

3

CHAPTER

Designing and Analyzing Jobs

Organizing Work

The Nature of Job Analysis

Methods of Collecting Job Analysis Information

Writing Job Descriptions and Job Specifications

Job Analysis in the Twenty-First Century



Test Yourself

1. What are the industrial, behavioural, and human engineering considerations involved in job design?
2. What is job analysis and what six steps are involved?
3. What is a job description and what are its key components?
4. What are the basic methods of collecting job analysis information and what quantitative techniques are available?
5. What are the current trends in the nature of jobs and job descriptions?

ORGANIZING WORK

An organization consists of one or more employees who perform various tasks. The relationships between people and tasks must be structured in such a way that the organization can achieve its goals in an efficient and effective manner.

Organizational structure refers to the formal relationships among jobs in an organization. An **organization chart** is often used to depict the structure. As illustrated in **Figure 3.1**, such a chart indicates the types of departments established and the title of each manager’s job and, by means of connecting lines, clarifies the chain of command and shows who is accountable to whom. An organization chart presents a “snapshot” of the firm at a particular point in time but does not provide details about actual communication patterns, degree of supervision, amount of power and authority, or specific duties and responsibilities.

Designing an organization involves choosing a structure that is appropriate, given the company’s strategic goals. There are three basic types of organizational structure, as depicted in **Figure 3.2**: bureaucratic, flat, and boundaryless. *Bureaucratic* designs are becoming less common; *flat* structures are increasingly the norm; and *boundaryless* organizations characterized by alliances and joint ventures have started to evolve. Another emerging form of organization is the virtual organization. These organizations do not have a formal structure or any one physical location, and they co-ordinate their operations using the Internet.

Job Design

In any organization, work has to be divided into manageable units and ultimately into jobs that can be performed by employees. **Job design** is the process of systematically organizing work into tasks that are required to perform a specific job. A **job** consists of a group of related activities and duties. Ideally, the duties of a job should be clear and distinct from those of other jobs and involve natural units of work that are similar and related. This helps minimize conflict and

organizational structure The formal relationships among jobs in an organization.

organization chart A “snapshot” of the firm at a particular point in time, depicting the organization’s structure in chart form.

Example of Online Organization Chart
www.IntranetOrgChart.com

job design The process of systematically organizing work into tasks that are required to perform a specific job.

job A group of related activities and duties held by a single employee or a number of incumbents.



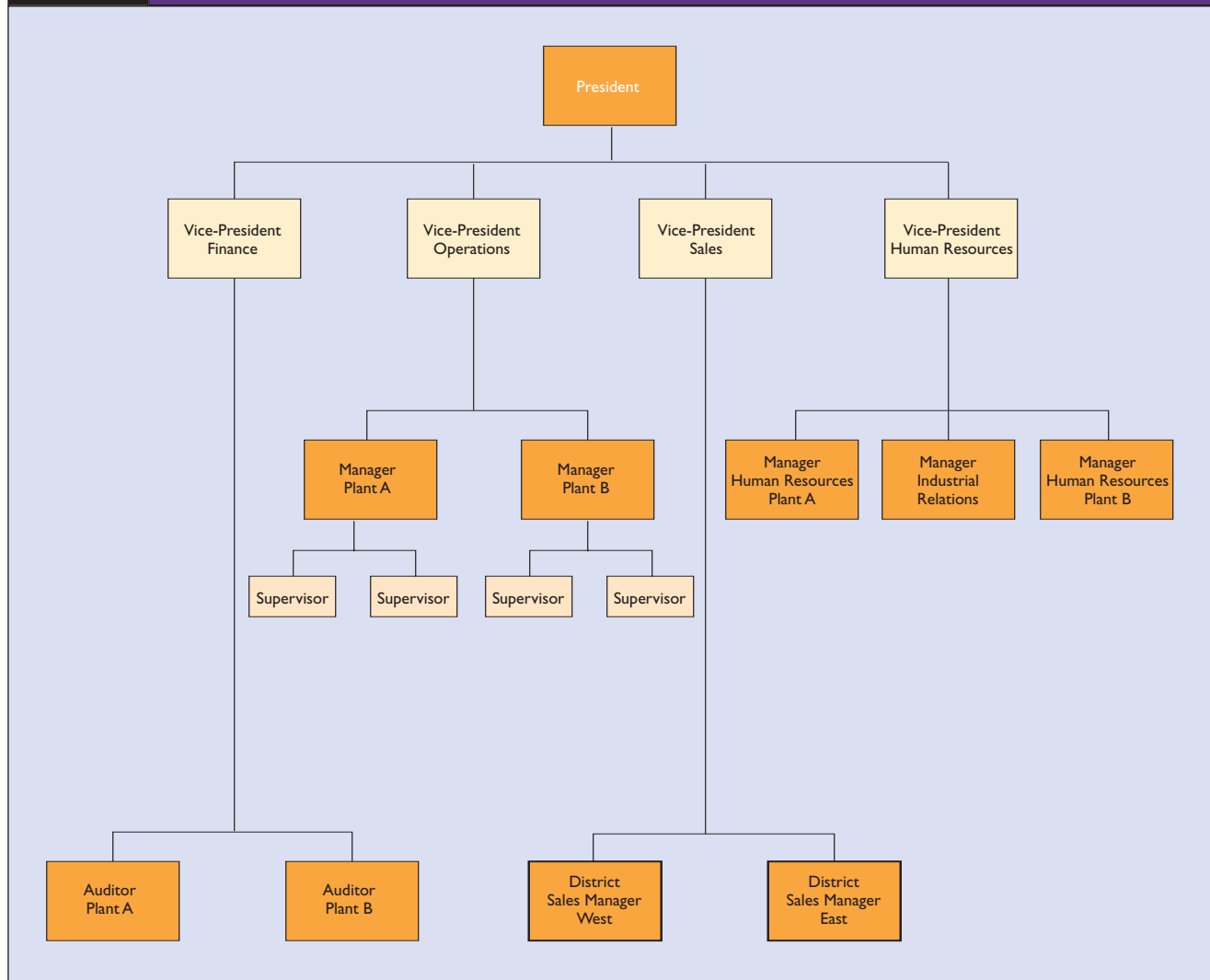
IN-CLASS NOTES

Organizing Work

- Organization chart depicts organizational structure of relationships among jobs
- Job design process organizes work into groups of tasks called jobs
- Industrial engineering approach created specialized, repetitive jobs
- Behavioural approach (based on job characteristics theory) broadens job tasks to increase motivation
- Human engineering approach (ergonomics) adapts job tasks to physical characteristics of employee

FIGURE
3.1

A Sample Organization Chart



enhance employee performance. A job may be held by a single employee or may have a number of incumbents. The collection of tasks and responsibilities performed by one person is known as a **position**. To clarify, in a department with 1 supervisor, 1 clerk, 40 assemblers, and 3 tow-motor operators, there are 45 positions and 4 jobs.

SPECIALIZATION AND INDUSTRIAL ENGINEERING CONSIDERATIONS The term “job” as it is known today is largely an outgrowth of the efficiency demands of the industrial revolution.¹ Work simplification is based on the premise that work can be broken down into clearly defined, highly specialized, repetitive tasks to maximize efficiency. This approach to job design involves assigning most of the administrative aspects of work (such as planning and organizing) to supervisors and managers, while giving lower-level employees narrowly defined tasks to perform according to methods established and specified by management.

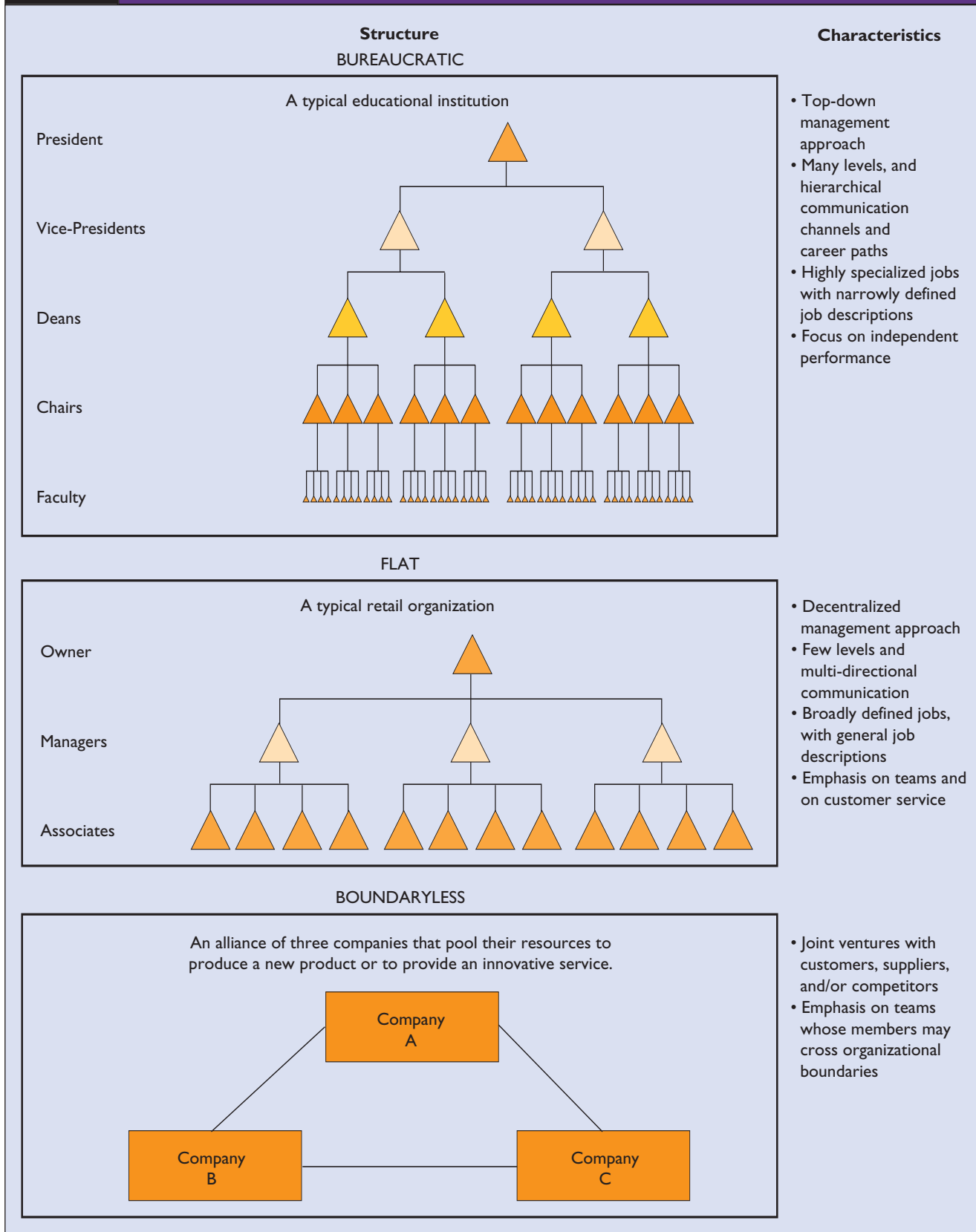
Industrial engineering is concerned with analyzing work methods and establishing time standards to improve efficiency. Industrial engineers systematically

position The collection of tasks and responsibilities performed by one person.

industrial engineering A field of study concerned with analyzing work methods; making work cycles more efficient by modifying, combining, rearranging, or eliminating tasks; and establishing time standards.

