Selection Analyst Cohort

Job Analysis

CAL★HR
CALIFORNIA DEPARTMENT OF HUMAN RESOURCES

HR Academy

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Introduction

The purpose of this manual is to walk new and seasoned analysts through the Job Analysis process from start to finish. Job Analyses in the State of California are primarily used for examination purposes because they provide a legally defensible justification for the knowledge, skills, abilities, and other characteristics (KSAOs) that an examination is designed to test for. However, they can be used for anything from examinations to recruitment, hiring, and training because the data and information gathered identify the essential functions and KSAOs of a classification.

The Job Analysis process can be broken into five main steps which will be discussed in further detail later in this manual. The steps are:

Diagram A.

1	2	3	4	5
First Step Conduct Job Research & Study Planning	**Second Step** Write Task Statements	**Third Step** Write KSAO Statements	**Fourth Step** Rate & Link Task and KSAO Statements	**Fifth Step** Document Job Analysis Method and Results

As you move through this manual, you will find each step explained in depth as well as resources, job aids, tips, and best practices that will help demystify the Job Analysis process. The steps will be covered in this manual in the order in which they would typically be done on the job.

Learning Objectives

By the end of this course, participants will be able to:

Detail
The CalHR Job Analysis process steps

Rate
Accurate task and KSAO Statements

Articulate
The legal requirements for a Job Analysis

Link
Accurate task and KSAO Statements

Document
The entire Job Analysis process

Conduct
A complete and successful Job Analysis
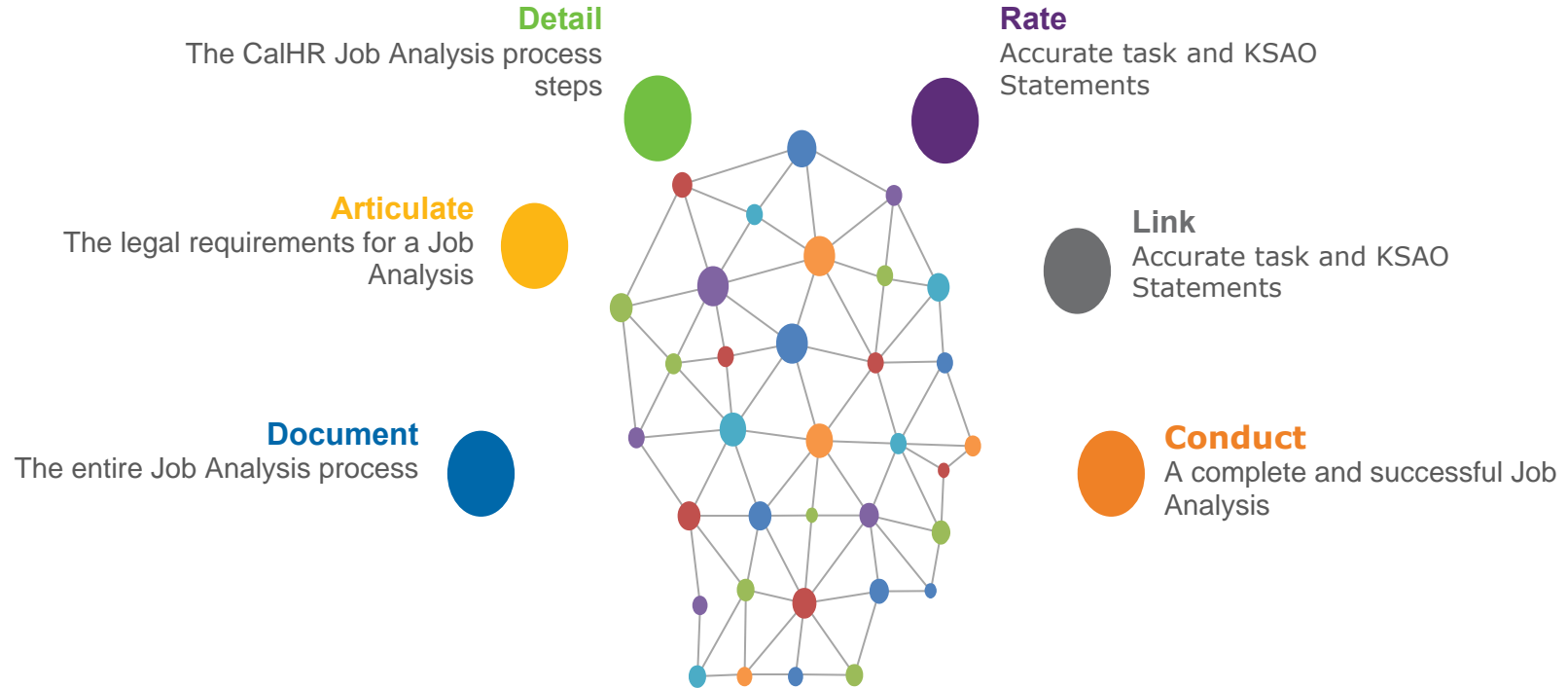
Foundations of Job Analysis

What is Job Analysis?

California Code of Regulations (CCR) section 79 defines a Job Analysis as: "The process of systematically identifying the essential tasks and functions performed in a classification and identifying the competencies that are required to perform those essential tasks and functions." Simply put, a Job Analysis is a specific structured way of collecting data related to the fundamental aspects of a job or classification like the knowledge, skills, abilities, and other characteristics (KSAOs) required to successfully perform a job or the most important or representative tasks and duties of a classification.

This information is then used to develop examinations, develop training courses and programs, and identify characteristics that potential applicants should demonstrate in an interview, among other uses. That is why a good Job Analysis is important, especially for examination purposes. It would be impossible to develop an examination for a Special Investigator classification without knowing exactly what a person in that classification actually does, and what KSAOs are required to do the job. Similarly, it would be difficult to design safety training for a Warehouse Worker at the Department of General Services without detailed knowledge of the job's primary functions and common tasks.

With that said, it is important to understand how a Job Analysis identifies the essential aspects of a job and what specifically a Job Analysis is designed to analyze. In order to do that, it is important to understand the levels of work also called the hierarchy of work activities (Brannick, 2007). Below are the typical levels of a field of work in order from largest to smallest:

- *Branch of work.* An example of a branch could be the Human Resources (HR) branch, which refers to all jobs related to HR.
- *Group.* A group of work could be all selection related jobs.
- *Series.* A series breaks the job group into smaller categories like journey-level analyst, first line supervisor, chief, and so on.
- *Job.* A job means similar work done by different people like an Examination Analyst.
- *Position.* This is a specific job held by one person (e.g., Nick an Examination Analyst at CalHR).
- *Duty.* A duty is a collection of tasks directed at general job goals. An Examination Analyst, for example, may have several duties related to developing an examination and each duty requires him to perform a series of tasks to complete it. Many of the best job analyses examine approximately 5-12 duties for the typical job (Brannick, 2007). This is generally the level at which State job analyses start.

- *Task.* A task is a collection of specific activities that must be performed to meet some job objective like facilitating a Subject Matter Expert (SME) meeting. A well-done Job Analysis will often contain between 30 – 100 tasks depending on the job.
- *Activity.* An activity is a cluster of job elements. For example, in order to facilitate a SME meeting, an analyst would need to complete activities like contact prospective SMEs, schedule the meeting, reserve a meeting room, etc.
- *Element.* An element may not be an obvious physical action but still contributes to an activity.

Which level your Job Analysis studies depends on the purpose of the Job Analysis. As mentioned above, job analyses for State purposes typically explore classifications at the duty or task level. For example, if you are conducting a Job Analysis for examination development purposes, then it should focus on the tasks associated with a job. On the contrary, your Job Analysis should focus on the duty level of a job if you are planning to use it for creating a more global document like a new classification specification.

Table A Examples of levels/units of analysis in a Job Analysis (Brannick, 2007)

Term	Example
Branch	HR
Group	Law enforcement
Series	Sworn law enforcement officers
Job	Police Officer
Position	Jane Doe, Police Officer, South District
Duty	Traffic enforcement
Task	Issue tickets to law violators
Activity	Pull motorist over
Element	Switch on siren and lights

Job Analysis – the foundation of HR function

While the majority of job analyses done for State service will be used for examination and hiring purposes, there are many other areas in which the data could be used.

1. *Job classification.* Job classification is the process of clustering jobs into families of similar jobs. Job Analysis data (often at the task or duty level) are used to identify, compare, and then group like-jobs into classifications (e.g., Staff Services Analyst). Typically, rules of thumb are agreed upon prior to conducting classification studies to

determine how much overlap between jobs must be present in order for the jobs to be grouped together.

2. *Job evaluation.* Job evaluation involves understanding the relative worth of a job(s) to an employer. Job Analysis data are used to help the employer decide the salary levels of similar jobs both within the organization and comparatively to jobs in the marketplace. By establishing fair pay, job evaluation helps attract and retain quality employees.

3. *Performance evaluation.* Performance appraisals are often used by employers to determine salary increases and promotional opportunities. In State service work performance appraisals are mostly used for employee development purposes. Regardless, Job Analysis is the mechanism employers should use to understand which tasks are crucial for performing well on the job, and which tasks are more superfluous.

4. *Training.* A majority of what employees need to know or do on the job is learned after they are hired via an employee training program. Job Analysis helps develop training curriculum by identifying key KSAOs that job incumbents need to perform well on the job. Once the critical KSAOs are identified, training can be designed to address gaps.

The building blocks of Job Analysis

There are four main building blocks that create the foundation of a Job Analysis. All four must be laid out to create a solid Job Analysis. If any of the initial questions are not answered, then the Job Analysis cannot be completed.

Building Block 1: What kinds of job data/information will be collected?
Every Job Analysis begins with a clearly defined purpose. It is extremely important that you know the purpose of your Job Analysis. It affects other aspects of your Job Analysis, like the level at which you will begin your study. It also affects the kind of data that you will gather. Below are some possible data types (Brannick, 2007) that may come out of a Job Analysis study depending on its purpose.

1. *Organizational philosophy and structure.* Collecting this type of data may help an analyst who is involved in a reorganization or consolidation project. This data shows how a particular job fits into the larger organizational structure. It can also tell an analyst more about the job itself based on its position in the organization. An analyst can tell by an organizational chart whether a position is managerial or subordinate in relation to other positions, and may be able to draw conclusions about what some of the duties of the position may be. The philosophy or attitude of an organization also tells an analyst more about a job. An incumbent may approach her job differently depending on the way that the job is viewed within the organization. That may also help to inform the

analyst of what a person might do and/or how he might do it. Imagine how an Office Technician who works in a department where the position is viewed as an essential part of daily operations may approach her job, versus one who works in a department that views the same position as unnecessary.

2. *Licensing and other mandated requirements.* This data is good for anyone involved in recruitment and hiring because it limits the pool of potential applicants based on the licensing or other requirements. It also helps for analysts who develop examinations for such positions which measure applicants' training and experience or qualifications. Essentially, this data can help the analyst draw conclusions about what an applicant or incumbent should know in order to successfully perform in a particular job.

3. *Professional standards.* This data is also good for measuring what a applicant or incumbent should know or be able to do in order to successfully perform on the job. However, unlike licensing or mandated requirements, professional standards are more like best practices. They may not be required for a particular position, but they may demonstrate a higher degree or level of proficiency in a field. Most professional standards come from recognized organizations and groups considered leaders in a field or area of study like the Project Management Institute. Many also require members to adhere to or follow certain standards to remain in good standing with the organization. If a majority of incumbents of a position are also members of a particular organization, an analyst can assume that they are at least aware of the best practices in a field, and likely use them to successfully perform in their jobs.

4. *Job context.* This data is critical for analysts involved in the selection process. In fact, most if not all of your job analyses will contain this data, particularly for those classifications that are used throughout a region or the State as a whole. This information is very helpful for projects like classification specification revisions. Job context data provides more information about the setting or conditions in which a job is performed. This information is sometimes posted on job bulletins under the "Working Conditions" section. It is important to know whether a job is performed in extreme or dangerous conditions, indoors or outdoors, regular or variable shifts, etc. For departments like CalTrans or California Department of Corrections and Rehabilitation, where a person works can affect how they work and what they do. An example of this might be the difference between a CalTrans Equipment Operator in San Diego County and one in Lassen County. The equipment that is used in an area that receives heavy snowfall might be very different from equipment used in an area where the weather is typically hot and sunny.

5. *Work performance indicators.* This type of data usually helps to show what is considered successful or satisfactory job performance and what is not. It may be useful for analysts who are also involved in training as well as analysts involved in various

areas of selection. It can identify areas of opportunity for training, what level of performance is considered minimally competent for examination purposes, or what should be included in a hiring assessment.

6. *Personal job demands.* This data type is closely related to job context data. It focuses on the effects of the work conditions on the person doing the job. This data may be helpful to analysts who need to know how demanding or physically taxing a job is, like for a classification specification revision, recruitment, examination, or hiring assessment purposes. Information gathered might include the physical (i.e. lifting or carrying heavy objects), psychological (i.e. maintaining composure in high-stress situations), or social (i.e. highly visible or political public-facing position) effects or demands that a job may have on an incumbent. For analysts who deal with Peace Officer, Correctional Officer, or firefighter classifications (among others), this data may help to develop more realistic or relevant Work Sample and Performance Tests.

7. *Work activities.* Work activities are the tasks that an incumbent performs as part of the job. This data is usually included in any civil service Job Analysis. The data can be used to update classification specifications, develop examinations and hiring assessments, performance measurements, and for other HR and selection functions. It provides a detailed explanation of what incumbents of a job actually do on a regular basis.

