JOB ANALYSIS AND DESIGN

Job Analysis: The process of examining the elements of a job and its worth for use in all employee-based HR practices and decisions.

This chapter is comprised of the strategies, processes, and tools involved in the analyzing and designing of a job. Job analysis and design are considered the foundation for all employment-related practices to be developed and implemented. The goal for any type of **job analysis** is basically the same—to examine a job and its worth in the context of current and projected work needs as determined by the organization. This involves the collecting of data about the job's tasks, responsibilities, working conditions, necessary materials/equipment usage, and the knowledge, skill sets, abilities, and other qualifications required to competently and consistently perform the job, as well as evaluating these job factors with a standardized weighting scale to determine the appropriate level and compensation range. Yes, some people may consider the job analysis process to be rather unexciting! It can be time-consuming and painstaking work requiring a high degree of detail orientation. However, the information yielded from a job analysis is a big deal when it comes down to human resources (HR) practitioners, functional/line managers, and consultants having accurate and current information with which to make sound employment-related decisions.
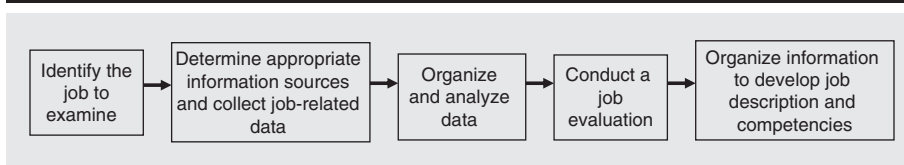
It is my humble opinion that the job analysis process is the most important element to all HR management strategies, from recruitment and job candidate selection all the way through the employee life cycle to performance evaluation, training, and development. Why do you think this is the case? Well, the information obtained for a particular job through a rigorous and accurate job analysis process will serve as the cornerstone for the development of all the systems, tools, and procedures that are needed to effectively perform the following:

Job Description: Formal document that includes information about a job's level, work conditions, qualifications, tasks, and responsibilities.

- Writing an accurate and up-to-date job description and conducting a job evaluation to determine level and pay grade

- Determining a market-rate compensation package for the job based on the job evaluation

- Designing a recruitment strategy clearly outlining the necessary qualifications for the job as well as the required tasks and responsibilities

- Hiring the most qualified candidate for the job using relevant selection methods, tools, and tests

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Figure 3.1 The Job Analysis Process Model

| Identify the job to examine | → | Determine appropriate information sources and collect job-related data | → | Organize and analyze data | → | Conduct a job evaluation | → | Organize information to develop job description and competencies |

- Evaluating the performance of an employee in the job using current, job-specific criteria

- Identifying training and learning needs for an employee based on any discrepancy between the job requirements and competencies and an employee's demonstrated performance

- Creating an employee development plan and setting mutually agreed-upon goals to achieve desired performance

Does this sound like a tall order to you? Well, it should! This is a big process with many moving parts, and it needs to be accomplished with the priority of obtaining up-to-date valid information, which requires attention to the tools and techniques that are being used. The job analysis process model, as typically implemented by many organizations, is broken down into five steps or phases as seen in Figure 3.1. This chapter will focus on the first three phases of this process model, and the last two phases will be the focus of the next two chapters.

PHASE 1: IDENTIFY THE JOB TO EXAMINE

I have conducted many job analyses in my professional experience, both as an HR practitioner and as an external consultant. These job analyses have served a variety of organizational needs, including building out new roles for different departments and functions that became necessary as business objectives shifted and evolved, as well as modifying jobs that had been in existence for decades in which many long-term "legacy" employees worked over the years that had become outmoded for various reasons such as technology changes and process streamlining. In some situations, the job itself is identified by senior management stakeholders, in particular the creation of new jobs that must be developed and integrated to meet new or projected business needs. In other situations, the job currently exists and is identified by middle management at the functional/departmental level in collaboration with the HR function as a result of an incumbent change. For the HR practitioner and/or external consultant involved in this initial phase of the job analysis process, some key questions should be considered before proceeding:

For a New Job:

- What is the actual work that would be required of an incumbent in this role, and what organizational outcomes would be met?

- Are there any other jobs in the organization that do work similar to the work identified for the proposed new job? In other words, did a similar job have to be created anywhere else in the organization already, and if so, where and what does it look like?

- Is it anticipated that the work required of an incumbent in this new role will serve a short-term need, or will it continue to meet long-term organizational objectives?

For an Existing Job:

- Why does this need currently exist—an employee termination, a voluntary resignation or retiring, a transfer or promotion?

- How many incumbents currently work in this job: Does one person hold this position, or do multiple incumbents work in this capacity?

- What has been the history of this job? In other words, has this job encompassed the same tasks and responsibilities always, or has it been modified over time, and why?

- When was the last time a job analysis was conducted for this job?

The reason for asking questions such as these is to really get to the business driver (or drivers) for why this job needs attention at this particular time. External forces, such as technological advancements and increased globalization, and internal forces, such as process improvements and systems changes, will continue to impact the way in which work needs to be performed, and it should not be assumed that all existing jobs in an organization will stay status quo and the current job structure will work and stay relevant for years. This is simply no longer the case. As an HR practitioner or an external consultant, you are the expert in this domain and possess workforce knowledge across every department/function and business site. While the typical HR practitioner may not have much decision-making authority with some of these drivers, especially the ones that come top-down from senior management, there is a greater degree of expertise power and decision input required when it involves advising functional/line managers and making recommendations for examining jobs in their respective areas. Remember, you know the workforce in its entirety from a horizontal perspective rather than from a limited vertical perspective, and therefore, you are in the best position to understand strategic workforce needs, structure, and organization. I always think about it in the context of a jigsaw puzzle: If you are personally responsible for completing one corner of a jigsaw

puzzle and you force pieces in where they do not belong or borrow pieces from another puzzle, ultimately the whole jigsaw puzzle will never come together cohesively, and the finished product will be ill fitting, disjointed, and probably never look like the picture on the box. The HR function is responsible for partnering with management to ensure that the workforce "puzzle" is structured to enable employees in every corner or area to work toward the achievement of business objectives in the most efficient, effective, and ethical manner possible.

PHASE 2: DETERMINE APPROPRIATE INFORMATION SOURCES AND COLLECT JOB-RELATED DATA

Once a job has been identified and the work required in this job discussed and agreed upon by the HR practitioner and any key stakeholders, the second phase of the process involves making a data collection plan and putting that plan into action. Several critical questions should be addressed at the onset of this phase, including:

- What type of information needs to be obtained?

- Who should be providing the information?

- What is the best method for gathering job-related information?

