

Analysis and Validation Services

Censeo consultants provide clients professional and scientifically rigorous analysis and validation services relative to various kinds of assessments, including knowledge and skill tests and different types of surveys. The assessments may be used for selection or development purposes. Censeo offers many different kinds of consulting services in this area, but most projects involve a structured methodology and some type of quantitative data analysis.

Analysis and validation studies are conducted for two main purposes:

- To ascertain the effectiveness of the assessments themselves, or of the HR systems of which they are a part. An example would be performing statistical analyses to demonstrate that a test used for selection or certification purposes is valid and will withstand legal scrutiny if it is challenged. From a systems standpoint, an example would be analyses to determine how well the whole selection process is operating to select candidates who will be high performers with a high probability for retention.
- To use assessment data to measure the effectiveness of some program or intervention, such as a training program. An example here would be assessing the degree to which people have learned what they were taught, or how well they are applying the knowledge and skills on the job.

Increasingly, HR and training professionals are being asked to *prove* that their tools and processes are effective and that they add value to the organization. They often seek outside expertise – from professionals trained in assessments, psychometrics and statistics – to help conduct the research to build the proof needed.

Typical Project Steps

Analysis and validation studies vary considerably depending on the purpose, the methodology that's appropriate, and other factors. However, the steps outlined below are fairly typical at a high level. Censeo's role can range from providing expert counsel as needed, to performing only selected technical tasks, to taking the lead role on the whole project.

1. *Project planning* – clarifying the objectives, determining data requirements and methodology, and developing a project plan with tasks, responsibilities, timelines, etc. As with any initiative, sound project planning helps ensure the desired outcomes are realized.
2. *Assessment objectives* – specifying the objectives for the assessment or system being evaluated, and the criteria that will be used in evaluating its validity, effectiveness and efficiency. The purpose of a selection test is obviously very different than that of a 360 feedback assessment, and the evaluation criteria will likewise be different.
3. *Data collection* – collecting the data needed to execute the project plan and methodology. Different types of data will be appropriate, depending on the kinds of analyses that will be performed. Examples include things like stakeholder perceptions, assessment data (e.g., total and dimension scores, item responses), and criterion measures such as job performance and retention. And there are many different measures related to the efficiency of systems, such as interview-to-hire ratios, cycle times for various parts of a process, passing rates, cost and resource requirements, etc.
4. *Data analysis* – performing statistical and other kinds of analyses to determine how well the assessment or system is meeting the defined objectives. For a selection test, one would be interested in the correlation between assessment scores and performance measures or retention. For a knowledge test associated with a training program, the analysis would determine how well the assessment mapped to the learning objectives in the program (quality of the test), in addition to how much people learned (quality of the training). And for a multi-rater survey, one would be most interested in the extent to which behavioral change occurred as a result of the process.
5. *Documentation and reporting* – summarizing the objectives, methodology, findings, and implications in a written document (and often in a corresponding presentation) that meets technical and professional standards, but that is also understandable and useful to people in the client organization. Some types of documentation, such as that for validation studies, must meet very specific standards. In other cases, clients are more interested in recommendations on how the assessment or system might be improved.

Censeo is often asked to assist clients in conducting analysis and validation studies on existing assessments and systems, and we follow the steps outlined above.

However, when we develop a new assessment or system, the research becomes part of the development process itself. That is, the “proof” needed is a key deliverable at the end of the engagement.

Validation Research Studies

When an assessment is used to make any kind of personnel decision (e.g., selection, certification, promotion, compensation), the company using it may have to prove that it is job-related and valid. Professional standards and EEOC guidelines address different kinds of validity, and it is beyond the scope of this fact sheet to cover this complex topic in any detail. But the basic point is to demonstrate that the assessment actually does what it purports to do, and that demonstration usually involves some kind of statistical analysis.

The most basic type of validity is *content* validity – the content of the assessment maps closely to what’s required on the job. A CPA certification exam measures knowledge of accounting principles and tax laws that are important to CPA job performance. A second type of validity involves correlating assessment scores with some criterion measure, such as job performance. The research may be a *concurrent* study (showing a relationship between scores and the performance of incumbents), or a *predictive* study (showing a relationship between the scores of applicants and their later performance on the job).

There are several technical issues to be resolved in conducting validation research. One is deciding whether the assessment will be a “hard hurdle” (passing score is required for the personnel decision to occur) or a “soft hurdle” (assessment score is considered along with other information). If a passing score is required, another issue is establishing what the passing score should be. A third issue is examining the “adverse impact” – assessment scores achieved by persons in protected groups (e.g., minorities, females, people over 40) relative to white males. A fourth issue – and one that is extremely important for legal defensibility reasons – is to ensure consistent administration procedures are followed for the assessment. Sound validation research studies will address all these issues, as well as many others.

There are compelling reasons, beyond legal defensibility, why one should be concerned about validity. Probably the most important is being able to prove that the assessment actually accomplishes its intended purpose. Why would an organization want to use an instrument that isn’t job-related or valid?

We tend to think of validation research as being applicable only to tests or other tools used in making personnel decisions. But it’s also applicable to other types of assessments, such as surveys, although the kind of research conducted is quite different. For example, a multi-rater survey could be “validated” by ensuring it is linked to a well-constructed competency model, and that it is focused on the most critical behaviors.

Other Examples of Analysis and Research Services

In addition to validation research, Censeo provides a wide variety of other services in this area. Here are just three examples:

- *Training program evaluations.* Censeo conducts research studies for clients at all four levels of Kirkpatrick’s model: 1-participant reactions, 2-learning and retention, 3-behavioral change, and 4-impact on organizational outcome variables. We also assist in conducting ROI analysis studies.
- *System effectiveness studies.* Clients sometimes ask us to look at all aspects of their entire selection or development systems, and to suggest ways to improve both effectiveness and efficiency. Much of this work involves quantitative analysis techniques.
- *Productivity analysis studies.* In this type of research, assessment data are used to understand the drivers of productivity, or some other type of outcome variable such as customer satisfaction. For example, an employee survey is used to measure leadership styles and other organizational factors, and then those results are correlated with key outcome variables. As another example, Censeo recently completed a study for a client showing strikingly strong relationships between assessment scores on employees’ product knowledge and a variety of financial measures.

Key Benefits

Censeo’s consultants have advanced degrees in Industrial-Organizational Psychology, and decades of experience in conducting rigorous, scientifically correct analysis and validation studies. But, equally as important as the correctness of the research and the thoroughness of the documentation is their ability to communicate results in a clear and impactful manner, and to identify specific ways to improve the effectiveness of assessment programs and HR systems.

Censeo Corporation is a human resource consulting firm offering consulting services and Internet-based assessment products. The company’s mission is to help clients maximize their investment in human capital by collecting and then strategically using accurate and valid information about competencies and work preferences. For more information, visit www.censeocorp.com, e-mail info-request@censeocorp.com or call 407.645.1600 x150.