8. *Worker characteristics.* Worker characteristics are essentially the KSAOs that incumbents must have in order to successfully perform on the job. Like work activities, this data is also important for developing examinations because KSAOs that are linked to job performance can be tested for.

9. *Critical incidents.* Critical incidents can be good or bad stories or situations that have happened to incumbents of a job. This data might reveal other tasks and KSAOs that are related to the job but did not come out in other areas of a Job Analysis or preliminary Job Analysis research. They represent the best and worst case scenarios of worker performance or working conditions. Think of the forklift driver who destroyed an entire warehouse by backing into a shelf and causing a domino effect of disaster, or the Personnel Technician who prevented a fire by quickly recognizing a problem with and shutting down a malfunctioning piece of office equipment.

Each of these data types may be useful in various areas of selection and HR. Knowing exactly what you are collecting data for, and how the data is intended to be used will help you decide what data types to collect during your Job Analysis. Without a clear purpose, a Job Analysis may not collect what you or your program needs. In most cases, analysts are told by their program or supervisor what the purpose of the Job Analysis is (i.e. to develop an examination,

update a classification specification, etc.). The only thing left to do is decide what data will fulfill that purpose and move on to the next step in the foundational process.

Building Blocks 2 and 3: What <u>methods</u> and related <u>sources</u> of data collection will be used?

After identifying the purpose and what data should be collected during the Job Analysis process, it is time to decide how and where the data can best be gathered. There are five common data collection methods used by most departments. Each one has its own benefits and potential challenges. What you choose may also be limited to what resources or personnel are available.

1. *Observations.* A common data collection technique in Job Analysis is simple observation, in which the analyst watches workers do the job being studied. If observation occurs over long periods of time (like is necessary for very technical or complicated jobs) the analyst often becomes a normal part of the worker's environment, and therefore sees an accurate portrayal of the job. Shorter-term observations sometimes cause the worker to change the way they work because they are conscious of being watched. The goal is to use observation techniques that cause minimal disturbance or impact on the actual work performance. An example of observation is doing a ride-along with a police officer.

2. *Interviews and SME workshops.* One of the most common data collection techniques (especially within California State Service) involves interviewing individuals that are knowledgeable of the job under study. The interview strategy can be used with individuals or with groups. The main recommendation is to use carefully constructed, structured interviews so that every interview covers the same themes. More will be said about this in chapter two when creating task Statements is discussed. The source for interviews includes job supervisors, executive management, the incumbent, and technical experts like college professors etc.

3. *Questionnaires.* Another common data collection technique commonly used in State service is the questionnaire. Questionnaires are often comprised of task and KSAO Statements culled during job observations or during interviews. The tasks and KSAOs are carefully compiled into a questionnaire which is then sent (typically via email) to job incumbents for the job under study. Rating scales (importance, necessary for performance, etc.) are typically included to allow job incumbents to provide quantitative input. More is said about this in chapters two and three. The source for questionnaire data includes the analyst (who compiles the questionnaire) and current job incumbents (who complete the questionnaire).

4. *Researching literature and records.* Analysts can gain valuable insight into the nature of a job by reviewing existing company records. For example, existing classification

specifications, older job analyses, performance appraisal information, accident reports, etc. are often great sources of information. Formal reviews of O*Net are also excellent ways to gain an initial understanding of the job tasks and related KSAOs required to do the job. Technical reports, books, training materials, manuals, and checklists are all excellent sources of job information. The source for this kind of data would be written or online documents, and the World Wide Web.

5. *Doing the work*. A less common method of data collection is doing the work, which involves the analyst actually performing the work under study. The approach is typically limited to simpler jobs where errors in performance are not critical. For example, an analyst should probably not attempt to perform heart surgery (unless of course, he or she moonlights as a surgeon).

Often, analysts use a combination of data collection methods rather than just one. Multiple methods allow for more data to be collected from a larger population. This is particularly true when dealing with classifications that are spread out, used throughout the State, or in areas that require difficult travel. It also provides an opportunity to capture data that a single collection method may not have gathered, and reduces the impact of the limitations of each collection method used. Usually analysts use a combination of research, questionnaires, and interviews and SME workshops to gather the data that they need. The methods that you choose are up to you and your department or program's needs and resources.

Representative Sampling

In addition to determining the data collection method, it is also important to identify from whom you will collect the data. This goes beyond the general collection of incumbents in the classification that will be studied. The "who" refers more to the representative sample of the classification that should be included in the study. A representative sample is a cross-section of a population that accurately represents all of the diverse groups within the population. Diversity in this case goes beyond race and gender identity. Other categories to consider are age, years in a classification or tenure, education level, work schedule, work shift, and region. It may also be important to identify whether or not there are variations in the role of incumbents in a particular classification.

This representative sample is essential to capturing the range of experiences, tasks, and other nuances of the job that you are analyzing. The goal of the representative sample is to make sure that analysts get input from as many of the different people doing the job as possible, to have a more accurate Job Analysis and more reliable data.

Analysts are not limited to these categories when trying to determine what a representative sample is for the classification that they intend to study. If there are any other demographic categories that may affect the way an incumbent experiences his or her position, those should also be considered. Each category can also be broken down into more specific categories if necessary. For example, "level of education" could be broken down further than degree type.

If an analyst believes it may impact how incumbents perform their jobs, he/she may also choose to look at degree subject areas, not just degree types (i.e. Bachelors in Chemistry or PhD. in Industrial and Organizational Psychology).

In most departments, employee demographic data can be found within the department itself. This information can be useful for identifying the different groups represented in a department, which will help determine what a representative sample might look like. Once the representative sample is pinpointed, data collection can be targeted to make sure that each member in the sample provides input.

Departments may assign SMEs for a Job Analysis that do not represent the range of individuals in a classification. However, a representative sample can still be polled through a survey or questionnaire. That is one reason why using multiple data collection methods is preferred when conducting a Job Analysis. You may not be able to observe, interview, or do the jobs of a representative sample of incumbents. You can, however, provide questionnaires and surveys to hundreds of incumbents, and capture more of the diverse experiences within a classification.

Building Block 4: What unit of analysis is required?

After identifying and collecting the necessary data, it is time to analyze and summarize the data. Building Block 4 is where the plan for that is developed. In some cases, the raw data gathered is useable as is. On the other hand, there is usually some work that needs to be done in order to turn the raw data into something that can be used for the Job Analysis being conducted. This is where you will decide how the raw data will be analyzed, summarized, and reported. Below are a few considerations based on some common civil service data types.

1. *Duties.* In order to develop a job evaluation or classification specification, an analyst needs precise Statements to summarize the work in question. Often the analyst has collected a variety of information throughout the study, and the data must be edited and summarized into higher level Statements. An example of a higher level Statement might be "Preparing and managing project plans" or "conducting training needs analysis". The Statements are short, but they suggest that there are many more detailed task Statements and activities.

2. *Tasks.* Job analyses conducted within California State service frequently use task level data to capture the nature of the work being studied. It is important to consider what level of analysis should be used before the Job Analysis project begins. This is appropriate because most State service job analyses serve a personnel selection purpose. Task-level detail is the best for making selection decisions because the task Statements can often be translated directly into examination items. For example, a task Statement like "edits technical documents for publication using APA style grammar and standard Microsoft software applications" are easily translated into a Training and Experience (T&E) examination item ("How many years' experience do you have editing

technical manuscripts following APA style guidelines") or Work Sample tests (have the applicant edit a document).

3. *Elemental motions.* A Job Analysis study may sometimes require the analyst to understand the most efficient way to do physical work. When this is at least part of the purpose of the Job Analysis study, elemental motions of the work should be observed and recorded. Brannick (2007) describes one such study of a bakery business. While observing the work, the analysts were asked to help in making rolls. The lead baker demonstrated how to shape the raw dough into rolls by hand. After several attempts, the analysts gave up because they could not grasp the subtle movements of the skilled baker's hands. If the analysts had a slow-motion video of the activity though, the likelihood of success would have been much higher.

4. *Scale choices for tasks and KSAOs.* Job Analysis conducted within California State Service require quantitative scales to allow SMEs and job incumbents to rate aspects of the task and KSAO (e.g., task importance, KSAO required at entry). The analyst must decide on the appropriate level of detail required for each scale. A more in-depth discussion of scales occurs within chapter 4.

Legal concerns in Job Analysis

Job analyses are not just best practice when it comes to selection related activities like competitive examination development. They are also required as part of the State's merit-based selection process. While not written into Federal or State law itself, Job Analysis is considered one of the most legally defensible ways to justify the KSAOs and other characteristics that are required for entry into California civil service.

Job analyses first became a preferred method of identifying and linking KSAOs that affect job performance after the passage of Title VII of the Civil Rights Act of 1964. Title VII explicitly prohibits any organization (employer, labor organization, industry, etc.) from denying employment, participation, promotion, or other advancement opportunity to any individual based on race, sex, color, religion, or national origin. The *Uniform Guidelines on Employee Selection Procedures (Uniform Guidelines)* also played a major role in the Job Analysis being tied to a legally defensible selection process.

A number of court cases helped to shape the way selection processes were established and proven legally. Companies and organizations tried to get around this law by seemingly arbitrarily requiring applicants or employees seeking promotion to possess certain KSAOs that were more likely to be available to Caucasian American males, without evidence that the requirement was necessary for satisfactory job performance. While on the surface, it looked as if the company or organization was setting unbiased standards for employee selection.

They were in fact acting discriminatorily and knowingly excluding minorities, because minority populations were less likely to meet the arbitrary requirements.

A landmark case of this was Griggs v. Duke Power Company. Duke Power Company required a high school diploma and a written test for an entry-level supervisory position knowing that African Americans were less likely to have a high school diploma. This requirement effectively kept African Americans and other minorities from being able to compete for the entry-level supervisory position. The argument was that the company believed that the requirement would improve the quality of the workforce, but there was no evidence of job relatedness offered. Ultimately, the Supreme Court ruled that Duke Power Company had acted in a discriminatory manner, because it was unable to prove that having a high school diploma was necessary for satisfactory job performance. Without proof that there was a relationship between job performance and a high school diploma, it was impossible to argue that an applicant without a diploma would be unable to satisfactorily perform the necessary tasks and duties of the job. From this case came the understanding that all requirements for employment and selection purposes must be job related. This ruling implied the importance of a Job Analysis for selection procedures, because job relatedness can only be proven through an in-depth analysis of a job.

A similar landmark case, Albemarle Paper Company v. Moody, ended with a very similar conclusion. The difference in this case was that the Supreme Court ruling actually pointed to the company's lack of a Job Analysis to support their selection process. Essentially, what was implied from *Griggs v. Duke Power Company* was made very clear in *Albemarle Paper Company v. Moody.* Based on this ruling and the *Griggs* ruling, it is now believed that Job Analysis must be done to support an organization's selection process and make the process legally defensible. If not, the organization may face significant trouble if a legal challenge is brought against them.

Other court cases have confirmed the previously stated assumptions about using a Job Analysis to support selection processes (see Table B for other cases and consequences as a result of unsupported selection procedures). In fact, after a review of 26 Federal cases Thompson (1982) noted:

1. Job Analysis is required and must be performed for the job for which the selection instrument is utilized.
2. Results and methods of the Job Analysis should be thoroughly documented.
3. Job data should be collected by trained analysts from a variety of current sources.
4. The sample size of the SMEs should be large enough to be representative of the jobs for which the selection test will be used.
5. Tasks and duties should be included in the analysis.
6. The most important tasks should be the focus of the selection tool.
7. KSAOs should be specified, especially if a content validation approach is used.

The *Uniform Guidelines*, originally established by the Equal Employment opportunity Commission (EEOC), the Office of Federal Contract Compliance (OFCC), the Civil Service Commission (U.S. Office of Personnel Management), and the Department of Justice between 1966 and 1978, reinforces the importance of a good Job Analysis. One of the key principles is that selection examinations must be valid measures of job related competence. On the surface, this does not seem directly linked to a Job Analysis. However, the *Uniform Guidelines* specifically States: "Any validity study should be based upon a review of information about the job for which the selection procedure is to be used. The review should include a Job Analysis".

In other words, a Job Analysis is required in order to support examination validity. Examination validity is what proves that an examination measures what it was designed to measure. This can be established through either criterion validity measures or content related validity measures. The most common for State purposes is content related validity which requires a Job Analysis to identify the tasks and KSAOs that are required for satisfactory job performance. They should therefore be tested.

Table B: Monetary consequence of unsubstantiated hiring practices

Employer	Award	Basis of Discrimination
Shony's Restaurants	$132 million	Race
Seattle City Light	$1.4 million	Race
Vacation Sales Associates	$7.7 million	Age and gender
C.H. Robinson Worldwide	$15 million	Gender
Stanford University	$545,000	Gender (1 person)
Federal Express	$50 million	Race

Exercise 1: Legal and Court Case Matching Exercise

Place the letter In Column A with the correct corresponding paragraph in Column B.

Column A	Column B
A. Principles for the Validation and use of Personnel Selection Procedures (2003)	Company conducted an insufficient validation study and no Job Analysis. _____
B. Uniform Guidelines on Employee Selection (1978)	Several Government Agencies provided a set of standards for validating selection measures _____
C. Griggs v. Duke Power (1971)	Developed by the several professional agencies to help practitioners develop valid and legally defensible selection measures. _____
D. Standards for Educational and Psychological Testing (1999)	Developed by the Society of Industrial Organizational Psychology to assist in validating selection measures _____
F. Albemarle Paper Co. v. Moody (1975)	Land mark, first case that stated that adverse impact was illegal. _____
G. Americans with Disabilities Act (ADA)	States that reasonable accommodation must be provided for individuals who require it. _____

The Job Analysis Process Overview

Job Analysis approaches fall into two categories: 1) work-oriented in which the analyst focuses on the job tasks, tools, and work contexts and other areas in order to identify and describe the work being done; and 2) worker-oriented in which the analyst focuses on the KSAOs that describe what one would need to successfully perform the job. The State uses a combination of the two – work- and worker oriented approaches – for job analyses. In the California civil service context, this hybrid approach provides all of the data needed to support personnel selection decision.

