

Chapter

3

Job Analysis

STRATEGIC OVERVIEW Todd Berkley, U.S. Bank's new manager for sales support and customer retention, plays a strategic role at that bank. Concerned about the number of big customers who were closing their accounts and moving to competitors, U.S. Bank recently refocused its competitive strategy. It's now emphasizing identifying—and quickly eliminating—the customer service problems that are causing its customers to leave. But Todd has discovered that doing so has affected every aspect of the bank's HR policies and procedures. To make sure they emphasize customer service and deal with angry customers at once, HR had to write new job descriptions for employees ranging from teller to guard to vice president, to include their new service-related duties. And then, of course, the bank had to train these employees, and institute new hiring standards to recruit and hire service-oriented people to fill the new positions. All the firm's HR efforts had to support U.S. Bank's new customer service strategy if that strategy was to succeed.¹ And at U.S. Bank, that had to start with job analysis.

The EEOC issues we addressed in Chapter 2 usually first come into play when the firm turns to analyzing its jobs and writing its job descriptions. The main purpose of this chapter is to show you how to analyze a job and write job descriptions. We'll see that analyzing jobs involves determining in detail what the job entails and what kind of people the firm should hire for the job. We discuss several

After studying this chapter, you should be able to:

- Discuss the nature of job analysis, including what it is and how it's used.
- Use at least three methods of collecting job analysis information, including interviews, questionnaires, and observation.
- Write job descriptions, including summaries and job functions, using the Internet and traditional methods.
- Write job specifications using the Internet as well as your judgment.
- Explain job analysis in a “jobless” world, including what it means and how it's done in practice.



techniques for analyzing jobs, and how to use the Internet and more traditional methods to draft job descriptions and job specifications. Then, in the following chapter, HR Planning and Recruiting, we'll turn to the methods managers use to actually find the employees they need. ■

THE NATURE OF JOB ANALYSIS

job analysis

The procedure for determining the duties and skill requirements of a job and the kind of person who should be hired for it.

job description

A list of a job's duties, responsibilities, reporting relationships, working conditions, and supervisory responsibilities—one product of a job analysis.

job specification

A list of a job's "human requirements," that is, the requisite education, skills, personality, and so on—another product of a job analysis.

Organizations consist of positions that have to be staffed. **Job analysis** is the procedure through which you determine the duties of these positions and the characteristics of the people to hire for them.² Job analysis produces information used for writing **job descriptions** (a list of what the job entails) and **job specifications** (what kind of people to hire for the job).

The supervisor or HR specialist normally collects one or more of the following types of information via the job analysis:³

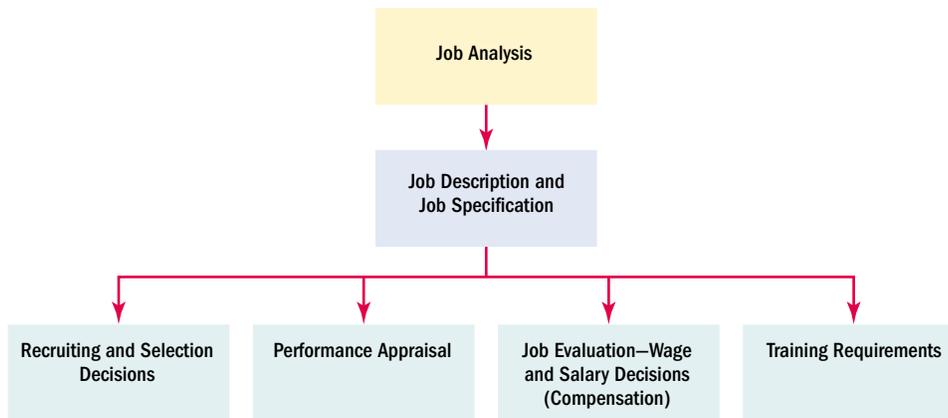
- *Work activities.* First, he or she collects information about the job's actual work activities, such as cleaning, selling, teaching, or painting. This list may also include how, why, and when the worker performs each activity.
- *Human behaviors.* The specialist may also collect information about human behaviors like sensing, communicating, deciding, and writing. Included here would be information regarding job demands such as lifting weights or walking long distances.
- *Machines, tools, equipment, and work aids.* This category includes information regarding tools used, materials processed, knowledge dealt with or applied (such as finance or law), and services rendered (such as counseling or repairing).
- *Performance standards.* The employer may also want information about the job's performance standards (in terms of quantity or quality levels for each job duty, for instance). Management will use these standards to appraise employees.
- *Job context.* Included here is information about such matters as physical working conditions, work schedule, and the organizational and social context—for instance, the number of people with whom the employee would normally interact. Information regarding incentives might also be included here.
- *Human requirements.* This includes information regarding the job's human requirements, such as job-related knowledge or skills (education, training, work experience) and required personal attributes (aptitudes, physical characteristics, personality, interests).

Uses of Job Analysis Information

As summarized in Figure 3-1, job analysis information is the basis for several inter-related HR management activities.

Recruitment and Selection Job analysis provides information about what the job entails and what human characteristics are required to perform these activities. This information, in the form of job descriptions and specifications, helps management decide what sort of people to recruit and hire.

Compensation Job analysis information is crucial for estimating the value of each job and its appropriate compensation. Compensation (such as salary and bonus) usually depends on the job's required skill and education level, safety hazards, degree of responsibility, and so on—all factors you can assess through job analy-



◀ **FIGURE 3-1**
Uses of Job Analysis Information

sis. Furthermore, many employers group jobs into classes (say, secretary III and IV). Job analysis provides the information to determine the relative worth of each job—and thus its appropriate class.

Performance Appraisal A performance appraisal compares each employee’s actual performance with his or her performance standards. Managers use job analysis to determine the job’s specific activities and performance standards.

Training The job description should show the activities and skills—and therefore the training—that the job requires.

Discovering Unassigned Duties Job analysis can also help reveal unassigned duties. For example, your company’s production manager says she’s responsible for a dozen or so duties, such as production scheduling and raw material purchasing. Missing, however, is any reference to managing raw material inventories. On further study, you learn that none of the other manufacturing people are responsible for inventory management, either. You know from your review of other jobs like these that someone should be managing inventories. You’ve uncovered an essential unassigned duty, thanks to job analysis.

EEO Compliance Job analysis also plays a big role in EEO compliance. U.S. Federal Agencies’ Uniform Guidelines on Employee Selection stipulate that job analysis is a crucial step in validating all major personnel activities.⁴ For example, employers must be able to show that their selection criteria and job performance are actually related. Doing this, of course, requires knowing what the job entails—which in turn requires a job analysis.

Steps in Job Analysis

There are six steps in doing a job analysis. Let’s look at each of them.

Step 1 Decide how you’ll use the information, since this will determine the data you collect and how you collect them. Some data collection techniques—like interviewing the employee and asking what the job entails—are good for writing job descriptions and selecting employees for the job. Other techniques, like the position analysis questionnaire described later, do not provide qualitative

information for job descriptions. Instead, they provide numerical ratings for each job; these can be used to compare jobs for compensation purposes.

organization chart

A chart that shows the organizationwide distribution of work, with titles of each position and interconnecting lines that show who reports to and communicates with whom.

process chart

A work flow chart that shows the flow of inputs to and outputs from a particular job.

Step 2 Review relevant background information such as organization charts, process charts, and job descriptions.⁵ **Organization charts** show the organizationwide division of work, how the job in question relates to other jobs, and where the job fits in the overall organization. The chart should show the title of each position and, by means of interconnecting lines, who reports to whom and with whom the job incumbent communicates.

A **process chart** provides a more detailed picture of the work flow. In its simplest form a process chart (like that in Figure 3-2) shows the flow of inputs to and outputs from the job you’re analyzing. (In Figure 3-2 the inventory control clerk is expected to receive inventory from suppliers, take requests for inventory from the two plant managers, provide requested inventory to these managers, and give information to these managers on the status of in-stock inventories.) Finally, the existing job description, if there is one, usually provides a starting point for building the revised job description.

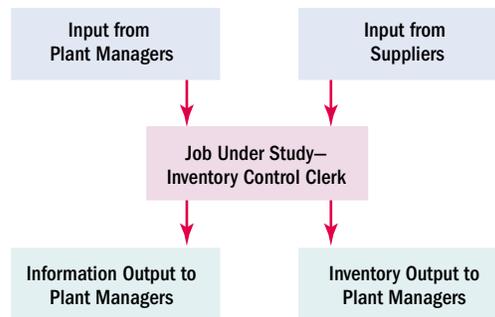
Step 3 Select representative positions. Why? Because there may be too many similar jobs to analyze. For example, it is usually unnecessary to analyze the jobs of 200 assembly workers when a sample of 10 jobs will do.

Step 4 Actually analyze the job—by collecting data on job activities, required employee behaviors, working conditions, and human traits and abilities needed to perform the job. For this step, use one or more of the job analysis methods explained later in this chapter.

Step 5 Verify the job analysis information with the worker performing the job and with his or her immediate supervisor. This will help confirm that the information is factually correct and complete. This review can also help gain the employee’s acceptance of the job analysis data and conclusions, by giving that person a chance to review and modify your description of the job activities.

Step 6 Develop a job description and job specification. These are two tangible products of the job analysis. The *job description* (to repeat) is a written statement that describes the activities and responsibilities of the job, as well as its important features, such as working conditions and safety hazards. The *job specification* summarizes the personal qualities, traits, skills, and background required for getting the job done. It may be in a separate document or in the same document as the job description.

► **FIGURE 3-2**
Process Chart for Analyzing a Job’s Work Flow



Source: Richard J. Henderson, *Compensation Management: Rewarding Performance*, 2nd ed., 1985, p. 158. Reprinted by permission of Prentice Hall, Upper Saddle River, N.J.

