities.

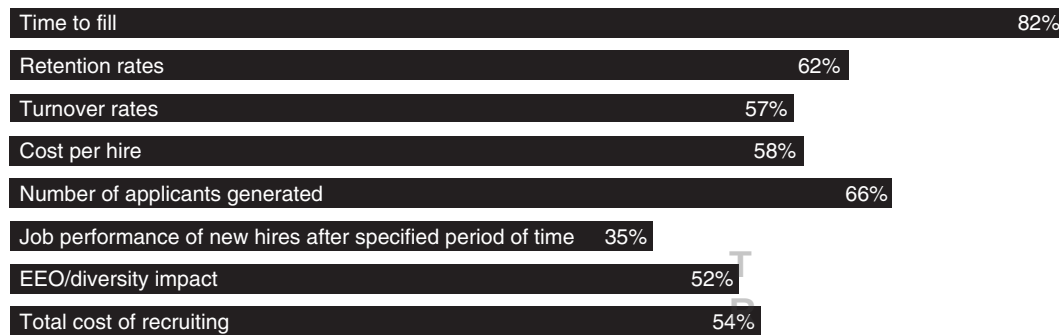
1. Networking at a *social* event (least effective).
2. Answering an ad in a publication of a professional association.
3. Using a social networking site.
4. Sending a résumé directly to an employer.
5. Responding to a notice posted in a store.⁵⁸

A recent emphasis also has been placed on understanding minority hiring patterns as a function of the recruiting effort and relative to population statistics and census data on potential employees. These comparisons may be critical if EEO litigation is pending.

EEOC definition of an "applicant"

The EEOC has stated that the definition of an "applicant" depends on the user's recruitment and selection procedures. The concept of an applicant is that of a person who has indicated an interest in being considered for hiring, promotion, or other employment opportunities. This interest might be expressed by completing an application form; or might be expressed orally, depending on the employer's practice; or through the Internet and related electronic technologies only. According to the EEOC, in order for an individual to be an applicant in the context of the Internet and related electronic data-processing technologies, the following must have occurred: (1) the employer has acted to fill a particular position; (2) the individual has followed the employer's standard procedures for submitting applications; and (3) the individual has indicated an interest in the particular position.

Figure 5-15 presents a list of some of the most important criteria that are used to evaluate different approaches to recruiting and the extent to which companies collect such data.

Figure 5-15 Criteria for Evaluating Recruitment Activities and the Extent to Which They Are Measured**Most Frequently Used Measures for Evaluating Recruiting Program Effectiveness**

Source: H. J. Bernardin, "A Survey of SHRM Member Recruiting Practices and Criteria for Evaluation," 2012. Manuscript under review.

Figure 5-16 Assessing Attraction Outcomes:**A STEP-BY-STEP OVERVIEW****STEP 1: IDENTIFY POSITIONS TO ASSESS**

Description: Organizations may choose not to develop scores to evaluate recruitment outcomes for all positions. Those positions where assessment of attraction outcomes is likely to be of greatest value are jobs that generate several new hires and attract large numbers of applicants. Calculate yield ratios for each recruitment source.

STEP 2: IDENTIFY CURRENT SCREENING METHOD AND DETERMINE CURRENT PROPERTIES

Description: Organizations need to identify the current selection methods used at each step in the recruitment process.

STEP 3: DETERMINE STRATEGY FOR ADAPTING CURRENT SCREENING METHOD TO PRODUCE SCORES FOR EACH APPLICANT AND ADAPT CHANGES

Description: Depending on what screening method is currently used, the amount of deviation between current recommended practices and the development of comparable scores for each candidate should be determined.

STEP 4: ASSESS ATTRACTION OUTCOMES

Description: Assess each applicant using the device developed in Step 3. Scores for all applicants in the applicant pool should be evaluated, including those that have left the pool by withdrawing themselves from consideration or because they were hired during the appropriate time period (defined by the organization).

STEP 5: MATCH RECRUITMENT ACTIVITIES TO RECRUITMENT PHASES AND ESTIMATE RECRUITMENT COSTS

Description: In order to evaluate the cost effectiveness of various recruitment practices, recruitment costs must be identified and mapped to the appropriate phase of recruitment (i.e., attraction, status maintenance, gaining job acceptance). Estimate costs of attraction by identifying all activities primarily designed to influence the attraction of applicants to this position.

