



WHAT IS AN ASSESSMENT CENTER?

THE ASSESSMENT CENTER METHOD, APPLICATIONS, AND TECHNOLOGIES

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DEVELOPMENT
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SECTION 1: How an Assessment Center Works

The assessment center method involves multiple evaluation techniques, including various types of job-related simulations, and sometimes interviews and psychological tests. Common job simulations used in assessment centers are:

- In-basket exercises
- Group discussions
- Simulations of interviews with “subordinates” or “clients”
- Fact-finding exercises
- Analysis/decision-making problems
- Oral presentation exercises
- Written communication exercises

Simulations are designed to bring out behavior relevant to the most important aspects of the position or level for which the assessee is being considered. Known as “dimensions” (or competencies) these aspects of the job are identified prior to the assessment center by analyzing the target position. A job analysis procedure identifies the behaviors, motivations, and types of knowledge that are critical for success in the target position. During assessment, the job simulations bring out assessee’s behavior or knowledge in the target dimensions.

A traditional assessment center involves six participants and lasts from one to three days. As participants work through the simulations, they are observed by assessors (usually three line managers) who are trained to observe and evaluate behavior and knowledge level. Assessors observe different participants in each simulation and take notes on special observation forms. After participants have completed their simulations, assessors spend one or more days sharing their observations and agreeing on evaluations. If used, test and interview data are integrated into the decision-making process. The assessors’ final assessment, contained in a written report, details participants’ strengths and development needs, and may evaluate their overall potential for success in the target position if that is the purpose of the center.

Perhaps the most important feature of the assessment center method is that it relates not to current job performance, but to future performance. By observing how a participant handles the problems and challenges of the target job or job level (as simulated in the exercises), assessors get a valid picture of how that person would perform in the target position. This is especially useful when assessing individuals who hold jobs that don’t offer them an opportunity to exhibit behavior related to the target position or level. This is often the case with individuals who aspire to management positions but presently hold positions that don’t give them an opportunity to exhibit management-related behavior on the job.



In addition to improved accuracy in diagnosis and selection, the organization that operates an assessment center enjoys a number of indirect benefits. Candidates accept the fairness and accuracy of promotion decisions more readily and have a better understanding of job requirements. Training managers to be assessors increases their skills in many other managerial tasks, such as handling performance appraisals and conducting coaching and feedback discussions.

SECTION 2: Validity and Fairness

The assessment center method, in its modern form, came into existence as a result of the AT&T Management Progress Study (Bray, Campbell, & Grant, 1974). In this study, which began in the late 1950s, individuals entering management positions in Bell Telephone operating companies were assessed and, from then on, their careers were followed. The study was unusual in that it was pure research. Neither the individuals assessed nor their bosses were given information about their performance in the center. Nor was this information in any way allowed to affect participants' careers. Participants were assessed soon after they entered management as new college recruits or after they were promoted from the ranks.

Not only did researchers follow participant advancement during the ensuing years, but a second assessment also was conducted eight years after the first (Howard & Bray, 1988). The criterion used was advancement to the fourth level of management in a seven-level hierarchy. The eight-year prediction is more valid—an expected finding since most individuals would have begun to consolidate their management skills after eight years in management. Yet the original assessment ratings were still valid—even after 20 years.

Thornton and Byham (1982) reviewed 29 studies of the validity of assessment center methodology. The authors found more support for the assessment center method than for other selection methodologies, while lamenting the fact that most of the studies were done by a few large organizations (AT&T, GE, IBM, SOHIO, and Sears).

In 1985 Thornton and his associates at Colorado State University processed 220 validity coefficients from 50 studies using a statistical approach called *meta-analysis*. They estimated the method's validity at .37 (Gaugler, Rosenthal, Thornton, & Bentson, 1985). Working independently of Thornton, Wayne Cascio of the University of Colorado arrived at the same figure (.37) in studying the validity of first-level assessment centers in an operating company of the Bell System. Cascio's main interest, however, was in measuring the "bottom-line impact" of promotion decisions based on assessment center information versus decisions based on criteria extracted from other methods (Cascio & Ramos, 1984).