This is an important first step because the answers to these questions will enable an HR practitioner, consultant, and anyone else instrumental to the data collection process to make informed decisions regarding the quality, quantity, and relevance of the information obtained. Let's look at each question in a bit more detail.

What type of information needs to be obtained?

The information necessary to obtain in a job analysis will be comprised of broad descriptors of the role and its context in the organization as well as specific details pertaining to the work itself and the required qualifications depicting the most appropriate incumbent. There will typically be general categories of information applicable to all the jobs in the organization, and it would be reasonable to integrate these into a framework for a job description template, which we will examine in a subsequent chapter. These categories may include:

- Job Title

- Reporting Relationships (above and below)

- Job Context/Environment

- Working Conditions

- Incumbent Qualifications

- Key Responsibilities/Job Criteria

- Essential Activities, Tasks, and Duties

- Required Resources, Materials, and Equipment

The data needed to fill in these categories will vary depending on the job, but will most likely include information about how the work gets accomplished; the necessary knowledge, skills, abilities, and other characteristics (KSAOs) and behavioral competencies to perform the job at the expected level; the resources that are required; and the range of tasks that an incumbent will work on daily, weekly, monthly, quarterly, and annually.

A pragmatic approach is the key to determining the type of information needed, which means that the essential and necessary elements are identified for inclusion and redundant and/or irrelevant elements are not. Someone charged with collecting data for a job analysis does not want to spend too much time and other resources gathering information that later will not be used in the analysis, nor want to be in a position where insufficient or incorrect information was obtained and the process has to be repeated. For example, let's imagine that you need to conduct a job analysis on an emergency room (ER) nurse in a hospital. You would need to access job-related information such as the nature of the ER environment, the equipment and materials being handled, and the tasks and procedures being performed by the incumbents. This information is critical to the job, and you will most definitely need to determine how to collect this type of data. You will not likely need to gather information about the admittance process or how the ER front desk staff processes patient paperwork and health insurance forms. Finding the middle ground between these two opposite ends of the spectrum would be ensuring a pragmatic approach.

Who should be providing the information?

Individuals who can be relied on to provide accurate, detailed job information should be considered as potential sources of data for a job analysis. This most commonly includes the incumbents working in the job, the supervisors and line managers to whom the incumbents report, HR staff, and any individuals who may know a great deal about the job because they once worked in the job or because their job requires them to work closely with incumbents in the job—aka subject-matter experts. Other individuals who could be considered credible and reliable sources of job data may include customers/clients, suppliers, contractors, coworkers, and anyone else who may be able to capture important elements about a job in a certain context, such as an employee who works with the incumbent on a project team or committee, or someone who works in a similar role but in another area of the organization.

I will share with you an example of the latter scenario from my own professional experience. When I was responsible for managing the human resource information system (HRIS) module of a data and reporting system for the university in which I was employed some years ago, I collaborated with other employees from every area of the university who were in similar roles, including data analysts and managers responsible for the system modules maintained in their respective offices of institutional research, financial aid, alumni relations, advancement, academic affairs, finance, the registrar, the bursar, and the information technology (IT) department. In fact, I worked with these individuals in a much greater capacity than I worked with my actual coworkers in the HR department. We participated on steering and governance committees together and worked together on process improvements, system upgrades, and data standards in project teams. If my coworkers in the HR department were asked for detailed information about my job, they would have had more difficulty explaining it accurately than any of the individuals who were in similar roles to mine in other departments across campus. The point here is that it really is important to think about each job from a holistic perspective, not just the department in which it is located, when determining appropriate contributors of accurate and reliable sources of job information.

What is the best method for gathering job-related information?

Every source of information related to a job will have benefits and challenges due to the collection process itself, the quality or quantity of the data collected, or some combination of these factors. Let's explore some common sources of job-related data, including archival records, observation, employee work journals, subject-matter experts, questionnaires, and interviews.

Archival Records

Archival records may be comprised of any existing data in databases/data warehouses, files, and document compilations that have been collected and stored for a variety of needs. While the majority of job-related records such as employee files will likely be maintained by the HR department, some records such as safety logs and standard operating procedures may be maintained elsewhere. Archival data collected for a job analysis may be used to establish a job's historical background (e.g., any changes over time to title, reporting relationships, work schedule, tasks and responsibilities, or equipment and systems used), to validate the current requirements of the job using information in employee files, and to examine trends and projected needs that may potentially require job modifications. Sources of archival information valuable for a job analysis may include

- job descriptions,

- recruitment advertisements/postings,

Archival Records: Information that has been documented and stored and can be accessed and used for various data needs.

- interview notes,

- selection test results,

- productivity logs,

- time sheets,

- expense reports,

- performance criteria,

- training records,

- employee goal setting and development plans, and

- memos and correspondence containing information about projects or clients.

While the vast majority of archival data will typically be found in the form of hard-copy documents and records, it is likely that archival records necessary for conducting a job analysis will also be found in electronic form. Some records may have been created in electronic format, while older records will likely have been created in hard copy and converted to an electronic format through scanning and data entry. An HR practitioner or consultant collecting job-related data should be prepared to access archival records in both hard copy and electronic formats.

Archival data can be a rich and valuable source of information, and its access and review is typically low or no cost. However, working with this type of information has its challenges. It can be difficult to obtain complete archival records, especially when the information is very old. A record could have been moved from one file cabinet or box and never returned, or refiled in the wrong location. Another potential challenge involves the confidence in the existing information. For an HR practitioner or consultant conducting archival data collection, it is often difficult to determine the accuracy of any of the information provided by other people in months and years past. Essentially, one is relying completely on the detail orientation, truthfulness, and comprehensiveness of whoever has contributed to the documentation in an employee file. For example, did an IT help-desk supervisor working in this position 10 years ago, who is no longer with the organization, effectively capture essential performance criteria for the incumbents in help-desk jobs in all his or her performance appraisals over a number of years? How would someone be able to determine that level of accuracy simply based on the documented information in the archival records? Perhaps one could examine the performance appraisals of incumbents in this job family over an extended period of time to examine the data for gaps or anomalies that may appear in the appraisals conducted by a particular supervisor, but there may be other unidentified variables that also need to be considered. With more recent records, there is a greater likelihood that the source of the data can still be located for questions and/or confirmation, but tracking and validating becomes quite difficult with archival records that are very old.

If problems arise resulting from out-of-sequence files, improperly recorded data, and gaps in the records, the individual gathering this information may find the use of archival records to require more time and effort than it is worth or the information gathered to be questionable in terms of accuracy (validity) and consistency (reliability). That said, archival records can be used effectively and efficiently with an understanding of the limitations and potential issues to be aware of and to identify before becoming too immersed in inaccurate, vague, or inconsistent data.