STEP 6: ESTIMATE INPUT VALUES AND COMPLETE UTILITY ESTIMATES (THIS IS REQUIRED TO COMPLETE EVALUATIONS THAT INCORPORATE BOTH COST AND BENEFIT CONSIDERATIONS)

Description: To be able to use utility analysis to convert differences in quality scores to dollars, several values need to be estimated. These include the validity of screening devices, the standard deviation of performance in dollars for the job in question, the number of individuals to be selected or the subset of candidates to be evaluated, and the average expected tenure of candidates in their positions once hired.

STEP 7: EVALUATE THE ADEQUACY OF CURRENT SCREENING DEVICES

Description: Organizations may decide that alternative screening devices may be more appropriate due to their cost, validity, adverse impact rate, or other properties of the scores they generate.

Source: Adapted from K. D. Carlson, M. L. Connerley, and R. L. Mecham, "Recruitment Evaluation: The Case for Assessing the Quality of Applicants Attracted," *Personnel Psychology* 55 (2002), pp. 461–490.

Attraction outcomes

One excellent study emphasizes the importance of "attraction outcomes" as a recruitment outcome that should be emphasized when evaluating recruitment practices. Attraction outcomes emphasize (and measure) the quality of the applicant pool as a function of the recruitment source. The authors argue that "adopting methods for evaluating attraction outcomes may be the single most valuable step organizations can take toward improving recruitment effectiveness."⁵⁹ They emphasize a more systematic measurement process that includes yield ratios and other detail on the methods used to screen candidates. Figure 5-16

presents their seven-step plan for assessing attraction outcomes. Their plan includes estimates of the economic yield or utility from each source. Yield ratios are important but there should be close scrutiny of the criteria used to qualify candidates from one recruitment step to the next. Obviously, a recruitment source that yields a high proportion of “qualified” candidates is important but a more fine-tuned analysis will provide more useful definitions of “qualified” that include comparative “scores” on these qualified candidates.

The Discrepancy between Research and Practice

Tracking vital criteria is essential in recruiting

Unfortunately, there is little systematic research on the effects of recruiting options using any of these criteria. Despite calls for systematic research on the effects of various approaches to recruiting, using yield ratios and performance-based criteria, few companies have strategic measurement criteria for evaluating recruitment and recruitment sources.

One survey found that only 53 percent of companies even had a formal system for evaluating their recruiting. Only 35 percent look at the job performance of new hires relative to recruitment source. Only 52 percent evaluate recruiting sources in terms of EEO or diversity issues. Obviously, the tracking of such vital criteria is essential in determining the relative effectiveness of the various recruiting options.

More informal methods more likely to improve job tenure

In general, the limited comparative studies on recruitment methods suggest that the more informal methods (e.g., walk-ins, referrals) are more likely to lead to longer job tenure than the more formal sources, such as newspaper ads. The Internet now exceeds newspaper ads in generating a large number of applicants for a position compared to the other methods. Another study found that people who had worked for the organization earlier had superior performance records, longer job tenure, and better attendance. There is also evidence that recruiting Generation Y job candidates requires emphasis on unique strategies that can increase success.⁶⁰

Many problems in recruiting may be a consequence of the way in which recruiters are rewarded. You may recall the army recruiting scandals. One recruiter in Colorado, working under a specific “head count” quota, produced a “Faith Hill High School” diploma for a dropout who was actually not eligible. Research has shown that those criteria that pertain to direct costs of recruiting to the organization are the ones on which recruiters are typically evaluated.⁶¹

For example, recruiters for a large manufacturing company in the South are compensated in relation to a “cost per hire” measure or what one staff member refers to as the “warm body” phenomenon. This emphasis on cost figures may explain the general lack of systematic research relating recruiting methods to higher-level criteria such as work quality. In the context of affirmative action, those persons assigned to meet specific EEO goals or timetables often are evaluated on the extent to which they meet the goals or timetables and not the extent to which the positions have been filled with qualified personnel or whether those individuals are successfully retained. The conflicting incentives of recruiters and line management can cause problems when the time comes to make job offers.