CalHR's Job Analysis process is broken down into five main steps. Other models break the Job Analysis process down into smaller and more specific steps (e.g. the WRIPAC method has 11 steps). Regardless of model, all identify the important tasks and KSAOs related to successful performance in the job being studied.

For the CalHR model, each step summarized below will be covered in depth in the corresponding chapters of this manual in the order in which they would typically be performed.

Job Research & Study Planning- the goal of this step is to use online and written tools to understand as much as possible about the job. Tools used include O*Net, existing classification specifications, old Job Analysis, textbooks, and research articles. If there are still questions about the job after researching archival material, job observations, and SME interviews can be used. The goal of this step is to create a draft list of task and KSAO Statements. During this step the analyst should plan the logistics of the study. Significant considerations include the demographics of the classification, SME identification, and careful planning of other logistical considerations, like how many incumbent responses to the Job Analysis survey are required.

Write Task Statements – here the task Statements from the Job Research phase are edited into the proper format and organized into domains. A SME workshop is organized so SMEs can rate the tasks and add any task(s) that may be missing.

Write KSAO Statements – this step's goal is essentially the same as the Task Statement step, except it is applied to KSAO Statements. One uniqueness of the KSAO development process is that it is an inferential process and not a function of direct observation. For example, a task associated with a job may be: "Types 60 words per minute on a computer to produce general office correspondence using standard word processing software". Based on this task, the analyst uses logic to infer that this task will require certain employee skills like "skill to use a computer", and "skill to type 60 words per minute" and "knowledge of office correspondence formats". Often tasks and KSAOs are reviewed in the same SME workshop.

Rate/Link Tasks and KSAOs – once tasks and KSAO Statements are finalized, they must be rated by SMEs to determine their frequency of occurrence and importance (tasks), and whether they are required when hired, important for job performance, and whether possessing

more of a KSAO will lead to improved job performance. Rated tasks and KSAOs are then linked to show which KSAOs are needed to perform the various tasks.

Documentation – The Job Analysis report is created documenting the Job Analysis process and methodology.

Summary

This Introduction provides a definition of a Job Analysis as a method of collecting purpose-specific job data, and explains the foundational steps (building blocks) required to prepare for a Job Analysis. The four building blocks involve identifying what data should be collected, the methods for collecting the data, the sources that the data will be collected from, and the method that will be used to analyze and report the data after the Job Analysis is complete. The legal requirements and support for conducting a Job Analysis are also laid out and explored, to provide the context in which a Job Analysis became the preferred method of data collection. The five-step CalHR Job Analysis process is introduced and summarized at the end of this introductory section.

CHAPTER 1

1

Job Research and Study Planning

Chapter Objectives:

Explain the methods and techniques for conducting comprehensive research about a job or job classification and the necessary consideration for planning the Job Analysis study.

Covered in this chapter:

- ✓ 1.1 How to do archival research
- ✓ 1.2 How to conduct job audits/interviews
- ✓ 1.3 Approaches to job observations
- ✓ 1.4 Planning logistics of the Job Analysis study
- ✓ Summary

Exercises included in this chapter:

- Exercise 2: Job Analysis Preparation

1.1 How to do archival research

The first step of any Job Analysis is to become familiar with the classification that is being studied. Understanding the classification or job helps to prepare analysts for the SME meeting, and to prepare survey questions and other data collection resources. While analysts may never know everything there is to know about a classification or a specific job, research always helps analysts gain enough of an understanding to make the Job Analysis process a bit easier. Ultimately, it is important to learn as much about a classification or job as possible. The best way to gain this knowledge is through research and reading secondary source information related to the classification or job. There are several excellent resources available to help analysts educate themselves.

The best place to start researching is within your department. If a classification has been studied before, there may already be an existing Job Analysis with good preliminary information in it. The classification specification and other job specific resources will also help to create a foundation of understanding. However, previous job analyses and classification specifications are not always the most up-to-date, and may not reflect current industry trends. That is why further research is always required beyond existing State and department documents. Once you have a basic understanding of the job or classification, you can move on to other sources of information to complete your research.

O*Net is an online database of work information contributed to by the U.S. Department of Labor. O*Net categorizes the information into six major areas: worker characteristics, worker requirements, experience requirements, occupation requirements, workforce characteristics, and occupation-specific information (Wilson, 2012, P. 84). The information on the site is compiled using rigorous scientific procedures, making it a very reputable and trustworthy resource. To access O*Net, simply go to: https://www.onetonline.org/.

> 💬 **Pro Tip:**
>
> Try to learn specific jargon used on the job so that you can understand incumbents descriptions of their work during the SME interviews.

Employment agencies, professional organizations, and union websites are another great resource for finding secondary source job information. Employment agencies like Monster, Indeed, and CareerBuilder have hundreds of job listings, and most of those listings have detailed descriptions of the job duties, required and desirable KSAOs, and other requirements that help to give a clear picture of what an applicant is expected to know and do on Day 1.

Professional organizations often have information on related certifications and professional standards that members and those employed in the related field should have in order to be considered "professionals" in their field. They may offer an overview of their profession and related areas for those who are interested in knowing more. These sites will also outline the requirements for membership in their organization. While it does not initially seem useful, this information might come in handy if the Job Analysis reveals that there is a significant

population within a classification that belongs to a particular organization. It does not mean that being a member of the organization should be a requirement for successful performance in a job, but it may help to reveal what these incumbents may bring with them in terms of KSAOs that others without the affiliation may not. For instance, a Project Manager at the Department of Public Health may also be a member of the Project Management Institute (PMI). While not required for the position, this person continues to participate in training opportunities and continued education as part of his or her membership in PMI. This may have a direct positive effect on the incumbent's job performance and may help to identify further KSAOs that may be necessary for satisfactory job performance. For a comprehensive list of professional organizations (by industry), visit https://jobstars.com/professional-associations-organizations/. Jobstars is also sponsored by the U.S. Department of Labor, so the information that it contains should be current and reliable.

Union websites are similar to professional organizations in that they may provide a broader overview of a profession or field, as well as the general requirements for employment in that field, like apprenticeships and certifications. It may outline general duties as well as tools or equipment related to the profession. The International Brotherhood of Electrical Workers provides a list of the tools (organized by professional category) that its members should have at all times. For an analyst in charge of conducting a Job Analysis for an electrician classification, this list would provide a great starting point for understanding both what electricians may use on the job and what the tools are called in the industry. In some cases, the common name is not the same as the industry-specific name for tools or other items related to a given profession. While these sites are not always a gold mine of secondary source information, they are still a good place to look for information. The American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) has a list of affiliated unions with links to their websites (https://aflcio.org/about/our-unions-and-allies/our-affiliated-unions), but most unions can be found through a simple search using any of the available search engines like Google, Yahoo, or Bing for example.

Web searches can also yield industry specific technical and research materials (Wilson, 2012). Searching for a technical report for a particular job will often turn up sample reports and documents that have detailed information like job requirements and perhaps typical tasks and duties performed. When an internet search is not enough to get the results that are needed, local libraries can prove to be a wealth of information. In most cases, the librarian will be able to help locate research material related to the job being studied. Librarians may also be able to direct you other resources in case what you need is not available at that particular library.

Sometimes simply reading about a job or classification does not reveal some of the more nuanced or subtle aspects of a job. There may be details or little things that are left out of documents and resources that might be important to know in order to have a clear or deeper understanding of the job. Research on a Peace Officer classification, for example, may reveal a lot about the required training, education, and requirements of the job, but it may leave out information about how officers interact with the public. It is not because these interactions are

not a major part of the job. These interactions are just far more complex and situational, and often cannot be generalized or reduced down to a basic function or KSAO. Once the initial research has been done, it might be necessary to gather more information first hand to round out your understanding of the job or classification. While there are many ways that first-hand information can be collected, two of the most common are job audits/interviews and observations.

1.2 How to conduct job audits/interviews

A job audit/interview is an interview with incumbent SMEs used to gather more information about a particular job. These interviews are usually structured and include very specific questions designed to gather more information about the essential tasks, KSAOs, tools and equipment, and responsibilities of a job among other information that may be important for understanding the job. They also gather basic demographic information from the SMEs that include name, classification, department, and location or region, which may help identify where and how the job may differ.

1.3 Approaches to job observations

Observations also help to provide analysts with a clearer picture of a job. Unlike an interview, observations allow the analyst to see the job done first-hand. This method is especially useful for jobs that have a set routine or manual jobs that have a lot of observable movement. More analytical jobs that require a large degree of mental activity are not observable because it is impossible to "observe" someone's mental processes.

Observations are objective, which means that the observer is not there to critique job performance or question work processes. Instead, the analyst simply watches from a comfortable distance in which he/she can observe the full range of work without interrupting the work or distracting the worker. The analyst also documents exactly what is said and done as it relates to the job in observation notes that can be reviewed later. It is important to note that when some people know that they are being observed, they may change their behaviors in order to "impress". That might mean that what is being observed may not accurately reflect what goes on day to day, but it is still a demonstration of the work typically performed.

Since observations require the analyst to go to a worksite, it is important to always get approval from the incumbent's manager to observe, as well as your own. There may also be security or safety concerns that make observations difficult, or may restrict what can and cannot be observed and documented. Correctional Officers and Field Nurses are good examples of this. There may be certain areas of a particular facility that an analyst is not allowed to enter or patient confidentiality concerns that might prevent an analyst from being able to observe certain functions of a job. Safety of the worker and the observer must always be considered before and during an observation. Other job specific requirements and

procedures must also be followed, if any exist (i.e. signing a confidentiality agreement, dress code, security procedures, etc.).

1.4 Planning logistics of the Job Analysis study

Once the preliminary research is complete, it is time to plan the logistics of the Job Analysis study. There are a number of factors that must be considered when planning. First and foremost is determining the best approach for gathering information from a representative sample of the job or classification being studied. In order to do this, it is necessary to have a clear understanding of the demographics of the job or classification, and the number of incumbents in the job or classification. Demographic data is often housed within the department, perhaps with Classification and Pay, or through a Personnel Liaison. Most departments have a procedure for retrieving demographic data, so it is important that you follow your department's procedure to get the needed information. Based on that information, a plan can be developed for how to collect data and input from a representative sample of incumbents. For example, if the classification has a large and diverse group of incumbents, an analyst may choose to use a survey in order to have a larger group of incumbents rate the tasks and KSAOs at step four of the process.

Table 1.1 Number of survey respondents required based on classification size

Number of incumbents (classification)	Job Analysis survey respondents
1 – 10	100%
11 – 20	85%
21 – 30	80%
31 – 50	75%
51 – 200	50%
201 & over	25% - 50% (more is better)

In addition to the chart above, there are some other factors that will help identify a truly representative sample:

- *Is the classification departmental or service-wide?* This information is important because it not only highlights which SMEs and incumbents must participate in the study, but also because it guides the kinds of task and KSAO information collected. If the classification is departmental only, then more position-specific information can be gathered and used.

If the classification is used by more than one department, then task and KSAO information will need to be more general (i.e., limited to the tasks and KSAOs shared by all departments that use the classification).

- *In which physical locations and shifts do incumbents work?* If incumbents work in large urban areas and in smaller rural areas, then the analyst must obtain SME and incumbent information from both. Do incumbents have access to email and computers, or do they perform their work in the field and therefore have limited access to technology? Shifts should also be considered. For example, a nurse working a night-shift likely performs many unique tasks compared to his/her day-shift co-workers.

> 💬 **Pro Tip:**
>
> CalHR defines a service-wide classification as any classification used by more than one department

- *What are the demographic characteristics of the classification*? Are the incumbents in the classification ethnically and culturally diverse or more similar? Adequate representation of these factors is required.

The more information gathered up-front, the better the job study plan will be. Planning should also include concerns like SME and incumbent availability, conference room space for meetings, etc. Again, the more careful planning done prior to beginning the Job Analysis, the better.

Summary

This chapter describes and explains the best research and planning techniques for learning more about a particular job. Using tools like O*Net, Monster, and search engines were discussed, as were department and library resources. Job planning, including identifying a representative sample, was also covered in detail. Having a solid understanding of the job being studied will help to ensure accuracy in the Job Analysis study by making sure that all important aspects of a job are addressed. Once there is adequate understanding of a job, a plan can be developed. Thorough planning in the beginning makes the Job Analysis process smoother in the later steps.

Exercise 2: Job Analysis Preparation

For each of these five situations, determine the important issues that need to be considered prior to conducting a Job Analysis. Be prepared to site reasons to support your decisions.

1. **Associate Blacksmith**
   0 incumbents currently in class

   Job classification has not been used since 1943; very little previous research exists

   Purpose of study: Selection, need to bring job classification back into use, anticipate desire for a performance test

2. **Clinical Nurse Assistant**
   137 incumbents currently in class

   15 supervisors

   5 work locations (Sacramento, San Diego, Los Angeles, San Francisco and Lodi) 3 work shifts (Morning, Swing and Night)

   Purpose of study: Selection, Previous Job Analysis conducted in 2000

3. **Lion Tamer**
   9 incumbents currently in class, 3 incumbents are on medical leave

   1 supervisor

   2 positions available

   Purpose of study: Selection

4. **Highway Maintenance Worker**
   224 incumbents currently in class

   32 supervisors

   52 open positions

   5 work locations (Sacramento, San Diego, Los Angeles, San Francisco and Galt)
   Purpose of study: Selection and Classification. Anticipate Manager desire for a written examination. Also interested in learning if incumbents should be allocated to several smaller classes.