Observation

Observation can be a particularly rich source of job information, and this is perhaps the most basic of all data collection methods. After all, each of us observes the behaviors of other people every day, whether we realize it or not. The real difference between simply people watching and conducting an observation is that observation is comprised of the systematic identification, documentation, description, and interpretation of selected behaviors of interest (Picardi & Masick, 2013). Observation enables the gathering of real-time data about employees' behaviors and interactions with others in their actual work environment to develop a comprehensive picture of the job and how it is performed. An employee can be observed in his or her job from a variety of contexts. Examples include working on a specific independent task (e.g., operating a piece of machinery that involves a process of sequential steps, entering data into a system), handling a customer interaction in person or over the phone via call monitoring, and collaborating with others in a group situation (e.g., a task that requires group effort, a team meeting). Conducting an observation can be especially helpful when very little documented information about a job exists and it is necessary to establish a baseline set of tasks and functions for a job obtained through viewing one or more employees performing the work involved.

Before proceeding, it is important to determine the focus or purpose of the observation. Why is this necessary? Well, think about any job you have held in the past or currently hold. Next, recall 1 hour of a typical work day in that job and consider the following questions:

- What task or tasks were you performing, how long did it take you to complete each task, and how frequently did you perform each task in this time frame?

- Were you sitting, standing, walking, driving, moving objects, or performing any other physical actions to complete work tasks?

- What materials and/or equipment were you using while performing each task?

- Were you interacting with others as you were performing this job, and if so, was the interaction in person or via phone or technology device?

These questions represent just a few of the many different elements that encompass the essential tasks, functions, and responsibilities of a job. Before conducting an observation, the information needs should be determined and organized in a manner

Observation:
Systematic identification, documentation, description, and interpretation of selected behaviors through real-time viewing or listening modalities.

that allows for efficient capture and recording of the data as the observation is occurring in real time so all the necessary job elements receive adequate attention. As an HR practitioner, consultant, or functional manager conducting an observation, you do not want to spend valuable time during the observation period writing out all the behaviors as they occur because you will miss other behaviors as well as key contextual elements that may be driving the incumbent's behaviors. Time spent on viewing and listening during an observation should be maximized, and time spent on writing/typing should be minimized.

Various tools and forms can be implemented to enable ease of recording job data as it is identified during an observation, such as checklists and spreadsheets. An existing job description (even one that is in need of some minor updating) can be a helpful source of information, as the tasks and duties can be used to create an observation checklist. As the job is being performed, the observer can check off the appropriate items on the checklist and even track the frequency of the incumbent's actions (e.g., how many customer complaint issues were received and resolved by a call center employee in a customer service job in a 1-hour time period). Any actions observed that are not represented on the job description can also be recorded and examined during the job analysis, because they may be tasks new to the job that should be integrated when updating the job description or they may even be tasks one incumbent or a small number of incumbents are performing that are actually not part of the formal job responsibilities. Table 3.1 provides an example of an observation checklist based on the essential tasks found in a job description for an administrative assistant.

Obtrusive and Unobtrusive Observation. Observational data collection methods can be obtrusive or unobtrusive. In an **obtrusive observation,** the employees being observed in the job environment are aware of the observer's presence. An important consideration with obtrusive observation is that employees will likely be on their best behavior in the presence of an observer in their work environment, a behavioral phenomenon relevant to the concepts of impression management and social desirability. They may demonstrate behaviors that are often not honest and realistic, potentially compromising the accuracy of the data collected. This appeared to be the case during the well-known Hawthorne Studies, in which researchers were commissioned by Western Electric to obtrusively observe employees performing their jobs at the Hawthorne Works plant (Mayo, 1949). The purpose of the study was to determine if the amount of light in the work area affected workers' productivity. The subjects increased their productivity, and it was later proposed that the attention they were receiving from the researchers may have influenced the increased productivity, not necessarily changes in lighting (Orne, 1962). In an **unobtrusive observation**, the employees being observed in the job setting are not aware of the observer's presence or that they are being observed.

Obtrusive Observation:
Individuals being observed are aware of the presence of the data collector/observer.

Unobtrusive observation:
Individuals being observed are not aware of the presence of the data collector/observer.

Table 3.1   Job Observation Checklist

Job Title: Administrative Assistant Observation Period: 1 hour	Date: _____ Time: _____			
Task/Activity	**Interval 1: 15 Minutes**	**Interval 2: 15 Minutes**	**Interval 3: 15 Minutes**	**Interval 4: 15 Minutes**
Processing and distributing mail				
Greeting and assisting visitors				
Answering and responding to phone calls				
Typing letters, reports, correspondence, and other departmental documents				
Filing paperwork and records				
Entering data into computer system				
Scheduling meetings and appointments, and maintaining staff calendars				
Coordinating travel arrangements for staff and completing expense reports				
Completing purchase orders and requisitions				
Completing financial and budgetary forms and reports				
Ordering office supplies				
Assisting with special projects				
Other: _____				
Other: _____				
Other: _____				

An effective approach to observation in certain circumstances involves a hybrid of obtrusive and unobtrusive observation, in that the observer's presence is known to the employee or employees being observed, but the observer is viewing and recording information in another location through the use of video and audio recording equipment. An example of this technique is an observational approach that is typically used with customer service representatives in a call center. Have you ever called an 800-number to speak with a customer service person and heard the recording "This call may be monitored for quality assurance purposes" before being connected with a representative? This is data collection through observation, though the observation is not visual but rather audio and may not even be examined in real time. HR practitioners, consultants, and/ or supervisors may choose to access call recordings at a later date and/or grouped by incumbent, shift, or type of call (e.g., technical, billing). As you can imagine, an HR practitioner, consultant, or functional/line manager gathering information can conduct an observation using a variety of methods and levels of interaction ranging from complete immersion in the job setting to no contact at all by being completely physically removed from the job setting while the observation is conducted.

Of course, the use of audio and video devices for observing, recording, viewing, and distributing examples of actual workplace activity must comply with legal compliance requirements and ethical guidelines to protect employees' rights. Legal and ethical considerations concerning the assurance of privacy and a safe, nonthreatening work environment must be carefully weighed and included in the decision to proceed with any observational method. There are circumstances in which an unobtrusive observation is inappropriate to the job and/or its setting, and there are situations in which no observational method is appropriate at all. Think about it—would you consider observation (with or without the use of recording devices) of a locker room, dressing room, or restroom attendant a suitable method for gathering job information? As I will reiterate throughout this chapter, each method of data collection will have its benefits and challenges and be more or less suitable in various situations and organizational contexts.