FIGURE 3.2

Bureaucratic, Flat, and Boundaryless Organizational Structures



identify, analyze, and time the elements of each job's work cycle and determine which, if any, elements can be modified, combined, rearranged, or eliminated to reduce the time needed to complete the cycle.

While work simplification can increase operating efficiency in a stable environment, it is not effective in a changing environment in which customers/clients demand custom-designed products and/or high-quality services or one in which employees want challenging work. Moreover, among educated employees, simplified jobs often lead to lower satisfaction, higher rates of absenteeism, and turnover and demands for premium pay to compensate for the repetitive nature of the work.

Since jobs are created primarily to enable an organization to achieve its objectives, industrial engineering cannot be ignored as a disciplined and objective approach to job design. However, too much emphasis on the concerns of industrial engineering—improving efficiency and simplifying work methods—may result in human considerations being neglected or downplayed.

BEHAVIOURAL CONSIDERATIONS By the mid-1900s, reacting to what they viewed as the “dehumanizing” aspects of pigeonholing workers into highly repetitive and specialized jobs, management theorists proposed ways of broadening the numbers of activities in which employees engaged. **Job enlargement (horizontal loading)** involves assigning workers additional tasks at the same level of responsibility to increase the number of tasks they have to perform. Also known as *horizontal loading*, job enlargement reduces monotony and fatigue by expanding the job cycle and drawing on a wider range of employee skills. Another technique to relieve monotony and employee boredom is **job rotation**. This involves systematically moving employees from one job to another. Although the jobs themselves don't change, workers experience more task variety, motivation, and productivity. The company gains by having more versatile, multi-skilled employees who can cover for one another efficiently.

More recently, psychologist Frederick Herzberg argued that the best way to motivate workers is to build opportunities for challenge and achievement into jobs through **job enrichment (vertical loading)**.² This is defined as any effort that makes an employee's job more rewarding or satisfying by adding more meaningful tasks and duties. Also known as *vertical loading*, job enrichment involves increasing autonomy and responsibility by allowing employees to assume a greater role in the decision-making process.

Enriching jobs can be accomplished through such activities as:

- increasing the level of difficulty and responsibility of the job
- assigning workers more authority and control over outcomes
- providing feedback about individual or unit job performance directly to employees
- adding new tasks requiring training, thereby providing an opportunity for growth, and
- assigning individuals specific tasks or responsibility for performing a whole job rather than only parts of it.

Richard Hackman and Greg Oldham's job design studies identified various job dimensions that would simultaneously improve the efficiency of organizations and the satisfaction of employees.³ Their *job characteristics model* proposes that employee motivation and satisfaction are directly linked to five core characteristics:⁴

1. *Skill variety*. The degree to which the job requires a person to do different tasks and involves the use of a number of different talents, skills, and abilities.

job enlargement(horizontal loading)

A technique to relieve monotony and boredom that involves assigning workers additional tasks at the same level of responsibility to increase the number of tasks they have to perform.

job rotation Another technique to relieve monotony and employee boredom, which involves systematically moving employees from one job to another.

job enrichment (vertical loading)

Any effort that makes an employee's job more rewarding or satisfying by adding more meaningful tasks and duties.

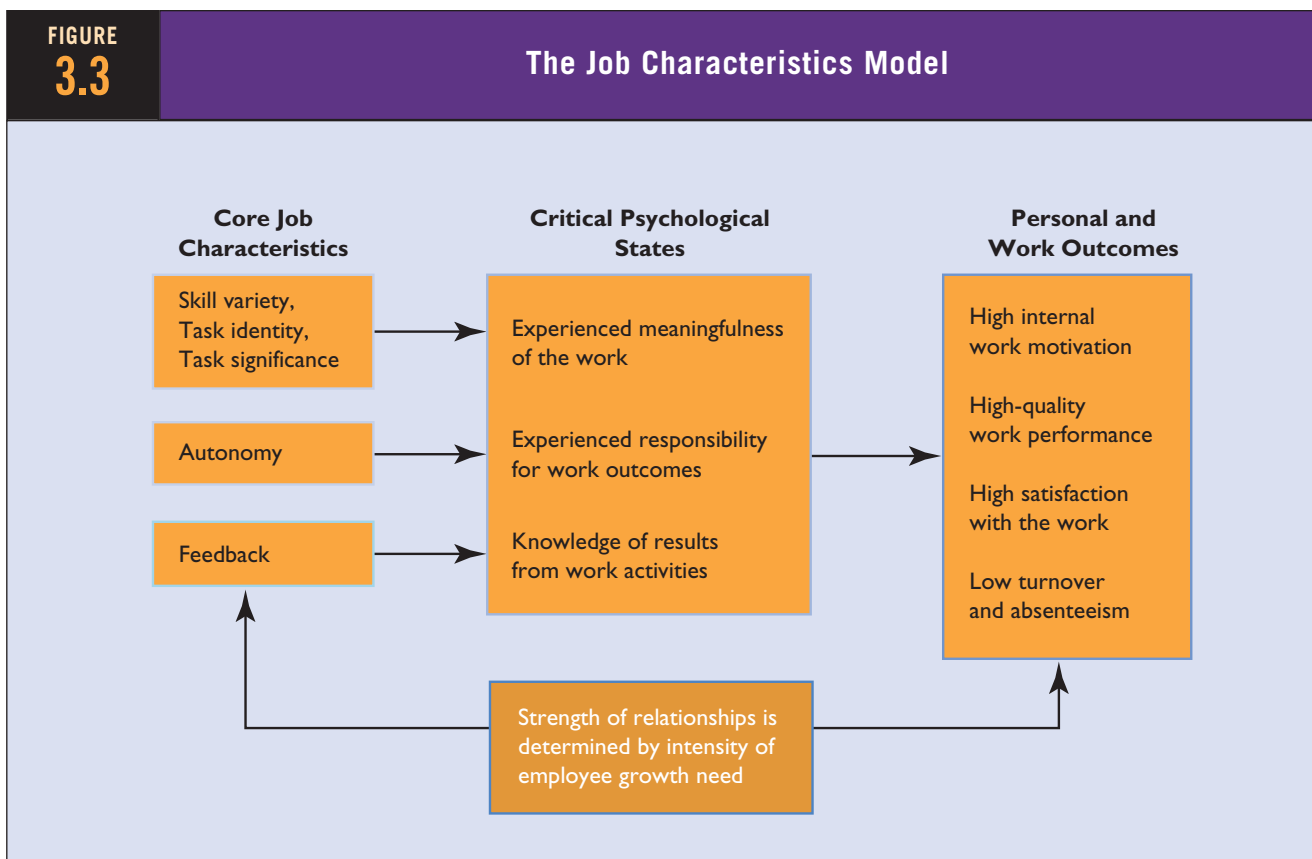


2. *Task identity*. The degree to which the job requires completion of a whole and identifiable piece of work, that is, doing a job from beginning to end, with a visible outcome.
3. *Task significance*. The degree to which the job has a substantial impact on the lives and work of others—both inside and outside the organization.
4. *Autonomy*. The amount of freedom, independence, and discretion the employee has in terms of scheduling work and determining procedures.
5. *Feedback*. The degree to which the job provides the employee with clear and direct information about job outcomes and effectiveness of his or her performance.

As illustrated in **Figure 3.3**, these core job characteristics create the conditions that enable workers to experience three critical psychological states that are related to a number of beneficial work outcomes:⁵

1. *Experienced meaningfulness*. The extent to which the employee experiences the work as important, valuable, and worthwhile.
2. *Experienced responsibility*. The degree to which the employee feels personally responsible or accountable for the outcome of the work.
3. *Knowledge of results*. The degree to which the employee understands, on a regular basis, how effectively he or she is performing.

A job with characteristics that allows an employee to experience all three critical states provides internal rewards that sustain motivation. The benefits to the employer include high-quality performance, higher employee satisfaction, and lower absenteeism and turnover.



Job enrichment and the inclusion of the five core dimensions in jobs is not, however, a panacea. Job enrichment programs are more successful in some jobs and settings than in others. Moreover, not all employees want additional responsibility and challenge. Hackman and Oldham stress that the strength of the linkage among job characteristics, psychological states, and work outcomes is determined by the intensity of an individual employee's need for growth.⁶ Some people prefer routine jobs and may resist job redesign efforts. In addition, job redesign efforts almost always fail when employees lack the physical or mental skills, abilities, or education needed to perform the job. Furthermore, neither approach will correct job dissatisfaction problems related to inequitable compensation, inadequate benefits, or lack of job security. Unions have sometimes resisted job enrichment, fearing that management will expect workers to take on more responsibility and challenge without additional compensation. Managers, fearing a loss of authority and control or worried about possible elimination of supervisory jobs, have also been sources of resistance.

A logical outgrowth of job enrichment and the job characteristics model has been the increasing use of **team-based job designs**, which focus on giving a **team**, rather than an individual, a whole and meaningful piece of work to do. Team members are empowered to decide among themselves how to accomplish the work.⁷ Often, they are cross-trained and then rotated to perform different tasks. Team-based designs are best suited to flat and boundaryless organization structures.

