

## Critical Evaluation Competency

HR professionals are called upon to use their Critical Evaluation competency in making (or requesting support for) business decisions—identifying opportunities and threats, developing effective and efficient plans, and evaluating the results of those plans. Critical Evaluation involves:

- Obtaining factual, objective, and reliable evidence.
- Considering a topic from all perspectives.
- Applying your analysis of the evidence, your experience, and HR best practices to develop appropriate responses.

**Business intelligence** refers to the ability to gather and analyze data from inside and outside the organization so that information is available for decision makers. For HR professionals, the ability to gather internal data is enhanced with the use of HR information systems and with enterprise management systems that can capture data from across the entire organization.

It is important to remember, however, that the purpose of gathering performance data is to use that information to support action. To do this, HR professionals must be able to understand the story that lies behind the numbers and relate this story and its significance to the organization's leaders. This requires analyzing data to see patterns and anomalies and conducting further analysis to detect causal relationships and project impacts on business plans. Presenting partially digested raw data will not guide action, and it may even deter action or point in the wrong direction.

Consider the following example, based on a story reported in *The New York Times*. A professor plotted the grades for his introductory science class and noted that the results yielded a peculiar bell curve. While most students were clustered at the high end of the grade scale (this was a school with challenging entry requirements), there was a second cluster, representing 20% of the students, that formed around the bottom of the grade scale. The professor decided to find out more about these students, before simply sending them off to a remedial course or letting them drop out. Poring over every student profile, he defined three adversity factors: low standardized entry scores, low family income, less-educated family. He analyzed the failing students and found that almost all had at least two of the three factors. Armed with this data and the

school's mission, he secured support for a special program that included extra instruction, peer mentoring, and close monitoring and rapid intervention by advisors. He tested the approach with a group of students. Results showed that this group performed at the same level as the entire student cohort on the same tests. The professor applied Critical Evaluation—as well as Ethical Practice and Leadership and Navigation—to improve the school's teaching practices.

HR professionals are faced everyday with troubling mysteries that data can help solve: low levels of retention, failure to recruit diverse or qualified candidates, disparate levels of effectiveness of performance management systems across the organization, or employee disputes or accidents. HR professionals in a large parcel delivery firm noticed a level of on-the-job injuries that was out of line with the industry norms—a good example of Business Acumen as well as Critical Evaluation. Analysis of claims revealed a larger proportion of injuries among truck drivers. Analysis of those claims revealed that they were due to accidents, and further study showed that the accidents primarily occurred when a driver was making a turn into oncoming traffic. Routes were changed to eliminate those turns, the new findings were reexamined, and the anomaly had disappeared.

So while HR professionals tend to think of themselves as working with people and not data, the reality is that what we know about people is data. HR professionals can benefit from developing their sense of curiosity and their abilities to read and interpret data.

To have competency in Critical Evaluation, HR professionals need:

- Skills to gather information and resources, such as measurement and assessment, objectivity, curiosity, and inquisitiveness.
- Tools and approaches to process information in order to make sound decisions, including critical thinking, problem solving, and research methodologies.
- Among advanced practitioners, techniques for translating and using information when making decisions and formulating recommendations.

This section will review basic statistical terms and principles, common analytical tools, and graphic tools that are often used to both analyze data and present analytical results to audiences.

### Evaluating Data Sources

Sources of data are more plentiful today than ever before. Human resource information systems and enterprise management systems collect data in an ongoing manner and include tools to sort and analyze data in different ways—for example, using data obtained before a certain date or change to create a control group, or spotting anomalies across the organization or over time. Quality in-house data is usually valid but is limited in the world of data that it can represent. (Note that in-house data that is inaccurate, outdated, or unrepresentative will produce results that are similarly flawed—garbage in, garbage out.)

Supplementing in-house data can be done easily online, but these secondary sources of data must be evaluated for their overall accuracy. There are several questions you should consider before accepting data in a print or online publication:

- Does the source have authority? A government agency, such as a labor department or ministry, or an academic institution is more credible than a blogger.
- What are the source’s possible biases? Bias can lead to “cherry picking” data—including only the facts that support a certain position.
- Are the sources for data used in a publication clearly cited? And are those sources reliable and accurate?
- Are the facts relevant? For example, data about trends in one industry may not apply to all industries.
- Is the data current? Some concepts are classic, but data is subject to variables that can weaken its relevance over time. For example, data from a recessionary period can be highly inaccurate in describing conditions in an expanding economy.
- If the data is being offered as proof of an argument, is the argument itself sound? Are its deductions from the data logical?

### Statistical Principles

Critical thinking is built on reason and evidence. Errors occur in the Critical Evaluation process when evidence is weak or is analyzed in a non-objective manner. Here we’ll look at several statistical principles: reliability and validity, statistical sampling, and measurement bias.

## Reliability and Validity

Whether you are designing a tool to gather primary data or using data from a secondary source, you should be concerned with two key characteristics of the data collected: reliability and validity.

**Reliability** reflects the ability of a data-gathering instrument or tool, such as a survey or a rater's observation or a physical measurement, to provide results that are consistent.

### Examples:

If an interviewer uses a tool to gather information from a series of individuals, each interview should produce the same categories of responses (data). If information is present in some interview reports but not in others, then this approach is probably not reliable.

If an applicant takes a motor skills test on consecutive days, the scores should be similar (allowing for the effect of practice). If all conditions are the same and the scores differ significantly, the test may not be reliable.