METHODS OF COLLECTING JOB ANALYSIS INFORMATION

There are various ways to collect information on the duties, responsibilities, and activities of a job, and we'll discuss the most important ones in this section. In practice, you could use any one of them, or you could combine the techniques that best fit your purpose. Thus, an interview might be appropriate for creating a job description, whereas the position analysis questionnaire may be more appropriate for quantifying the worth of a job for compensation purposes.

Conducting the job analysis usually involves a joint effort by an HR specialist, the worker, and the worker's supervisor. The HR specialist (perhaps an HR manager, job analyst, or consultant) might observe and analyze the job and then develop a job description and specification. The supervisor and worker may fill out questionnaires listing the subordinate's activities. The supervisor and worker may then review and verify the job analyst's conclusions regarding the job's activities and duties.

In practice, firms usually collect job analysis data from multiple "subject matter experts" (mostly job incumbents) using questionnaires and interviews. They then average data from several employees from different departments to determine how much time a typical employee spends on each of several specific tasks. The problem is that employees who have the same job title but work in different departments may experience very different pressures. Therefore, simply adding up and averaging the amount of time that, say, HR assistants need to devote to "interviewing candidates" could end in misleading results. The point is that you must understand the job's departmental context: The way someone with a particular job title spends his or her time is not necessarily the same from department to department.

Interviews, questionnaires, observations, and diary/logs are the most popular methods for gathering job analysis data. They all provide realistic information about what job incumbents actually do. Managers use them for developing job descriptions and job specifications.

The Interview

Managers use three types of interviews to collect job analysis data—individual interviews with each employee, group interviews with groups of employees who have the same job, and supervisor interviews with one or more supervisors who know the job. They use group interviews when a large number of employees are performing similar or identical work, since it can be a quick and inexpensive way to gather information. As a rule, the workers' immediate supervisor attends the group session; if not, you can interview the supervisor separately to get that person's perspective on the job's duties and responsibilities.

Whichever kind of interview you use, you need to be sure the interviewee fully understands the reason for the interview, since there's a tendency for such interviews to be viewed, rightly or wrongly, as "efficiency evaluations." If so, interviewees may hesitate to describe their jobs accurately.

Pros and Cons The interview is probably the most widely used method for identifying a job's duties and responsibilities, and its wide use reflects its advantages. It's a relatively simple and quick way to collect information, including information that might never appear on a written form. A skilled interviewer can unearth important activities that occur only occasionally, or informal contacts that wouldn't be obvious from the organization chart. The interview also provides an opportunity to explain the need for and functions of the job analysis. And the employee can vent frustrations that might otherwise go unnoticed by management.



▲ The job analysis process begins when the analyst collects information from the worker and supervisor about the nature of the work and the specific tasks the worker does.

Distortion of information is the main problem—whether due to outright falsification or honest misunderstanding.⁶ Job analysis is often a prelude to changing a job's pay rate. Employees therefore may legitimately view the interview as an efficiency evaluation that may affect their pay. They may then tend to exaggerate certain responsibilities while minimizing others. Obtaining valid information can thus be a slow process, and prudent analysts get multiple inputs.

Typical Questions Despite their drawbacks, interviews are widely used. Some typical interview questions include:

- What is the job being performed?
- What are the major duties of your position? What exactly do you do?
- What physical locations do you work in?
- What are the education, experience, skill, and [where applicable] certification and licensing requirements?
- In what activities do you participate?
- What are the job's responsibilities and duties?
- What are the basic accountabilities or performance standards that typify your work?
- What are your responsibilities? What are the environmental and working conditions involved?
- What are the job's physical demands? The emotional and mental demands?
- What are the health and safety conditions?
- Are you exposed to any hazards or unusual working conditions?

The best interviews follow structured or checklist formats. Figure 3-3 presents one example—a job analysis questionnaire. It includes a series of detailed questions regarding matters like the general purpose of the job; supervisory responsibilities; job duties; and education, experience, and skills required. Of course, structured lists are not just for interviewers: Job analysts who collect information by personally observing the work or by using questionnaires—two methods explained below—can also use lists like these.⁷

Interview Guidelines Keep several things in mind when conducting a job analysis interview. First, the job analyst and supervisor should work together to identify the workers who know the job best—and preferably those who'll be most objective in describing their duties and responsibilities.

Second, quickly establish rapport with the interviewee. Know the person's name, speak in easily understood language, briefly review the interview's purpose, and explain how the person was chosen for the interview.

Third, follow a structured guide or checklist, one that lists questions and provides space for answers. This ensures you'll identify crucial questions ahead of time and that all interviewers (if there's more than one) cover all the required questions. (However, also make sure to give the worker some leeway in answering questions, and provide some open-ended questions like, "Was there anything we didn't cover with our questions?")

Fourth, when duties are not performed in a regular manner—for instance, when the worker doesn't perform the same job over and over again many times a day—ask the worker to list his or her duties in order of importance and frequency of occurrence. This will ensure that you don't overlook crucial but infrequently performed activities—like a nurse's occasional emergency room duties.

Finally, after completing the interview, review and verify the data. Specifically, review the information with the worker's immediate supervisor and with the interviewee.

Job Analysis Information Sheet

Job Title _____ Date _____

Job Code _____ Dept. _____

Superior's Title _____

Hours worked _____ AM to _____ PM

Job Analyst's Name _____

1. What is the job's overall purpose?

2. If the incumbent supervises others, list them by job title; if there is more than one employee with the same title, put the number in parentheses following.

3. Check those activities that are part of the incumbent's supervisory duties.

Training

Performance Appraisal

Inspecting work

Budgeting

Coaching and/or counseling

Others (please specify) _____

4. Describe the type and extent of supervision received by the incumbent.

5. **JOB DUTIES:** Describe briefly WHAT the incumbent does and, if possible, HOW he/she does it. Include duties in the following categories:

a. daily duties (those performed on a regular basis every day or almost every day)

b. periodic duties (those performed weekly, monthly, quarterly, or at other regular intervals)

c. duties performed at irregular intervals

6. Is the incumbent performing duties he/she considers unnecessary? If so, describe.

7. Is the incumbent performing duties not presently included in the job description? If so, describe.

8. **EDUCATION:** Check the box that indicates the educational requirements for the job (not the educational background of the incumbent).

No formal education required

Eighth grade education

High school diploma (or equivalent)

2-year college degree (or equivalent)

4-year college degree (or equivalent)
(specify)

Graduate work or advanced degree

Professional license (specify)

◀ FIGURE 3-3 Job Analysis Questionnaire for Developing Job Descriptions

Use a questionnaire like this to interview job incumbents, or have them fill it out.

► **FIGURE 3-3**
(Continued)

9. **EXPERIENCE:** Check the amount of experience needed to perform the job.

<input type="checkbox"/> None	<input type="checkbox"/> Less than one month
<input type="checkbox"/> One to six months	<input type="checkbox"/> Six months to one year
<input type="checkbox"/> One to three years	<input type="checkbox"/> Three to five years
<input type="checkbox"/> Five to ten years	<input type="checkbox"/> More than ten years

10. **LOCATION:** Check location of job and, if necessary or appropriate, describe briefly.

<input type="checkbox"/> Outdoor	<input type="checkbox"/> Indoor
<input type="checkbox"/> Underground	<input type="checkbox"/> Pit
<input type="checkbox"/> Scaffold	<input type="checkbox"/> Other (specify)

11. **ENVIRONMENTAL CONDITIONS:** Check any objectionable conditions found on the job and note afterward how frequently each is encountered (rarely, occasionally, constantly, etc.)

<input type="checkbox"/> Dirt	<input type="checkbox"/> Dust
<input type="checkbox"/> Heat	<input type="checkbox"/> Cold
<input type="checkbox"/> Noise	<input type="checkbox"/> Fumes
<input type="checkbox"/> Odors	<input type="checkbox"/> Wetness/humidity
<input type="checkbox"/> Vibration	<input type="checkbox"/> Sudden temperature changes
<input type="checkbox"/> Darkness or poor lighting	<input type="checkbox"/> Other (specify)

12. **HEALTH AND SAFETY:** Check any undesirable health and safety conditions under which the incumbent must perform and note how often they are encountered.

<input type="checkbox"/> Elevated workplace	<input type="checkbox"/> Mechanical hazards
<input type="checkbox"/> Explosives	<input type="checkbox"/> Electrical hazards
<input type="checkbox"/> Fire hazards	<input type="checkbox"/> Radiation
<input type="checkbox"/> Other (specify)	

13. **MACHINES, TOOLS, EQUIPMENT, AND WORK AIDS:** Describe briefly what machines, tools, equipment, or work aids the incumbent works with on a regular basis:

14. Have concrete work standards been established (errors allowed, time taken for a particular task, etc.)? If so, what are they?

15. Are there any personal attributes (special aptitudes, physical characteristics, personality traits, etc.) required by the job?

16. Are there any exceptional problems the incumbent might be expected to encounter in performing the job under normal conditions? If so, describe.

17. Describe the successful completion and/or end results of the job.

18. What is the seriousness of error on this job? Who or what is affected by errors the incumbent makes?

19. To what job would a successful incumbent expect to be promoted?

[**Note:** this form is obviously slanted toward a manufacturing environment, but it can be adapted quite easily to fit a number of different types of jobs.]

Questionnaires

Having employees fill out questionnaires to describe their job-related duties and responsibilities is another good way to obtain job analysis information.