General Motors, Saturn Division, is an extremely high-profile operation that has mastered the use of team-based job design. Initiated as a completely new venture within GM, the Saturn car assembly process involves self-managed teams with 5 to 15 members. Each team reviews and hires new members, manages its own budget, schedules its work, and makes decisions regarding production and quality concerns.⁸

HUMAN ENGINEERING CONSIDERATIONS Over time, it became apparent that in addition to considering psychological needs, effective job design must also take physiological needs and health and safety issues into account. **Human engineering** (or **ergonomics**) aims to adapt the entire job system—the work, environment, machines, equipment, and processes—to match human characteristics. Doing so results in eliminating or minimizing product defects, damage to equipment, and worker injuries or illnesses caused by poor work design.

AN ETHICAL DILEMMA

If an organization restructures and adopts a team-based design, how should employees who can't work effectively in teams be dealt with?

team-based job designs Job designs that focus on giving a team, rather than an individual, a whole and meaningful piece of work to do and empowering team members to decide among themselves how to accomplish the work.

team A small group of people with complementary skills who work toward common goals for which they hold joint responsibility and accountability.

human engineering (ergonomics) An interdisciplinary approach that seeks to integrate and accommodate the physical needs of workers into the design of jobs. It aims to adapt the entire job system—the work, environment, machines, equipment, and processes—to match human characteristics.



At Saturn's auto factory, team members with complementary skills work toward common goals for which they hold joint responsibility and accountability.

In addition to designing jobs and equipment with the aim of minimizing negative physiological effects for all workers, human engineering can aid in meeting the unique requirements of individuals with special needs. For example, over the last few years, as the aging of the workforce has become apparent, human engineering has been used to adapt jobs for older workers. The key for employers, dealing with the effects of their aging workforce, is to ensure that jobs requiring physical activity are designed with ergonomic principles in mind. Physical demands, such as manual materials-handling (lifting, pushing, pulling, and carrying), upper-limb movements (reaching, grasping, pinching, and finger-ing) should be performed using good working postures and as little force and repetition as possible. Items such as mechanical assists for lifting (scissor lift tables, tilters, vacuum lifts) and for assembly (screw guns and adjustable tables) are therefore becoming more essential.⁹

job analysis The procedure for determining the tasks, duties, and responsibilities of each job and the human attributes (in terms of knowledge skills, and abilities) required to perform it.

job descriptions A list of the duties, responsibilities, reporting relationships, and working conditions of a job—one product of job analysis.

job specifications A list of the “human requirements,” that is, the requisite knowledge, skills, and abilities (KSAs) needed to perform the job—another product of job analysis.

THE NATURE OF JOB ANALYSIS

Once jobs have been designed or redesigned, an employer’s performance-related expectations need to be defined and communicated based on job analysis, a process by which information about jobs is systematically gathered and organized. **Job analysis** is the procedure firms use to determine the tasks, duties, and responsibilities of each job and the human attributes (in terms of knowledge, skills, and abilities) required to perform it. In contrast to job design, which reflects subjective opinions about the ideal requirements of a job, job analysis is concerned with objective and verifiable information about the actual requirements. Once this information has been gathered, it is used for developing **job descriptions** (what the job entails) and **job specifications** (what the human requirements are).¹⁰



IN-CLASS NOTES

The Nature of Job Analysis

- Job analysis determines tasks, duties, and responsibilities of a job and the human attributes required to perform it
- Job analysis used to create job descriptions and job specifications that form the cornerstone of many HR activities
- Six steps in job analysis are:
 1. identify how the information will be used
 2. review background information
 3. select representative jobs to be analyzed
 4. analyze the jobs
 5. review information with job incumbents
 6. develop job descriptions and job specifications

Accuracy of job analysis information is very important as it provides the basis for many HR-related decisions. However, job analysis is usually based on human judgment, a process that is known to be fallible and subject to considerable inaccuracy. Inaccuracies can be created by the effects of social influence, enhancement of self-presentation, and limited or biased information processing.¹¹ Thus, one point of view is that caution should be taken to ensure that potential inaccuracies do not occur—such as having more than one job analyst at work and reviewing any discrepancies between the results.¹² Others believe that accuracy is possible if job analysis is properly conducted and focused on concrete, specific behaviours.¹³

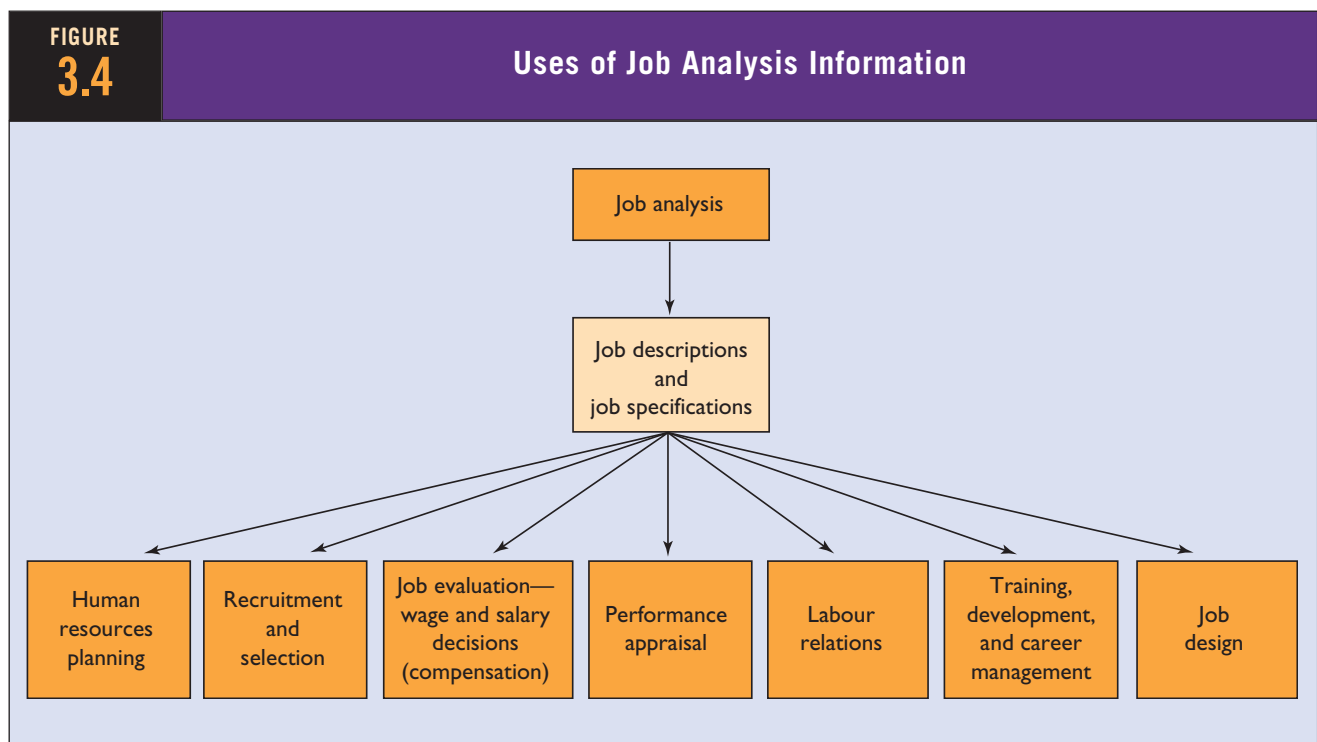
Uses of Job Analysis Information

Job analysis is sometimes called the cornerstone of HRM. As illustrated in Figure 3.4, the information gathered, evaluated, and summarized through job analysis is the basis for a number of interrelated HR activities. Having accurate information about jobs and their human requirements—which has been gathered in a gender-neutral, bias-free manner—is essential for legal compliance in each of these areas, as explained below.

HUMAN RESOURCES PLANNING Knowing the actual requirements of jobs is essential in order to plan future staffing needs and in assessing how a firm's employment equity goals can be met most effectively.

RECRUITMENT AND SELECTION Job description and job specification information should be used to decide what sort of person to recruit and hire. Identifying *bona fide* occupational requirements and ensuring that all activities related to recruitment and selection (such as advertising, screening, and testing) are based on such requirements, is necessary for legal compliance in all Canadian jurisdictions.

Job Analysis Resources
www.ipmaac.org/link-ja.html



COMPENSATION Job analysis information is also essential for determining the relative value of each job and the appropriate compensation. The relative value of jobs is one of the key factors used to determine appropriate compensation and justify pay differences if challenged under human rights or pay equity legislation.

PERFORMANCE APPRAISAL To be legally defensible, the criteria used to assess employee performance must be directly related to the duties and responsibilities identified through job analysis. Performance standards should be based on actual job requirements, as identified through job analysis.

LABOUR RELATIONS In unionized environments, the job descriptions developed from the job analysis information are generally subject to union approval prior to finalization. Such union-approved job descriptions then become the basis for classifying jobs and bargaining over wages, performance criteria, and working conditions. Once approved, significant changes to job descriptions may have to be negotiated.

TRAINING, DEVELOPMENT, AND CAREER MANAGEMENT By comparing the knowledge, skills, and abilities (KSAs) that employees bring to the job with those that are identified by job analysis, managers can determine the gaps. Training programs can then be designed to bridge these gaps.

Steps in Job Analysis

The six steps involved in analyzing jobs are as follows:

Step 1. *Identify the use to which the information will be put.* This will determine the types of data that should be collected and the techniques used. Some data-collection techniques—such as interviewing the employee and asking what the job entails and what his or her responsibilities are—are good for writing job descriptions and selecting employees for the job. Other job analysis techniques (like the position analysis questionnaire, described later) do not provide qualitative information for job descriptions but rather numerical ratings for each job; these can be used to compare jobs with one another for compensation purposes.

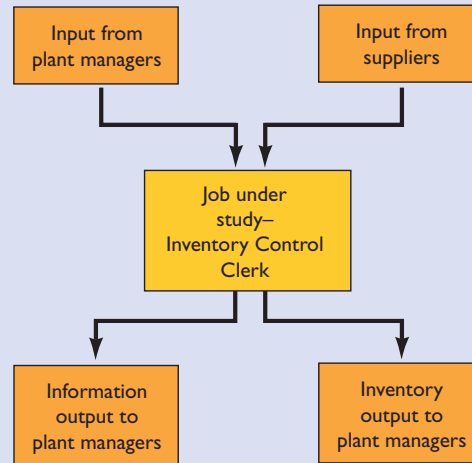
Step 2. *Review relevant background information such as organization charts, process charts, and job descriptions.*¹⁴ As explained earlier, organization charts show how the job in question relates to other jobs and where it fits in the overall organization. A **process chart** provides a more detailed understanding of the workflow than is obtainable from the organization chart alone. In its simplest form, a process chart (like the one in **Figure 3.5**) shows the flow of inputs to and outputs from the job under study. (In Figure 3.5, 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, can provide a starting point for building the revised one.