Employee Work Journals/Recordkeeping

A work journal can be considered a blend of a self-report questionnaire and a self-report observation. An incumbent in a job is asked to maintain a written record of everything he or she does on the job during a specified amount of time—for example, one work day or one work week. The work journal itself can be unstructured, essentially a blank notebook, or a structured format such as a spreadsheet or organized template. A structured work journal that includes specific job responsibility categories and is organized by time periods during a work shift may be helpful in enabling recall and providing the incumbent with prompts for making sure as much information in all areas of the job is included. As with the observation checklist, a section for "other" tasks can be included in a structured work journal to allow the incumbent to capture any other tasks that come up and need to be recognized for the job analysis.

While the work journal can be a valuable source of job information based on firsthand experience, there are of course a few caveats. Task information may be recorded based on how the specific incumbent perceives or performs them. The incumbent may forget to write everything down or may not have enough time to stop working and record tasks, especially in fast-paced and customer-facing jobs. What would you think if the cashier processing your shopping order at the grocery store stopped in the middle of your transaction to pull out a pen and notebook to write down all the steps being performed? You would probably not be thinking about how diligent that employee was by recording all his or her task behaviors while you stood there waiting to pay and watching your ice cream melt. On the opposite end of the spectrum, the incumbent may write absolutely *everything* down, such as filling the copy machine with paper, which results in a great deal of superfluous and usually irrelevant information that needs to be sifted through. However, the work journal data collection method can be particularly useful for obtaining the incumbent's view and understanding of his or her job and comparing it to another credible source, such as the functional/line manager or a subject-matter expert, which we will examine next.

Subject-Matter Experts

Subject-matter experts, otherwise known as SMEs, can be a valuable source of information because they either will have firsthand experience and knowledge working in the actual job or experience in their own respective job that required they work closely with incumbents in the job being analyzed. Because subject-matter experts have such a close connection with a job under examination, they often can more readily provide a different level of expertise about the job, one that is comprised of three distinct and equally important types of knowledge-based information: declarative knowledge, procedural knowledge, and tacit knowledge.

Declarative knowledge is any information that comprises the fact-based "nuts and bolts" information needed to understand the job. Let's look at the job of flight attendant as an example. For this job, declarative knowledge may include

- knowing the number of seats and rows in the various aircraft models, as well as number and location of emergency exits;

- knowing the system of different audio signals that the pilot and copilot use to communicate with the cabin and the meaning of each bell tone (i.e., the one, two, or three dings that we hear over the public-address system during a flight but only the flight attendants know the meaning); and

- knowing the inventory, layout, and order of the galley necessary for efficient food and beverage service.

Procedural knowledge is any information needed to understand how to perform various tasks in a job. As the name implies, this type of knowledge is all about the

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Subject-Matter Expert: Also known as SME, an individual with firsthand experience and knowledge about a job.

Declarative Knowledge: Information that comprises the facts needed to understand a job.

Procedural Knowledge: Information needed to understand how to perform necessary job tasks.

procedures and actions required to perform the job correctly. Using our example of the flight attendant job, procedural knowledge may include

- how to demonstrate use of the oxygen masks in the event of an emergency,

- how to stock and organize the food and beverage cart in preparation for either full meal or drink/snack services, and

- how to work the controls for the main door and Jetway connection to the aircraft for embarking/disembarking.

Tacit Knowledge:
Information not officially recorded anywhere that an individual knows because it has been passed down from a predecessor or through trial and error.

Lastly, there is **tacit knowledge**, which is perhaps the most challenging to pin down and articulate in many situations. Tacit knowledge is that type of information that you "just know." It is not necessarily learned from a book or instruction manual. Typically, tacit knowledge is passed down from one person to another based on something discovered through experimenting or trial and error. One example of tacit knowledge that we can probably all relate to is a special family dish that only a certain person knows how to cook because the recipe is not written down, and it is the result of years of improvising and adding a "pinch of this and a pinch of that" until it was perfect. The only way to preserve this precious information is to actually prepare the recipe alongside the family member who knows it, watch each step of the way as he or she measures, dices, and blends ingredients together, and write it all down. In a similar manner, tacit information exists in many jobs too. How many of us have a go-to person on the job who knows a certain sequence of steps or a work-around, not found in any manual, to fix the copier when the paper jam button lights up? The longer an incumbent is in a job, the greater the amount of tacit knowledge he or she will likely accumulate. To return to our example of the flight attendant job, tacit knowledge may include

- how to respond to different types of distressed passengers (e.g., child having a temper tantrum, loud and boisterous passenger) with ease and minimal disruption,

- what to do if there is an insufficient number of special meals (e.g., vegetarian, kosher) onboard after the plane has taken off, and

- how to maneuver carry-on bags of various size and weight safely and in a manner that optimizes all available overhead compartment space.

The most important consideration when working with subject-matter experts, regardless of the type of knowledge they have to offer, is ensuring they have a clear understanding of relevant and comprehensive job information to provide to your job analysis effort. Sometimes, SMEs have been working in a job for so long that it may be difficult to put into words and articulate in detail everything they do on the job; they just do it because it has become second nature. There is also the possibility that an SME may have devised

shortcuts or other ways to perform tasks that are not exactly in accordance with proper procedures and/or safety protocol; they may save time for the incumbent but with a potential risk associated. Collaborating with more than one SME if possible may help to reduce the likelihood of these issues from occurring and impacting your job data.

Questionnaires

Questionnaires are not only used in job analysis but for many other data collection needs—essentially, any area of interest or need in which information needs to be gathered from a targeted sample of individuals. You will notice that this section on the use of questionnaires for data collection in job analysis is a bit lengthier than the sections describing other data collection approaches. There are two reasons for a greater amount of detail in this section. First, questionnaires are one of the more commonly used methods for gathering information about a job. Second, the design and implementation of questionnaires is not a simple process. There are many factors to consider when constructing a questionnaire to ensure it is clear and understandable, inclusive of the correct items in the proper order, objective, and relevant to the job of interest.

There are equally as many factors to consider with questionnaire delivery, including selection of the appropriate modality to the employee or employees for honest, accurate, and timely response. Questionnaire delivery may vary depending on the individuals involved in the data collection process and contextual parameters, such as time and physical logistics, and are typically distributed electronically, though hard-copy questionnaires are still used. In some situations, an HR practitioner or consultant may wish to use more than one delivery method for administering a questionnaire for a job analysis. For example, an incumbent who works in a nonoffice job without a dedicated computer workstation such as a retail salesperson or production worker in a manufacturing plant may best provide job input by completing a hard-copy or electronic questionnaire in person directly in the HR department. On the other hand, a manager who works remotely or travels frequently will almost certainly require an electronic version of the questionnaire accessible via an e-mail link to a web-based system.