You have to decide how structured the questionnaire should be and what questions to include. Some questionnaires are very structured checklists. Each employee gets an inventory of perhaps hundreds of specific duties or tasks (such as “change and splice wire”). He or she is asked to indicate whether or not he or she performs each task and, if so, how much time is normally spent on each. At the other extreme the questionnaire can be open-ended and simply ask the employee to “describe the major duties of your job.” In practice, the best questionnaire often falls between these two extremes. As illustrated in Figure 3-3, a typical job analysis questionnaire might have several open-ended questions (such as “state your main job duties”) as well as structured questions (concerning, for instance, previous experience required).

Whether structured or unstructured, questionnaires have both pros and cons. A questionnaire is a quick and efficient way to obtain information from a large number of employees; it's less costly than interviewing hundreds of workers, for instance. However, developing the questionnaire and testing it (perhaps by making sure the workers understand the questions) can be expensive and time consuming.

Observation

Direct observation is especially useful when jobs consist mainly of observable physical activities—assembly-line worker and accounting clerk are examples. On the other hand, observation is usually not appropriate when the job entails a lot of mental activity (lawyer, design engineer). Nor is it useful if the employee only occasionally engages in important activities, such as a nurse who handles emergencies. And *reactivity*—the worker's changing what he or she normally does because you are watching—can also be a problem.

Managers often use direct observation and interviewing together. One approach is to observe the worker on the job during a complete work cycle. (The *cycle* is the time it takes to complete the job; it could be a minute for an assembly-line worker or an hour, a day, or longer for complex jobs.) Here you take notes of all the job activities. Then, after accumulating as much information as possible, you interview the worker. Ask the person to clarify points not understood and to explain what other activities he or she performs that you didn't observe. You can also observe and interview simultaneously, asking questions while the worker performs his or her job.

Participant Diary/Logs

Another approach is to ask workers to keep a **diary/log** of what they do during the day. For every activity he or she engages in, the employee records the activity (along with the time) in a log. This can produce a very complete picture of the job, especially when supplemented with subsequent interviews with the worker and the supervisor. The employee, of course, might try to exaggerate some activities and underplay others. However, the detailed, chronological nature of the log tends to mediate against this.

Some firms take a high-tech approach to diary/logs. They give employees pocket dictating machines and pagers. Then at random times during the day, they page the workers, who dictate what they are doing at that time. This approach can avoid one pitfall of the traditional diary/log method: relying on workers to remember what they did hours earlier when they complete their logs at the end of the day.

diary/logs

Daily listings made by workers of every activity in which they engage along with the time each activity takes.

Quantitative Job Analysis Techniques

Qualitative approaches like interviews and questionnaires are not always suitable. For example, if your aim is to compare jobs for pay purposes, you may want to be able to assign quantitative values to each job. The position analysis questionnaire, the Department of Labor approach, and functional job analysis are three popular quantitative methods.

position analysis questionnaire (PAQ)

A questionnaire used to collect quantifiable data concerning the duties and responsibilities of various jobs.

Position Analysis Questionnaire The **position analysis questionnaire (PAQ)** is a very structured job analysis questionnaire.⁸ The PAQ contains 194 items, each of which (such as “written materials”) represents a basic element that may or may not play an important role in the job. The job analyst decides if each item plays a role and, if so, to what extent. In Figure 3-4, for example, “written materials” received a rating of 4, indicating that written materials (like books, reports, and office notes) play a considerable role in this job. The analyst can do this online; see www.paq.com.

The advantage of the PAQ is that it provides a quantitative score or profile of any job in terms of how that job rates on five basic activities: (1) having decision-making/communication/social responsibilities, (2) performing skilled activities, (3) being physically active, (4) operating vehicles/equipment, and (5) processing information. The PAQ’s real strength is thus in classifying jobs. In other words, it lets you assign a quantitative score to each job based on its decision-making, skilled activity, physical activity, vehicle/equipment operation, and information-processing characteristics. You can therefore use the PAQ results to quantitatively compare jobs to one another,⁹ and then assign pay levels for each job.¹⁰

Department of Labor job analysis procedure

Standardized method for rating, classifying, and comparing virtually every kind of job based on data, people, and things.

Department of Labor (DOL) Procedure The **U.S. Department of Labor (DOL) job analysis procedure** also provides a standardized method by which different jobs can be quantitatively rated, classified, and compared. The heart of this analysis is a data, people, and things rating for each job.

Here’s how the procedure works. As Table 3-1 (on page 70) shows, a set of basic activities called *worker functions* describes what a worker can do with respect to data, people, and things. With respect to data, for instance, the basic functions include synthesizing, coordinating, and copying. With respect to people, they include mentoring, negotiating, and supervising. With respect to things, the basic functions include manipulating, tending, and handling.

Note also that each worker function gets an importance level. Thus, “coordinating” is 1, whereas “copying” is 5. If you were analyzing the job of a receptionist/clerk, for example, you might label the job 5, 6, 7, which would represent copying data, speaking—signaling people, and handling things. On the other hand, you might code a psychiatric aide in a hospital 1, 7, 5 in relation to data, people, and things. In practice, you would analyze each task that the worker performed in terms of data, people, and things. Then the highest combination (say 4, 6, 5) would be used to identify the job, since this is the highest level that a job incumbent would be expected to attain.

As illustrated in Figure 3-5 (on page 70) the schedule produced from the DOL procedure contains several types of information. The job title, in this case dough mixer in a bakery, is listed first. Also listed are the industry in which this job is found and the industry’s standard industrial classification code. There is a one- or two-sentence summary of the job, and the worker function ratings for data, people, and things—in this case 5, 6, 2. These numbers mean that in terms of difficulty, a dough mixer copies data, speaks/signals with people, and operates/controls with respect to things. Finally, the schedule specifies the

INFORMATION INPUT			
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 his job.			
1.1.1 Visual Sources of Job Information			
1	4	Written materials (books, reports, office notes, articles, job instructions, signs, etc.)	
2	2	Quantitative materials (materials which deal with quantities or amounts, such as graphs, accounts, specifications, tables of numbers, etc.)	
3	1	Pictorial materials (pictures or picturelike materials used as <i>sources</i> of information, for example, drawings, blueprints, diagrams, maps, tracings, photographic films, x-ray films, TV pictures, etc.)	
4	1	Patterns/related devices (templates, stencils, patterns, etc., used as <i>sources</i> of information when <i>observed</i> during use; do <i>not</i> include here materials described in item 3 above)	
5	2	Visual displays (dials, gauges, signal lights, radarscopes, speedometers, clocks, etc.)	
6	5	Measuring devices (rulers, calipers, tire pressure gauges, scales, thickness gauges, pipettes, thermometers, protractors, etc., used to obtain visual information about physical measurements; do <i>not</i> include here devices described in item 5 above)	
7	4	Mechanical devices (tools, equipment, machinery, and other mechanical devices which are <i>sources</i> of information when <i>observed</i> during use or operation)	
8	3	Materials in process (parts, materials, objects, etc., which are <i>sources</i> of information when being modified, worked on, or otherwise processed, such as bread dough being mixed, workpiece being turned in a lathe, fabric being cut, shoe being resoled, etc.)	
9	4	Materials <i>not</i> in process (parts, materials, objects, etc., not in the process of being changed or modified, which are <i>sources</i> of information when being inspected, handled, packaged, distributed, or selected, etc., such as items or materials in inventory, storage, or distribution channels, items being inspected, etc.)	
10	3	Features of nature (landscapes, fields, geological samples, vegetation, cloud formations, and other features of nature which are observed or inspected to provide information)	
11	2	Man-made features of environment (structures, buildings, dams, highways, bridges, docks, railroads, and other "man-made" or altered aspects of the indoor or outdoor environment which are <i>observed</i> or <i>inspected</i> to provide job information; do not consider equipment, machines, etc., that an individual uses in his work, as covered by item 7)	

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

◀ **FIGURE 3-4**
Portions of a
Completed Page from
the Position Analysis
Questionnaire

Note: The 194 PAQ elements are grouped into six dimensions. This exhibits 11 of the "information input" questions or elements. Other PAQ pages contain questions regarding mental processes, work output, relationships with others, job context, and other job characteristics.

Source: E. J. McCormick, P. R. Jeanneret, and R. D. Mecham, *Position Analysis Questionnaire*. Copyright 1989 by Purdue Research Foundation, West Lafayette, IN. Reprinted with permission.

▶ **TABLE 3-1**
Basic Department of
Labor Worker
Functions

	Data	People	Things
Basic Activities	0 Synthesizing	0 Mentoring	0 Setting up
	1 Coordinating	1 Negotiating	1 Precision working
	2 Analyzing	2 Instructing	2 Operating/controlling
	3 Compiling	3 Supervising	
	4 Computing	4 Diverting	3 Driving/operating
	5 Copying	5 Persuading	4 Manipulating
	6 Comparing	6 Speaking/signaling	5 Tending
		7 Serving	6 Feeding/offbearing
	8 Taking instructions/helping	7 Handling	

Note: Determine employee's job "score" on data, people, and things by observing his or her job and determining, for each of the three categories, which of the basic functions illustrates the person's job. "0" is high; "6," "8," and "7" are lows in each column.

human requirements of the job, for instance, in terms of training time required, aptitudes, temperaments. As you can see, each job ends up with a numerical score (such as 5, 6, 2). You can thus group together (and assign the same pay to) all jobs with similar scores, even for very different jobs like job dough mixer and mechanic's helper.

▶ **FIGURE 3-5**
Sample Report Based
on Department of
Labor Job Analysis
Technique

JOB ANALYSIS SCHEDULE

1. Established Job Title DOUGH MIXER

2. Ind. Assign (bake prod.)

3. SIC Code(s) and Title(s) 2051 Bread and other bakery products

4. JOB SUMMARY:

Operates mixing machine to mix ingredients for straight and sponge (yeast) doughs according to established formulas, directs other workers in fermentation of dough, and curls dough into pieces with hand cutter.