Step 3. *Select the representative positions and jobs to be analyzed.* This is necessary when there are many incumbents in a single job and when a number of similar jobs are to be analyzed, since it would be too time-consuming to analyze every position and job.

process chart A diagram showing the flow of inputs to and outputs from the job under study.

**FIGURE
3.5**

Process Chart for Analyzing a Job's Workflow



Source: R. I. Henderson, *Compensation Management in a Knowledge-based World* (9th ed.). Upper Saddle River, NJ: Pearson Education, 2003, p.137. Reprinted by permission of Prentice-Hall, Englewood Cliffs, NJ.

Step 4. *Analyze the jobs.* This requires collecting data on job activities, required employee behaviours, working conditions, and human traits and abilities needed to perform the job, using one or more of the job analysis techniques explained later in this chapter.

Step 5. *Review the information with job incumbents.* Job analysis information should be verified with the worker(s) performing the job and with the immediate supervisor. This will help confirm that the information is factually correct and complete. By providing an opportunity for review and modification, if necessary, this step can also help gain the employees' acceptance of the job analysis data as well as the documents derived from these data and subsequent decisions reached.

Job Analysis Resources
<http://harvey.psyc.vt.edu>

Step 6. *Develop a job description and job specification.* A job description and a job specification are the two concrete products of the job analysis. As explained earlier, the *job description* is a written statement that describes the activities and responsibilities of the job as well as important features of the job (such as working conditions and safety hazards). The *job specification* summarizes the personal qualities, traits, skills, and background required. While there may be a separate document describing the human qualifications, job descriptions and specifications are often combined in a single document, generally titled "Job Description."

METHODS OF COLLECTING JOB ANALYSIS INFORMATION

Various techniques are used for collecting information about the duties, responsibilities, and requirements of the job; the most important ones will be discussed in this section. In practice, when the information is being used for multiple purposes, several techniques may be used in combination.



IN-CLASS NOTES

Methods of Collecting Job Analysis Information

- Interviews: individual, group, supervisory
- Questionnaires: varying degrees of structure
- Observation: by job analyst
- Participant diary/log: employees record activities during the day
- Quantitative techniques:
 - Position analysis questionnaire (PAQ)
 - Functional job analysis (FJA)
 - National Occupational Classification (NOC)

Collecting job analysis data usually involves a joint effort by an HR specialist, the incumbent, and the jobholder's supervisor. In smaller firms, it may be a line manager who collects this information. The HR specialist or line manager might observe and analyze the work being done and then develop a job description and specification. The supervisor and incumbent typically review and verify the job analyst's conclusions regarding the job's duties, responsibilities, and requirements.

The Interview

The interview is probably the most widely used method for determining the duties and responsibilities of a job. Three types of interviews are used to collect job analysis data: *individual* interviews with each employee; *group* interviews with employees having the same job; and *supervisory* interviews with one or more supervisors who are thoroughly knowledgeable about the job being analyzed. The group interview is used when a large number of employees are performing similar or identical work, and it can be a quick and inexpensive way of learning about the job.

Whichever interview method is used, the interviewee should fully understand the reason for the interview, since there's a tendency for such interviews to be misconstrued as "efficiency evaluations." When they are, interviewees may not be willing to accurately describe their jobs or those of their reporting employees.

Some typical interview questions include:

1. What is the major purpose of the job?
2. What are the major duties? What percentage of time is spent on each?
3. What are the major responsibilities?
4. What types of equipment, machinery, and/or tools are used?
5. What are the education, experience, skill, and (where applicable) certification and licensing requirements?

6. What are the basic accountabilities or performance standards that typify the work?
7. What are the job's physical demands? What are its emotional and mental demands?
8. In what physical location(s) is the work performed? What working conditions are involved?
9. What are the health and safety conditions? To what hazard(s) is there exposure, if any?

Interviews should follow a structured or checklist format. A job analysis questionnaire with detailed questions like the one presented in **Figure 3.6** may be used to interview job incumbents or may be filled out by them. A job analyst who collects information by personally observing the work being done can also use this questionnaire. These two methods will be explained shortly.¹⁵

INTERVIEW GUIDELINES When conducting a job analysis interview, supervisors and job analysts should keep several things in mind:

1. The job analyst and supervisor should work together to identify the employees who know the job best, as well as those who might be expected to be the most objective in describing their duties and responsibilities.
2. Rapport should be established quickly with the interviewee by using the individual's name, speaking in easily understood language, briefly reviewing the purpose of the interview (job analysis, not performance appraisal), and explaining how the person came to be chosen.
3. A structured guide or checklist that lists questions and provides spaces for answers should be used. This ensures that crucial questions are identified ahead of time so that complete and accurate information is gathered and that all interviewers (if there is more than one) glean the same types of data, thereby helping ensure comparability of results. However, leeway should also be permitted by including some open-ended questions like, "Was there anything that we didn't cover with our questions?"
4. When duties are not performed in a regular manner—for instance, when the incumbent doesn't perform the same tasks or jobs over and over again many times a day—the incumbent should be asked to list his or her duties in order of importance and frequency of occurrence. This will ensure that crucial activities that occur infrequently—like a nurse's occasional emergency room duties—aren't overlooked.
5. The data should be reviewed and verified by both the interviewee and his or her immediate supervisor.



Questionnaires

Having employees fill out questionnaires to describe their job-related duties and responsibilities is another good method of obtaining job analysis information. The major decision involved is determining how structured the questionnaire should be and what questions to include. Some questionnaires involve structured checklists listing an inventory of perhaps hundreds of specific duties or tasks (such as "change and splice wire"), and the employee is asked to indicate whether or not he or she performs each and, if so, how much time is normally spent on it. At the other extreme, the questionnaire can be open-ended and simply ask the employee to describe the major duties of his or her job. In practice, a typical job analysis questionnaire often falls between the two extremes. As

FIGURE
3.6

Job Analysis Questionnaire

Job title: _____ Job grade: _____
 Department: _____ Location: _____
 Prepared by: _____ Date: _____

1. Purpose of job

- What is the purpose of the job? Why does the job exist?

2. Major responsibilities and essential functions (list in order of importance)

- What are the responsibilities?
- How are they done?
- Percentage of time?
- Why is the activity performed?
- What is the measure of success?
- What direction of others is involved?

3. Knowledge

- What techniques and/or practices are necessary? Why?

- List specific education requirement(s).

- List experience requirement(s) and number of years required in each.

- List required licences or certificates.

4. Problem solving and decision making

- List how the jobholder solves problems (i.e., planning, scheduling, creativity techniques, complexity of procedures, degree of independent thinking, and resourcefulness or ingenuity required). List examples of required development of new methods. What are the consequences if problems are not solved?

5. Resource responsibility

- List annual pay of personnel who report to jobholder: _____
- List annual operating budget (include pay): _____
- List any other financial resources (i.e., annual project value/cost, shop order value, total sales, total unit payroll, gross sales booked,

purchasing/contracts volume, transportation costs, facilities budget, assets, investment income, program development costs, and gross sales billed):

- What is the jobholder's role in planning, organizing, acquiring, or monitoring these resources?

- What is the jobholder's impact in planning, organizing, acquiring, or monitoring these resources?

6. Skills of persuasion

- Describe the communication skills required in the job (e.g., explaining, convincing, and selling).
- Are contacts inside or outside?
- What are the levels of contacts?
- What types of oral or written communications are involved?
- Who is communicated with and why?

7. Working conditions

Read the list of working conditions below and put a check mark if they impact on your job.

Condition	Amount of Exposure		
	<i>Occasional</i>	<i>Regular</i>	<i>Frequent</i>
Dust, dirt, fumes	_____	_____	_____
Heat, cold	_____	_____	_____
Noise	_____	_____	_____
Vibration	_____	_____	_____
Inclement weather	_____	_____	_____
Lighting	_____	_____	_____

Describe any health or safety hazards related to the job.

Source: T.J. Hackett, E.G. Vogeley, S. Weeks, P. Drouillard and D.E. Tyson, "Job Analysis and Job Descriptions," in D.E. Tyson, Ed., *Carswell's Compensation Guide* (Toronto: Carswell, March 2002), pp. 21–23. Reprinted by permission of Carswell, a division of Thomson Canada Limited.

illustrated in Figure 3.6, there are often several open-ended questions (such as “state your main job duties”) as well as a number of structured questions (concerning, for instance, job requirements).

Observation

Direct observation is especially useful when jobs consist mainly of observable physical activities. Jobs like those of janitor, 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 that cannot be measured (lawyer, design engineer). Nor is it useful if the employee engages in important activities that might occur only occasionally, such as year-end reports.

Direct observation and interviewing are often used together. One approach is to observe the worker on the job and note all observed job activities. Then, after as much information as possible is accumulated, the incumbent is interviewed, asked to clarify points not understood, and explain what additional activities he or she performs that weren’t observed. Another approach is to observe and interview simultaneously while the jobholder performs his or her tasks.

Participant Diary/Log

Another technique involves asking employees to keep a diary/log or a list of what they do during the day. Each employee records every activity in which he or she is involved (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 employee and his or her supervisor. However, it is too time-consuming to be practical in most of today’s organizations.

Advantages and Disadvantages of the Conventional Data Collection Methods

Interviews, questionnaires, observation, and participant diaries are known as the conventional data collection methods, and they are all qualitative in nature. They are the most popular methods for gathering job analysis data and provide realistic information about what job incumbents actually do and the qualifications and skills required. Associated with each are certain advantages and disadvantages, as summarized in **Table 3.1**. By combining two or more conventional techniques, some of the disadvantages can be overcome.