The ideal recruiter

The effectiveness of the various methods of recruiting also has been shown to vary as a function of particular method characteristics. In general, research allows us to construct an ideal recruiter: strong interpersonal skills, extensive knowledge of the organization, and enthusiasm for the organization, the job, and the candidates. College recruiting is apparently enhanced when the recruiter is between the ages of 30 and 55, is perceived to have stature in the company (line managers are preferred to professional recruiters), and is verbally fluent with good interpersonal skills and an extensive knowledge of the company and the particular job.⁶² The success of any recruiting effort, however, is more dependent on the job (and offer) characteristics themselves. College students place the greatest weight on pay, fringe benefits, and the type of work. Recruiters often underestimate the importance of such factors relative to others.⁶³

Figure 5-17 presents a summary of the latest research findings on recruitment and practical applications. Figure 5-18 summarizes the sparse research on recruiting the Millennial generation.

What Are the Effects of E-Recruiting?

Despite its great potential, **E-recruiting** is not necessarily a panacea for all organizations and all jobs. The track record to date is not all that impressive.⁶⁴ One CEO of a marketing development company said, “Unless you’re looking for programmers in some cutting-edge technology, you’re kind of out of luck.”

Figure 5-17 Recruitment Research and Practical Applications

Research Findings	Practical Applications
Recruitment sources affect the characteristics of applicants attracted.	Use sources such as referrals (e.g., from current employees) that yield applicants less prone to turnover and more likely to be better performers.
Recruitment materials have a more positive impact if they contain more specific information.	Provide applicants with information on aspects of the job that are important to them, such as salary, location, and diversity.
Organizational image influences applicants' initial reactions to employers.	Ensure all communications regarding an organization provide a positive message regarding the corporate image and the attractiveness of the organization as a place to work.
Applicants with a greater number of job opportunities are more attentive to and more influenced by early recruitment activities than those with fewer opportunities (i.e., less marketable individuals).	Ensure initial recruitment activities (e.g., Web site, brochure, on-campus recruiting) are as attractive to candidates as later activities.
Recruiter demographics have a relatively small effect on applicants' attraction to the organization.	Worry less about matching recruiter/applicant demographics and more about the content of recruiting messages and the organization's overall image in terms of diversity.
Realistic job previews (e.g., brochures, videos, group discussions that highlight both the advantages and the disadvantages of the job) reduce subsequent turnover.	Provide applicants with a realistic picture of the job and organization, not just the positives.
Applicants will infer job and organizational information based on the organizational image projected and their early interactions with the organization if the information is not clearly provided by the organization.	Provide clear, specific, and complete information in recruitment materials so that applicants do not make erroneous inferences about the nature of the job or the organization as an employer.
Recruiter warmth has a large and positive effect on applicants' decisions to accept a job.	Individuals who have contact with applicants should be chosen for their interpersonal skills.
Applicants' beliefs in a "good fit" between their values and the organization's influence their job-choice decisions.	Provide applicants with accurate information about what the organization is like so that they can make accurate fit assessments.

Source: Adapted from A. M. Ryan and N. T. Tippins, "Attracting and Selecting: What Psychological Research Tells Us," *Human Resource Management* 43 (2004), p. 311. Reprinted with permission of John Wiley & Sons.

Figure 5-18 Strategies for Recruiting the Millennials

1. Put More Emphasis on Employee Referrals

While this strategy works for all generations, some headhunters argue that Yers are particularly deferential to company referrals. Millennials are active internal recruiters because they like an active role in picking their peers.

2. Offer Job Internships and Job Tryouts

Paid summer internships (often between junior and senior years of college) are becoming more common. The interns are given many work sample tryouts. Says one prominent headhunter, "The key to retaining young guns is to give them different opportunities throughout the business."

3. "TLK 2 Them"

Millennials are impressed with and attracted to companies with "high tech" recruitment. Electronic communications (videos about the organization, executive blogs) are important elements of recruitment and more valued by the Millennials.

4. Offer Flexible Work Arrangements

Options such as telecommuting or remote working arrangements are more valued by this generation as they tend to question why actual "face" time is really necessary when Internet-based communication is more efficient and, as one Yer put it, "I can do it in my underwear without spending time or gas money."