5. WORK PERFORMED RATINGS:

	D	P	(T)
Worker Functions	Data	People	Things
	5	6	2

Work Field Cooking, Food Preparing

6. WORKER TRAITS RATING: (To be filled in by analyst)

Training time required

Aptitudes

Temperaments

Interests

Physical Demands

Environment Conditions

Functional Job Analysis Functional job analysis is similar to the DOL method, but differs in two ways.¹¹ First, functional job analysis rates the job not just on data, people, and things, but also on four more dimensions: the extent to which specific instructions are necessary to perform the task; the extent to which reasoning and judgment are required to perform the task; the mathematical ability required to perform the task; and the verbal and language facilities required to perform the task. Second, functional job analysis also identifies performance standards and training requirements. It therefore lets you answer the question, “To do this task and meet these standards, what training does the worker require?”

You may find both the DOL and functional job analyses methods in use. However, analysts increasingly use other methods instead, including the U.S. government’s online initiatives, which we’ll discuss below.

functional job analysis

A method for classifying jobs similar to the DOL method, but additionally taking into account the extent to which instructions, reasoning, judgment, and mathematical and verbal ability are necessary for performing job tasks.

Using Multiple Sources of Information

There are obviously many ways to obtain job analysis information. You can get it from individual workers, groups, or supervisors; or from the observations of job analysts, for instance. You can use interviews, observations, or questionnaires. Some firms use just one basic approach, like having the job analyst do interviews with current job incumbents. Yet a recent study suggests that using just one source may not be wise.¹²

The problem is the potential inaccuracies in people’s judgments. For example, in a group interview, some group members may feel forced to go along with the consensus of the group; or an employee may be careless about how he or she completes a questionnaire. What this means is that collecting job analysis data from just interviews, or just observations, may lead to inaccurate conclusions. It’s better to try to avoid such inaccuracies by using several sources.¹³ For example, where possible, collect job analysis data from several types of respondents—groups, individuals, observers, supervisors, and analysts; make sure the questions and surveys are clear and understandable to the respondents. And if possible, observe and question respondents early enough in the job analysis process to catch any problems while there’s still time to correct them.

WRITING JOB DESCRIPTIONS

A job description is a written statement of what the worker actually does, how he or she does it, and what the job’s working conditions are. You use this information to write a job specification; this lists the knowledge, abilities, and skills required to perform the job satisfactorily.

There is no standard format for writing a job description. However, most descriptions contain sections that cover:

1. Job identification
2. Job summary
3. Responsibilities and duties
4. Authority of incumbent
5. Standards of performance
6. Working conditions
7. Job specifications

Figures 3-6 and 3-7 present two sample forms of job descriptions.

▼ FIGURE 3-6 Sample Job Description

OLEC CORP.
Job Description

Job Title: Marketing Manager
Department: Marketing
Reports To: President
FLSA Status: Non Exempt
Prepared By: Michael George
Prepared Date: April 1, 2002
Approved By: Ian Alexander
Approved Date: April 15, 2002

SUMMARY

Plans, directs, and coordinates the marketing of the organization's products and/or services by performing the following duties personally or through subordinate supervisors.

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.

Establishes marketing goals to ensure share of market and profitability of products and/or services.

Develops and executes marketing plans and programs, both short and long range, to ensure the profit growth and expansion of company products and/or services.

Researches, analyzes, and monitors financial, technological, and demographic factors so that market opportunities may be capitalized on and the effects of competitive activity may be minimized.

Plans and oversees the organization's advertising and promotion activities including print, electronic, and direct mail outlets.

Communicates with outside advertising agencies on ongoing campaigns.

Works with writers and artists and oversees copywriting, design, layout, pasteup, and production of promotional materials.

Develops and recommends pricing strategy for the organization which will result in the greatest share of the market over the long run.

Achieves satisfactory profit/loss ratio and share of market performance in relation to pre-set standards and to general and specific trends within the industry and the economy.

Ensures effective control of marketing results and that corrective action takes place to be certain that the achievement of marketing objectives are within designated budgets.

Evaluates market reactions to advertising programs, merchandising policy, and product packaging and formulation to ensure the timely adjustment of marketing strategy and plans to meet changing market and competitive conditions.

Recommends changes in basic structure and organization of marketing group to ensure the effective fulfillment of objectives assigned to it and provide the flexibility to move swiftly in relation to marketing problems and opportunities.

Conducts marketing surveys on current and new product concepts.

Prepares marketing activity reports.

SUPERVISORY RESPONSIBILITIES

Manages three subordinate supervisors who supervise a total of five employees in the Marketing Department. Is responsible for the overall direction, coordination, and evaluation of this unit. Also directly supervises two non-supervisory employees. Carries out supervisory responsibilities in accordance with the organization's policies and applicable laws. Responsibilities include interviewing, hiring, and training employees; planning, assigning, and directing work; appraising performance; rewarding and disciplining employees; addressing complaints and resolving problems.

QUALIFICATIONS

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

EDUCATION and/or EXPERIENCE

Master's degree (M.A.) or equivalent; or four to ten years related experience and/or training; or equivalent combination of education and experience.

LANGUAGE SKILLS

Ability to read, analyze, and interpret common scientific and technical journals, financial reports, and legal documents. Ability to respond to common inquiries or complaints from customers, regulatory agencies, or members of the business community.

Ability to write speeches and articles for publication that conform to prescribed style and format. Ability to effectively present information to top management, public groups, and/or boards of directors.

MATHEMATICAL SKILLS

Ability to apply advanced mathematical concepts such as exponents, logarithms, quadratic equations, and permutations. Ability to apply mathematical operations to such tasks as frequency distribution, determination of test reliability and validity, analysis of variance, correlation techniques, sampling theory, and factor analysis.

REASONING ABILITY

Ability to define problems, collect data, establish facts, and draw valid conclusions. Ability to interpret an extensive variety of technical instructions in mathematical or diagram form.

**166.117–018 MANAGER, PERSONNEL (profess. & kin.) alternate titles:
manager, human resources**

Plans and carries out policies relating to all phases of personnel activity: Recruits, interviews, and selects employees to fill vacant positions. Plans and conducts new employee orientation to foster positive attitude toward company goals. Keeps record of insurance coverage, pension plan, and personnel transactions, such as hires, promotions, transfers, and terminations. Investigates accidents and prepares reports for insurance carrier. Conducts wage survey within labor market to determine competitive wage rate. Prepares budget of personnel operations. Meets with shop stewards and supervisors to resolve grievances. Writes separation notices for employees separating with cause and conducts exit interviews to determine reasons behind separations. Prepares reports and recommends procedures to reduce absenteeism and turnover. Represents company at personnel-related hearings and investigations. Contracts with outside suppliers to provide employee services, such as canteen, transportation, or relocation service. May prepare budget of personnel operations, using computer terminal. May administer manual and dexterity tests to applicants. May supervise clerical workers. May keep records of hired employee characteristics for governmental reporting purposes. May negotiate collective bargaining agreement with BUSINESS REPRESENTATIVE, LABOR UNION (profess. & kin.) 187.167–018. GOE: 11.05.02 STRENGTH: S GED: R5 M5 L5 SVP: 8 DLU: 88

◀ **FIGURE 3-7**
“Personnel Manager”
Description from
Dictionary of
Occupational Titles

Source: *Dictionary of Occupational Titles*, 4th ed. (Washington, DC: U.S. Department of Labor, Employment Training Administration, U.S. Employment Service, 1991).

Job Identification

As in Figure 3-6, the job identification section contains several types of information.¹⁴ The *job title* specifies the name of the job, such as supervisor of data processing operations, marketing manager, or inventory control clerk. The *FLSA status* section permits quick identification of the job as exempt or nonexempt. (Under the Fair Labor Standards Act, certain positions, primarily administrative and professional, are exempt from the act’s overtime and minimum wage provisions.) *Date* is the date the job description was actually written, and *prepared by* indicates who wrote it.

There is also space to indicate who approved the description and perhaps a space that shows the location of the job in terms of its plant/division and department/section. This section might also include the immediate supervisor’s title and information regarding salary and/or pay scale. There might also be space for the grade/level of the job, if there is such a category. For example, a firm may classify programmers as programmer II, programmer III, and so on.

Job Summary

The job summary should describe the general nature of the job, and includes only its major functions or activities. Thus (in Figure 3-6), the marketing manager “Plans, directs, and coordinates the marketing of the organizations products and/or services.” For the job of materials manager, the summary might state that the “materials manager purchases economically, regulates deliveries of, stores, and distributes all material necessary on the production line.” For the job of mail-room supervisor, “the mailroom supervisor receives, sorts, and delivers all incoming mail properly, and he or she handles all outgoing mail including the accurate and timely posting of such mail.”¹⁵

Include general statements like “performs other assignments as required” with care. Such statements can give supervisors more flexibility in assigning duties. Some experts, however, state unequivocally that “one item frequently found that should never be included in a job description is a ‘cop-out clause’ like ‘other duties,

as assigned,' ”¹⁶ since this leaves open the nature of the job—and the people needed to staff it.

Relationships

There is occasionally a relationships statement (not in the example), which shows the jobholder’s relationships with others inside and outside the organization. For a human resource manager, such a statement might look like this:¹⁷

Reports to: Vice president of employee relations.

Supervises: Human resource clerk, test administrator, labor relations director, and one secretary.

Works with: All department managers and executive management.

Outside the company: Employment agencies, executive recruiting firms, union representatives, state and federal employment offices, and various vendors.¹⁸

Responsibilities and Duties

This section presents a list of the job’s major responsibilities and duties. As in Figure 3-6, list each of the job’s major duties separately, and describe it in a few sentences. In the figure, for instance, the duties include “establishes marketing goals to ensure share of market,” “develops and executes marketing plans and programs,” “communicates with outside advertising agencies,” and “develops and recommends pricing strategy.” Typical duties for other jobs might include maintaining balanced and controlled inventories, making accurate postings to accounts payable, maintaining favorable purchase price variances, and repairing production-line tools and equipment.