Perfect reliability is rarely achieved. A variety of errors can occur that may create inconsistent results, including:

- A failure to maintain the same conditions or correct for differences. For example, giving a cognitive skills test at different times of the day may produce different results. The impact of these differences can show up by retesting the subject(s).
- Cultural differences that create different interpretations of questions. For example, the same tool used to gather employee engagement data in different countries may produce different results. Tools require thorough review and testing.
- Bias in using the tool to gather data. Rater reliability can be checked by testing a tool with different raters. Bias is discussed further below.

**Validity** is the ability of an instrument to measure what it is intended to measure. Validation answers two questions:

- What does the instrument measure?
- How well does the instrument measure it?

Validity reflects the degree to which a tool measures attributes that are relevant to the measurement's intention.

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### **Examples:**

Skill tests administered to job applicants must produce valid performance data, which means that they must measure skills that are necessary requirements for the job.

A data-gathering tool designed to select information from an HRIS for an analysis about workplace-related injuries should contain only cases related to that type of injury, not injuries that occur away from the workplace.

A tool's validity may be damaged by using irrelevant criteria to develop measures. For example, a tool used to select high-talent individuals for fast-track career development could focus on characteristics that do not correlate to competencies leaders need in the organization. A follow-up survey may reveal that success rates do not correlate with the tool's predictions. Similarly, a performance analysis of a customer call center intended to measure customer satisfaction will not be valid if it focuses on the frequency of call handling.

A common adage is that all valid tools are reliable but not all reliable tools are valid. You can measure the wrong things in a consistent manner.

### **Statistical Sampling**

Sampling is often used when the population to be analyzed is very large or when data cannot be obtained from the entire population. The sample must be representative; it must accurately reflect the key characteristics of the entire population being studied. For example, the sample used in a wage survey of employees in a certain job should include the same ratio of sexes and years of experience as for all employees in that job. Samples of data must be sufficiently large to include all the possible variations within the population being sampled. The smaller a sample is, the more likely analysis results will be affected by statistical outliers, values that differ greatly from the average. This is a common problem with surveys with poor rates of response.

### **Measurement Bias**

Bias occurs when people consciously or unconsciously evaluate data in an irrational manner. This is a common issue in the interview process, performance evaluation, and investigations. HR professionals must take precautions to ensure that their preconceptions do not misinterpret information and inadvertently influence their judgment.



Measurement bias may lead to claims of unlawful discrimination, particularly if inconsistent questioning, stereotyping, or the like is caused by or related to an employee's or candidate's protected status (i.e., the employee or candidate is a member of a class of individuals protected against discrimination by statute).

- **Stereotyping** applies generalized opinions about how people of a given gender, race, religion, age, education level, job type, or national origin look, think, act, feel, or respond.

**Example:** Presuming that poor customer service ratings in a work unit are related to the predominance of one gender in that unit is stereotyping.

- **Inconsistency** in using a data-gathering approach or tool can result in selectively gathering data.

**Example:** An HR professional investigating a complaint about a potentially abusive supervisor interviews only employees who have been in the work unit for several years (or, conversely, only new employees).

- With the **first-impression error**, the investigator makes snap judgments and lets his or her first impression (either positive or negative) cloud the subsequent evaluation.

**Example:** An HR professional conducting interviews for access to a mentoring program responds very favorably to an employee's open and friendly manner. This first reaction diminishes the importance of suggestions gathered later that the employee may not have the discipline to meet the program's requirements.

- **Negative emphasis** involves weighting a small negative reaction or piece of information more than it should objectively merit. Research indicates that we give unfavorable information roughly twice the weight of favorable information. Negative emphasis often happens when subjective factors like dress or nonverbal communication taint the investigator's judgment.

**Example:** An applicant is unable to maintain eye contact during a job interview. The job under consideration involves telemarketing, and all communications with the customer will be via phone. The interviewer rejects the applicant due to the lack of eye contact.

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- With the **halo/horn effect**, the analyst allows one strong point that he or she values highly to overshadow all other information. When this works in the subject's favor, it is called the **halo effect**. When it works in the opposite direction, with the analyst judging an individual unfavorably in all areas on the basis of one trait, it is called the **horn effect**.

**Example:** A vendor used for recruiting executives is unfailingly easy to work with—always easy to reach, pleasant to talk with. The vendor always rates highly in outsourcing surveys...despite the fact that the hiring rate for many of vendor's candidates is disappointingly low.

- In the case of **nonverbal bias**, undue emphasis is placed on unrelated nonverbal cues.

**Example:** The investigator interprets the candidate's occasional tapping of a forefinger on the conference room table to be a sign that the individual is nervous and must be lying.

- With the **contrast effect**, strongly convincing individuals tend to enhance the negative impressions of the next individual interviewed, and vice versa.

**Example:** In a team meeting, one member presents data for her position confidently. The HR team leader asks another team member to present an argument for another position. The team leader is more critical of the second position because the first exposition was so strong.

- The **similar-to-me error** involves making judgments based on shared personal characteristics.

**Example:** The HR manager is inclined to believe that a young staff member is ready for promotion because he has qualities the manager saw in herself at that point in her career.

- **Cultural noise** occurs when an analyst fails to recognize that an individual is responding to questions with answers that the interviewer wants to hear—in other words, the interviewer's culture or values determines what he or she hears.

**Example:** An HR professional is interviewing HR staff in different offices to assess training programs provided by the home office. The HR professional does not question the staff's generally favorable assessments of the training delivery mechanisms because these mechanisms have worked well at the home office.