5. Offer Sabbaticals and Time Off for Community/Volunteer Service

Millennials are more attracted to "green" companies and jobs that offer time off for community service and volunteer work. They are more attracted to companies regarded as "socially responsible."

6. Offer Pay Packages with More Pay at Risk and a Closer Link with Performance and Productivity

Millennials like a closer link between their work products and their pay through pay-for-performance systems. In some segments (e.g., technology), they particularly like stock options as a part of the pay package.

Track record on e-recruiting not that impressive

While others would certainly disagree with such a sweeping conclusion, there is limited empirical evidence showing web-based recruiting to be superior to other recruiting options for the most important criteria for assessing the recruitment effort.

The Internet will certainly give you a lot of résumés and fast. But whether the Internet facilitates the faster hiring of better people at relatively lower cost has not yet been

Résumé overload

determined except with isolated case studies, usually involving technological jobs. Darlene Chapin, recruiting director for Cheetah Technologies in Florida, claims Internet recruiting for programmers has made the process much more efficient. Research supports this view.⁶⁵

One of the major problems reported with Internet recruiting is the volume of résumés received, the so-called résumé overload. Many recruiters simply download all the “applications.” While this type of recruiting will surely get you more applications and faster, the process can be quite inefficient without a strategy for classifying, rating, or ranking résumés based on a matching process between job specifications and candidates’ KASOCs or competencies.

Online structured approaches to screening

More companies are now using online structured approaches to screening that require applicants to submit biographical information according to a specific format. The format allows for an automatic “scoring” of biographical and other information and thus a classification scheme for candidates. This “artificial intelligence” approach allows for greater control over information gathering and storage and has the potential for better decision making. One discrepancy between academic research and personnel practice is the clear finding in research that statistical or actuarial decision making based on the valid weighting of different sources of information about job candidates results in more effective staffing decisions compared to the way personnel decisions are normally made where an evaluator forms a general impression based on an overall evaluation of the information about candidates.

“Artificial intelligence” can lead to more valid decision making

When done properly, “artificial intelligence” can lead to more intelligent decision making. One study reported a 270 percent increase in efficiency using an automated résumé scoring system.⁶⁶ One expert recommends the following strategies for processing résumés: (1) optimize the e-mail system by pushing candidates to particular job folders; (2) use auto-response e-mails with valid, prequalifying questions or conditions (certain required job specifications); (3) drive candidates to apply online at your website so valid scores can be derived based on relevant biographical, competency-based information; and (4) use an outsourced staffing or résumé screening service.⁶⁷ This expert is also the co-founder of a company called People Bonus that offers this very service (check out its website). There is no question that the Millennial generation is more receptive to Internet recruiting, online applications, and even online “interviews.” Figure 5-18 presents a summary of the unique elements to Gen Y recruiting.

Two Philosophies of Recruiting: Flypaper versus Matching

More applicants for key positions is a HPWP

The traditional philosophy of recruiting has been to get as many people to apply for a job as possible. The idea is based on trying to obtain the lowest possible selection ratio given a fixed recruiting cost. A **selection ratio (SR)** is the proportion of job openings to applicants. An SR of 0.10 means there are 10 applicants for every job opening. A **lower selection ratio is generally more desirable** because it enables the organization to choose job candidates from a larger pool of qualified candidates, thereby increasing selectivity. Research on **High-Performance Work practices**, first introduced in Chapter 1, clearly shows that more successful firms have significantly lower selection ratios than less successful firms for key positions.

This assumption holds true as long as the cost of recruiting and subsequent screening is not exorbitant and applicants for the job are at least minimally qualified. In general, selection ratios are more favorable when companies are admired by the working public.⁶⁸ For example, the number of job applicants is up for most of *Fortune* magazine’s “2011 Best Companies” (e.g., Google, Apple, Cisco Systems, SAS, Southwest Airlines) relative to competitors that did not make the list.