5. **Police/Fire Dispatcher**

    14 incumbents currently in class

    1 supervisor

    Employees work shift schedules

    Supervisor has expressed concerns that an on-site analyst may interrupt the work flow and increase the chance of errors

    Purpose of study: Develop on-the-job training program

CHAPTER 2

2

Write Task Statements

Chapter Objectives:

Learn how to translate task information from job research into properly formatted task Statements.

Covered in this chapter:

✓ 2.1 The SME workshop

✓ 2.2 Task Statement definition and format

✓ Summary

Exercises included in this chapter:

- Exercise 3: Writing Good Task Statements

2.1 The SME workshop

After completing the initial research and becoming familiar with the job or classification being studied, it is time to move to the second step in the CalHR Job Analysis process. This step is where analysts craft task Statements to be used to flesh out exactly what essential activities or tasks incumbents perform on the job.

This step begins with a SME meeting or workshop in which incumbents or supervisors of the job or classification help to generate task Statements. As mentioned in the introduction to this manual, it is important to make sure that the SMEs are representative of the larger workforce for the position being studied. While there is no magic number of how many SMEs you have in your meeting, 6-10 SMEs is recommended. The group should be a good mix of people who represent the various populations within the classification. Again, that group may look different depending on the size of the classification and its makeup, but it should always be a cross-section of the larger group. Not only does the representative group of SMEs provide you with a well-rounded image of the job, it also provides your Job Analysis with a greater degree of legal defensibility, because it takes into account the diversity of the job or classification.

> 💬 **Pro Tip:**
>
> Prior to the SME meeting(s) the analyst should prepare as comprehensive a list of tasks and KSAOs as possible. This expedites the SME meetings greatly.

In some departments, the SMEs are chosen by the program for which the Job Analysis is being prepared. In other departments, the analyst is the one who selects and requests the SMEs that he or she wants to attend the SME meeting. There are also other different approaches to providing SMEs. It is important to follow department policy when selecting and requesting SMEs.

Regardless of whether or not your department assigns SMEs, the goal of the meeting is the same. After the SMEs are confirmed, plan how the task Statements generated in the meeting will be organized. If there is already a set procedure or process in place, it is fine to follow that. Otherwise, decide exactly how you plan to collect the Statements from your SMEs and then organize them into domains. A piece of expert advice is to have SMEs write Statements on 3x5 note cards which can be sorted into domains fairly easily (Brannick, 2007). Likewise, creating an Excel spreadsheet and using the sorting feature is just as effective.

When the meeting begins, it is the analyst's job to make sure the SMEs understand the purpose and the process for the meeting. Begin the meeting with a welcome and explain that the purpose of the meeting is to create a comprehensive list of tasks that represents the job that they either do or supervise. Ask the SMEs to think about their working conditions in order to get them thinking about their typical tasks. Allow the SMEs to discuss their jobs and typical duties as a group, while making sure they are staying on topic and on task. Ask probing questions to drive the conversation if it seems to stall.

Once the conversation has yielded some consensus and good general task details, explain to the SMEs that the next course of action is to develop actual task Statements based on the topics discussed. Explain the basic format of task Statements and why they are necessary for the current process. A task Statement is how analysts articulate or explain what is done, what it is done with (i.e. tools, machines, equipment, etc.), for what purpose it is done, and at whose direction it is done.

 After the SMEs are comfortable with writing task Statements, have each write a comprehensive list of task Statements that accurately reflects what they do during a typical work day. You may need to demonstrate one or two sample task Statements for the SMEs if they seem to have trouble. Compare the lists as a group once the SMEs are done drafting and editing their lists and remove the duplicates. It is a good idea to generate a preliminary list of task Statements before the meeting based on the research conducted and have the SMEs review it as well and identify the applicable tasks. If any tasks are missing from the collective list of tasks, be sure to add them to the pre-generated list. Once the SMEs feel that the overall task list is comprehensive and reflective of their daily activities, the meeting can be adjourned. In some cases, analysts use one meeting to achieve multiple goals. If that is how analysts in your department typically use SME meetings for job analyses, then adjourn after the SMEs have completed all applicable assignments.

After the workshop, compile the lists into a master list, rewriting SME generated task Statements if necessary, and organize the tasks into 5 to 12 major content domains. Content domains are the broader categories that each task falls under. For example, under the domain "Written Communication", there may be tasks related to writing emails, generating documents, and other writing related tasks.

There is no set number of task Statements that should be generated from this process, but a thorough Job Analysis usually contains anywhere from 30 to 100 tasks. Any list generated that has more than 100 tasks or fewer than 30 tasks should be reviewed to make sure all the essential tasks and only the essential tasks are listed.

2.2 Task Statement format

Tasks are basically smaller activities which are done to create or change something. For example, a task like typing a memo requires someone to complete a series of activities like first accessing a computer, then opening a Word document, and pressing letter keys to create words and sentences.

Properly written task Statements give an implied subject of the task (i.e., workers, incumbents, managers [this part is not actually written]) and have a specific form that includes five written components:

1. *Action verb.* The task Statement begins with a strong action verb
2. *Object of verb.* This may include data, people, machines, equipment, work aids, or tools
3. *Why done?* Answers the question "to produce or achieve what?"
4. *How done?* Answers the question "using what tools, equipment, or work aids?"
5. *Upon what instruction?* Answers who or what gives the direction to accomplish the task.

💬 **Pro Tip:**

Try to avoid bland action verbs like assists, guides, handles, helps etc. Vague action verbs are too subjective and open to interpretation

Cascio, (2008) offers a useful template for task Statement writing:

What?		*Why?*	*How?*	
Performs What Action? (1. action verb)	*To Whom or to What? (2. object of verb)*	*To Produce or Achieve What? (3. why done?)*	*Using What Tools, Equipment or Work Aids? (4. how done?)*	*Upon What Instruction? (5. upon what instruction?)*
Examines	Walls, ceilings, floors, and furniture	In order to locate and extinguish secondary fire sources	Using pike pole, hose line, power saw, and axe	Per department procedures
Carries	Smoldering mattresses and furniture from buildings	In order to reduce fire and smoke damage to buildings and their contents	Using a crowbar and hammer	Per department procedures

Some examples of good, average, and poor tasks Statements may be of assistance to the reader.

Poor	Answer office correspondence
Fair	Write replies to letters asking for job information using the computer
Better	Compose written responses to job opening inquiries using word processing software to provide job application instructions per department eligibility guidelines

Poor	Inform staff of benefit changes
Fair	Give employees information about benefit changes using oral presentations
Better	Inform employees about changes in benefit options using PowerPoint presentations per HR management instructions

Poor	Prepare travel form 625(a) in triplicate giving airline flight numbers and hotel contact information to obtain travel advances and distribute one copy each to supervisor, manager, and file twelve days prior to departure date using #2 lead pencil at the request of staff
Better	Complete travel request forms in timely manner to obtain cash travel advance following departmental guidelines

Summary

This chapter outlines detailed procedures for generating job-related task Statements. Techniques for running the SME workshops are also described in detail. Task Statements are defined including each of their five components and recommendations for how to write precise, high-quality Statements are outlined. Samples of good, bad, and average task Statements are also included as examples.

Exercise 3: Office Writing Good Task Statements

Review the following tasks Statements. Identify the major components included in each task, and revise the Statement as necessary to include all five (5) components.

1. Respond to public media inquiries.

2. Delegate assignments to staff to ensure appropriate workloads using scheduling software, memorandums, and meetings.

3. Prepare claims (i.e. payment requests) for the California Victims Compensation and Government Claims Board to resolve payment issues in accordance with the State Administrative Manual.

4. Audit invoices using contract tracking logs to ensure contract work is performed within time period and monetary limits of contract.

5. Record meeting minutes at the direction of the Division Manager.

6. Write technical reports, project summaries or complex documents using various software applications at the request of management.

7. Address disagreements and conflicts involving staff members and vendors or other stakeholders to achieve a harmonious, productive workplace.

CHAPTER 3

3

Write KSAO Statements

Chapter Objectives:

Learn how to translate KSAO information from step one into properly formatted KSAO Statements.

Covered in this chapter:

✓ 3.1 The SME workshop

✓ 3.2 KSAO Statement definition and format

✓ Summary

Exercises included in this chapter:

- Exercise 4: Writing Good KSAO Statements

3.1 The SME workshop

This workshop begins like the SME workshop for developing task Statements. Explain the purpose of the meeting – to identify the necessary KSAOs needed in order to perform the tasks that were identified in the previous workshop. In most cases, Job Analysis workshops are scheduled over the course of two or three consecutive days. However, if SMEs are not available or it is not possible to schedule consecutive meetings, it is important to recap what was done in the previous workshop so the current process does not feel "brand new" to SMEs. It is also a good idea to define KSAOs for the SMEs. It should never be assumed that everyone understands what they mean or how they are used for Job Analysis purposes (section 3.2 has a detailed definition of each).

Make sure that the master list of tasks and content domains is available for SMEs to review as they think about the related KSAOs. At this point, ask the SMEs to also review the content domains and how the tasks are categorized. Based on their feedback, the list and categories can be revised.

Once the SMEs have reviewed the task list and provide feedback, ask them to begin thinking about what someone would need to know, have learned or been trained to do, or have the ability to do in order to complete the tasks listed. Ask them first to think about the physical aspects of the job and what it takes to perform the daily functions of the job. Ask probing questions again to generate discussion. Does the job involve lifting? Are incumbents expected to stand for long periods? Questions like these are good for getting the SMEs to think about the physical characteristics that are needed to complete tasks. Ask the SMEs to discuss what someone must know to complete the listed tasks, and what someone must have been trained or taught to do for the same tasks.

When the SMEs have finished discussing the KSAOs needed, ask them to write KSAO Statements for each content domain. Go through the domains one at a time to avoid misplaced KSAOs. If the list of tasks is short, then the SMEs can write KSAO Statements for each task Statement if it makes things easier for them. If the list is long, it is enough to ask the SMEs to write KSAO Statements for the domains and not for every task Statement within the domain. Generally speaking, the same KSAOs should apply to every task within a particular domain. Experts recommend compiling the task and KSAO Statement combinations and sharing them with the group. This can be done by projecting the Excel spreadsheet with the task Statements and corresponding KSAO Statements (Brannick, 2007). After everyone has contributed their KSAO Statements to the list and there are no new KSAOs to add, the process is finished.

The overall SME workshop process is unique. Because each analyst is different and each group of SMEs is different, there is no one way to facilitate a SME workshop. The above is a suggestion for how to generate KSAO Statements with SMEs, but every analyst will ultimately develop and refine his or her own techniques over time and with practice. For your first

workshop, you may ask a more experienced analyst to sit in with you and watch you facilitate. Keep in mind that the more experienced analyst is only there to provide feedback and guide you through the process, not to run your workshop.

3.2 KSAO Statement Definition and Format

KSAOs as they relate to job analyses are defined as (Gatewood, 2011):

Knowledge – a body of factual or procedural information about a particular domain that is associated with successful performance of a task.

Skill – a person's proficiency or competency in performing a specific task usually involving tools or equipment.

Ability – a more general, enduring capability possessed by a person. For example deductive reasoning capability.

Other -

Skills and *abilities* are often misinterpreted as the same thing. They are similar but have a very distinct difference. A skill is something that can be influenced by training. One can learn advanced Microsoft Excel skills or how to drive a forklift over the course of a few weeks with training. An ability is more inherent or natural. Someone may or may not have the physical ability to lift 40 pounds or comprehend complex written texts. These cannot be easily learned or trained.

> 💬 **Pro Tip:**
>
> KSAO Statements are *not* simply task Statements with the words "Knowledge of", "Skill to", or "Ability to" added to the beginning.

KSAO Statements are supposed to capture the underlying KSAOs required to successfully complete a task. They are not a restatement of the task Statement. For example, the SMEs may have written a task Statement that reads, "Compose Executive Summaries of new legislation to inform Executive-level staff of important changes affecting State and/or department policies and functions using word processing software as requested by the Director." The related KSAO Statement should show what someone should know or be able to do in order to complete an Executive Summary as explained in the task Statement.

By pulling apart the task Statement, SMEs can identify the necessary KSAOs. In this case, summarizing requires the ability to read and understand legislative and legal documents. Composing something using word processing software requires basic Microsoft Work skills. The person should have strong written communication skills and also know the standard conventions of Business English, as well as what an Executive Summary is and what makes it different from other types of summaries. They may also need to have the ability to type 40 words a minute among other KSAOs.

Similar to task Statements, KSAO Statements are written using a specific format/structure. KSAO Statements have three components:

1. A "*what*" component which answers questions like "knowledge of what", "skill to do what" or "ability to do what"
2. A "*to what effect*" component which answers how the KSAO is used or applied on the job
3. A "*degree* or *level*" component which clarifies how much or what level of the KSAO is needed (e.g., advanced excel skills, vs. excel skills)

The following table demonstrates how to structure KSAO Statements correctly:

What?	*Why?*	*Level?*
1. *Knowledge of what, skill to do what, or ability to do what?*	2. *How or why the KSAO is used or applied*	3. *The degree of proficiency or level required*
Knowledge of intermediate multivariate statistics	to identify population characteristics and make predictions	Intermediate factor analysis, logistics regression
Skill to dice vegetables using a chef's knife	to assist in food preparation	Novice

Often times, components of KSAO Statements are reordered to make the Statement easier to read. For example, the first Statement above would be written "Knowledge of multivariate statistics (factor analysis, logistic regression) to identify population characteristics and make predictions." Example 2 could be written "Novice level skill to dice vegetables using a chef's knife to assist in food preparation"

Below are a few examples of well written KSAO Statements (Gatewood, 2011).