You can use the Department of Labor’s *Dictionary of Occupational Titles* here for itemizing the job’s duties and responsibilities. Take the HR manager’s duties, as shown in Figure 3-7. These duties include “plans and carries out policies relating to all phases of personnel activity”; “recruits, interviews, and selects employees to fill vacant positions”; and “conducts wage surveys within labor markets to determine competitive wage rate.”

This section should also define the limits of the jobholder’s authority, including his or her decision-making authority, direct supervision of other personnel, and budgetary limitations. For example, the jobholder might have authority to approve purchase requests up to \$5,000, grant time off or leaves of absence, discipline department personnel, recommend salary increases, and interview and hire new employees.¹⁹ You also need to comply with ADA regulations: See the New Workplace feature following.



▲ Job analysis can help clarify the responsibilities and duties of newly created job positions, such as the job of Jules Polonetsky, chief privacy officer of the Internet firm DoubleClick. Some privacy experts suggest this position should include such duties as setting up a privacy committee, assessing privacy risks of all the firm’s operations that utilize personal data, and developing a corporate privacy code. Here Mr. Polonetsky participates in a roundtable on privacy issues.

THE NEW WORKPLACE

Writing Job Descriptions That Comply with the ADA

Congress enacted the Americans with Disabilities Act (ADA) to reduce or eliminate serious problems of discrimination against disabled individuals. Under the ADA, the individual must have the requisite skills, educational background, and experience to perform the job's essential functions. A job function is essential when it is the reason the position exists or when the function is so specialized that the firm hired the person doing the job for his or her expertise or ability to perform that particular function. If the disabled individual can't perform the job as currently structured, the employer is required to make a "reasonable accommodation," unless doing so would present an "undue hardship."

As we said earlier, the ADA does not require job descriptions, but it's probably advisable to have them. Virtually all ADA legal actions will revolve around the question, "What are the essential functions of the job?" Without a job description that lists such functions, it will be hard to convince a court that the functions were essential to the job. The corollary is that you should clearly identify the essential functions: don't just list them along with other duties on the description.

Essential job functions are the job duties that employees must be able to perform, with or without reasonable accommodation.²⁰ Is a function essential? Questions to ask include:

1. Does the position exist to perform that function?²¹
2. Are employees in the position actually required to perform the function?²²
3. Is there a limited number of other employees available to perform the function?
4. What is the degree of expertise or skill required to perform the function?
5. What is the actual work experience of present or past employees in the job?
6. What is the amount of time an individual actually spends performing the function?
7. What are the consequences of not requiring the performance of the function?

Standards of Performance and Working Conditions

Some job descriptions contain a standards of performance section. This lists the standards the employee is expected to achieve under each of the job description's main duties and responsibilities.

Setting standards is never an easy matter. However, most managers soon learn that just telling subordinates to "do their best" doesn't provide enough guidance. One straightforward way of setting standards is to finish the statement: "I will be completely satisfied with your work when . . ." This sentence, if completed for each duty listed in the job description, should result in a usable set of performance standards.²³ Here are some examples:

Duty: Accurately Posting Accounts Payable

1. Post all invoices received within the same working day.
2. Route all invoices to proper department managers for approval no later than the day following receipt.
3. An average of no more than three posting errors per month.

Duty: Meeting Daily Production Schedule

1. Work group produces no less than 426 units per working day.
2. Next work station rejects no more than an average of 2% of units.
3. Weekly overtime does not exceed an average of 5%.

The job description may also list the working conditions involved on the job. These might include things like noise level, hazardous conditions, or heat.

HR.NET

Using the Internet for Writing Job Descriptions

Most employers probably still write their own job descriptions, but more are turning to the Internet. One site, www.jobdescription.com, illustrates why. The process is simple. Search by alphabetical title, keyword, category, or industry to find the desired job title. This leads you to a generic job description for that title—say, “Computers & EDP systems sales representative.” You can then use the wizard to customize the generic description for this position. For example, you can add specific information about your organization, such as job title, job codes, department, and preparation date. And you can indicate whether the job has supervisory abilities, and choose from a number of possible desirable competencies and experience levels.



▲ WEBNOTE

Many employers are turning to Web sites that create customized job descriptions in a few simple clicks.

www.jobdescription.com

The U.S. Department of Labor’s occupational information network, called O*NET, is another useful Web tool (you’ll find it at www.doleta.gov/programs/onet). It’s replacing the *Dictionary of Occupational Titles* as a source of occupational information. O*NET contains data adapted from preexisting sources, including the *Dictionary of Occupational Titles*. However, it is growing fast and adding new data about jobs in today’s increasingly information-based economy. Built-in software allows users to see the most important characteristics of occupations, as well as the experience, education, and knowledge required to do each job well. Both the *Dictionary of Occupational Titles* and O*NET include the specific tasks associated with many occupations. O*NET also provides skills, including basic skills such as reading and writing, process skills such as critical thinking, and transferable skills such as persuasion and negotiation.

O*NET improves on the *Dictionary of Occupational Titles* in other ways. For example, an O*NET listing also includes information on worker requirements (required knowledge, for instance), occupation requirements (based on work activities such as compiling, coding, and categorizing data), and experience requirements (including education and job training). You can also check the job’s labor market characteristics (such as employment projections and earnings data).²⁴ The Entrepreneurs + HR feature on page 79 shows you how to use O*NET.

WRITING JOB SPECIFICATIONS

The job specification takes the job description and answers the question, “What human traits and experience are required to do this job well?” It shows what kind of person to recruit and for what qualities that person should be tested. The job specification may be a section of the job description or a separate document entirely. Often—as in Figure 3-6—the employer presents it as part of the job description.²⁵

Specifications for Trained Versus Untrained Personnel

Writing job specifications for trained employees is relatively straightforward. For example, suppose you want to fill a position for a bookkeeper (or counselor or programmer). In cases like these, your job specifications might focus mostly on traits like length of previous service, quality of relevant training, and previous job performance. Thus, it's usually not too difficult to determine the human requirements for placing already trained people on a job.

The problems are more complex when you're filling jobs with untrained people (with the intention of training them on the job). Here you must specify qualities such as physical traits, personality, interests, or sensory skills that imply some potential for performing or for being trained to do the job.

For example, suppose the job requires detailed manipulation in a circuit board assembly line. Here you might want to ensure that the person scores high on a test of finger dexterity. Your goal, in other words, is to identify those personal traits—those human requirements—that validly predict which candidates would do well on the job and which would not. Employers identify these human requirements through a subjective, judgmental approach or through statistical analysis. Let's examine both approaches in detail.

Specifications Based on Judgment

Most job specifications come from the educated guesses of people like supervisors and human resource managers. The basic procedure here is to ask, "What does it take in terms of education, intelligence, training, and the like to do this job well?"

There are several ways to get educated guesses or judgments. You could simply create them yourself, or you could choose them from the competencies listed in Web-based job descriptions like those at www.jobdescription.com. The typical job description there lists competencies like "Generates creative solutions" and "Manages difficult or emotional customer situations." O*NET online is another good option. Job listings there include complete descriptions of educational and other experience and skills required.

The *Dictionary of Occupational Titles* can also still be useful. For each job in the dictionary, job analysts and vocational counselors have made judgments regarding its human requirements. The dictionary assigns ratings and letters to human requirements or traits as follows: G (intelligence), V (verbal), N (numerical), S (spatial), P (perception), Q (clerical perception), K (motor coordination), F (finger dexterity), M (manual dexterity), E (eye-hand-foot coordination), and C (color discrimination). The ratings reflect the amount of each trait or ability possessed by people with different performance levels currently working on the job, based on the experts' judgments.

Use common sense when compiling a list of the job's human requirements. Certainly job-specific human traits like those unearthed through job analysis—manual dexterity, say, or educational level—are important. However, don't ignore the fact that some work behaviors may apply to almost any job (although they might not normally surface through a job analysis).



▲ The job specifications for already trained candidates, such as the customer service operator shown here, should clearly indicate which skills, like computer literacy, are job requirements.

◆ **RESEARCH INSIGHT** One researcher, for example, obtained supervisor ratings and other information from 18,000 employees in 42 different hourly entry-level jobs in predominantly retail settings.²⁶ Regardless of the job, here are the work behaviors (with examples) that he found to be “generic”—in other words, that seem to be important to all jobs:

Job-Related Behavior	Some Examples
Industriousness	Keeps working even when other employees are standing around talking; takes the initiative to find another task when finished with regular work.
Thoroughness	Cleans equipment thoroughly, creating a more attractive display; notices merchandise out of place and returns it to the proper area.
Schedule flexibility	Accepts schedule changes when necessary; offers to stay late when the store is extremely busy.
Attendance	Arrives at work on time; maintains good attendance.
Off-task behavior (reverse)	Uses store phones to make personal unauthorized calls; conducts personal business during work time; lets joking friends be a distraction and interruption to work.
Unruliness (reverse)	Threatens to bully another employee; refuses to take routine orders from supervisors; does not cooperate with other employees.
Theft (reverse)	(As a cashier) Underrings the price of merchandise for a friend; cheats on reporting time worked; allows nonemployees in unauthorized areas.
Drug misuse (reverse)	Drinks alcohol or takes drugs on company property; comes to work under the influence of alcohol or drugs.