Constructing and implementing questionnaires require a skill set that may go above and beyond the qualifications and experience of most HR practitioners. For this reason, questionnaire design, delivery, and data analysis are often conducted by internal or external consultants with this specific expertise. However, I believe it is important for all practitioners in this field to have an understanding of how to design a basic questionnaire. In addition to job analysis, an HR practitioner may need to create questionnaires for other reasons, such as for training program evaluations and for use in the employee exit interview process. There is no reason to be intimidated by the prospect of building a basic, simple questionnaire when you understand the tools and the process to follow. For larger and more complex data collection needs, there are many options available that can be purchased or licensed, with or without assistance from an external consultant. A commonly used prebuilt questionnaire used by many organizations for job analysis is

Questionnaire: A document comprised of a collection of questions and statements designed to gather information from respondents about a topic or area of interest/need.

the Position Analysis Questionnaire, or PAQ, which will be discussed a bit further into this section. The key here is in understanding the breadth and depth of the data needs for the job being examined and the limits of your internal bandwidth and expertise—the classic "build or buy" scenario.

Questionnaire Design Elements. When constructing a questionnaire for job analysis, an HR practitioner or consultant should develop items that will be easily and consistently interpreted by the target audience, which most commonly includes job incumbents and functional/line managers. The individuals who complete a questionnaire of any type are referred to as **respondents**. The questionnaire layout and design also require focus in terms of the overall look and appeal. Visual elements such as color, font style and size, and graphics are an important consideration when developing a questionnaire. A questionnaire should not look unappealing nor should it look cluttered and complicated (i.e., stimuli overload). The items should be clean and straightforward, which requires simple wording in an objective and universal manner to facilitate comprehension and, therefore, accurate responses. The average reading level of the job incumbents should be determined to approximate the level of wording that will be appropriate and not too advanced. In some situations, the questionnaire may need to be correctly translated into several languages if it is being administered to employees in multiple countries. The inclusion of highly specialized industry and field-specific language, or jargon, should be carefully integrated. For a variety of jobs, the inclusion of jargon and/or acronyms in a questionnaire will be necessary to capture critical job-related information. If the questionnaire is being administered to incumbents who may or may not understand this type of language, an option allowing the respondent to select "not applicable" or "do not know" from a list of choices for an item may be a reasonable solution.

The number of questions or items on a questionnaire should also be carefully considered. A questionnaire that is too long may disinterest respondents, who may decide to quit before completing the entire questionnaire, make up answers just to get through it quickly, or decide not to participate at all if the length of the questionnaire is known before beginning. Any items that are not relevant to the job being examined should be omitted.

Many organizations will often have a basic questionnaire template with items applicable to all employees and then modify the template for specific jobs to create customized questionnaires. As you can imagine from all these considerations, questionnaire design is no easy effort, as employees may differ in terms of language comprehension, reading skills, attention span, and memory/recall. Those involved in questionnaire design can integrate a variety of question design elements to suit the needs and content of the questionnaire, which I will discuss next.

Open-Ended and Closed-Ended Questions. In an **open-ended question**, the job incumbent may answer freely and provide a response in any length or detail. The benefit of open-ended questions is they may enable the respondent to provide a greater level of detail and put the response into a useful context that may be a bit more

Respondent: An individual who provides information for a questionnaire.

Open-ended Question: A question that allows the respondent to provide a free-form answer.

challenging to obtain through closed-ended questions. However, a great deal of time and effort may be needed to code/categorize responses to open-ended questions and discard irrelevant information. The following is an example of an open-ended question for a cashier job in a grocery store:

What tasks do you perform at your register when you begin your shift, before you start processing customer transactions?

Response:_____

_____

A **closed-ended question** is one in which the incumbent must provide a response from a limited number of options, such as yes or no. Closed-ended questions are commonly used to focus on specific response options. The benefit of using closed-ended questions is their simplicity for data collection and analysis. The information obtained from closed-ended questions can often be organized and analyzed faster and easier than the information collected through open-ended questions. However, the questionnaire may not include all possible response options suitable to the job, which can result in the incumbent skipping the question or providing an answer that is not really accurate. The following is an example of a closed-ended question for a cashier job in a grocery store:

When do you count out your cash drawer?

Check only one of the following options.

_____ At the beginning of the shift only

_____ At the end of the shift only

_____ At the beginning and the end of the shift

_____ I do not count out the cash drawer at all

Forced-Choice Response Set. A **forced-choice response set** is a useful option that offers a bit more flexibility than the closed-ended question yet retains a tighter boundary for potential responses than the open-ended question. A job questionnaire item that incorporates a forced-choice response set provides incumbents with a short list of items from which to select the most appropriate response or responses to that item. Incumbents may be allowed to select multiple choices from the response set provided or restrict the response to just one option. Either approach is reasonable and depends on the intent of the questionnaire item and the specific data needs. A questionnaire designer could also decide to include an "other" option in the event a respondent does not see an appropriate choice among the options listed. The use of the "other" option should be carefully considered before implementation, as it is considered open-ended and will require time for categorization and coding of information before the

Closed-ended Question: A question that requires the respondent to provide an answer from a limited number of options such as yes/no.

Forced-Choice Response Set: A questionnaire item that enables the respondent to select an answer from a set of choices.

responses can be analyzed. The following is an example of a forced-choice response set for a cashier job in a grocery store:

What tasks do you perform at your register when you begin your shift, before you start processing customer transactions? Check all responses that apply.

_____ Sign in to the system

_____ Put on name tag and/or apron

_____ Count the cash drawer

_____ Turn on the conveyer belt

_____ Review the weekly flyer for items on sale

_____ Replenish the grocery bags

_____ Ensure an adequate supply of paper in the receipt machine

_____ Wipe the scanner window and counter with spray cleaner and a paper towel

_____ Turn on register station light to signal the lane is open

_____ Other: _____

Response Scales. For certain types of questionnaire items, response scales that provide options that fall along a continuum can be used. Depending on the questionnaire item, the options on a response scale can be provided as numbers, words, phrases, and even graphics. Perhaps the most commonly used type of response scale is the Likert scale, named for its developer Rensis Likert (1932), which can be customized based on the appropriate response needed for a questionnaire item and the level of detail needed from the response. The scale choices, referred to as **anchors**, represent a range of selection options along the scale from which to choose in response to the questionnaire item. Questionnaire designers often use response scales that consist of five to seven anchors. A response scale that includes too few anchors may not offer an adequate number of choices, and respondents may be forced to choose a less-than-accurate option. A response scale that offers too many anchors may confuse the respondent due to a lack of true differentiation from one anchor to the next. Different items on a questionnaire can have response scales with different types of anchors, and, in fact, this is a fairly common design. However, the scales used should include the same number of anchors (e.g., all 5-point scales) for consistency and simplicity for the respondent. Scales that vary throughout the questionnaire—for example, a 3-point scale followed by a 7-point scale—may be confusing for the respondents and increase the likelihood for inaccurate answers or fewer completed questionnaires.