Knowledge

"Knowledge of building materials including the uses, storage, and preparation of materials such as aluminum siding, Masonite, concrete block, and gypsum border"

"Knowledge of the development, scoring, and application of employee performance appraisal techniques such as behaviorally anchored rating scales, 360-feedback, and graphic rating scales"

Skills

"Skill in using a bank proof machine to process 50 checks per minute without error"

"Skill in the use of handguns as needed to pass annual police department qualifying standards"

Abilities

"Ability to use basic arithmetic to calculate flow of current through an electrical circuit"

"Ability to obtain facts and information by using interviewing skills and techniques"

Other

"Able to maintain control in crisis situations"

"Takes initiative to get things done without prompting"

As with task Statements, writing good KSAO Statements takes time and practice. Below are some KSAO writing guidelines taken from a variety of expert Job Analysis experts. Each KSAO Statement should:

1. Be limited to describing only one worker trait or human characteristic.
2. Be observable/demonstrable (i.e., it is difficult to directly observe knowledge, but it can be demonstrated).
3. Relate to one or more tasks or job dimensions.
4. Be easy to read and understand
5. Provide definitions or clarifying examples within parenthesis to ensure the KSAOO has common meaning
6. Avoid the use of acronyms and abbreviations as much as possible

Summary

This chapter focused on instruction about how to develop quality KSAO Statements. Guidelines for facilitating effective SME meetings are given and KSAO Statements are defined. The three key elements of a quality KSAO Statement are discussed and guidelines for writing quality KSAO Statements end the chapter.

Exercise 4: Writing Good KSAO Statements

Review the following KSAO Statements. Identify the major components included in each KSAO, and revise the Statement as necessary to include all three (3) components.

1. Knowledge of the merit system.

2. Ability to establish and maintain cooperative relationships with departmental employees, contractors, the public, and other stakeholders.

3. Knowledge of statistics (e.g. averages, frequency, variation) for analyzing the impact and effectiveness of programs, policies, and/or procedures.

4. General knowledge and understanding of scientific research principles and investigatory methods as applied to waste and compost management.

5. Skill to transcribe.

6. Skill to cut.

7. Copes well in stressful environments.

CHAPTER 4

4

Rate and Link Tasks and KSAOs

Chapter Objectives:

Learn how to accurately rate task and KSAO Statements, and how to link KSAOs to important job tasks.

Covered in this chapter:

- ✓ 4.1 Rating tasks and KSAO Statements
- ✓ 4.2 Linking KSAOs to important tasks
- ✓ Summary

Exercises included in this chapter:

- Exercise 5: Evaluate Job Analysis Data – Task and KSAO Ratings

4.1 Rating task and KSAO Statements

Depending on the size of the classification being studied, there are two options for rating task and KSAO Statements. For smaller classifications (fewer than 25 incumbents), a committee-based approach can be used to rate the tasks and KSAOs generated during the SME workshops. For larger classifications, a survey with the tasks and KSAOs should be sent out to get as many incumbent responses as possible.

Committee based rating for smaller classifications

If the committee-based approach is most appropriate for the job or classification that is being studied, then begin by gathering SMEs. Committee-based rating involves a representative panel or committee of SMEs who rate the task and KSAO Statements generated during the preceding workshops. Usually the same SMEs who created the tasks and KSAOs also rate them, but it is not required. If the original SMEs are unavailable or there are other justifications for using a different group of SMEs, be sure to give the new SMEs a chance to review the full master task and KSAO lists. They can provide input if they feel anything is missing, or that some Statements should be combined. The content domains should also be reviewed to make sure that the SMEs feel they accurately represent the various tasks listed. After the SMEs have reviewed the lists, they can be briefed on the purpose of the meeting, which is:

– to rate the tasks and KSAOs
– the process by which the ratings will be done,
– and the rating scale that will be used for rating.

 It is essential that the SMEs know what they are doing and how they are expected to do it in order to avoid mistakes during the rating process.

Survey based rating for larger classifications
It is rare to find a classification with fewer than 25 incumbents in State service. In most cases, a committee-based approach is not appropriate for rating State classifications because there is no way to get a truly representative sample of SMEs to come in and sit for a rating session. For most classifications, survey-based rating is the best approach. For this approach, a survey should be compiled using either Survey Monkey or another program that contains the complete list of tasks and KSAOs to be rated, along with the rating choices for each item. There should also be an area where respondents detail their demographic information (age, gender, race, location, shift, level of responsibility, etc.) to help determine if the sample is representative. Each department may handle survey development slightly differently, so be sure to find out what your department typically uses and what is available to you. Once the survey is developed, distribute the survey to as many incumbents, supervisors, and managers of the classification as possible. Based on previous research, it should be noted whether or not incumbents are likely to have access to internet or a computer. Depending on that, the survey may need to be distributed differently (i.e. mailed, emailed, web- or browser-based,

etc.). There is no fixed number of responses required for a Job Analysis, but the respondents should be representative of the larger classification. If studying Correctional Officers, for example, it is probably not enough to get only responses from one facility in the Northern California region. Likewise, even if the classification is limited to one location, it is not enough to get responses from only women in their 20s, when the classification is not predominantly comprised of women in their 20s. What makes a sample representative will vary, but it is important to make sure that the sample is representative.

Task rating scales

Regardless of how rating occurs, SMEs should be given a clear rating scale. Tasks are rated using two scales: *task frequency* and *task importance.* CalHR recommends *frequency* and *importance* because the rating scales have clearly defined anchors that experience shows are easily understood by SMEs. Each SME then rates each task independently. Again, SMEs should be instructed to rate based on a typical job and not their specific execution of the job.

The scale points and definitions are as follows:

1. *Task frequency*: How often is this job task performed?
   0 = **Does not apply.** This task is not performed on the job.
   1 = **Less than once a month.** This task is performed at least once a year but less than once a month.
   2 = **Monthly.** This task is performed at least once a month, but less than once a week.
   3 = **Weekly.** This task is performed once to several times a week, but less than once a day.
   4 = **Daily.** This task is performed one or more times per day.

2. *Task importance*: How important is this task for successful job performance?
   0 = **Does not apply.** The inability to perform this task has no effect on job performance. The task is not performed on the job, or is trivial to successful job performance.
   1 = **Moderately important.** Satisfactory performance on this task is moderately important for successful job performance. An inability to perform this task will affect job performance, but it will not lead to failure on the job.
   2 = **Important.** Satisfactory performance of this task is important for successful job performance. An inability to perform this task will have noticeable effect on job performance, resulting in an inability to perform some aspects of the job.
   3 = **Very important.** Satisfactory performance of this task is very important for successful job performance. An inability to perform this task is likely to result in failure on the job, and may result in negative consequences to the department.
   4 = **Critical.** Satisfactory performance of this task is critical to successful job performance. An inability to perform this task will lead to significant failure on the job, and will seriously impact the department.

Establishing a cut score (Tasks)

Title I of the Americans with Disabilities Act (ADA) mandates that personnel selection decisions can only be based on essential job functions. The *task importance* rating is critical and makes this determination. The cut-off is usually considered the midpoint, which should also correspond to a rating of "important". In the above rating scale, a rating of "2" corresponds to "important" for successful job performance. That means that the cut-off would be set as "2". According to the *Uniform Guidelines*, task Statements that receive an overall importance rating of two (important) or greater should be retained in the final Job Analysis. Task Statements with lower importance ratings should be listed in an appendix of the final Job Analysis documentation. They can be used for other HR functions like training and development, but NOT for personnel selection.

The *task frequency* scale is also important because Federal legislation States that selection examinations have to be based on tasks that are performed regularily, and not on infrequently performed tasks.

> 💬 **Pro Tip:**
>
> A *Task Importance* rating of 2 or above should be used as a demarcation point for determining essential tasks

Exercise 5a: Evaluate Job Analysis Data – Task Ratings

For the following exercise calculate the mean (average) rating for each of the SMEs' responses to the scales. Determine which tasks should not be considered for selection purposes based on the results, using the scales midpoint as the cut-off. Round each answer to two decimal places. Refer to the task scales in this chapter.

#1

SME Name	Task #1		Task #2		Task #3		Task #4		Task #5		Task #6	
	Imp	Freq	Imp	Freq	Imp	Freq	Imp	Freq	Imp	Freq	Imp	Freq
Michelle	2	1	1	3	3	1	1	2	4	4	3	1
Jerimiah	3	1	1	3	3	2	1	2	4	4	3	3
Monika	2	2	2	2	3	1	3	4	4	3	2	1
Ryan	2	1	3	3	3	1	2	3	3	2	4	1

Which Tasks are retained based of the analysis of the data? Place your answer and explanation in the space provided below.

KSAO rating scales

After task ratings have been finalized, it is time to focus on KSAO Statements. The main purpose of KSAO rating is to get SME input about which KSAOs are critical for job performance, when the KSAO is required (upon entry or after entry to the job), and to determine the KSAO's relationship to job performance.

In accord with this purpose, SMEs rate KSAO Statements using three scales:

1. **KSAO Importance:** How important is this KSAO for successful job performance?
   0 = **Not important**. You can *definitely* perform your job effectively even if you do not possess this KSAO. There is *no* problem if you do not possess this KSAO.
   1 = **Somewhat important**. You can *probably* perform your job effectively if you do not possess this KSAO. There is a *minor* problem if you do not possess this KSAO.
   2 = **Important**. It is *unlikely* that you can perform your job effectively unless you possess this KSAO. There is a *problem* if you do not possess this KSAO.
   3 = **Very important**. KSAO is very important for successful job performance. A lack of this KSAO is likely to result in failure on the job and may result in negative consequences to the department.
   4 = **Critical**. KSAO is critical for successful job performance. A lack of this KSAO is will result in failure on the job in negative consequences to the department.

2. **Expected upon Entry:** How much of this KSAO is a person expected to have upon entry to the job?
   0 = **Not needed**. The KSAO is not needed on the first day of the job. It is either learned on the job, through training, or is not an essential component of the job.
   1 = **Needed**. Possession of the KSAO is needed and expected on the first day of the job. Possession of *most* of this KSAO is needed and expected upon entry to the job.
   2 = **Essential**. Possession of this KSAO upon entry to the job is critical. Possession of *all* these KSAOs is expected at entry to the job.

3. **Relationship to job performance**: Does possession of this KSAO lead to better job performance?
   0 = No. Possession of this KSAO does not result in better job performance.
   1 = Yes. Possession of this KSAO does result in better job performance.

Establishing a cut score (KSAOs)

SMEs review each KSAO and rate each on the scales above. Just like with task Statements, the midpoint of the scale as the established cut-off score for KSAOs. As can be seen in the above rating scales, a rating of "2" corresponds to "important" for successful job performance, and a rating of "1" corresponds to "needed" at entry. According to the *Uniform Guidelines*, only KSAO Statements identified as important for satisfactory job performance (a 2 or greater on

the KSAO importance scale) and expected at entry (a 1 or greater on the expected upon entry scale) are retained in the final Job Analysis. KSAOs not retained should be listed in an appendix of the Job Analysis documentation. It is important to note that just because a KSAO did not meet the cut off for the examination does not mean it does not have some importance to the job. The remaining KSAOs may be used for other HR purposes, like training or individual development plans.

Exercise 5b: Evaluate Job Analysis Data – KSAO Ratings

For the following exercise calculate the mean (average) rating for each of the SMEs' responses to the scales. Determine which KSAOs should not be considered for selection purposes, based on the results, using the scales midpoint as the cut-off. Round each answer to two decimal places. Refer to the KSAO scales in this chapter.

SME Name	KSAO #1			KSAO #2			KSAO #3			KSAO #4			KSAO #5			KSAO #6		
	Imp	Expect	Rel	Imp	Expect	Rel	Imp	Expect	Rel	Imp	Expect	Rel	Imp	Expect	Rel	Imp	Expect	Rel
Bruce	0	1	1	1	2	1	2	1	0	1	2	0	2	0	1	1	2	0
Clark	2	1	0	2	2	1	2	1	1	2	1	0	2	1	0	1	2	1
Oliver	1	2	1	4	2	1	2	0	1	2	1	1	2	0	1	1	2	1
Rick	3	1	0	3	1	1	3	2	0	3	1	0	3	1	0	1	2	1

Which KSAOs are retained based of the analysis of the data? Place your answer and explanation in the space provided below.

4.2 Linking Tasks and KSAO Statements

After rating individual tasks and KSAOs, SMEs need to then link them together. In other words, they need to identify which KSAOs are necessary for which tasks. This is a very important requirement for all job analyses. The *Uniform Guidelines* mandate that a relation between each KSAO and important job tasks be demonstrated for legal defensibility purposes. Linking also helps analysts develop personnel selection tools like examinations. The tools should be designed to test for those KSAOs that applicants need to perform for important job tasks.

For the linking process, SMEs are given the lists of only the retained tasks and KSAOs with ratings. For each KSAO Statement, SMEs are asked to read through the task list and identify all tasks that would require the specific KSAO. Because most KSAOs are needed for multiple tasks, it is likely that one KSAO will be linked to several task Statements. Like with the rating process, SMEs work independently and link each KSAO to the relevant tasks. After all SMEs have completed linking the tasks and KSAOs, the responses are collected. Then the analyst evaluates the ratings to find consensus or agreement among the raters. When two or more SMEs have the same linkage, it is considered a consensus.