Perhaps the bigger challenge is to make sure that in doing the job analysis, you don't miss the forest for the trees. Consider a recent study of 50 testing engineers at a Volvo plant in Sweden. When asked what determined job competence for a testing engineer, most of the engineers focused on traditional criteria such as “to make the engine perform according to specifications.” But the most effective testing engineers defined the job's main task differently: “to make sure the engine provides a customer with a good driving experience.” As a result, these engineers went about their jobs testing and tuning the engines “not as engineers trying to hit a number, but as ordinary drivers—imagining themselves as seniors, students, commuters, or vacationers.” This subgroup of the testing engineers worked hard to develop their knowledge of customers' driving needs, even when it meant reaching out to people outside their own group, such as designers or marketers.

The point, says the researcher, is that “if people don't recognize or value the attributes that really determine success, how easy will it be for them to acquire those attributes?” Employers should therefore “shift the focus of their recruitment and training programs from flawed attribute checklists toward identifying and, if necessary, changing people's understanding of what jobs entail.” In other words, in developing the job description and job specification, make sure you really understand the reason for the job and therefore the skills a person actually needs to be competent at it.²⁷

Specifications Based on Statistical Analysis

Basing job specifications on statistical analysis is the more defensible approach, but it's also more difficult. The aim here is to determine statistically the relationship between (1) some predictor or human trait, such as height, intelligence, or finger dexterity, and (2) some indicator or criterion of job effectiveness, such as performance as rated by the supervisor. The procedure has five steps: (1) analyze the job and decide how to measure job performance; (2) select personal traits like finger dexterity that you believe should predict successful performance; (3) test candidates for these traits; (4) measure these candidates' subsequent job performance; and (5) statistically analyze the relationship between the human trait (finger dexterity) and job performance. Your objective is to determine whether the former predicts the latter.

This method is more defensible than the judgmental approach because equal rights legislation forbids using traits that you can't prove distinguish between high and low job performers. Hiring standards that discriminate based on sex, race, religion, national origin, or age may have to be shown to predict job performance. Ideally, this is done with a statistical validation study.

ENTREPRENEURS + HR

Without their own job analysts or (in many cases) HR managers, many small-business owners face two hurdles when doing job analyses and job descriptions. First, they often need a more streamlined approach than those provided by questionnaires like the one shown in Figure 3-3. Second, there is always the reasonable fear that in writing their job descriptions, they will overlook duties that subordinates should be assigned, or assign duties not usually associated with such positions. What they need is an encyclopedia listing all the possible positions they might encounter, including a detailed listing of the duties normally assigned to these positions.

Help is at hand: The small-business owner has at least three options. The *Dictionary of Occupational Titles*, mentioned earlier, provides detailed descriptions of thousands of jobs and their human requirements. Web sites like www.jobdescription.com provide customizable descriptions by title and industry. And the Department of Labor's O*NET is a third alternative. We'll focus on using O*NET in this feature.

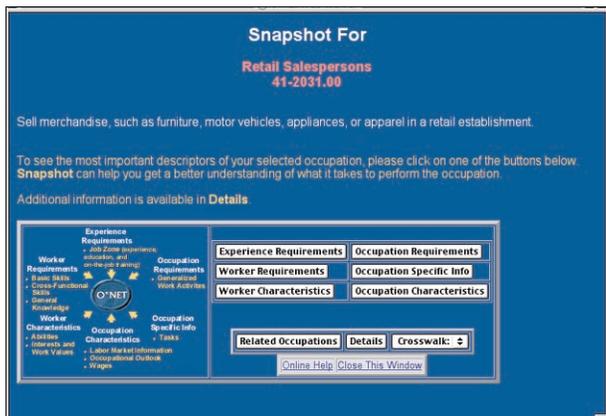
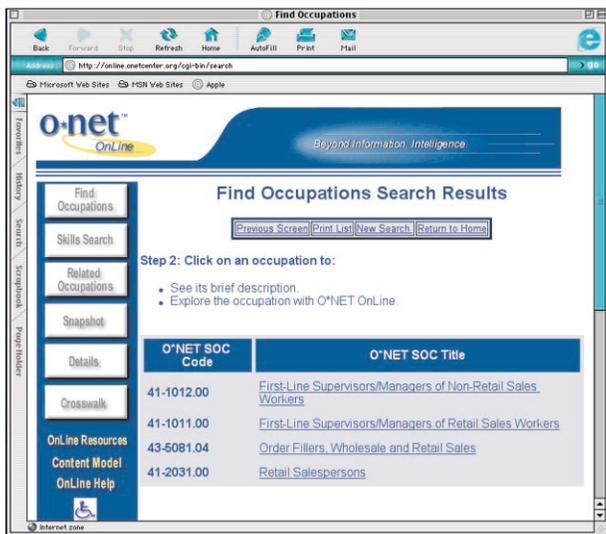
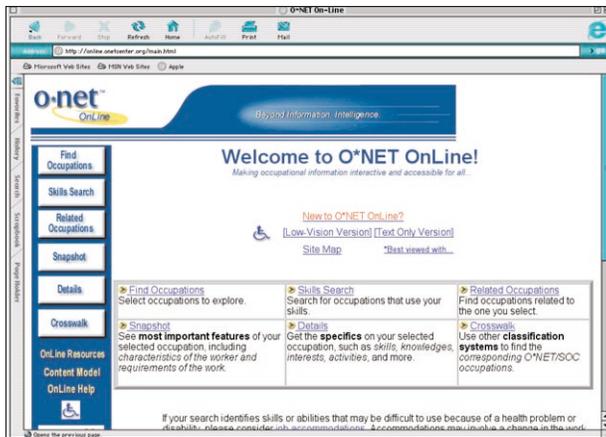
Step 1. Decide on a Plan

Start by developing at least the broad outline of a corporate plan. What do you expect your sales revenue to be next year, and in the next few years? What products do you intend to emphasize? What areas or departments in your company do you think will have to be expanded, reduced, or consolidated, given where you plan to go with your firm over the next few years? What kinds of new positions do you think you'll need in order to accomplish your strategic plans?

Step 2. Develop an Organization Chart

Next, develop an organization chart for the firm. Show who reports to the president and to each of his or her subordinates. Complete the chart by showing who reports to each of the other managers and supervisors in the firm. Start by drawing up the organization chart as it is now. Then, depending upon how far in advance you're planning, produce a chart showing how you'd like your chart to look in the immediate future (say, in two months) and perhaps two or three other charts showing how you'd like your organization to evolve over the next two or three years.

A Practical Job Analysis Approach



▲ WEBNOTE

Shown in the three screen captures above, O*NET easily allows the user to develop job descriptions.

online.onetcenter.org

You can use several tools here. For example, MS Word includes an organization charting function: On the insert menu, click *Object*, then *Create New*. In the *Object* type box, click *MS Organization Chart*, and then *OK*. Software packages such as *OrgPublisher for Intranet 3.0* from TimeVision of Irving, Texas, are another option.²⁸

Step 3. Use a Job Analysis/Description Questionnaire

Next, use a job analysis questionnaire to determine what the job entails. You can use one of the more comprehensive questionnaires (see Figure 3-3); however, the job description questionnaire in Figure 3-8, is a simpler and often satisfactory alternative. Fill in the required information, then ask the supervisors and/or employees to list the job’s duties (on the bottom of the page), breaking them into daily duties, periodic duties, and duties performed at irregular intervals. You can distribute a sample of one of these duties (Figure 3-9) to supervisors and/or employees to facilitate the process.

Step 4: Obtain Lists of Job Duties from O*NET

The list of job duties you uncovered in the previous step may or may not be complete. We’ll therefore use O*NET to compile a more comprehensive list. (Refer to the Webnote for a visual example as you read along.) Start by going to <http://online.onetcenter.org> (top). Here, click on *Find Occupations*. Assume you want to create job descriptions for retail salespeople. Type in *Retail Sales* for the occupational titles, and *Sales and Related* from the job families drop-down box. Click *Find Occupations* to continue, which brings you to the *Find Occupations Search Result* (middle). Clicking on *Retail Salespersons*—snapshots—produces the job summary and specific occupational duties for retail salespersons (bottom). For a small operation, you might want to combine the duties of the retail salesperson with those of first-line supervisors/managers of retail sales workers.

Step 5: Compile the Job’s Human Requirements from O*NET

Next, return to the *Snapshot for Retail Salesperson* (bottom). Here, instead of choosing occupation-specific information, choose, for example, *Worker Experiences*, *Occupational Requirements*, and *Worker Characteristics*. You can use this information to develop a job specification for recruiting, selecting, and training the employees.

STEP 6: Complete Your Job Description

Finally, using Figure 3-8, write an appropriate job summary for the job. Then use the information obtained in Steps 4 and 5 to create a complete listing of the tasks, duties, and human requirements of each of the jobs you will need to fill.

Background Data for Job Description

Job Title _____ Department _____

Job Number _____ Written by _____

Today's Date _____ Applicable DOT Codes _____

I. Applicable DOT Definition(s):

II. Job Summary:

(List the more important or regularly performed tasks)

III. Reports To:

IV. Supervises: _____

V. Job Duties: _____

(Briefly describe, for each duty, what employee does and, if possible, how employee does it. Show in parentheses at end of each duty the approximate percentage of time devoted to duty.)

A. Daily Duties:

B. Periodic Duties:

(Indicate whether weekly, monthly, quarterly, etc.)

C. Duties Performed at Irregular Intervals:

◀ **FIGURE 3-8**
Job Description
Questionnaire

Example of Job Title: Customer Service Clerk

Example of Job Summary: Answers inquiries and gives directions to customers, authorizes cashing of customers' checks, records and returns lost charge cards, sorts and reviews new credit applications, works at customer-service desk in department store.

Example of One Job Duty: Authorizes cashing of checks: authorizes cashing of personal or payroll checks (up to a specified amount) by customers desiring to make payment by check. Requests identification, such as driver's license, from customers, and examines check to verify date, amount, signature, and endorsement. Initials check and sends customer to cashier.