Quantitative Job Analysis Techniques

Although most employers use interviews, questionnaires, observations, and/or diaries/logs for collecting job analysis data, there are many times when these narrative approaches are not appropriate. For example, when the aim is to assign a quantitative value to each job in order that jobs can be compared for pay purposes, a more quantitative job analysis approach may be best. The position analysis questionnaire and functional job analysis are two 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.¹⁶ The PAQ itself is filled in by a job analyst, who should already be acquainted with the particular job to be analyzed. The PAQ contains 194 items, each of which represents a basic element that may or may not

**TABLE
3.1****A Summary of Conventional Data Collection Methods for Job Analysis and the Advantages/Disadvantages of Each**

Method	Variations	Brief Descriptions	Advantages	Disadvantages
Observation	Structured	<ul style="list-style-type: none"> • Watch people go about their work; record frequency of behaviours or nature of performance on forms prepared in advance 	<ul style="list-style-type: none"> • Third-party observer has more credibility than job incumbents, who may have reasons for distorting information • Focuses more on reality than on perceptions 	<ul style="list-style-type: none"> • Observation can influence behaviour of job incumbents • Meaningless for jobs requiring mental effort (in that case, use information processing method) • Not useful for jobs with a long job cycle
	Unstructured	<ul style="list-style-type: none"> • Watch people go about their work; describe behaviours/tasks performed 		
	Combination	<ul style="list-style-type: none"> • Part of the form is prepared in advance and is structured; part is unstructured 		
Questionnaire	Structured	<ul style="list-style-type: none"> • Ask job incumbents/supervisors about work performed using fixed responses 	<ul style="list-style-type: none"> • Relatively inexpensive • Structured questionnaires lend themselves easily to computer analyses • Good method when employees are widely scattered or when data must be collected from a large number of employees 	<ul style="list-style-type: none"> • Developing and testing a questionnaire can be time-consuming and costly • Depends on communication skills of respondents • Does not allow for probing • Tends to focus on perceptions of the job
	Unstructured	<ul style="list-style-type: none"> • Ask job incumbents/supervisors to write essays to describe work performed 		
	Combination	<ul style="list-style-type: none"> • Part of the questionnaire is structured; part is unstructured 		
Diary/Log	Structured	<ul style="list-style-type: none"> • Ask people to record their activities over several days or weeks in a booklet with time increments provided 	<ul style="list-style-type: none"> • Highly detailed information can be collected over the entire job cycle • Quite appropriate for jobs with a long job cycle 	<ul style="list-style-type: none"> • Requires the job incumbent's participation and co-operation • Tends to focus on perceptions of the job
	Unstructured	<ul style="list-style-type: none"> • Ask people to indicate in a booklet over how long a period they work on a task or activity 		
	Combination	<ul style="list-style-type: none"> • Part of the diary is structured; part is unstructured 		
Individual Interview	Structured	<ul style="list-style-type: none"> • Read questions and/or fixed response choices to job incumbent and supervisor; must be face to face 	<ul style="list-style-type: none"> • Provides an opportunity to explain the need for and functions of job analysis • Relatively quick and simple way to collect data • More flexible than surveys • Allows for probing to extract information and provides the interviewee with an opportunity to express views and/or vent frustrations that might otherwise go unnoticed • Activities and behaviours may be reported that would be missed during observation 	<ul style="list-style-type: none"> • Depends heavily on rapport between interviewer and respondent • May suffer from validity/reliability problems • Information may be distorted due to outright falsification or honest misunderstanding
	Unstructured	<ul style="list-style-type: none"> • Ask questions and/or provide general response choices to job incumbent and supervisor; must be face to face 		
	Combination	<ul style="list-style-type: none"> • Part of the interview is structured; part is unstructured 		

A Summary of Conventional Data Collection Methods for Job Analysis and the Advantages/Disadvantages of Each—continued

Method	Variations	Brief Descriptions	Advantages	Disadvantages
Group Interview	Structured	<ul style="list-style-type: none"> Same as structured individual interviews except that more than one job incumbent/supervisor is interviewed 	<ul style="list-style-type: none"> Groups tend to do better than individuals with open-ended problem solving Reliability and validity are likely to be higher than with individuals because group members cross-check each other 	<ul style="list-style-type: none"> Cost more because more people are taken away from their jobs to participate Like individual interviews, tends to focus on perceptions of the job
	Unstructured	<ul style="list-style-type: none"> Same as unstructured individual interviews except that more than one job incumbent/supervisor is interviewed 		
	Combination	<ul style="list-style-type: none"> Same as combination individual interview except more than one job incumbent/supervisor is interviewed 		

Source: Adapted from W. J. Rothwell and H.C. Kazanas, *Planning and Managing Human Resources: Planning for Personnel Management*, 2nd ed. (Amherst MA: Human Resources Development Press, 2003), pp. 66–68. Reprinted by permission of the publisher.

play an important role in the job. The job analyst decides whether each item plays a role on the job and, if so, to what extent. In **Figure 3.7**, for example, “written materials” received a rating of four, indicating that materials such as books, reports, and office notes play a considerable role in this job.

The advantage of the PAQ is that it provides a quantitative score or profile of the job in terms of how that job rates on five basic dimensions: (1) decision-making/communication/social responsibilities, (2) skills, (3) physical activity, (4) vehicles/equipment operation, and (5) information processing. Since it allows the assignment of a quantitative score to each job based on these five dimensions, the PAQ’s real strength is in classifying jobs. Results can be used to compare jobs with one another; this information can then be used to determine appropriate pay levels.¹⁷

FUNCTIONAL JOB ANALYSIS Functional job analysis (FJA) rates the job on responsibilities pertaining to data, people, and things. It also includes the following dimensions: the extent to which specific instructions, reasoning, and judgment are required to perform the task; the mathematical ability required; and the verbal and language facilities involved. This quantitative technique also identifies performance standards and training requirements. Thus, FJA allows the analyst to answer the question, “To do this task and meet these standards, what training does the worker require?”¹⁸

THE NATIONAL OCCUPATIONAL CLASSIFICATION The *National Occupational Classification (NOC)*, which was revised and updated in 2001, is an excellent source of standardized information. It contains comprehensive descriptions of approximately 25 000 occupations and the requirements for each. To illustrate the types of information included, the NOC listing for Specialists in Human Resources is shown in **Figure 3.8**.

functional job analysis (FJA) A quantitative method for classifying jobs based on types and amounts of responsibility for data, people, and things, as well as the extent to which instructions, reasoning, judgment, and verbal facility are necessary for performing assigned tasks. Performance standards and training requirements are also identified.

National Occupational Classification (NOC) A reference tool for writing job descriptions and job specifications. Compiled by the federal government, it contains comprehensive, standardized descriptions of about 25 000 occupations and the requirements for each.

FIGURE
3.7

Portions of a Completed Page from the Position Analysis Questionnaire

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 the job.

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

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 that 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 that are <i>sources</i> of information when <i>observed</i> during use or operation) |
| 8 | 3 | Materials in process (parts, materials, objects, etc., that 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, that 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 that 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 that are <i>observed</i> or <i>inspected</i> to provide job information; do not consider equipment, machines, etc., that an individual uses in the work, as covered by item 7) |

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 & R.D. Mecham, *Position Analysis Questionnaire*. 1989, Purdue Research Foundation, West Lafayette, IN. Reprinted with permission.

**FIGURE
3.8**
NOC (2001) Job Description for Specialists in Human Resources

Specialists in Human Resources develop, implement, and evaluate human resources and labour relations policies, programs, and procedures and advise managers and employees on personnel matters. Specialists in Human Resources are employed throughout the private and public sectors, or may be self-employed.

Examples of titles classified in this unit group

Business Agent, Labour Union
Classification Officer
Classification Specialist
Compensation Research Analyst
Conciliator
Consultant, Human Resources
Employee Relations Officer

Employment Equity Officer
Human Resources Research Officer
Job Analyst
Labour Relations Officer
Mediator
Union Representative
Wage Analyst

Main duties

Specialists in Human Resources perform some or all of the following duties:

- Develop, implement, and evaluate personnel and labour relations policies, programs, and procedures
- Advise managers and employees on the interpretation of personnel policies, benefit programs, and collective agreements
- Negotiate collective agreements on behalf of employers or workers, and mediate labour disputes and grievances
- Research and prepare occupational classifications, job descriptions, and salary scales
- Administer benefit, employment equity and affirmative action programs, and maintain related record systems
- Coordinate employee performance and appraisal programs
- Research employee benefit and health and safety practices and recommend changes or modifications to existing policies.

Employment requirements

- A university degree or college diploma in a field related to personnel management, such as business administration, industrial relations, commerce, or psychology
or
Completion of a professional development program in personnel administration is required.
- Some experience in a clerical or administrative position related to personnel administration may be required.

Additional information

- Progression to management positions is possible with experience.

Classified elsewhere

- Human Resources Managers (0112)
- Personnel and Recruitment Officers (1223)
- Personnel Clerks (1442)
- Professional Occupations in Business Services to Management (1122)
- Training officers and instructors (in 4131 College and Other Vocational Instructors)

Source: Human Resources Development Canada, *National Occupational Classification*, 2001. Reproduced with permission of the Minister of Public Works and Government Services Canada, 2002.

The *NOC* and its counselling component, the *Career Handbook*, both focus on occupations rather than jobs. An **occupation** is defined as a collection of jobs that share some or all of a set of main duties. The jobs within each group are characterized by similar skills.¹⁹

To provide a complete representation of work in the Canadian economy, the *NOC* classifies occupations into Major Groups based on two key dimensions—skill level and skill type. The Major Groups, which are identified by two-digit numbers, are then broken down further into Minor Groups, with a third digit added, and Unit Groups, at which level a fourth digit is added. Within these three levels of classification, a Unit Group provides the actual profile of an occupation.²⁰ For example:

- Major Group 31—Professional Occupations in Health
- Minor Group 314—Professional Occupations in Therapy and Assessment
- Unit Group 3142—Physiotherapists

One of the benefits of the *NOC* is that it has helped promote a greater degree of uniformity in job titles and descriptions used by employers across Canada. This has facilitated the exchange of information about salaries and benefits for compensation administration purposes and about labour supply and demand for human resources planning.

occupation A collection of jobs that share some or all of a set of main duties.