This process can also be done with a committee of SMEs. In this case, a group of two or more SMEs link the tasks and KSAOs together. The SMEs negotiate amongst themselves until a consensus is reached.

The following table is an example of successful linking of tasks, KSAOs and information from the State service classification specification.

KSAO Linkage Data

KSAO O#	KSAO Statement	Classification Specification KSAO #	Linking Task #
1	Knowledge of State and Federal constitutional law and principles to ensure all activities are compliant	1	2,3,5,6,19,13,15,17,18,19,21,24,27
2	Knowledge of the rules of evidence and their application to ensure all activities are compliant	1	2,3,5,6,10,13,15,17,18,19,21,24,27,28
3	Knowledge of legal principles and their application, the use of legal references, and legal terms to effectively work in a legal environment	1,2	2,3,5,6,10,13,15,17,18,19,21,24,27,28,29,30

Summary

This chapter describes how to rate the frequency and importance of task Statements, and how to rate KSAO information based on their relation to successful job performance, when they are required on the job, and whether having more of a KSAO will lead to better job performance. These ratings can be obtained using a committee-based approach (for classifications with fewer than 25 incumbents) or by utilizing a digital (or paper based) survey for larger classifications. A step-by-step guide for using the online survey tool Survey Monkey is provided in the appendix of this manual. A critical part of the rating process is ensuring that a representative sample of SMEs rate the tasks and KSAOs. Determining what constitutes a representative sample and how the sample will be obtained should be well planned during step one of the Job Analysis process. The chapter ends discussing two different techniques for linking KSAOs to tasks. This activity is a crucial part of any Job Analysis study because the *Uniform Guidelines* mandate that the relation between tasks and KSAOs be demonstrated for legal defensibility purposes.

CHAPTER 5

5

Documenting the Job Analysis

Chapter Objectives:

Understand the importance of thorough Job Analysis documentation and the information that is required.

Covered in this chapter:

✓ 5.1 Why Job Analysis documentation is important

✓ 5.2 The required content of a Job Analysis report

✓ Summary

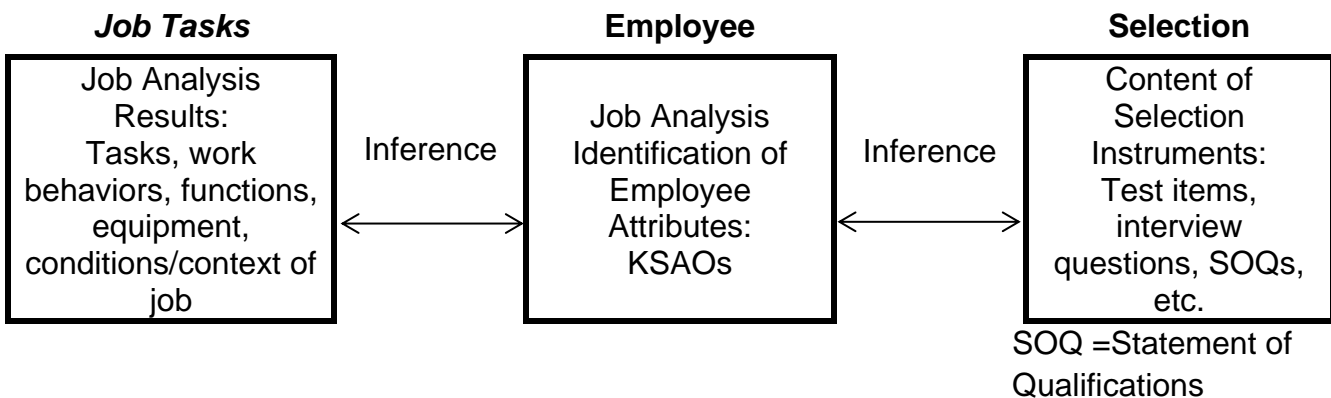# 5.1 Why Job Analysis documentation is important

Perhaps as important as the study itself is the documentation that supports it. First, the *Uniform Guidelines* establish that not only is Job Analysis documentation required, but that it also must be so detailed that another analyst could use the documentation and recreate the study and reproduce the findings. Being able to essentially copy a Job Analysis and get the same or close to the same results proves that the study is sound, and that the findings are not a result of luck or unique to just one study.

Second, because the State primarily depends on content-related validity to support its selection tools, the Job Analysis is the primary piece of validity evidence that the content is in fact job related. Without a very detailed report with clear documentation, it would be hard to justify the content of a selection tool. Figure 5.1 (Gatewood, 2011) demonstrates how the argument for the selection tool is made using the Job Analysis data. The first box (job tasks) represents the list of the job tasks, etc. generated during the Job Analysis. SMEs then define the KSAOs required to perform the specific tasks (box 2). Finally, selection tools are created or purchased that are the most suited to measuring the employee attributes. Based on this, the selection tools are supported by the job tasks and the employee attributes, which creates the content-related validity evidence needed for the selection instruments.

Figure 5.1

Job Tasks		**Employee**		**Selection**
Job Analysis Results: Tasks, work behaviors, functions, equipment, conditions/context of job	Inference ⟷	Job Analysis Identification of Employee Attributes: KSAOs	Inference ⟷	Content of Selection Instruments: Test items, interview questions, SOQs, etc.

SOQ =Statement of Qualifications

Third, selection tools are always open to legal challenges for discrimination concerns. It is possible for an applicant or several applicants to claim that one group was hired in larger numbers or at a higher rate than others. In situations like this, Job Analysis documentation can be used as proof that the decisions made were based on job-related criteria and not on an arbitrary basis. Without that proof, the hiring department may be found liable for unintentionally discriminating against a particular class of employees (Wilson, 2011).

Finally, well documented Job Analysis data can be used to support a variety of different human resource functions. Having adequate Job Analysis documentation makes using the data for other purposes easier. The data can be used to plan training efforts, for succession planning, job redesign, and many other important functions.

5.2 What content is required for a Job Analysis report?

There are several categories of information that should be included in the final Job Analysis documentation: Planning & Job Research, Task Development, KSAO Development, Rating information for both tasks and KSAOs, and Linking information of tasks and KSAOs, along with linking of the selection tool content. The checklist below can be used as a guide for documentation purposes.

- Name of department and contact information
- Name of classification/job
- Completion dates of Job Analysis
- What techniques were used to collect preliminary Job Analysis information (job audits, observations, committee based Job Analysis, literature review) and the dates the specific activities were conducted. The analyst should make sure that the methods used for data collection are clearly described.
- A description of the incumbents in the current classification/job (speaks to whether SME sample is representative)
- The number of SMEs that participated in the initial Task & KSAO discussion broken down by incumbent, supervisor, manager etc., and whether SMEs reviewed and approved the final task and KSAO Statements prior to administering the task & KSAO survey (assuming the job/class is big enough to warrant a Job Analysis survey)
- A summary of the number of task and KSAO Statements created and retained, and whether the Statements included the recommended number of components (five for task Statements, three for KSAO)
- If used, how was the Job Analysis survey developed and administered (paper? Online?), the number of SME responses (supervisor vs. incumbent), and some discussion about the representativeness of the final sample (including demographics)
- Description of retained tasks and KSAOs, along with ratings and description of the cut scores used, plus an appendix showing tasks/KSAOs not retained for selection examination purposes. Also include the linking of tasks and KSAOs and examination items (once the examination is completed)

Summary

The final chapter reviews why documentation of the Job Analysis study is so important and what information must be included. Job Analysis documentation is important because it is legally required, it serves as the basis for establishing the content-related validity of the selection examination, it protects against lawsuits by demonstrating the valid, job-relatedness of the selection instrument, and because well-organized Job Analysis data can support many

other HR functions. Time spent meticulously documenting the Job Analysis study is time well spent indeed. The chapter ends with a nine-point checklist of what information is required in Job Analysis documentation.

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Additional Resources

Laws, rules, and regulations:

California Code of Regulations Title 2 Division 1 Chapter 1 Subchapter 1.3 Classifications, Examinations, and Appointments: https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=IF641909FF92 D43FAA515390CD06BFC4F&originationContext=documenttoc&transitionType=Default&contextData=(sc.De fault)

CalHR State HR Professionals page: http://calhr.ca.gov/State-hr-professionals/Pages/main.aspx

Code of Federal Regulations Part 1607 – Uniform Guidelines on Employee Selection Procedures (1978): https://www.govinfo.gov/content/pkg/CFR-2017-title29-vol4/xml/CFR-2017-title29-vol4-part1607.xml

Government Code Title 2. Government of the State of California Division 5. Personnel: http://leginfo.legislature.ca.gov/faces/codes_displayexpandedbranch.xhtml?tocCode=GOV&division=5.&title= 2.&part=&chapter=&article=

SPB Compliance Review Tools and Best Practices: http://www.spb.ca.gov/compliance/compliancereview_tools.aspx

SPB Merit Selection Manual: Policies and Practices: http://www.spb.ca.gov/laws/manuals_tools.aspx

U.S. Equal Employment Opportunity Commission Facts on Employment Procedures: https://www.eeoc.gov/policy/docs/factemployment_procedures.html

Job research:

CalCareer: jobs.ca.gov

Career Builder: careerbuilder.com

Classification specifications: http://calhr.ca.gov/State-hr-professionals/Pages/job-descriptions.aspx

Indeed: indeed.com

Monster: monster.com

Office of Personnel Management (Federal): opm.gov

O*NET OnLine: onetonline.org

Identifying a representative sample:

HRNet: https://hrnet.calhr.ca.gov/CalHRNet/default.aspx

Internal Human Resources Information Systems (HRIS)

MIRS reports

Organization (Org) Charts

Glossary

Ability – general, enduring capability possessed by a person. For example deductive reasoning capability.

Building blocks (of job analyses) – the foundation of a Job Analysis, including job classification, job evaluation, performance evaluation, and training job evaluation. All four must be laid out to create a solid Job Analysis.

Committee-based rating – a technique used for rating task and KSAOO Statements associated with smaller job classification (i.e., fewer than 25 incumbents in the position)

Content domains – the broader categories that each task falls under

Content related validity – requires a Job Analysis in order to identify the tasks and KSAOs that are required for satisfactory job performance and should therefore be tested.

Critical Incident Technique – a specific interview technique that involves asking questions about particularly good or bad examples of job performance

Eligibility Examinations – Formal examinations used to establish employment lists for classifications.

Employment agencies – Businesses like Monster or CareerBuilder that supply detailed job information as well as recruiting, placement, and other career information and services.

Examination validity – what proves that an examination measures what it was designed to measure.

Hierarchy of work activities – specific terms used to describe different aspects or levels of work.

Hiring Assessments– Selection procedures used during the hiring process for a specific position.

Job Analysis– a structured data-collection technique used to understand fundamental aspects of a job or job family

Job audit/interview – an interview with incumbent SMEs used to gather more information about a particular job which are usually structured and include very specific questions designed to gather more information about the essential tasks, KSAOs, tools and equipment, and responsibilities of a job, among other information, that may be important for understanding the job.

Job observations – allow the analyst to see the job done first-hand, which is especially useful for jobs that are have a set routine or manual jobs that have a lot of observable movement.

Knowledge – a body of factual or procedural information about a particular domain that is associated with successful performance of a task.

O*Net – an online database of work information contributed to by the U.S. Department of Labor.

Other - (as used in KSAOs) – mental or physical attributes that are in addition to knowledge, skills, and abilities.

Purpose of the Job Analysis – refers to the importance of defining why the Job Analysis is being conducted. The purpose of the study drives many important considerations.

Secondary source information – information about a job or job family derived from sources other than the job itself. For example, O*Net, job descriptions, technical reports, existing job analyses, etc.

Skill – a person's proficiency or competency in performing a specific task usually involving tools or equipment.

Survey-based rating – a commonly used technique for rating task and KSAO Statements using a digital online survey. Paper-and-pencil versions can also be used.

Technical and research materials – sample reports and documents that have detailed information like job requirements and perhaps typical tasks and duties performed.

The Uniform Guidelines on Employee Selection Procedures – Federal guidelines governing how employee selection procedures are developed.

Title VII of the 1964 Civil Rights Act – explicitly prohibits any organization (employer, labor organization, industry, etc.) from denying employment, participation, promotion, or other employment or advancement opportunity to any individual based on race, sex, color, religion, or national origin.

Validity evidence – evidence that a test measures what it claims to measure. California State service typically uses content validity.

Appendices

The following documents are resources and templates that you may use as a guide when conducting a Job Analysis. Should your department have its own template or standard forms, these documents do not supersede your department's preferred templates and forms. CalHR is not requiring the use of any of the following documents and recommends that you consult with your supervisor before adopting any of the outlines provided.

CalHR would like to thank the Department of Industrial Relations for their contribution of templates for inclusion in this manual.

Appendix A: SPB Rule 250

Title 2. Administration

Division 1. Administrative Personnel

Chapter 1. State Personnel

Subchapter 1. General Civil Service Regulations

Article 10. Appointments

§ 250. Requirement That Selection Be Based on Merit and Fitness.

(a) Appointments to positions in the State civil service made from eligible lists in a manner consistent with provisions of Sections 254, 254.1, and 254.2 as related to the certification of eligibles, by way of transfer, as defined in Government Code Section 18525.3, or by way of reinstatement, as defined in Government Code Section 19140, shall be made on the basis of merit and fitness, defined exclusively as the consideration of each individual's job-related qualifications for a position, including his/her knowledge, skills, abilities, experience, education, training, physical and mental fitness, and any other personal characteristics relative to job requirements, as determined by applicant performance in selection procedures, including, but not limited to, hiring interviews, reference checks, background checks, and/or any other procedures, which assess job-related qualifications and are designed and administered to select those individuals who best meet the selection need.