◀ **FIGURE 3-9**
Background Data for
Examples

JOB ANALYSIS IN A “JOBLESS” WORLD

Job is generally defined as “a set of closely related activities carried out for pay,” but over the past few years the concept of a job has been changing quite dramatically. As one observer put it:

The modern world is on the verge of another huge leap in creativity and productivity, but the job is not going to be part of tomorrow’s economic reality. There still is and will always be enormous amounts of work to do, but it is not going to be contained in the familiar envelopes we call jobs. In fact, many organizations are today well along the path toward being “de-jobbed.”²⁹

From Specialized to Enlarged Jobs

The term *job* as we know it today is largely an outgrowth of the industrial revolution’s emphasis on efficiency. During this time, experts like Adam Smith and Frederick Taylor wrote glowingly of the positive correlation between specialization and efficiency.³⁰ Jobs and job descriptions, until quite recently, tended to follow their prescriptions and to be fairly detailed and specific.

By the mid-1900s other writers were reacting to what they viewed as the “dehumanizing” aspects of pigeonholing workers into highly repetitive and specialized jobs; many proposed solutions like job enlargement, job rotation, and job enrichment. **Job enlargement** means assigning workers additional same-level activities, thus increasing the number of activities they perform. Thus, the worker who previously only bolted the seat to the legs might attach the back as well. **Job rotation** means systematically moving workers from one job to another.

Psychologist Frederick Herzberg argued that the best way to motivate workers is to build opportunities for challenge and achievement into their jobs via job enrichment. **Job enrichment** means redesigning jobs in a way that increases the opportunities for the worker to experience feelings of responsibility, achievement, growth, and recognition—for instance, by letting the worker plan and control his or her own work instead of having it controlled by outsiders.³¹

Why Managers Are Dejobbing Their Companies

Whether specialized, enlarged, or enriched, however, workers still generally have had specific jobs to do, and these jobs have required job descriptions. In many firms today, however, jobs are becoming more amorphous and more difficult to define. In other words, the trend is toward dejobbing.

Dejobbing—broadening the responsibilities of the company’s jobs, and encouraging employees not to limit themselves to what’s on their job descriptions—is a result of the changes taking place in business today. Organizations need to grapple with trends like rapid product and technological change, global competition, deregulation, political instability, demographic changes, and a shift to a service economy. This has increased the need for firms to be responsive, flexible, and generally more competitive. In turn, the organizational methods managers use to accomplish this have helped weaken the meaning of *job* as a well-defined and clearly delineated set of responsibilities. Here is a sampling of methods that have contributed to this weakening.

Flatter Organizations Instead of traditional pyramid-shaped organizations with seven or more management layers, flat organizations with just three or four levels are becoming more prevalent. Most firms (including AT&T, ABB, and General

job enlargement

Assigning workers additional same-level activities, thus increasing the number of activities they perform.

job rotation

Systematically moving workers from one job to another.

job enrichment

Redesigning jobs in a way that increases the opportunities for the worker to experience feelings of responsibility, achievement, growth, and recognition.

dejobbing

Broadening the responsibilities of the company’s jobs, and encouraging employees not to limit themselves to what’s on their job descriptions.

Electric) have already cut their management layers from a dozen to six or fewer. Because the remaining managers have more people reporting to them, they can supervise them less, so the jobs of subordinates end up bigger in terms of both breadth and depth of responsibilities.

Work Teams Managers increasingly organize tasks around teams and processes rather than around specialized functions. For example, at Chesebrough-Ponds USA, a subsidiary of Unilever, managers replaced a traditional pyramidal organization with multiskilled, cross-functional, and self-directed teams; the latter now run the plant's four product areas. Hourly employees make employee assignments, schedule overtime, establish production times and changeovers, and even handle cost control, requisitions, and work orders. They also are solely responsible for quality control under the plant's continuous quality improvement program.³² In an organization like this, employees' jobs change daily; there is thus an intentional effort to avoid having employees view their jobs as a specific set of responsibilities.

The Boundaryless Organization In a **boundaryless organization** the widespread use of teams and similar structural mechanisms reduces and makes more permeable the boundaries that typically separate departments (like sales and production) and hierarchical levels.³³ Boundaryless organizations foster responsiveness by encouraging employees to rid themselves of the "it's-not-my-job" attitudes that typically create walls between one employee's area and another's. Instead the focus is on defining the project or task at hand in terms of the overall best interests of the organization, thereby further reducing the idea of a job as a clearly defined set of duties.

Reengineering **Reengineering** is "the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary measures of performance, such as cost, quality, service, and speed."³⁴ In their book *Reengineering the Corporation*, Michael Hammer and James Champy argue that the principles that shaped the structure and management of business for hundreds of years—like highly specialized divisions of work—should be retired. Instead, the firm should emphasize combining tasks into integrated, unspecialized processes (such as customer service) assigned to teams of employees.

You can reengineer jobs in many ways. For example, you can combine several specialized jobs into a few relatively enlarged and enriched ones.³⁵ Typically, in reengineered situations workers tend to become collectively responsible for overall results rather than being individually responsible for just their own tasks: "They share joint responsibility with their team members for performing the whole process, not just a small piece of it. They not only use a broader range of skills from day to day, they have to be thinking of a far greater picture."³⁶ Most important, "while not every member of the team will be doing exactly the same work . . . the lines between [the workers' jobs] blur."

The Future of Job Descriptions Most firms today continue to use job descriptions and to rely on jobs as traditionally defined. However, it's clear that more firms are moving toward new organizational configurations built around jobs that are broad and that may change every day. As one writer said, "In such a situation people no longer take their cues from a job description or a supervisor's instructions. Signals come from the changing demands of the project. Workers learn to focus their individual efforts and collective resources on the work that needs doing, changing as that changes. Managers lose their 'jobs,' too. . . ."³⁷ Yet some feel that

boundaryless organization

Organization marked by the widespread use of teams and similar structural mechanisms that reduce and make more permeable the boundaries that typically separate departments.

reengineering

The fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service, and speed.

“job descriptions, although they include the ubiquitous phrase, ‘and all other duties as assigned,’ are still relatively rigid and limiting.”³⁸

Some employers are moving from traditional to more performance-based job descriptions. For example, Acxiom Corporation in Little Rock, Arkansas, recently moved from more traditional job descriptions to a new system. Instead of listing specific language skills (such as Java) for a software developer’s job description, it now emphasizes behavioral competencies, such as self-directed learning. This is because Acxiom has decided that it’s this self-directed learning that’s really important for keeping software developers up to date. The typical job description at Acxiom now includes just a few statements describing overall responsibilities. Supervisors then set specific expectations by defining the skills (such as “learn two new software languages”) the employee needs at that time. The job description thus becomes more of a flexible, living, performance-based document.³⁹

Dejobbing also triggers broader HR issues. For example, “you must find people who can work well without the cue system of job descriptions.”⁴⁰ This puts a premium on hiring people with the skills and values to handle empowered jobs:

*For multi-dimensional and changing jobs, companies don’t need people to fill a slot, because the slot will be only roughly defined. Companies need people who can figure out what the job takes and do it, people who can create the slot that fits them. Moreover, the slot will keep changing.*⁴¹

There’s also a shift from training to education, from teaching employees the “how” of a job to enhancing their insight and understanding regarding its “why.” This is because in a fast-changing global environment, jobs change so quickly that it’s impossible to hire people “who already know everything they’re ever going to need to know.”⁴²

◆ **HIGH-PERFORMANCE INSIGHT** Modern job analysis/job design techniques can help companies implement high-performance strategies. In one firm—British Petroleum’s exploration division—the need for more efficient, faster-acting, flatter organizations and empowered employees inspired management to replace job descriptions with matrices listing skills and skill levels.⁴³ Senior managers wanted to shift employees’ attention from a job description/“that’s-not-my-job” mentality to one that would motivate them to obtain the new skills they needed to accomplish their broader responsibilities.

The solution was a skills matrix like that in Figure 3-10. They created skills matrices for various jobs within two groups of employees, those on a management track and those whose aims lay elsewhere (such as to stay in engineering). HR prepared a matrix for each job or job family (such as drilling manager). As in Figure 3-10, the matrix listed (1) the basic skills needed for that job (such as technical expertise) and (2) the minimum level of each skill required for that job or job family. The emphasis is no longer on specific job duties. Instead, the focus is on developing the new skills needed for the employees’ broader, empowered, and often relatively undefined responsibilities.

The skills matrix approach triggered other HR changes in this division. For example, the matrices gave employees a constant reminder of what skills they must improve. The firm instituted a new skill-based pay plan that awards raises based on skills improvement. Performance appraisals now focus more on skills acquisitions. And training emphasizes developing broad skills like leadership and planning—skills applicable across a wide range of responsibilities and jobs. The result was a new firm-wide emphasis on performance.

▼ **FIGURE 3-10 The Skills Matrix for One Job at BP**

The light blue boxes indicate the minimum level of skill required for the job.

H	H	H	H	H	H	H
G	G	G	G	G	G	G
F	F	F	F	F	F	F
E	E	E	E	E	E	E
D	D	D	D	D	D	D
C	C	C	C	C	C	C
B	B	B	B	B	B	B
A	A	A	A	A	A	A
Technical Expertise	Business Awareness	Communication and Interpersonal	Decision Making and Initiative	Leadership and Guidance	Planning and Organizational Ability	Problem Solving

STRATEGIC HR

U.S. Bank's new customer service and retention manager, Todd Berkley, discovered that focusing the bank's competitive strategy on customer service affected every aspect of the bank. Employees must now perform a multitude of new tasks. When they meet with customers closing their accounts, service reps now have to try to understand the customer's reason for leaving, and keep detailed records of frequent complaints. The bank is installing complaint identification initiatives to identify, track, and solve complaints in all branches, call centers, and Web sites. Salespeople must gather more information about customer preferences when they open new accounts. Employees across the bank have had to learn how to use the bank's new complaint-monitoring software. The bank designed new jobs to place care calls when customers complain. The bank is developing a new customer assurance unit, which will swing into action when high-value accounts are in danger of leaving.