Anchor: A selection option on a questionnaire response scale.

An HR practitioner or consultant who is interested in the number of times a job incumbent behaves in a particular manner or performs a specific task may design a frequency scale. Frequency scales are commonly used in questionnaires, though a researcher must construct the anchor labels carefully. It is important that (1) the anchor labels are not vague, (2) the anchor labels represent all time/frequency options necessary to examine, and (3) the progression from one end of the scale to the other should follow a logical sequence and reasonably equal distance between anchor points. An example of a Likert scale examining the frequency of a task performed on the job, and the accompanying questionnaire item, may be constructed as follows:

On a typical work shift, approximately how many customers do you assist with helping them to locate a specific item in the store?

1	2	3	4	5
0 customers	1-2 customers	3-4 customers	5-6 customers	7 or more customers

Questionnaire Issues. The two main areas of concern with the data derived from questionnaires are (1) honesty of responses and (2) memory and recall of the respondents. These issues are also relevant to any self-report measures used, as well as interviews. Let's examine each of these issues in detail.

Honesty. Even the most accurate, objective, and well-designed questionnaire may be subject to inaccuracies from dishonest responses, ranging from "white lies" to dramatic falsification. A common issue regarding honesty in questionnaires is impression management, which is the tendency of individuals to alter their behaviors based on their perception of what will make a good impression to others. In most situations, an incumbent is not being dishonest on a job questionnaire with malicious intent but rather to provide the impression that his or her job is highly sophisticated, complex, and critical to the success of the organization. Again, a useful strategy to determine the extent of honest responses on a questionnaire is to compare that information with the information about the same job gathered from other sources, such as an observation or interview with the incumbent's manager. All the data collected through the various methods should be in alignment.

Memory and Recall. In some situations, respondents simply do not remember the information correctly. For example, if you were asked "How many hours of television did you watch in the last week?" would you be able to recall the exact number of hours you watched television? It is highly unlikely. To facilitate recall, questionnaire items can be designed to assist respondents with cues that are especially helpful with frequency and time ranges.

The following are examples of a question without assisting recall cues and a question that provides a recall cue in the form of a forced-choice frequency response set:

Question without a recall cue:

In the past week, how many merchandise returns and/or exchanges did you process?

_____ merchandise returns/exchanges

Question with a recall cue:

In the past week, how many merchandise returns and/or exchanges did you process?

_____ 10 or more merchandise returns/exchanges

_____ 7–9 merchandise returns/exchanges

_____ 4–6 merchandise returns/exchanges

_____ 1–3 merchandise returns/exchanges

_____ I did not process any merchandise returns/exchanges this past week

Interviews

Interview: A structured real-time discussion with a knowledgeable source of job-related information.

An HR practitioner or consultant may conduct structured **interviews** to facilitate data collection and gather information about a job from different sources in a fairly budget-friendly way. Job incumbents, coworkers, supervisors, and managers may all be reasonable interviewees depending on the situation. An interview may range from 20 minutes to a couple of hours and should be determined in advance based on the anticipated scope and/or depth of the interviewee's job knowledge. The interviewer should provide a list of questions or topics that will be covered to ensure that the interviewee is prepared to provide the appropriate information or bring any important materials or resources to the interview session. This strategy not only facilitates the collection of specific and relevant information but it can also save time and the need for follow-up action.

Critical Incident Technique: An open-ended interview item in which the interviewee is asked for an example of a real job-related situation.

A valuable interview approach worth mentioning is commonly referred to as the **critical incident technique.** This is considered an open-ended question, and the interviewee is asked to provide a more narrative example of a real situation that is relevant to the construct of interest. For example, if the topic of customer service is the focus area for interviewing an incumbent in a retail sales job, a critical incident item may be "Describe a time when you provided excellent service or support to a customer, and highlight the specific details of this experience that you believe made it excellent." This item can also be tailored to be asked of an interviewee who is not the actual job incumbent—for

EXAMINING THE POSITION ANALYSIS QUESTIONNAIRE

The PAQ is a standardized questionnaire used to assess all the necessary elements of a job, including the behaviors required to adequately perform the work. The PAQ was developed at Purdue University by researchers McCormick, Jenneret, and Meacham in 1972 and has been used by organizations to collect data for job analyses since 1974. Through their research, in which many different jobs were examined and analyzed, a set of common behavioral dimensions emerged. This formed the framework for the PAQ instrument, which originally consisted of 194 items and now consists of 300 items, organized into the following six categories:

Information Input:

    The information sources needed for an incumbent to perform the job effectively

Mental Processes:

    Critical thinking, reasoning, analytical skills, synthesizing information for decision making, and other cognitive ability requirements

Work Output:

    The physical/manual activities necessary to perform the job as well as the required equipment, tools, and other devices

Relationships With Others:

    The individuals with which the incumbent must work and communicate to effectively perform the job, including personal contact, instruction, and supervision

Job Context:

    The physical/environmental and social context in which the job is performed

Other Job Characteristics:

    Special job demands, work pace, unique work requirements not included in the other categories

    Different response scales are used for evaluating the items in each of these categories. Each scale is relevant to the items in the category and measure criticality or importance to the job (I), frequency or time spent in the job (T), extent of use in the job (U), possibility of occurrence in the job (P), applicability to the job (A), and special codes (S).

    The PAQ is an in-depth questionnaire and covers every detail about a job that is necessary in certain situations, especially concerning safe work behaviors and safety protocol, as well as for determining the Fair Labor Standards Act classification of a job (e.g., exempt/nonexempt). The PAQ is generally not completed by an incumbent but rather by a trained HR practitioner or consultant. Completed questionnaires are analyzed by computer, and results provide valuable information regarding necessary aptitude and selection test scores for a job, the KSAOs that should form the minimum qualifications for a job, estimated weightings and points for conducting a job evaluation, and benchmark comparisons across similar jobs in the PAQ database for determining job levels and grades for internal equity. The PAQ is a copyrighted assessment tool and therefore must be purchased and accessed through PAQ Services (www.paq.com).

example, with an incumbent's direct supervisor. The critical incident item in this context may be "Describe a time when you observed a team member under your supervision provide excellent service or support to a customer, and highlight the specific details of

this experience that you believe made it excellent." This technique is quite similar to the behavioral-based or experiential interview approach used in candidate selection, which we will examine a bit further into this book.