(b) Eligible lists shall be created on the basis of merit and fitness, and, as such, shall result from: recruitment strategies designed to be as broad and inclusive as necessary to best meet the selection need; and applicant performance in selection procedures that assess job-related qualifications, are competitive in nature, are designed and administered to fairly and objectively identify those applicants who meet the selection need, and result in the ranking of applicants based on their job-related qualifications.

(c) Permanent status in permanent appointments to the civil service is achieved after completion of the required probationary period, the final phase of the selection process. Assessment of employee performance during the probationary period shall be made on the basis of merit and fitness, with regard to the individual's qualifications, including his/her knowledge, skills, abilities, experience, education, training, physical and mental fitness, and any other personal characteristics relative to job requirements, and his/her job-related performance.

(d) All phases of the selection process, including recruitment and examining, eligible list creation, appointment, and completion of the civil service probationary period, shall provide for the fair and equitable treatment of applicants and employees on an equal opportunity basis

without regard to political affiliation, race, color, ancestry, national origin, sex, sexual orientation, religion, disability, medical condition, age, or marital status.

(e) Nothing herein shall be construed to relieve appointing powers from the obligation to reasonably accommodate individuals with disabilities as required under the Americans with Disabilities Act, the Fair Employment and Housing Act, and the Civil Service Act.

(f) Nothing herein shall be construed so as to contravene the intent and purpose of Article VII, Section 6, of the California Constitution, which provides for the granting of preferences in State civil service to veterans and their surviving spouses.

(g) Intra-departmental job assignment transfers within the same job classification, such as assignments to different work shifts or work locations, or time base changes pursuant to Section 277 do not constitute appointments for purposes of this regulation.

NOTE: Authority cited: Section 18701, Government Code.

Reference: Article VII, Sections 1 and 6, California Constitution; Sections 18500, 18525.3, 18900, 18930, 18950, 18951, 18971-18979, 19050, 19052, 19140, 19171, 19173, and 19702.2, Government Code.

Appendix B: Uniform Guidelines Summary

The following excerpt is from a summary of the Uniform Guidelines on Employee Selection Procedures (Uniform Guidelines) prepared by the State Personnel Board's Test Validation and Construction Unit. The Uniform Guidelines, in its entirety, is available for review at www.uniformguidelines.com:

Introduction

This summary of the Uniform Guidelines for Employee Selection Procedures is intended to provide a brief overview of the provisions contained in the Uniform Guidelines. This summary should be used in conjunction with the full text of the Uniform Guidelines to address specific selection-related queries.

History of the Uniform Guidelines on Employee Selection Procedures

The Civil Rights Act of 1964 established that employment decisions based on race, color, religion, sex, or national origin are discriminatory and illegal. In 1978, the U.S. Civil Service Commission, the Department of Labor, the Department of Justice, and the Equal Employment Opportunity Commission jointly adopted the Uniform Guidelines on Employee Selection Procedures to establish uniform standards for employers for the use of selection procedures and to address adverse impact, validation, and record-keeping requirements. The Uniform Guidelines document a uniform Federal position in the area of prohibiting discrimination in employment practices on the basis of race, color, religion, sex, or national origin. The Uniform Guidelines outline the requirements necessary for employers to legally defend employment decisions based upon overall selection processes and specific selection procedures.

The Uniform Guidelines are not in and of themselves legislation or law; however, through their reference in a number of judicial decisions, they have been identified by the courts as a source of technical information and have been given deference in litigation concerning employment issues.

In addition to the Uniform Guidelines themselves, a separate document entitled Questions and Answers on the Uniform Guidelines on Employee Selection Procedures was released in 1979 to provide further clarification and a common interpretation of the Uniform Guidelines.

Appendix C: Title VII of the Civil Rights Act, as amended

a) Discriminatory practices prohibited; employees or applicants for employment subject to coverage

All personnel actions affecting employees or applicants for employment (except with regard to aliens employed outside the limits of the United States) in military departments as defined in section 102 of title 5, in executive agencies as defined in section 105 of title 5 (including employees and applicants for employment who are paid from nonappropriated funds), in the United States Postal Service and the Postal Rate Commission, in those units of the Government of the District of Columbia having positions in the competitive service, and in those units of the legislative and judicial branches of the Federal Government having positions in the competitive service, and in the Library of Congress shall be made free from any discrimination based on race, color, religion, sex, or national origin.

b) Equal Employment Opportunity Commission; enforcement powers; issuance of rules, regulations, etc.; annual review and approval of national and regional equal employment opportunity plans; review and evaluation of equal employment opportunity programs and publication of progress reports; consultations with interested parties; compliance with rules, regulations, etc.; contents of national and regional equal employment opportunity plans; authority of Librarian of Congress

Except as otherwise provided in this subsection, the Equal Employment Opportunity Commission shall have authority to enforce the provisions of subsection (a) of this section through appropriate remedies, including reinstatement or hiring of employees with or without back pay, as will effectuate the policies of this section, and shall issue such rules, regulations, orders and instructions as it deems necessary and appropriate to carry out its responsibilities under this section. The Equal Employment Opportunity Commission shall -

(1) be responsible for the annual review and approval of a national and regional equal employment opportunity plan which each department and agency and each appropriate unit referred to in subsection (a) of this section shall submit in order to maintain an affirmative program of equal employment opportunity for all such employees and applicants for employment;

(2) be responsible for the review and evaluation of the operation of all agency equal employment opportunity programs, periodically obtaining and publishing (on at least a semiannual basis) progress reports from each such department, agency, or unit; and

(3) consult with and solicit the recommendations of interested individuals, groups, and organizations relating to equal employment opportunity.

The head of each such department, agency, or unit shall comply with such rules, regulations, orders, and instructions which shall include a provision that an employee or applicant for employment shall be notified of any final action taken on any complaint of discrimination filed by him thereunder. The plan submitted by each department, agency, and unit shall include, but not be limited to -

(1) provision for the establishment of training and education programs designed to provide a maximum opportunity for employees to advance so as to perform at their highest potential; and

(2) a description of the qualifications in terms of training and experience relating to equal employment opportunity for the principal and operating officials of each such department, agency, or unit responsible for carrying out the equal employment opportunity program and of the allocation of personnel and resources proposed by such department, agency, or unit to carry out its equal employment opportunity program.

With respect to employment in the Library of Congress, authorities granted in this subsection to the Equal Employment Opportunity Commission shall be exercised by the Librarian of Congress.

(c) Civil action by employee or applicant for employment for redress of grievances; time for bringing of action; head of department, agency, or unit as defendant

Within 90 days of receipt of notice of final action taken by a department, agency, or unit referred to in subsection (a) of this section, or by the Equal Employment Opportunity Commission upon an appeal from a decision or order of such department, agency, or unit on a complaint of discrimination based on race, color, religion, sex or national origin, brought pursuant to subsection (a) of this section, Executive Order 11478 or any succeeding Executive orders, or after one hundred and eighty days from the filing of the initial charge with the department, agency, or unit or with the Equal Employment Opportunity Commission on appeal from a decision or order of such department, agency, or unit until such time as final action may be taken by a department, agency, or unit, an employee or applicant for employment, if aggrieved by the final disposition of his complaint, or by the failure to take final action on his complaint, may file a civil action as provided in section 2000e-5 of this title, in which civil action the head of the department, agency, or unit, as appropriate, shall be the defendant.

(d) Section 2000e-5(f) through (k) of this title applicable to civil actions

The provisions of section 2000e-5(f) through (k) of this title, as applicable, shall govern civil actions brought hereunder, and the same interest to compensate for delay in payment shall be available as in cases involving nonpublic parties.

(e) Government agency or official not relieved of responsibility to assure nondiscrimination in employment or equal employment opportunity

Nothing contained in this Act shall relieve any Government agency or official of its or his primary responsibility to assure nondiscrimination in employment as required by the Constitution and statutes or of its or his responsibilities under Executive Order 11478 relating to equal employment opportunity in the Federal Government.

Appendix D: Critical Incident Technique

Occasionally, the interview process becomes bogged down and SMEs are unresponsive to the structured questions. A technique used to stimulate thinking and discussion is the Critical Incident Technique (CIT). The CIT involves asking questions about particularly good or bad examples of job performance. A key to this technique is to ask about specific behaviors that have actually happened versus simply descriptions of hypothetical performance. Each critical incident should include three components: a description of the specific situation, the effective or ineffective behavior performed by the incumbent, and the consequences of that behavior (Gatewood, 2011). The CIT is unlikely to generate a comprehensive list of tasks or KSAOs but it is an excellent way to open up thinking and dialog during interviews that are not progressing fruitfully. Brannick, (2007) offers several practical tips on facilitating the CIT during SME meetings.

1. Do not use the term "critical incident" when describing the activity to SMEs. Instead, use "behavioral examples" or "work snap shots". Ask the SMEs to imagine that they could take a snapshot of a worker doing something exceptionally great or exceptionally bad.

2. Prepare for using the CIT by coming up with some good examples and make the example stories job related.

3. Have SMEs imagine actual specific people and tell stories about them.

4. Prompt the SMEs using tasks or behavioral dimensions from the Job Analysis if they are hesitant.

5. Instruct the SMEs not to worry about assigning blame to the exemplar.

Appendix E: Survey Monkey

CalHR uses Survey Monkey as an easy and efficient tool for creating and distributing the Job Analysis survey. The detailed instructions below represent a step-by-step guide for developing the Survey Monkey survey. Departments are free to choose their own survey approach provided they follow the principles outlined in this course.

CalHR has developed a standard Survey Monkey template for task and KSAO rating purposes. This template is available to all departments who have a Survey Monkey account (ask the course instructor for more information). Below are the steps for creating a Job Analysis survey using the CalHR survey template.

1. Open the template and go to the "Design Survey" Tab

2. On the first page of the template (P1: Introduction), fill in the survey with the classification name where it says "Enter Classification Here". At the bottom of page one fill in the name and contact information of the HR Contact where indicated. Then fill in the date the survey must be completed where it says "Month, Day, Year."

3. On the second page (P2: Demographic Information – Page 1) you may need to update some of these questions. They should all be mandatory to answer before the survey taker moves on to the next page.

   a. Question 1, "enter first and last name" should be kept as it will help you identify each survey taker.

   b. Question 2, which department do you work for" can be changed to which division or unit do you work for, whatever is appropriate for your department. This question helps ensure that you are getting responses from all of the divisions/units within your organization that utilize this particular classification.

   c. Question 3, "current classification" is important to determine if the survey taker is at the appropriate level and has the expertise to be counted in this survey. Update the options to reflect the classification being surveyed/assessed.

   d. Question 4, "what classification are you rating?" should be deleted if you are only surveying one classification. When you are surveying more than one classification, this question is necessary to be able to separate the data appropriately. Have all of the classifications being surveyed listed, and do not allow an "other" option. Survey takers must indicate only one of the classifications that they are rating.

   e. Question 5, "how are you completing this survey?" is intended to demonstrate the level the SMEs who are responding to your survey. You should strive, whenever possible, to have the majority of your responses come from incumbents.

   f. Question 6, "tenure" does not need any editing.

   g. Question 7, "education". This question does not need any editing unless there is a degree that incumbents may have that is not reflected in the options (e.g., JD for a lawyer classification).

   h. Question 8, "county". This question should not need any editing (all California counties are represented) unless this classification has some incumbents who are working outside of the State.

   i. Question 9, "headquarters or field office". This question should not need any editing.

   j. Question 10, "lead". This question should not need any editing.

     k.   Question 11, "supervise". This question should not need any editing.

4. On the third page (P3: Demographic Information – Page 2) you can update these questions as necessary. Please note these questions should be left as optional so that a survey taker may skip the questions if they wish.

    a. Question 1, "gender" can be updated if necessary for your department.

    b. Question 2, "ethnicity" can be updated if necessary for your department.

    c. Question 3, "age" can be updated if necessary for your department.

5. On the fourth page (P4: Task Ratings), you can copy and paste the finalized task Statements from your Job Analysis Meeting here. Simply click where it says "Enter Task Statements Here", and then Click on "Bulk Answers". In the dialog box that pops up, copy and paste your task Statements in bulk. Copy both the number and the task Statement. We suggest 20 – 25 per page at the most.

6. On the fifth page (P5: Task Ratings), do exactly the same as the previous page.

7. If you have more tasks than can fit on the template pages provided, you can copy one of the "Task Rating" pages by:

    a. Clicking on more actions on the top right hand corner of the page.

    b. Pick "Copy Page"

    c. Pick "after" current page for the position and then click apply.

8. If you don't need as many task ratings pages as provided, you can delete a page by:

    a. Clicking on more actions on the top right hand corner of the page.

    b. Pick "Delete Page"

    c. Pick "Delete questions on the page as well" and then pick apply.

9. The KSAO Statements can be added in the same manner as the task Statements. Important Point: Make sure you are adding KSAO Statements to the correct template page (make sure it says "Knowledge, Skill, Ability, and Other Ratings" at the top of the page). The tasks and KSAOs use different rating scales, so placing them on the wrong page will result in incorrect ratings being applied to your Statements.

10. On the last page, insert the contact information for the HR Contact where it says "HR Contact Info".

11. After you have finished creating your survey, click on the "Collect Responses" tab. Then click on "Get Web Link". You can copy and paste the web link into an email to send to SMEs.

Appendix F: Sample Job Analysis Survey

1. Introduction

Job Analysis Survey for Research Data Specialist 1, 2, & 3

The California Department of Human Resources (CalHR) - Selection Services Program (SSP) is conducting a Job Analysis survey for your department. The purpose of this survey is to rate the task statements, as well as the knowledge, skills, abilities, and personal characteristics (KSAPCs) statements required for successful job performance. This information is necessary to ensure that selection procedures are appropriate, job-related, and in compliance with federal and State laws regarding employment testing. This job analysis is being conducted for the new Research Data Specialist 1, 2, and 3 classifications.