All of which means Todd and his colleagues had to reanalyze all of the bank's jobs, from teller to guard to vice president; add duties like those above to current lists of job functions; and create several new jobs (such as customer assurance manager). Todd and his colleagues found, in other words, that they couldn't implement the bank's new strategy without a keen understanding of job analysis.⁴⁴

Implementing the New Strategy at U.S. Bank

We invite you to visit www.prenhall.com/dessler on the Prentice Hall Web site for our online study guide, Internet exercises, current events, links to related Web sites, and more.



Summary

1. Developing an organization structure results in jobs that have to be staffed. Job analysis is the procedure through which you find out (1) what the job entails and (2) what kinds of people you should hire for the job. It involves six steps: (1) determine the use of the job analysis information, (2) collect background information, (3) select the positions to be analyzed, (4) collect job analysis data, (5) review information with participants, and (6) develop a job description and job specification.
2. You can use four basic techniques to gather job analysis data: interviews, direct observation, questionnaires, and participant diary logs. These are good for developing job descriptions and specifications. The Department of Labor, functional job analysis, and PAQ approaches result in quantitative ratings of each job and are usually useful for classifying jobs for pay purposes.
3. The job description should portray the work of the position so well that the duties are clear without reference to other job descriptions. Always ask, “Will the new employee understand the job if he or she reads the job description?”
4. The job specification takes the job description and uses it to answer the question, “What human traits and experience are necessary to do this job well?” It tells what kind of person to recruit and for what qualities that person should be tested. Job specifications are usually based on the educated guesses of managers; a more accurate statistical approach to developing job specifications can also be used, however.
5. Use the *Dictionary of Occupational Titles* to help you write job descriptions. Find and reproduce the DOT descriptions that relate to the job you’re describing. Then use those DOT descriptions to “anchor” your own description and particularly to suggest duties to be included. You can also use Internet sources like jobdescription.com.
6. Firms increasingly use O*NET to create job descriptions. To use this tool, start at <http://online.onetcenter.org>.
7. Dejobbing is ultimately a product of the rapid changes taking place in business today. As firms try to speed decision making by taking steps such as reengineering, individual jobs are becoming broader and much less specialized. Increasingly, firms don’t want employees to feel limited by a specific set of responsibilities like those listed in a job description. As a result, more employers are substituting brief job summaries, perhaps combined with summaries of the skills required for the position.

Tying It All Together

In the previous chapter we discussed the EEOC and the legal factors managers should consider when recruiting and hiring employees. The purpose of the current chapter, Job Analysis, was to explain how managers determine what jobs need to be done, what these jobs’ specific duties are, and the characteristics of the employees who will fill these jobs. The chapter covered such topics as methods for collecting job analysis information and how to use the Internet, as well as traditional methods of writing job descriptions and job specifications. In the following chapter, HR Planning and Recruiting, we’ll turn to the methods managers use to find the employees they need to fill their positions.

Discussion Questions

1. What items are typically included in the job description? What items are not shown?
2. What is job analysis? How can you make use of the information it provides?
3. We discussed several methods for collecting job analysis data—questionnaires, the position analysis questionnaire, and so on. Compare and contrast these methods, explaining what each is useful for and listing the pros and cons of each.
4. Describe the types of information typically found in a job specification.
5. Explain how you would conduct a job analysis.
6. Do you think companies can really do without detailed job descriptions? Why or why not?

7. In a company with only 25 employees, is there less need for job descriptions for the employees of the company? Why or why not?
1. Working individually or in groups, obtain copies of job descriptions for clerical positions at the college or university where you study, or the firm where you work. What types of information do they contain? Do they give you enough information to explain what the job involves and how to do it? How would you improve on the description?
 2. Working individually or in groups, use O*NET to develop a job description for your professor in this class. Based on that, use your judgment to develop a job specification. Compare your conclusions with those of other students or groups. Were there any significant differences? What do you think accounted for the differences?
 3. Working individually or in groups, obtain a copy of the DOT from your library. Choose any two positions and compare the jobs' data-people-things ratings. (These are the fourth, fifth, and sixth digits of the job's DOT number; ratings are explained at the end of the DOT.) Do the ratings make sense based on what you know about the jobs? Why or why not?

Individual and Group Activities

EXPERIENTIAL EXERCISE

Purpose: The purpose of this exercise is to give you experience in developing a job description, by developing one for your instructor.

Required Understanding: You should understand the mechanics of job analysis and be thoroughly familiar with the job analysis questionnaires. (See Figure 3-3 and the job description questionnaire, Figure 3-8.)

How to Set Up the Exercise/Instructions: Set up groups of four to six students for this exercise. As in all exercises in this book, the groups should be separated and should not converse with each other. Half the groups in the class will develop the job description using the job analysis questionnaire (3.3), and the other half of the groups will develop it using the job description questionnaire (3.8). Each student should review his or her questionnaire (as appropriate) before joining his or her group.

1. Each group should do a job analysis of the instructor's job; half the groups (to repeat) will use the job analysis questionnaire for this purpose, and half will use the job description questionnaire.
2. Based on this information, each group will develop its own job description and job specification for the instructor.
3. Next, each group should choose a partner group, one that developed the job description and job specification using the alternate method. (A group that used the job analysis questionnaire should be paired with a group that used the job description questionnaire.)
4. Finally, within each of these new combined groups, compare and critique each of the two sets of job descriptions and job specifications. Did each job analysis method provide different types of information? Which seems superior? Does one seem more advantageous for some types of jobs than others?

APPLICATION CASE *Tropical Storm Allison*

In June 2001 tropical storm Allison hit North Carolina and the Optima Air Filter Company. Many employees' homes were devastated, and the firm found that it had to hire almost three completely new crews, one for each of its shifts. The problem was that the "old-timers" had known their jobs so well that no one had ever bothered to draw up job descriptions for them. When about 30 new employees began taking

their places, there was general confusion about what they should do and how they should do it.

The storm quickly became old news to the firm's out-of-state customers, who wanted filters, not excuses. Phil Mann, the firm's president, was at his wit's end. He had about 30 new employees, 10 old-timers, and his original factory supervisor, Maybelline. He decided to meet with Linda Lowe, a con-

sultant from the local university's business school. She immediately had the old-timers fill out a job questionnaire that listed all their duties. Arguments ensued almost at once: Both Phil and Maybelline thought the old-timers were exaggerating to make themselves look more important, and the old-timers insisted that the lists faithfully reflected their duties. Meanwhile, the customers clamored for their filters.

Questions

1. Should Phil and Linda ignore the old-timers' protests and write up the job descriptions as they see fit? Why? Why not? How would you go about resolving the differences?
2. How would you have conducted the job analysis?

CONTINUING CASE: LearnInMotion.com *Who Do We Have to Hire?*

As the excitement surrounding the move into their new offices wound down, the two principal owners of LearnInMotion.com, Mel and Jennifer, turned to the task of hiring new employees. In their business plan they'd specified several basic aims for the venture capital funds they'd just received, and hiring a team topped the list. They knew their other goals—boosting sales and expanding the Web site, for instance—would be unreachable without the right team.

They were just about to place their ads when Mel asked a question that brought them to a stop: "What kind of people do we want to hire?" It seemed they hadn't really considered this. They knew the answer in general terms, of course. For example, they knew they needed at least two salespeople, plus a programmer, a Web designer, and several content management people to transform the incoming material into content they could post on their site. But it was obvious that job titles alone really didn't provide enough guidance. For example, if they couldn't specify the exact duties of these positions, how could they decide whether they needed experienced employees? How could they decide exactly what sorts of experiences and skills they had to look for in their candidates if they didn't know exactly what these candidates would have to do? They wouldn't even know what questions to ask.

And that wasn't all. For example, there were obviously other tasks to do, and these weren't necessarily included in the sorts of things that salespeople, programmers, Web designers, or content management people typically do. Who was going to answer the phones? (Jennifer and Mel had originally assumed they'd put in one of those fancy automated call directory and voice-mail systems—until they found out it would cost close to \$10,000.) As a practical matter, they knew they had to have someone answering the phones and directing callers to the proper extension. Who was going to keep track of the monthly expenses and compile them for the

accountants, who'd then produce monthly reports for the venture capitalist? Would the salespeople generate their own leads? Or would LearnInMotion.com have to hire Web surfers to search and find the names of people for the sales staff to call or e-mail? What would happen when the company had to purchase supplies, such as fax paper or computer disks? Would the owners have to do this themselves, or should they have someone in house do it for them? The list, it seemed, went on and on.

It was obvious, in other words, that the owners had to get their managerial act together and draw up the sorts of documents they'd read about as business majors—job descriptions, job specifications, and so forth. The trouble is, it all seemed a lot easier when they read the textbook. Now they want you, their management consultants, to help them actually do it. Here's what they want you to do for them.

Questions and Assignments

1. Draw up a set of job descriptions for each of the positions in the case: salesperson, Web designer, programmer, content manager. You may use whatever sources you want, but preferably search the Internet and relevant Web sites, since you want job descriptions and lists of duties that apply specifically to dot-com firms.
2. Next, using sources similar to those in Question 1—and whatever other sources you can think of—draw up specifications for each of these jobs, including things such as desirable work habits, skills, education, and experiences.
3. Next, keeping in mind that this company is on a tight budget, write a short proposal explaining how it should accomplish the other activities it needs done, such as answering the phones, compiling sales leads, producing monthly reports, and purchasing supplies.