IN-CLASS NOTES

Writing Job Descriptions and Job Specifications

- Job descriptions include:
 - job identification
 - job summary
 - relationships
 - duties and responsibilities
 - authority
 - performance standards
 - working conditions
- Job descriptions should be clear, specific, and brief
- Job specifications include knowledge, skills, and abilities (KSAs) required of an employee to do the job
- Qualifications in a job specification must be justifiable, particularly education and experience

WRITING JOB DESCRIPTIONS AND JOB SPECIFICATIONS

Job Descriptions

Monster Board Canada
www.monster.ca

A job description is a written statement of what the jobholder actually does, how he or she does it, and under what conditions the job is performed. No standard format is used in writing job descriptions but most include the following types of information: job identification, job summary, relationships, duties and responsibilities, authority of incumbent, performance standards, and working conditions. The description in **Figure 3.9**—in this case for a marketing manager—provides an example. As can be seen, the description is quite comprehensive and includes such essential elements as identification, summary, and duties and responsibilities, as well as the human qualifications for the job. As explained in the HR.Net box, online assistance is also available.

JOB IDENTIFICATION The job identification section generally contains several types of information. The *job title* specifies the title of the job, such as marketing manager, recruiter, or inventory control clerk. The *department* or location is also indicated, along with the title of the immediate supervisor—in this case, under the heading *reports to*. The *date* refers to the date the job description was actually written, and *prepared by* identifies the person who wrote it. There is also an indication of *who approved the description* and the *approval date*. Many job descriptions also include a *job code*, which permits easy referencing. While some firms devise their own coding systems based on wage classification, for example, many use *NOC* codes to facilitate external comparison and employment equity reporting.

JOB SUMMARY The *job summary* should describe the general nature of the job, listing only its major functions or activities. Thus, the marketing manager “plans, directs, and co-ordinates the marketing of the organization’s products and/or services.” For the job of materials manager, the summary might state that she or he “purchases economically, regulates deliveries of, stores, and distributes all material necessary on the production line,” while that for a mailroom supervisor might indicate that he or she “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.”²¹

HR . NET

Writing Job Descriptions Online

Thanks to the Internet, assistance in writing job descriptions may be just a few keystrokes away. A comprehensive, individual, professional job description can be created in minutes—it is fast, easy, and done completely online. At www.jobdescription.com, there are more than 3700 built-in job descriptions in the existing job library, and specific competencies can be added to further define and individualize the job description to meet the needs of a specific organization.

After completing the job description, jobdescription.com helps create and publish professional job advertisements and generate a job-specific interview form that contains suggested behavioural interview questions.

Source: www.jobdescription.com (March 26, 2005).

**FIGURE
3.9**
Sample Job Description—Automotive Service Manager
**OLEC CORP.
Job Description**

Job Title:	Automotive Service Manager	Prepared By:	Larry Weber
Department:	Automotive Repair	Prepared Date:	October 12, 2005
Reports To:	General Manager	Approved By:	Anne Massard
FLSA Status:	Non-Exempt	Approved Date:	October 18, 2005

SUMMARY

Directs and coordinates activities concerned with acquisition of automotive equipment and operation and maintenance of automotive fleet repair and storage facilities by performing the following duties personally or through subordinate supervisors.

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

Coordinates activities of personnel conducting research and testing program on automotive equipment considered for acquisition based on such factors as operational performance, costs of operation and maintenance, operational safety, and compliance with environmental laws and regulations.

Reviews and submits staff proposals for modifications to vendor or manufacturer.

Directs procurement of all types of company owned and operated automotive equipment and materials, supplies, and parts required to maintain automotive equipment, garages, and storage facilities.

Coordinates automotive repair and maintenance services to obtain maximum utilization of automotive equipment and prevent operational delays in other departments.

SUPERVISORY RESPONSIBILITIES

Manages total of 7 employees in the Automotive Department. 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

Fifth year college or university program certificate; or two to four years related experience and/or training; or equivalent combination of education and experience.

LANGUAGE SKILLS

Ability to read and interpret documents such as safety rules, operating and maintenance instructions, and procedure manuals. Ability to write routine reports and correspondence. Ability to speak effectively before groups of customers or employees of organization.

MATHEMATICAL SKILLS

Ability to calculate figures and amounts such as discounts, interest, commissions, proportions, percentages, area, circumference, and volume. Ability to apply concepts of basic algebra and geometry.

REASONING ABILITY

Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to interpret a variety of instructions furnished in written, oral, diagram, or schedule form.

COMPUTER SKILLS

Inventory Smog Tester Certificate

PHYSICAL DEMANDS

While performing the duties of this job the employee is regularly required to stand; walk; use hands to finger, handle, or feel; reach with hands and arms and talk or hear. The employee is occasionally required to sit; climb or balance and stoop, kneel, crouch, or crawl. The employee is regularly required to lift up to 10 pounds and up to 25 pounds. The employee is frequently required to lift up to 50 pounds. The employee is occasionally required to lift up to 100 pounds. The vision requirements include: close vision.

WORK ENVIRONMENT

While performing the duties of this job the employee is regularly exposed to moving mechanical parts and fumes or airborne particles. The employee is frequently exposed to outside weather conditions. The employee is occasionally exposed to high, precarious places; toxic or caustic chemicals and risk of electrical shock.

The noise level in the environment is high.

RELATIONSHIPS There is sometimes a relationships section, which indicates the jobholder’s relationships with others inside and outside the organization. The relationships section on the job description of an HR manager, for example, might look like this:²²

- *reports to:* vice-president of human resources
- *supervises:* HR specialist, test administrator, labour relations specialist, and one administrative assistant
- *works with:* all department managers and senior management team members
- *contacts outside the company:* employment agencies, executive recruiting firms, union representatives, benefit consultants, and various suppliers.

DUTIES AND RESPONSIBILITIES This section presents a detailed list of the job’s major duties and responsibilities. Each of the job’s major duties should be listed separately and described in a few sentences. The duties of the marketing manager include establishing marketing goals to ensure share of market and profitability and developing and recommending pricing strategy.

The NOC may be a helpful reference tool when itemizing a job’s duties and responsibilities. As shown in Figure 3.8, a specialist in human resources might be expected to: “develop, implement, and evaluate personnel and labour relations policies, programs, and procedures”; “advise managers and employees on the interpretation of personnel policies, benefit programs, and collective agreements”; and “research and prepare occupational classifications, job descriptions, and salary scales.”

Most experts state unequivocally that one item frequently found but should never be included in a job description is a “cop-out clause,” such as “other duties, as assigned,”²³ since this leaves open the nature of the job and the people needed to staff it and can be subject to abuse. Instead, a statement such as “The duties and responsibilities outlined above are representative but not all-inclusive” may meet the firm’s need for flexibility without sacrificing the quality and usefulness of the job description.

AUTHORITY This section of a job description should define the limits of the jobholder’s authority, including his or her decision-making authority, direct supervision of other employees, and budgetary limitations. For example, the jobholder might have authority to approve purchase requests up to \$5000, grant time off or leaves of absence, discipline department employees, recommend salary increases, and interview and hire new employees.²⁴

PERFORMANCE STANDARDS Some job descriptions also contain a performance standards section, which indicates the standards the employee is expected to achieve in each of the job description’s main duties and responsibilities.

Setting standards is never an easy matter. Simply telling employees to “do their best” does not provide enough guidance to ensure top performance. One straightforward way of setting standards is to finish the statement: “Work will be considered completely satisfactory when” This sentence, if completed for each duty listed in the job description, should result in a usable set of performance standards, as follows:²⁵

Duty: Accurately Posting Accounts Payable

- all invoices received are posted within the same working day
- all invoices are routed to the proper department managers for approval no later than the day following receipt



- no more than three posting errors per month occur on average, and
- by the end of the third working day of each month, the posting ledger is balanced.

Duty: Meeting Daily Production Schedule

- work group produces no less than 426 units per working day
- no more than 2 percent of units are rejected at the next workstation on average, and
- work is completed with no more than 5 percent overtime per week on average.

WORKING CONDITIONS The job description should also list the general working conditions involved in the job. This section generally includes information about noise level, temperature, lighting, degree of privacy, frequency of interruptions, hours of work, amount of travel, and hazards to which the incumbent may be exposed.

JOB DESCRIPTION GUIDELINES Some helpful guidelines to assist those writing job descriptions include:²⁶

1. *Be clear.* Portray the job so well that the duties are clear without reference to other job descriptions.
2. *Indicate scope of authority.* Indicate the scope and nature of the work by using such phrases as “for the department” or “as requested by the manager.” Include all important relationships.
3. *Be specific.* Select the most specific words to show (1) the kind of work, (2) the degree of complexity, (3) the degree of skill required, (4) the extent to which problems are standardized, (5) the extent of the worker’s responsibility for each phase of the work, and (6) the degree and type of accountability. Use action such words as *analyze, gather, assemble, plan, devise, infer, deliver, transmit, maintain, supervise, and recommend*. Positions at the lower levels of the organization generally have the most detailed explanations of duties and tasks, while higher-level positions tend to have broader responsibility statements.
4. *Be brief.* Use short, accurate statements, since they usually best accomplish the purpose.
5. *Recheck.* Finally, to check whether the description fulfills the basic requirements, ask, “Will a new employee understand the job if he or she reads the job description?”

JOB DESCRIPTIONS AND HUMAN RIGHTS LEGISLATION Job descriptions are NOT legally required but are highly advisable. Human rights legislation requires employers to ensure that there is no discrimination on any of the prohibited grounds in any aspect or terms and conditions of employment. Essential job duties should be clearly identified in the job description. Indicating the percentage of time spent on each duty and/or listing duties in order of importance are strategies used to differentiate between essential and non-essential tasks and responsibilities. It must be remembered that even when an employee cannot perform one or more of the essential duties due to reasons related to a prohibited ground, such as a physical disability or religion, reasonable accommodation to the point of undue hardship is required.





The job specifications for previously trained candidates, such as the call centre operators shown here, should clearly indicate which skills, like computer literacy, are job requirements.

LEGAL compliance

physical demands analysis

Identification of the senses used and type, frequency, and amount of physical effort involved in the job.