While interviews are a source of reliable and credible information, provided you gather information from appropriate sources, they are, of course, not without some challenges. Interviews can be quite time consuming, particularly if a large number of interviews must be conducted, if interviewees are geographically dispersed, or have schedules/shifts that leave little room for taking time away from their workday to be interviewed. A group interview may be implemented as an efficient method for collecting data from multiple individuals at the same time. Group size can vary but should not be so large that responses from all interviewees are not possible. A group interview should not be considered if it is believed that interviewees may distort responses to conform to the group or to make a certain impression during the interview session.

In many situations, a specific data collection method will appear to be more appropriate than the other options, and the benefits and challenges of the data collection methods most commonly used for job analysis are described in Table 3.2. Working within stringent budgetary parameters is a common concern, which may necessitate using a low-cost method. Logistical constraints are another challenge. A significant logistical challenge that presents itself may require the need to coordinate with others' schedules (e.g., employees, HR staff, subject-matter experts, line/functional managers) for conducting meetings, interviews, and observations when the timing is convenient for them. For example, when I worked in the HR function for a manufacturing plant operating 24 hours a day/7 days a week/363 days a year (the plant shut down for routine maintenance on July 4th and December 25th), it was occasionally necessary for me to juggle my normal 8:30 a.m. to 5:00 p.m., Monday through Friday work schedule to be able to meet with employees or shift supervisors on their time. This meant that sometimes I had to be at the plant on a Saturday morning, or at 6:00 a.m. or 8:00 p.m. on a weekday. If this type of flexibility is simply not possible on the part of the HR practitioner or consultant responsible for gathering information for the job analysis, then it may mean eliminating or modifying how interviews and observations could be used as potential data collection methods. Fortunately, with technology such as video-enabled communication via smartphones, tablets, and laptops, use of these methods may still be feasible to a degree even when connecting in person to gather information is not possible or is too cumbersome to accomplish.

Another logistical challenge is the securing of a location/physical space and other materials necessary to collect data. For someone internally, such as an HR practitioner, securing a location to conduct one-on-one or group interviews and meetings may be relatively easy to do, especially if the person has an office or access to a meeting or conference room. For an external consultant, this may require an extra step in the coordination

Table 3.2 Benefits and Challenges of Job Analysis Data Collection Methods		
Data Collection Method	**Benefits**	**Challenges**
Archival Records	• Low cost • Records can be examined on data collector's schedule and pace; no need to work around employee and managers' schedules and other logistical constraints	• May be time consuming • Missing information or gaps may occur • Only as accurate as the individuals who recorded the information
Employee Observation	• Low cost • Real-time data can be obtained • Opportunity to ask employees questions or clarify how or why tasks are performed as they are demonstrating them	• May be time consuming • If observation must be unobtrusive, this may be logistically difficult to accomplish • If obtrusive, employees may alter their typical behavior to make a good impression
Employee Journals/ Recordkeeping	• Low cost • Firsthand knowledge of the job	• Self-report journals can be embellished to create the perception a job is more important or complex than in reality
Subject-Matter Experts	• Low cost • Firsthand knowledge of the job	• If currently in the job, may embellish tasks and responsibilities to enhance perception of importance • If no longer in the job, may not remember all details required of job tasks, or may not be aware of process improvements or updates since working in the job
Questionnaires	• Can be customized based on specific job requirements or organizational needs • Can be administered to many individuals across multiple locations to ensure consistency • May be reused	• May be costly to purchase • May be time consuming to create and validate • If used as a self-report measure, honesty of employee responses may be questionable
Interviews	• Low cost • Do not have to be conducted in person • Data from a variety of sources	• May be time consuming to conduct individual interviews • Impression management and conformity may impact honest responses in a group interview

process. In many situations, an external consultant will be able to use office or meeting room space in the HR department or even meet with supervisors and managers in their respective offices. In my experience, I prefer the use of space in the HR department,

because employees have a tendency to panic or think a worst-case scenario (e.g., restructuring, layoff) when they see a consultant in a private meeting with their manager having a discussion about jobs. Another benefit to meeting with key stakeholders in the HR department is the immediate accessibility of employee files. During the course of a data collection meeting with a line/functional manager being held in the HR department, any need for clarification or additional information may be met right away by examining the employee files and documentation maintained there.

For these reasons, it is highly recommended that a combination approach is taken when collecting data for a job analysis. This strategy will ensure sufficient information is gathered and, most important, that the information is reliable and accurate. The different methods you use will act as checks and balances for each other by providing validation for similar findings from one method to another and by highlighting inconsistencies in data provided by one source that do not appear to align with data obtained from other sources. For an HR practitioner or consultant conducting a job analysis, there is a greater degree of confidence in the accuracy of the data when similar pieces of information are obtained through multiple sources.

PHASE 3: ORGANIZE AND ANALYZE DATA

In the next phase of the job analysis process, all the information collected is organized in a meaningful and structured manner to assess relevance, descriptiveness, accuracy, and consistency across sources. At this point, a smart first step would be to move each piece of information (with its source) into one of the appropriate categories that were identified in Phase 2 of the process. When reviewing each piece of information, a determination should be made as to where it fits and is relevant—key job responsibilities, their associated tasks and activities, incumbent qualifications, reporting relationships, work environment/conditions, and so on. This can be time consuming, as there will most likely be quite a bit of information in different forms and contexts. For example, the information obtained may have been captured through written notes, phone/video recordings, checklists, e-mail communication, and database reports. As a result, the data will probably look a bit disjointed in its original form before it actually comes together in a comprehensive manner.

As the job data are examined, there will be quantitative information, such as:

- Number of transactions processed at a cash register for a retail sales job

- Number of calls handled for a customer service representative job

- Number of products assembled or inspected for a manufacturing or quality-control job

There will also be qualitative information, such as:

- The tasks required for retail sales associates for handling a merchandise return

- The steps taken by a bartender for making a specific cocktail

- The procedures followed by a pilot for preparing the plane for takeoff and landing

I recommend the adoption of a systematic approach to analyzing the data collected. Design a procedure that could be used every time a job analysis is conducted to ensure consistency as well as to avoid reinventing the wheel or becoming overwhelmed in a sea of data. Many data scientists and researchers use a coding system to sort through qualitative data and facilitate categorization, and this can also be beneficial to HR practitioners and consultants involved in this phase. A spreadsheet, database, or similar type of system can be a valuable tool for entering and organizing data for analysis. Table 3.3 provides an example of a framework for organizing job data collected. As you can see in this example, the data obtained from the self-report questionnaire is rather sparse, and additional details have fortunately been obtained through the other two sources of job data.