Of course, what is critical is that the increases in the applicant pool reflect at least minimally qualified applicants. Many companies express disappointment with web-based recruiting because of the labor involved in processing a larger collection of résumés, many of which are not really a close match to the requirements of the job. In circumstances where the “quality” of the candidates is most important, along with the attraction of people who are more likely to stay longer, the “matching” philosophy of recruitment may be more efficient.⁶⁹ A persuasive argument can be made that matching the needs of the organization to the needs of the applicant will enhance the recruitment process. The result will be a workforce that is more likely to stay with the organization longer

and perform at a higher level of effectiveness for a longer period. In the context of this matching philosophy, a process of realistic recruitment is recommended. An important component of realistic recruiting is a **realistic job preview (RJP)**. RJP's provide the characteristics of the job to applicants so they can evaluate the compatibility of this realistic presentation of the job with their own work preferences. St. Petersburg, Florida, police recruits are shown a video depicting the realistic life of a St. Petersburg police officer. Recruits are told that each arrest they make entails hours of paperwork. RJP's can result in a self-selection process that screens out people most likely to have difficulty on the job. Those applicants who are hired after being exposed to an RJP are also better able to cope because of more realistic expectations about the job.⁷⁰ It is said that RJP's "vaccinate" applicants by lowering their unrealistic expectations and bringing them more in line with actual work conditions.

Lower rates of employee turnover for employees recruited with RJP's

Many companies doing international work provide extensive RJP's for potential expatriates and their families. Bechtel, the giant construction company, provides a 60-minute video of life in Saudi Arabia that engineers and their spouses view before they make a commitment for a 1-year assignment. Research on realistic recruiting shows lower rates of employee turnover for employees recruited with RJP's, particularly for more complex jobs, and higher levels of job satisfaction and performance at the initial stages of employment. RJP's are more beneficial for organizations hiring at the entry level, when there are low selection ratios (i.e., many applicants per position), and under conditions of relatively low unemployment (i.e., where people have more job options). Otherwise, the approach may increase the cost of recruiting by increasing the average time it takes to fill each position. RJP's are developed using job analysis information. The critical incident technique is particularly effective for developing RJP's. RJP's also could be incorporated in job postings on the Internet to facilitate the self-selection process.

Use of the Job Compatibility Questionnaire can reduce turnover

Another approach to staffing that fits into the matching philosophy is the use of the **Job Compatibility Questionnaire (JCQ)** discussed in Chapter 4.⁷¹ The JCQ provides a quantitative match between job applicant preferences and the actual characteristics of a job, including compensation system characteristics, benefits, work schedule, and, of course, the characteristics of the actual work to be performed. The JCQ results have also been used to construct a realistic job preview and to redesign high-turnover jobs. A study of customer service representatives at one Tribune Company newspaper found that the combination of JCQ as a selection device plus the RJP after the job offer was conveyed reduced voluntary turnover by 35 percent and increased the job satisfaction of the workforce.⁷² An instrument such as the JCQ also could be incorporated into a standardized job analysis method for downloading from the Internet. Since the JCQ and the RJP will reduce the pool of potential qualified candidates, these approaches should be used in conjunction with a stronger recruitment effort in order to increase the pool of potential candidates of job candidates.

Understanding the Recruits

Effective recruiting requires that the organization know what potential applicants are thinking and what their needs and desires are regarding all major characteristics of the job. For example, how important are the various elements of the fringe benefit package? Are applicants interested in special work schedules, child care, particular work locations? Organizations also need to be keenly aware of how candidates search for jobs. What outlets do they rely on for job information? To what extent do they rely on outside referral agencies for job placement? Should recruitment be restricted to specific geographical areas based on the search behavior of potential candidates? At least some answers to these questions can be gathered over time based on the past recruiting successes and failures of the organization. Recruitment is one area of HRM where a computerized system of detailed record keeping would be most beneficial for recruiting efforts in the future. Unfortunately, most organizations rely on recruiter "hunches" to make decisions and do little to organize their past recruiting efforts in such a way that systematic research could help to determine their future strategies. Research indicates that these "hunches" are not particularly accurate. A better strategy is to rely on the research that is summarized in Figures 5-17 and 5-18 and to understand that whom you are recruiting has a lot to do with the success of any given strategy.⁷³

Human Resource Planning and Recruitment for Multinational Corporations*

International HR planning and recruitment is more complicated

The majority of Fortune 500 companies are now multinational in nature and a sizable portion of their business (and profits) is derived from overseas operations. As discussed in Chapter 2, some of our largest, most prestigious companies (e.g., Microsoft, IBM, GE, McDonald's, Coca-Cola) derive close to (or over) 50 percent of their revenues from overseas business. Unfortunately, with few exceptions, the relationship between HR planning and strategic planning for international ventures is even weaker than for U.S. operations despite the fact that many experts regard human resource issues as even more important to the success of an overseas operation than of a domestic operation. Efforts are being made to enhance the recruiting and success of expatriates. As illustrated in Figure 5-19, some companies are responding by consolidating the external hiring requirements and gaining expertise in overseas staffing needs.