Job Specifications

Writing the job specification involves examining the duties and responsibilities and answering the question, “What human traits and experience are required to do this job?” Both skill and effort factors should be considered, as well as the human implications of the working conditions. The job specification clarifies what kind of person to recruit and for which qualities that person should be tested. Often—as in Figure 3.9—it is presented as part of the job description.²⁷

The usual procedure to obtain the required information is to ask questions on the job analysis questionnaire, such as, “What does it take in terms of education, knowledge, training, and experience to do this job?” When developing job specifications, the *NOC* and *Career Handbook* can provide helpful reference information, including requirements for vision, colour discrimination, hearing, body position, limb co-ordination, and strength.²⁸

Once again, complying with human rights legislation means keeping a few pointers in mind. All listed qualifications must be justifiable, based on the current job duties and responsibilities. For example, unjustifiably high educational and/or lengthy experience requirements can lead to systemic discrimination. For that reason, many employers are no longer indicating that a degree or diploma is mandatory; rather, they specify that the position calls for a university degree in a specific area, a college diploma in that area, or an equivalent combination of education and work experience.

The qualifications of the current incumbent should not be confused with the minimum requirements, since he or she might be under- or overqualified. To avoid overstating or understating qualifications, it is helpful to ask the question, “What minimum qualifications would be required if this job were being filled in the immediate future?”

For entry-level jobs where no experience is required, identifying the actual physical and mental demands is critical. For example, if the job requires detailed manipulation on a circuit-board assembly line, finger dexterity is extremely important and is something for which candidates should be tested. A **physical demands analysis**—which identifies the senses used and type, frequency, and amount of physical effort involved in the job—is often used to supplement the job specification. Having such detailed information is particularly beneficial when determining accommodation requirements.

To illustrate the types of information and amount of detail that should be provided in a well-written job specification, a sample has been included as **Figure 3.10**.

JOB ANALYSIS IN THE TWENTY-FIRST CENTURY

The concept of a “job” is in the midst of change as many employees are increasingly expected to adapt what they are doing to reengineered processes, increased empowerment, self-directed work teams, and new technology. Revolutionary forces including accelerating product and technological changes, globalized competition, deregulation, political instability, demographic changes, trends toward a service society, and the information age have dramatically increased the need for employees to be flexible and responsive to changes in what they do and how they do it.²⁹

**FIGURE
3.10****Job Specification****Job Title: Lifeguard**

Location: Lethbridge Community Pool
Job Code: LG1
Supervisor: Head Lifeguard
Department: Recreation
Division: Parks and Recreation
Date: May 1, 2006

Job Summary

The incumbent is required to safeguard the health of pool users by patrolling the pool, rescuing swimmers in difficulty, treating injuries, advising pool users of safety rules, and enforcing safety rules.

Skill

Formal Qualifications: Royal Life Saving Society Bronze Medallion or equivalent

Experience: No prior experience required but would be an asset.

Communication Skills: Good oral communication skills are required. Proficiency in one or more foreign languages would be an asset. The incumbent must be able to communicate courteously and effectively. Strong interpersonal skills are required. All interaction with the public must be handled with tact and diplomacy.

Effort

Physical Effort: The incumbent is required to stand during the majority of working hours. In the event of an emergency where a swimmer is in distress, the incumbent must initiate rescue procedures immediately, which may involve strenuous physical exertion.

Mental Effort: Continuous mental attention to pool users. Must remain vigilant despite many simultaneous demands on his or her attention.

Emotional Effort: Enforcement of safety rules and water rescue can be stressful. Must maintain a professional demeanour when dealing with serious injuries or death.

Working Conditions

Job is performed in humid temperature-controlled indoor environment. No privacy. Shift work to cover pool hours of 7 a.m. to 11 p.m. seven days a week. Some overtime and split shifts may be required.

Approval Signatures

Incumbent: _____

Supervisor: _____

Date: _____



IN-CLASS NOTES

Job Analysis in the Twenty-First Century

- Concept of a clearly defined job is changing as environmental forces create the need for flexibility and adaptability
- Flatter organizations, increased use of work teams, boundaryless organizations, and re-engineering have all blurred clearly defined jobs
- Some firms now using brief competency-based descriptions

The organizational techniques used to foster responsiveness to change have helped blur the meaning of job as a set of well-defined and clearly delineated responsibilities. Here is a sampling of how these techniques have contributed to this blurring.

Flatter Organizations

Instead of pyramid-shaped organizations with seven or more management layers, flat organizations with just three or four levels are becoming more prevalent. Many firms have already cut their management layers from a dozen to six or fewer. As the remaining managers are left with more people reporting to them, they can supervise them less; so every employee's job ends up involving greater breadth and depth of responsibilities.

Work Teams

Over the past decade, work has become increasingly organized around teams and processes rather than around specialized functions. In these organizations, employees' jobs change daily; the effort to avoid having employees view their job as a limited and specific set of responsibilities is thus intentional.

In many firms, the widespread use of teams means that the boundaries that typically separate organizational functions (like sales and production) and hierarchical levels are reduced and made more permeable. In such firms, responsiveness is fostered by encouraging employees to rid themselves of the "it's not my job" attitude that typically creates walls between one employee area and another. Instead, the focus is on defining the job at hand in terms of the overall best interests of the organization as is the case at WestJet Airlines that is described in the Strategic HR box.

The Boundaryless Organization

Boundaryless organization structures are emerging where relationships (typically joint ventures) are formed with customers, suppliers, and/or competitors to pool resources for mutual benefit or encourage co-operation in an uncertain

STRATEGIC HR

WestJet Airlines

While most North American airlines are cutting staff and slashing costs in a desperate fight for survival, Calgary-based WestJet Airlines Ltd. continues to defy the odds and add more jobs. Employees are key to the cost-cutting culture at the no-frill, low-fare airline. When hiring new employees, the company often looks for individuals who are fun-loving, energetic, gregarious and optimistic rather than those with previous airline experience. In fact, those with little or no airline experience are preferred as “. . . they don't bring any preconceived notions of how things are done, because at WestJet we don't do things like traditional airlines do,” said company spokesperson Siobhan Vinish.

While the company does set some standards and expectations, training is focused on motivation of employees. The company stresses teamwork and is managed from the bottom—reducing a costly level of supervisory management. Since there are no job descriptions, employees are given a high degree of latitude to perform their jobs and are expected to pitch in and perform all tasks necessary to keep the flights on schedule. It is not uncommon to have WestJet pilots unload luggage, and

after a plane lands, every employee on the flight, including employees flying on their own time, are expected to join in cleaning the aircraft for its next take-off. Even the CEO helps out during flights and can often be found greeting customers at the ticket counter. This team-based “jobless” culture means an annual savings of \$2.5 million and enables a quick turnaround, making WestJet one of the most profitable and successful airlines in North America.

Sources: P. Fitzpatrick, “Wacky WestJet's Winning Ways: Passengers Respond to Stunts That Include Races to Determine Who Leaves the Airplane First,” *National Post*, October 16, 2000, pp. C1, C2; J. Bryan, “WestJet Puts Friendly Back in the Skies: The Upstart Western Airline is Praised for Its Low Fares, On-time Flights, Trouble-free Flying, and Helpful, Cheerful Employees,” *National Post*, September 6, 1999, p. C6; “WestJet Flies Against Trends by Adding Employees and Aircraft,” *Canadian Press Newswire*, September 12, 2002; P. Verburg, “Prepare for Takeoff (*Entrepreneur of the Year*),” *Canadian Business*, December 25, 2000, pp. 94–96.

environment. As in team-based organizations, barriers are broken down—in this case, between the organization and its suppliers, customers, or competitors—and teams are emphasized. In such structures, jobs are defined in very general terms, since the emphasis is on the overall best interests of the organizations involved.

Reengineering

Reengineering is defined as “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.”³⁰ Experts argue that traditional principles like highly specialized division of work should be retired. Instead, the firm should emphasize combining tasks into integrated, unspecialized processes that are then carried out by committed employees.

Reengineering is achieved in several ways. Specialized jobs are combined into one so that formerly distinct jobs are integrated and compressed into enlarged, enriched ones.³¹ Workers become collectively responsible for overall results rather than being individually responsible for just their own tasks. As a result, their jobs change dramatically. To that extent, reengineering also contributes to de-jobbing the enterprise.

reengineering The fundamental rethinking and radical redesign of business processes to achieve dramatic improvement in contemporary measures of performance.

AN ETHICAL DILEMMA

Because job descriptions are not required by law and some organizations have found them no longer relevant, would abolishing job descriptions raise any moral or legal concerns?

The Future of Job Descriptions

Most firms today continue to utilize job descriptions and to rely on jobs as traditionally defined. However, it is clear that more and more firms are moving toward new organizational configurations, ones built around jobs that are broad and that may change every day. Workers learn to focus their individual efforts and collective resources on the work that needs doing, changing as that changes. In some cases, competency/skill analysis and brief role descriptions are being used instead of job descriptions.

CHAPTER REVIEW

Answers to Test Yourself

1. What are the industrial engineering, behavioural engineering, and human engineering considerations involved in job design?

Industrial engineers systematically identify, analyze, and time the element of job cycles and use the information to modify, eliminate, or rearrange work to reduce time to improve efficiency. Behavioural engineering proposes job enlargement, job rotation, and job enrichment to overcome dehumanization and other problems associated with industrial engineering. The job characteristics model proposes that employee motivation and satisfaction are directly linked to five core job characteristics: skill variety, task identity, task significance, autonomy, and feedback. Human engineering takes into consideration ergonomics and tries to adapt the entire job system to match human characteristics.

2. What is job analysis and what six steps are involved?

Job analysis is concerned with objective and verifiable information about the actual requirements of a job. Once this information has been gathered, it is used for developing job descriptions (what the job entails) and job specifications (what the human requirements are). Job analysis involves six steps: (1) determine the use to which the information will be put, (2) collect background information, (3) select the representative positions and jobs to be analyzed, (4) collect data, (5) review the information collected with the incumbents and their supervisors, and (6) develop the job descriptions and job specifications.

3. What is a job description and what are its key components?

A job description is a written statement of what the jobholder actually does, how the job is done, and under what conditions the job is performed. Typical information included is the job identification, a job summary, relationships, duties and responsibilities, authority of incumbent, performance standards, and working conditions.

4. What are the basic methods of collecting job analysis information and what quantitative techniques are available?

There are four conventional techniques used to gather job analysis data: interviews, questionnaires, direct observation, and participant diary/log. Quantitative job analysis techniques include the position analysis questionnaire (PAQ) and functional job analysis (FJA).