This systematic approach facilitates analysis and also allows for examination of data across multiple sources in one view. This is important because inaccuracies in the data are inevitable, and having a strategy and the right tools will be critical for identifying them so they are not included in the job evaluation process and in the development of a job description. In a study conducted by Morgeson and Campion (1997), 16 potential sources of inaccuracy in job analysis data were examined and delineated, including the following:

1. Social sources: social influence processes, conformity pressures, extremity shifts, loss of motivation

2. Self-presentation processes: impression management, social desirability, demand effects

3. Cognitive sources: limitations in information processing systems, information overload, heuristics, categorization

4. Biases in information processing systems: carelessness, extraneous information, inadequate information, order and contrast effects, halo effect, leniency and severity, methods effects

What do these findings mean to you? Well, the key takeaway here is that there is a wide variety of potential sources of invalidity in the data gathered for use in a job analysis, many of which are out of the control of the individual(s) collecting and analyzing

Table 3.3 Data Organization and Categorization System for Job Analysis

Job Title: Human Resources Coordinator

Data Source	Job Responsibility: • Processing of Departmental Information	Job Responsibility: • Handling of Departmental Communications	Job Responsibility: • Scheduling of Appointments and Meetings	Job Responsibility: • Maintaining Office Supply Inventory
Observation	• Filed stack of paperwork that included benefits/health insurance forms, performance appraisals, and disciplinary documentation in employee files	• Answered main phone several times and forwarded calls to the correct HR staff member; one call had to be placed on hold in order to answer another incoming call	• Responded to e-mails from functional managers requesting meetings with HR staff members by offering date/time options after reviewing their calendars	• Examined quantity and type of existing office supplies including copy paper and toner, pens, notepads, and file folders, and processed a request to vendor using established purchase order (P.O.) number
Self-Report Questionnaire	• Maintains employee records	• Handles all incoming phone calls and walk-in visitors	• Maintains all HR staff members' daily/weekly schedules	• Maintains adequate quantity of office and departmental kitchen supplies
Supervisor Interview	• Files all employee paperwork in personnel files • Enters employee data in HRIS and runs necessary personnel reports upon request	• Greets all in-person visitors arriving for appointments with HR staff • Answers main phone number and forwards calls appropriately • Acts as a backup for incoming calls on staff members' extensions in their absence	• Coordinates appointments and meetings for HR manager and staff through access to their online calendars, and schedules blocks of time for the needs of internal and external constituents	• Keeps inventory of supplies needed to keep HR department well stocked for staff and visitors, including office paper goods and equipment needs and kitchen paper goods, snacks, and coffee; processes orders with appropriate vendors weekly or as needed

the data. Therefore, the best strategy to take is to (1) identify one or more reliable and competent individuals who are in a position to obtain relevant and credible information and (2) use multiple methods for data collection, chosen with attention to organizational

ORGANIZATIONAL BEST PRACTICES

Discovering Data in New Places—Job Analysis Leverages Social Networking Tools

The concept of *big data*, a ubiquitous term these days, refers to the seemingly unlimited and endless stream of multidirectional information pervasive in all areas of business and society. Data scientists and analytics experts are leveraging this data in ways to understand current trends and issues, to evaluate programs and practices, and to forecast where a current trend or scenario is moving to make the most-educated decisions. In the ongoing search for valid and reliable job data, HR practitioners and consultants are also turning to big data for new sources of trusted job-related information. In particular, the social networking site LinkedIn has emerged as a widely used source of job data. LinkedIn profiles are comprised of an individual's professional background, including work experience, skill sets, education, publications, projects, presentations, awards and honors, languages spoken, and many other specialized sections that a user can integrate into a customized profile (e.g., volunteer work, patents). A profile on LinkedIn could be considered one part resume and one part self-reported professional journal.

Juniper Networks, a Silicon Valley technology firm, has been successfully using LinkedIn as a source of job data. The company leverages data such as employee skill sets, functional knowledge, and job duties and responsibilities to analyze jobs and examine trends relevant to a job's evolving qualifications, tasks, and necessary skills. By analyzing these data of current, former, and prospective employees on LinkedIn, Juniper Networks is able to fully understand how a job has evolved and what is required going forward for ideal job fit and long-term success for both the employee and organization. Having access to such breadth and depth of individuals' professional information enables organizations such as Juniper Networks and others to mine exactly the type of information they need to fill in data gaps, to conduct benchmark and comparative analyses with existing data, and to validate the required KSAOs for a job.

Typically, professionals on LinkedIn do maintain accurate profiles and make regular updates to their information. Yet this is challenging to actually validate with any frequency and/or certainty. Because this information is essentially self-reported data, it should not be unquestioningly accepted as completely honest and accurate. It is important to cross-check the information collected through LinkedIn and other social networking and social media sources with information that has been validated and determined to be current and accurate.

Source: Roberts, B. (2013, October 1). The benefits of big data. *HR Magazine*, 21–30.

climate/trust, accessibility, and logistical parameters. Do not interpret that idea as employing everyone and everything for your data collection approach—the notion of "Let's throw everything at the wall and see what sticks." There should still be a reasonable degree of rationale and logic driving the determination of the most suitable methods of data collection for a given job, including examining the context/setting of the job itself and available resources needed such as budget, time allotment, and input from others.

CHAPTER SUMMARY

- Job analysis and design are considered the foundation for all employment-related practices to be developed and implemented, with the primary goal of examining a job and its worth in the context of current and projected work needs as determined by the organization.

- The job analysis process involves the collecting of data about the job's tasks, responsibilities, working conditions, necessary materials/equipment usage, and the knowledge, skill sets, abilities, and other qualifications required to competently and consistently perform the job, as well as evaluating these job factors with a standardized weighting scale to determine the appropriate level and compensation range.

- The first phase of the job analysis process involves working with key stakeholders in the organization to identify the job to examine, which is important for getting to the business driver (or drivers) for why this job needs attention at this particular time.

- The second phase of the job analysis process involves determining appropriate information sources and making a plan for collecting job-related data. Several critical questions should be addressed at the onset of this phase, including what is the type of information that needs to be obtained, who should be providing the information, and what is the best method for gathering job-related information. The answers to these questions will enable an HR practitioner, consultant, and anyone else instrumental to the data collection process to make informed decisions regarding the quality, quantity, and relevance of the information obtained. Several common sources of job-related data include archival records, observation, employee work journals, subject-matter experts, questionnaires, and interviews.

- The third phase of the job analysis process involves organizing all the data collected in a meaningful and structured manner to assess relevance, descriptiveness, accuracy, and consistency across sources. A systematic approach is recommended for organizing and categorizing the data for analysis and determination of its accuracy and reliability for use in the job evaluation process and job description development.

KEY TERMS