As discussed in Chapter 2, international HRM is more complicated than domestic HRM. All of the planning and recruitment are more unpredictable because of potentially volatile environmental and political issues in the host country that can affect the overseas operations. For example, after considerable success penetrating the Japanese market, Milwaukee-based Harley-Davidson has had to respond to considerable political pressure directed at restricting its growth in Japan. The pressure is affecting its forecasts of market penetration in Japan.

Almost all HRM activities (e.g., staffing, performance management, reward systems and compliance, and employee development) are more difficult and unpredictable in overseas operations not only because of environmental volatility but because many of the methods within each of these domains that have proven effective in U.S. settings do not necessarily work for international staffing, performance management, and the other domains. The U.S. insurance industry, for example, puts considerable weight on biographical information in the selection of insurance agents. The validity of the method for predicting sales success,

Figure 5-19 International HR Jobs

Director, Global eRecruiting International, Munich, Germany	HR Director International, Toronto, Canada
Allianz AG, a global leader in the financial services arena, seeks a highly motivated individual to lead an international team responsible for creating and implementing a comprehensive eRecruiting and employment branding plan and incorporating multiple segmented lead generation tactics that ensure a consistent candidate experience with Allianz and its affiliates. Requirements: - At least 8 years of Marketing and/or branding experience (project management) in financial services or insurance fields. Recruiting-related marketing experience preferred. - Significant project management experience. - Demonstrated leadership and relationship management abilities. - Sourcing strategist who has developed a total approach to generating leads in a similar environment desired. - Proficient in Internet utilization and Web analysis. - Ability to conduct and report on relevant research. - Bachelor's Degree and/or MBA (e.g., business, economics, marketing) or equivalent. - Work experience abroad (6-month minimum).	We are one of <i>Forbes'</i> 200 Best Small Companies (www.edumgt.com) for the third year in a row. With proprietary colleges throughout the U.S., we have recently acquired three post-secondary institutions specializing in information technology, located in Halifax, Toronto, and Vancouver. We seek a Director of Human Resources for the three locations, to be based in Toronto headquarters. The Director of Human Resources is a position of leadership within our organization. We seek a seasoned generalist who is familiar with start-ups or acquisitions, and who is able to successfully guide employees through change. The incumbent will possess the ability to integrate HR into key business operations, and to assist senior executives in building an infrastructure with all levels of management, staff, and faculty. Particular emphasis will be placed on organizational development, staffing, compensation, benefits, employee relations, training, and knowledge of provincial employment laws within a tri-site environment. The successful candidate will possess a broad understanding of HR practices and policies, a minimum Bachelors degree in business, human resources management, or related field and at least seven (7) years of parallel experience in HR management. Some travel will be necessary in order to serve each of the locations. The environment is challenging and very fast-paced, as well as student and employee-centered. We offer a competitive salary and benefits, with enormous opportunities for advancement. For immediate consideration, your résumé and salary history may be sent via e-mail attachment to:
HR Director International, Riyadh, Saudi Arabia	
New position reporting to COO for one of the world's largest jewelry manufacturing facilities located in Riyadh, SA. Approximately 3,000 employees in seven (7) locations throughout Saudi Arabia. Will be responsible for the development of an effective HR program, building all systems including core competencies and organizational values. Ideal candidate will be fluid in the language, culture, and customs/laws of Middle Eastern manufacturing operations. Excellent salary and benefits package to include housing allowance and relocation. Submit résumé to:	

*This section was contributed by Stephanie Thomason.

discussed in Chapter 6, has never been studied for overseas sales and thus may not apply in the hiring of expatriate Americans, host-country nationals, or third-country nationals.