5. What are the current trends in the nature of jobs and job descriptions?

The concept of a “job” is in the midst of change, as organizations are becoming flatter and boundaryless and focus on work teams. Although organizational techniques used to foster responsiveness to change have helped to blur the meaning of job as a set of well-defined and clearly delineated responsibilities, most firms today continue to utilize job descriptions and to rely on jobs as traditionally defined. In some cases, competency/skill analysis and brief role descriptions are being used instead.

Key Terms

functional job analysis (FJA) (p. 78)
human engineering (ergonomics) (p. 67)
industrial engineering (p. 63)
job (p. 62)
job analysis (p. 68)
job descriptions (p. 68)
job design (p. 62)
job enlargement (horizontal loading) (p. 65)
job enrichment (vertical loading) (p. 65)
job rotation (p. 65)
job specifications (p. 68)

National Occupational Classification (NOC) (p. 78)
organizational structure (p. 62)
organization chart (p. 62)
physical demands analysis (p. 86)
position (p. 62)
position analysis questionnaire (PAQ) (p. 76)
process chart (p. 70)
reengineering (p. 89)
team (p. 67)
team-based job designs (p. 67)

CASES AND EXERCISES

CASE INCIDENT

Linking Job Analysis and Pay

It wasn't until the CEO's secretary, Fay Jacobs, retired that anyone in the Winnipeg Engineering Company's HR department realized how much variation there was in the compensation of the company's secretaries.

To Tina Jessup, compensation specialist, it was quite apparent why there were inconsistent standards for secretarial pay. With the advance of office-automation technology, managers' differing styles of delegation, and secretaries' varying degrees of willingness to take on increasing managerial responsibilities, the job had assumed a variety of profiles. As the jobs now existed, it was quite likely that two individuals with the same title might be performing very different jobs.

Knowing that updated job analysis information was essential and prepared for resistance from those who might want to protect their status and pay, Tina decided to use an objective method to gather information about each of the secretaries' jobs. She developed a questionnaire that she planned to distribute to each member of the firm's secretarial staff and his or her manager following a brief explanatory interview. The interviews would, she hoped, give her a chance to dispel fears on the part of any of the secretaries or managers that the purpose of the analysis was to eliminate jobs, reduce salaries, or lower the grade level of positions.

Before finalizing the questionnaire, Tina shared it with a small group of secretaries in her own department. Based on their input, she made some modifications, such as adding questions about the use of office technology and its impact on the job.

The questionnaire now covered nearly every aspect of the secretarial role, from processing mail, to making travel arrangements, to editing and preparing company correspondence, budgets, and reports. The questions also captured information about how much time was spent on each activity and how much supervision each task required. Tina hoped that in addition to establishing standards on which Winnipeg Engineering could base a more equitable pay structure, the survey would allow the HR staff members to assess training needs, examine the distribution of work, determine accurate specifications for recruitment and selection, and develop employment tests to be used in the future.

Just as Tina was about to begin the interviews and the distribution of questionnaires, she got a telephone call from Janet Fried, vice-president of sales. She had heard about the upcoming analysis and was very upset. Janet claimed to be worried about how much time Avril, the secretary assisting her, would have to take away from her work in order to meet with Tina and fill out the questionnaire. She also expressed concern that Avril might feel that her job was threatened and start looking for a position elsewhere. Tina agreed to meet with Janet to discuss her reservations, for which Janet thanked her profusely. Just before hanging up, Janet added, "You know, Tina, I sure wouldn't want to see Avril's job rated at a lower grade level than the secretary assisting the vice-president of operations!"

Questions

1. What do you think is the real "problem" from Janet's point of view?
2. How should Tina address each of the concerns that Janet expressed?

3. What can Tina do to prepare herself for any resistance to her job analyses on the part of the secretaries themselves?
4. Given the current advances in office technology, such as sophisticated spreadsheet programs, voice-mail systems, and e-mail, as well as the elimination of many middle-management positions through corporate downsizings, secretaries in many firms are taking on quasi-managerial responsibilities. How can Tina account in her job analyses for the degrees to which individual secretaries at Winnipeg Engineering are doing so?

REVIEW AND DISCUSSION QUESTIONS

1. Explain work simplification. In what situations is this approach to job design appropriate?
2. Differentiate among job enlargement, job rotation, and job enrichment, and provide an example of each.
3. What is involved in the human-engineering approach to job design? Why is it becoming increasingly important?
4. Several methods for collecting job analysis data are available—interviews, the position analysis questionnaire, and so on. Compare and contrast these methods, explaining the usefulness of each and listing their pros and cons.
5. While not legally required, having job descriptions is highly advisable. Why? How can firms ensure that their job specifications are legally defensible?

RUNNING CASE: LEARNINMOTION.COM

Who Do We Have to Hire?

The case for Chapter 3, *Who Do We Have to Hire?*, asks the student to develop job descriptions and specifications, and to assess other job requirements based on the needs of LearninMotion.com.

To read this case, go to the Companion Website at www.pearsoned.com/dessler and click on the *Fundamentals of Human Resources Management in Canada*, Second Edition, cover. Click on the case module in Chapter 3. The Running Case illustrates a variety of challenges confronted by HR professionals, small-business owners, and front-line supervisors. It places students in the role of HR management consultants to help the fledgling LearninMotion.com develop HR policies, strategies, and long-term goals. Each case is accompanied by assignments for the management consultants in the form of critical-thinking questions posed to the student.

EXPERIENTIAL EXERCISE

For further study of text materials and development of practical skills, select the Experiential Exercise module for this chapter on the Companion Website. This module provides two to three individual or group-based assignments per chapter.

STUDY GUIDE

Circle the correct answer. After completing this self-test, check your answers against the Answers to Study Guide Questions at the back of this book (p. xxx).

- Which of the following outlines the structure of relationships between people and tasks giving a “snap shot” view of the organization?
 - organization structure
 - organization chart
 - organizational analysis
 - organization design
 - none of the above
- Smith Company used a job design method that helped them redesign their jobs to increase organization efficiency. The method systematically identified, analyzed, and timed the key elements of job cycles. The information was then used to make modifications and rearrangements that increase the efficiency. What work simplification method was being used?
 - organization redesign
 - job re-design
 - industrial re-engineering
 - job enrichment
 - all of the above
- Amila and Chan work for a leading financial institution. During the last three years, Amila worked in the HR department, first as Receptionist, then Office Administrator, and then HR Assistant. Chan worked as an Accountant for two years and recently was given additional job responsibilities and a payroll clerk reporting to him. What job broadening techniques were used in the case of Amila and Chan?
 - job rotation, job enrichment
 - job rotation, job enlargement
 - job redesign
 - job analysis, job redesign
 - job enrichment, job enlargement
- Richard Hackman and Greg Oldham’s job design studies identified that there are five core characteristics that could enhance organizational effectiveness and increase employee satisfaction. Which combination of characteristics has the right combination?
 - skill variety, task identity, task significance, redesign, task management
 - task identification, skill identification, skill variety, feedback, autonomy
 - skill variety, task identity, task significance, feedback, autonomy
 - skill variety, task variety, tasks, suggestions, autonomy
 - skill identification, skill variety, task identity, feedback, autonomy
- The procedure used to determine the tasks, duties, and responsibilities of each job and the human attributes required to perform the job is known as:
 - job description
 - job analysis
 - job design
 - job reengineering
 - none of the above
- Job analysis is the cornerstone of HR activities. The information gathered is used for key HR activities, such as:
 - recruitment and selection
 - human resources planning
 - compensation
 - performance and career management
 - all of the above
- Jessica, who is the HR Assistant at a manufacturing firm, was given the task of analyzing the firm’s jobs. She was told to collect data on job activities, employee behaviours, and working conditions and to identify skills required to perform the jobs. This was part of a project to complete a job analysis project. Which step in the job analysis process corresponds to what Jessica is supposed to do?
 - analyze the jobs
 - review relevant background information
 - select representative positions and jobs to be analyzed
 - review job analysis with job incumbents
 - develop job description and job specification
- Harry is the HR Manager of Harris Inc. One of his key objectives is to reassess their compensation structures and salary grades. The most suitable job analysis technique Harry can use for this purpose is:
 - interview
 - salary survey
 - functional job analysis
 - position analysis questionnaire
 - none of the above
- There are a number of techniques used to conduct job analysis. The following lists the common conventional job analysis techniques that can be used:
 - diary/log, observation, interview, questionnaire
 - interview, PAQ, job description, diary/log
 - interview, observation, functional analysis
 - PAQ, functional analysis, questionnaire
 - all of the above

10. A reference tool compiled by the federal government that contains comprehensive job descriptions is called the:
- Federal Occupational Classification
 - National Occupational Analysis
 - Job description bank
 - Standard national occupations
 - National Occupational Classification
11. A list of duties, responsibilities, reporting relationships, and working conditions of a job, which is a product of a job analysis exercise, is called:
- job specification
 - job description
 - job class
 - job design
 - process chart
12. A job description written for a VP of Sales and Marketing included the following areas: job identification, relationships, duties and responsibilities, performance standards, and working conditions. What other key areas need to be included to complete the job description?
- job specification, job title
 - department, prepared date
 - authority, job summary
 - job summary, job title
 - authority, job specification
13. The Brown-Dobson Company hired a consultant to launch a project to develop job descriptions for key positions in the organization. The consultant decided to prepare a document with guidelines to assist the line managers who will play a key role in writing the job descriptions. What are some of the guidelines included in the document?
- be clear, be specific, use action words
 - do interview, ask specific questions
 - write the job description and share with employee
 - use action words, get employee commitment
 - all of the above
14. Over the past few years, the concept of a “job” has been changing quite rapidly due to changes in technology, globalization, deregulation, and many other reasons. This has forced organizations to be more responsive, flexible, and more competitive in a global marketplace. What are some of the key techniques that have contributed to the “blurring” of the concept of a “job”?
- reduced organizational hierarchy
 - emphasis on team and team process
 - reengineering
 - creation of boundaryless organizations
 - all of the above
15. Due to rising competition, Hi-Tech Inc. had to take a number of measures to ensure its competitiveness. One of the measures they used reduced a number of management layers in the organization, which has contributed to faster decision making so that the organization is more responsive and nimble. What technique did the organization use to achieve its responsiveness?
- introduce staff layoffs
 - workforce reduction
 - flattening the organization
 - downsizing
 - job redesign