This survey is being conducted using individuals who are/were (prior to consolidation when the name of the classifications changed) in the following classifications:

Research Program Specialist 1 including all parentheticals
Research Program Specialist 2 including all parentheticals
Research Program Specialist 3 including all parentheticals
Tax Research Specialist 1
Tax Research Specialist 2
Tax Research Specialist 3

If you are/were in one of the above classifications, you will be asked to rate the tasks and KSAPCs based on your experience in that classification. If you previously were in one of the above classifications, please complete the survey based on your most recent assignment. If you are a supervisor of employees who are/were in the above classifications, please complete the survey based on your understanding of the jobs of those you supervise.

Please allow 60 to 90 minutes to complete the survey. The rating scales for task and KSAPC statements are provided via drop down menus. If you need to exit and return to the survey, please consider the following:

• Respondents must use the same computer to return to the survey.
• All statements must be rated before proceeding to the next page of the survey. Any information on partially completed pages will not be saved. After completing a page, select the "NEXT" button to save the information.
• If you wish to save entered information and return to the survey at a later time, "cookies" must be enabled in your internet settings options. If you are unable to change the internet settings of your computer or do not have administrator rights, contact your Department's Information Technology (IT) support team.
• SSP is not able to guarantee that information entered will be saved, please contact your IT team before starting the survey if uncertain about your computer settings.

* What is your current classification? (Answer this question based on your classification PRIOR to consolidation when the names changed)

○ Research Program Specialist 1

○ Research Program Specialist 1 (Geographic Information Systems)

○ Research Program Specialist 1 (Health)

○ Research Program Specialist 1 (Demography)

○ Research Program Specialist 1 (Economics)

○ Research Program Specialist 1 (Social/Behavioral)

○ Tax Research Specialist 1

○ Research Program Specialist 2

○ Research Program Specialist 2 (Geographic Information Systems)

○ Research Program Specialist 2 (Health)

○ Research Program Specialist 2 (Demography)

○ Research Program Specialist 2 (Economics)

○ Research Program Specialist 2 (Social/Behavioral)

○ Research Program Specialist 2 (Mental Health)

○ Tax Research Specialist 2

○ Research Program Specialist 3 (Demography)

○ Research Program Specialist 3 (Geographic Information Systems)

○ Research Program Specialist 3 (Resource Economical Operations Research)

○ Tax Research Specialist 3

○ Other (please specify)

[   ]

* This survey is meant to assess the tasks performed and the KSAs that are necessary for each level of the Research Program Specialist series. You will be rating these tasks and KSAs for one of the below levels based on your most recent assignment or based on the level you are most familiar with (i.e., the one you supervise). Which of the levels below are you rating on this survey?

○ Research Program Specialist 1 (including all parentheticals and Tax Research Specialist 1)

○ Research Program Specialist 2 (including all parentheticals and Tax Research Specialist 2)

○ Research Program Specialist 3 (including all parentheticals and Tax Research Specialist 3)

* This survey is intended to measure the duties and qualifications of the Research Program Specialist 1, 2, and 3 classifications (including all parentheticals and Tax Research Specialists). Persons qualified to complete this survey include Research Program Specialist 1, 2, and 3 classifications (including all parentheticals and Tax Research Specialists) incumbents (i.e., those who were in one of those classifications prior to consolidation), their immediate supervisors, and persons who otherwise have expert knowledge about the requirements of the Research Program Specialist 1, 2, and 3 (including all parentheticals and Tax Research Specialists) job. How are you completing the Job Analysis Survey? As a:

○ Current Incumbent

○ Former Incumbent

○ Supervisor

○ Trainer

○ Other (please specify)

[   ]

How long have you worked in your current job classification

○ 0 to 6 months

○ 7 to 12 months

○ More than 1 year but less than 2

○ At least 2 years but less than 3

○ At least 3 years but less than 5

○ At least 5 years but less than 10

○ More than 10 years

* What is the highest level of education you have completed?

○ Some high school

○ High school graduation or GED

○ Up to two years of college with no degree

○ Two-year college degree (i.e., A.A. degree)

○ Three to four years of college with a two-year college degree

○ Three to four years of college with no degree

○ Four-year college degree (i.e., B.A. degree)

○ Master's degree

○ Doctoral degree

* What county do you work in?

County	

Other (please specify)

* Do you work in headquarters or a field office?

- ○ Headquarters/Central Office
- ○ Field Office/Regional Office

* How many employees do you act as a lead for?

- ○ 0
- ○ 1 to 5
- ○ 6 to 10
- ○ 11 or more

* How many employees do you directly supervise?

- ○ 0
- ○ 1 to 3
- ○ 4 to 6
- ○ 7 to 9
- ○ 10 to 19
- ○ 20 or more

3. Demographic Information - Page 2

The following three questions are voluntary. This information is being collected to document the representativeness of the respondents to this survey. Individual responses will remain confidential.

What is your gender?

○ Female

○ Male

○ Decline to State

Of which ethnic group do you consider yourself a member?

○ Asian

○ Black/African American

○ Filipino

○ Hispanic

○ Native American

○ Pacific Islander

○ White/Caucasian

○ Decline to State

What is your age?

○ Under 21

○ 21 - 29

○ 30 - 39

○ 40 - 49

○ 50 - 59

○ 60 or over

○ Decline to State

4. Task Ratings

Rate each of the tasks using the two scales provided below (Importance and Frequency). If you are an incumbent, use your own first-hand knowledge of the job to rate each of the tasks based upon the tasks you actually perform in your current assignment. If you are the supervisor of one or more incumbents, rate each task based on the tasks performed by the incumbents you supervise.

* Written Communication Tasks

	Importance	Frequency
1 Write letters, memos, emails, and other correspondence for the purpose of communicating and disseminating information to a variety of audiences.		
2 Write project and/or executive summaries, and other more complex documents for various purposes (e.g., documenting program requirements, status, completion, addressing policy issues, responding to requests for information and requesting information).		
3 Develop concept papers to explain an issue or need for new, or changes to existing, processes, procedures or methodology (e.g., program development, scope of proposed change, advantages/disadvantages of the proposed change, and/or budget issues).		
4 Write research reports for dissemination to requestors and other interested parties that may include the following components: background and literature review, list of specific study aims, goals and objectives, study design and research methodology, data collection procedures, data analysis techniques, results, conclusions and recommendations.		
5 Write and edit policy manuals, legislative guidelines, departmental manuals, or other written materials related to relevant tasks or assignments.		
6 Read, interpret, and/or update policy manuals, legislative guidelines, departmental manuals or other written materials related to relevant tasks or assignments.		
7 Review and/or write critiques of research articles and other documents developed by internal and external researchers to identify information relevant to the current research and/or provide feedback on the research methodology, statistical techniques used, findings obtained, and conclusions reached in the study.		
8 Read literature to keep current in the latest findings and trends in the program area.		

9. Knowledge, Skill, and Ability Ratings

Rate each of the knowledge, skills, abilities, and personal characteristics (KSAPCs) using the three scales provided below. If you are an incumbent in the job you are rating, use your own first-hand knowledge of the job to rate each of the KSAPCs based upon the requirements and qualifications of your current assignment. If you are the supervisor of the job you are rating, rate each KSAPC based on the current qualifications required of your staff.

* Research Design and Techniques KSAPCs

	Importance	Expected At Entry	Relationship to Job Performance
1 Knowledge of research design methods to conduct research projects and evaluation studies.			
2 Knowledge of the scientific method and its appropriate uses and applications in order to develop and critique research projects and assignments.			
3 Knowledge of data collection methods (e.g., survey, interviews, data mining, GPS, geocoding) to ensure the proper use and validation of the research results.			
4 Knowledge of appropriate sampling techniques required to produce statistically reliable and valid research results.			
5 Skill to conduct a literature review using various resources (e.g., library, internet) to compile information and data from academic journals, research publications, and online sources.			
6 Knowledge of practices required to ensure and maintain data security, including securely transmitting confidential data.			

Appendix G: Best Practices for Maintaining Job Analysis Reports

It is CalHR's opinion that the following should be done when a Job Analysis is beyond the 5-year mark:

1. Have an Examination Analyst who is familiar with the Job Analysis process do some research to determine if the classification has changed significantly and if new Tasks or KSAOs need to be added. If the classification is Landscape Technician, for example, perhaps no new Statements need to be developed, and you can skip to step 4.

2. The Examination Analyst should determine what edits are needed to the Tasks and KSAO list. Add any new Tasks/KSAOs and/or delete or amend any old ones that are deemed obsolete.

3. If the Examination Analyst determines significant changes are necessary (for example, an Information Technology Specialist II where the tasks and KSAOs have changed significantly), then a Job Analysis meeting can be convened with SMEs to vet the new and existing items.

4. Resurvey the SMEs to allow them to rate all of the Tasks and KSAOs.

5. Put an addendum in the Job Analysis Report detailing the process and the new ratings on the Tasks and KSAOs.

Appendix H: Conducting Job Analysis Research Step-by-Step

The following is adapted from The Handbook of Work Analysis (Wilson, Bennnett, Gibson, and Alliger, 2012, p. 88-89). A new analyst may find the steps below helpful, but ultimately with practice, each analyst will create and utilize their own research process. The steps below are intentionally brief. Further clarification can be found in chapter 1 of this manual.

1. Step 1: Define the purpose of the Job Analysis; in many instances this will be examination development. Also determine the following: What types of work information are needed (e.g., tasks, responsibilities, KSAOs)? What work role (or roles) are being analyzed?

2. Step 2: Search secondary sources, guiding your research with the responses in step 1. In this step, O*Net, classification specifications, prior job analyses, Duty Statements, etc. are used to gather the information needed.

3. Step 3: Broaden your search for sources. This may include use of search engines (e.g., Google), the job at other public sector entities (e.g., counties, cities, other States), the job at private sector entities, job postings on online sites (e.g., Monster, Indeed), etc.

4. Step 4: Compare the results of your research from steps 2 and 3. Look for commonalities between each of the sources you used. By finding commonalities, you are establishing consensus and supporting your research results. Conversely, items that are only found in one source may not generalize well to all positions within a particular job.

5. Step 5: Verify your research results with SMEs. Ask them to identify what information is relevant to their jobs, what is not, and anything that is missing. It is recommended to perform this step prior to establishing task and KSAO Statements. If time and resources do not permit, then this can be completed simultaneously with reviewing the Statements.

6. Step 6: Document, document, document! Include your sources in your Job Analysis report so that as the report is maintained, you or another analyst can easily redirect back to the original sources. This information may also be helpful in the event of an audit or compliance review. A recommended best practice is to maintain some sort of database or spreadsheet identifying various sources and the information they provide to streamline future research projects.

Appendix I: Sample Task Rating Results Sheet

Retained Tasks

[CLASSIFICATION]

Scale A Importance (Mean Rating)	Scale B Frequency (Mean Rating)		Task Statements (Number = ##)
4.00	2.00	1	Task Statement goes here
		2	
		3	
		4	
		5	
		6	
		7	
		8	
		9	
		10	
		11	
		12	
		13	
		14	

Tasks Not Retained

The following tasks Statements have been dropped from the final Job Analysis because they did not meet the cutoff criteria of having an importance rating of 2 or greater. When tasks Statements are dropped from further consideration (i.e. selection etc.), it doesn't necessarily mean that the tasks are unimportant to individual job incumbents or specialized job assignments. Rather, it implies that the tasks do not generalize well enough to be considered as representative of the job classification overall. Typically, there are core tasks that all incumbents complete, and these are most appropriate for representing the work performed by the classification.

Scale A Importance (Mean Rating)	Scale B Frequency (Mean Rating)		Task Statements (Number = ##)
1.50	1.00		Tasks Statements goes here

Appendix J: Sample KSAO Rating Results Sheet

Retained KSAOs
[CLASSIFICATION]

Scale A Importance (Mean Rating)	Scale B Expected at Entry (Mean Rating)	Scale C Relationship (Mean Rating)	KSAO Statements (Number = ##)	
4.00	2.00	1.00	K1	KSAO Goes here
			K2	
			K3	
			K4	
			K5	
			K6	
			K7	
			K8	
			K9	
			K10	
			11	
			12	
			13	

KSAOs Not Retained

The following KSAO Statements have been dropped from the final Job Analysis because they did not meet the cutoff criteria of having BOTH an importance rating of 1.9 or greater and an Expected at Entry rating of 1 or higher. When a KSAO is dropped from further consideration (i.e. selection etc.), it doesn't necessarily imply that the KSAO is unimportant to individual job incumbents or specialized job assignments. Rather, it implies that the KSAO does not generalize well enough to be considered as representative of the job classification overall. Typically, there are core KSAOs that all incumbents share, and these are most appropriate for representing the work performed by the classification.

Scale A Importance (Mean Rating)	Scale B Expected at Entry (Mean Rating)	Scale C Relationship (Mean Rating)		KSAO Statements (Number = ##)
1.50	1.00	0.95		KSAO Statement goes here

Appendix K: Sample Task and KSAO Linking Sheet

Instructions: For each KSAO Statement, carefully consider the relationship between each Statement and every task on the "Retained Tasks" form provided. If the KSAO is required to complete the task, write the corresponding task number in the third column titled "Linking Task #".

KSAO #	KSAO Statement	Classification Specification KSAO#	Linking Task #
1	KSAO Statements goes here		1,2,3,4,5,6
2			
3			

Course Notes

Job Analysis