Within the rewards/compliance domain of HRM activities, issues related to family, housing, dependent care and schooling, spouse employment, taxation, and health care all tend to complicate the international HRM function. These issues also make the economic and psychological implications of errors in international HRM relatively greater than for domestic assignments.⁷⁴

One study identified the critical issues affecting planning and recruitment aspects of international HRM.⁷⁵ The major challenges were

1. Identifying top managerial talent early in the process.
2. Identifying criteria for success in overseas assignments.
3. Motivating employees to take overseas assignments.
4. Establishing a stronger connection between the strategic plan of the company and HR planning.

Identifying top managerial talent in the home and host countries is a recurring problem in international HRM, as noted by a 2010 **Global Relocation Trends** survey.⁷⁶ In this survey, 32 percent of respondents cited “finding suitable candidates” as their most significant challenge. Identifying criteria for success, the second challenge listed, is a complex issue, as performance appraisals and criteria vary as a function of cultural values and norms of the country of assignment. Few experts would argue with the contention that these challenges are more difficult with international planning and recruitment. The third challenge, motivating employees to take overseas assignments, often proves easier to meet, as many executives seeking upward advancement⁷⁷ and executives who are open to change and have an adventurous spirit may relish the overseas experience and the immersion into a new culture. Furthermore, the extensive benefit package often provided to expatriates under the commonly used balance sheet approach makes the overseas stay quite comfortable. This package may afford many expatriates the ability to save more while overseas than in the home country. Despite such benefits, some executives refuse to take international assignments.

One study found that “family concerns” was the most common reason for assignment refusal (89 percent), followed by spouse career concerns (62 percent).⁷⁸ Family issues remain a challenge throughout the international assignment, as 28 percent of respondents from the same study cited family concerns as their reason for early return. Executives may also refuse the assignment due to the inherent difficulties perceived in the country of assignment. As noted in Chapter 2, the emerging societies of China, India, and Russia present significant cultural and legal problems with which program managers and expatriates must deal.

Repatriation policies often are not adequate to meet the needs of returning expatriates. Lawrence Buckley, personnel manager for GE, for example, says the “re-entry process isn’t as smooth as we would like it to be.” He states that GE is making progress in this area but that it is “still a problem for us and U.S. industry in general.”⁷⁹ One problem occurs when organizations fail to establish a career development plan for expatriates that takes into account the international experience and knowledge they acquired overseas. This failure may propel expatriates to seek other job alternatives that capitalize on their experience. A second problem occurs when expatriates are placed in lateral positions with less autonomy and freedom than they had enjoyed overseas. Extensive reporting requirements and greater bureaucracy may pose difficulties for executives accustomed to making decisions on their own.⁸⁰ A third problem occurs when foreign-service premiums, cost of living allowances, and other benefits and perquisites provided to expatriates while abroad are abruptly terminated. Expatriates, spouses, and children who have grown accustomed to extensive benefits overseas may feel that an abrupt change in lifestyle is unfair, given the expatriates’ additional tenure within the company.

Corporations now place more and considerable weight on overseas experience as a requirement for high-level executive assignments. For example, Honeywell, Allied-Signal, and Rohm & Haas all require overseas assignments prior to senior management placement. With the increased sophistication of international communications and the growing importance of international operations for corporate strategy, studies showing managers

Critical issues affecting IHRM planning and recruitment

Inadequate Repatriation Policies

perceiving a loss of visibility at headquarters due to overseas assignments probably apply less today than only a few years ago.

Underlying all HRM challenges is the strategic position of the multinational corporation regarding the relationship of the overseas operation to the parent company.⁸¹ The recruitment strategy for overseas assignments is directly tied to this strategic position. U.S. companies may recruit and select from one (or more) of three sources.

1. The pool of U.S. personnel who would be expatriated to the foreign assignment.
2. The pool of candidates from the country of the overseas operations.
3. Candidates from all nationalities.

Ethnocentrism

Ethnocentrism, the policy of using *only* home-country executives for overseas assignments, really only makes sense either financially or strategically when the company is just starting the operation. Otherwise, the disadvantages of this approach outweigh the advantages. Japanese companies with this philosophy applied to U.S. operations have encountered a number of problems, including a proliferation of equal employment opportunity lawsuits and, in particular, age discrimination cases as Japanese companies replace American managers over the age of 40 with sometimes younger and very often Japanese managers. The use of host-country nationals in overseas operations can reduce language and cultural problems, the need for expensive training programs, and, of course, the tremendous cost of placing expatriates and their families in overseas assignments. This is becoming more common for American companies.⁸²

Geocentrism

The **geocentric policy** of hiring the best person regardless of nationality is the formal policy of choice for most large U.S. corporations but is certainly not without its problems since such a management team may have more difficulties communicating with each other and understanding the subtle implications of cultural differences.

For corporations maintaining a close strategic relationship to the overseas division (as opposed to a philosophy of autonomous operations), the most common strategy for managerial recruitment and job placement for U.S. companies is a balance between expatriates and host- or third-country nationals. Sales and production personnel are typically recruited from the national pool. Companies that have a “hands-off” managerial philosophy toward autonomous foreign operations they may have acquired or developed typically use expatriates in coordination with nationals until the parent company is comfortable with the operation and the profits of the foreign division are acceptable. Most of the expatriates may then be recalled to reduce the overhead of the operation.

SUMMARY

Human resource planning (HRP) seeks to place the right employees in the right jobs at the right time and at the lowest possible cost, thereby providing the means for the organization to pursue its competitive strategy and fulfill its mission. Planning improves the organization's ability to create and sustain competitive advantage and to cope with problems, threats, and opportunities arising from change—technological, social, political, and environmental. HRP and all of its derivatives should always keep the future customer in focus. Reengineering or downsizing programs that lose this focus ultimately may have a negative impact on the organization. HRP systematically attempts to forecast personnel demand, assess supply, and reconcile the two.

Personnel demand can be assessed using qualitative methods such as the Delphi technique and quantitative methods. Internal supply may be forecast by using human resources information systems (HRIS), replacement charts, and Markov analysis. Internal shortages are resolved through training and/or recruitment. This information is used in action planning to develop human resource strategy. HRP is an ongoing process where control and evaluation procedures are necessary to guide HRP activities. Deviations from the plan and their causes must be identified in order to assess whether the plan should be revised. Most labor market analysis should now be done with a global context.⁸³

Recruitment is the process of finding and attracting applicants who are interested in and qualified for position vacancies. The Internet has had an increasingly profound impact on this HR function. Recruitment should encompass both the attraction and the selection of the most qualified personnel. The ideal recruitment program is one in which a sufficient number of qualified applicants are attracted to and ultimately accept the positions in an efficient manner. Unfortunately, the typical assessment of recruitment policies, programs, and personnel in the past has focused on simply whether positions were filled and the cost and speed of filling positions rather than evaluating the quality of the personnel who were hired and placed.

The most recent writing on recruitment, however, has placed a greater emphasis on the quality dimension of the recruiting effort. There is increasing evidence that the various approaches to recruiting result in different outcomes for the organization and that the success of any strategy depends on who is being recruited. The evaluation of recruiting programs in the future is thus more likely to focus on the quality dimension of the people who are hired in addition to the “body count” criteria that are more typically used. The quality criterion has been emphasized in this chapter and the need to establish a match between job seekers’ needs and desires for certain job characteristics and those which the organization can offer.

Discussion Questions

1. How should HR planning involve a comparison to competitors? What critical data are required?
2. Why is HR planning an important activity? What are some of the advantages of effective planning?
3. Some organizations do thorough job analysis first and then human resource planning as part of a restructuring process. What approach makes more sense to you?
4. Discuss the possible pros and cons of the two qualitative methods for forecasting labor demand.
5. If actual performance of the human resource plan differs from desired performance, what remedial steps might you use?
6. Employee referral is a popular method of recruiting candidates. What are its advantages and disadvantages?
7. What are the advantages and disadvantages of the various external recruitment sources described in the chapter?
8. How do human resource planning and recruitment complement each other?
9. Suppose a key employee has just resigned and you are the department manager. After you have sent your request to personnel for a replacement, how could you help the recruiter find the best replacement?
10. Discuss the advantages and disadvantages of using web-based recruitment.