To determine the dollar impact of assessment centers, Cascio needed more than validity information; he needed cost data (fully loaded costs of the assessment process), plus job performance data expressed in dollars. Over a four-year period he developed a simple methodology for expressing in dollar terms the job performance levels of managers. Using information provided by more than 700 line managers, Cascio combined data on the validity and cost of the assessment center with the dollar-valued job performance of first-level managers. With this data, he produced an estimate of the organization's net gain in dollars resulting from the use of assessment center information in the promotion process. Over a four-year period, the gain to the company in terms of the improved job performance of new managers was estimated at \$13.4 million, or approximately \$2,700 each year for each of the 1,100 people promoted in first-level management jobs.



Adverse Impact

Compared to other selection methodologies, the assessment center method generally is seen as more fair and objective in terms of gender, race, and age than other methodologies. Some differential performance has been found but this usually is the result of differential applicant populations. The method is uniquely fair because of its emphasis on actual behavior rather than psychological constructs.

There is consistent research showing that assessment centers are unbiased in their predictions of future performance. These studies considered a candidate's age, race, and gender and found that predictions by assessment center methodology are equally valid for all candidates. (See Thornton & Byham, 1982, for a complete discussion of these issues.)

Federal courts have viewed assessment centers as valid and fair. Indeed, they often have mandated assessment centers to overcome selection problems stemming from the use of paper-and-pencil and other selection instruments.

SECTION 3: Adoption of the Assessment Center Method Outside the United States

The chief reason the assessment center method is valid in so many different countries is that it is an easily adaptable evaluation system, not an evaluation instrument. Users need not adopt dimensions or standards of performance that are important in the U.S. but perhaps unimportant in their country; they merely adopt a systematic procedure for evaluating candidates against job-related dimensions that are specific to their particular organization and environment. For example, the dimension Interpersonal Sensitivity is shown in vastly different ways in Japan than in the United States, but the method by which the dimension is assessed works just the same (and as well).

Selection and Placement of Candidates for Higher Levels of Management

In the early 1970s organizations began using the assessment center method to help select and place individuals in higher levels of management. Assessment centers have been used to help evaluate candidates for presidencies of organizations, plant managers, general managers, and many senior government positions. Most of these assessments were made by a team of outside "professional" assessors (consultants). It is difficult to find qualified high-level, in-house people who can take the time to assess and evaluate candidates objectively.

SECTION 4: Selection and Placement of Empowered Personnel

The greatest growth of assessment centers since 1985 has been stimulated by organizations moving to an empowered workforce. These organizations are giving employees:

- Responsibility for their designated areas or outputs.
- Control over resources, systems, methods, and equipment.
- Control over working conditions and schedules.
- Authority (within defined limits) to commit the organization.
- Evaluation by achievements.

Most also are organizing employees into self-directed work teams. The teams are made up of team members and a team leader (the team leader is a working, nonmanagement member of the team). Teams take responsibility for:

- Improving quality and productivity; job rotation.
- Planning/Scheduling.
- Who works on what.
- Quality audit.
- Equipment adjustment, maintenance, and repair.
- Housekeeping, vacation planning, absenteeism, tardiness, and performance issues.
- Choosing the team leader.
- Many other areas.



The adaptation of self-directed teams drastically changes the role of supervisors and managers. Supervisors (often called group leaders) have a very large span of control, with as many as 100 subordinates. Because teams and team leaders take on many of the normal supervisory functions, the supervisors became more managerial in function, concentrating more on budgeting and planning. This, in turn, affects the role of middle managers. The multiple-level changes in job functions have forced organizations to use new methods in connection with selection, promotion, and placement decisions. Because assessment centers worked so well at supervisory and managerial levels, it was natural to turn to assessment centers as a methodology.

Hundreds of manufacturing plants have used assessment centers to select employees, team leaders, and group leaders. To accomplish this, many new processes were developed, especially in connection with “greenfield” plant start-ups where large numbers of applicants must be processed. Toyota assessed 22,000 applicants to staff their 3,000-person plant in Kentucky.

At the employee level, exercises involve applicants in problem-solving group exercises, simulations of the manufacturing process, and one-to-one interactive exercises. Supervisor exercises provide opportunities to demonstrate coaching, leadership, and decision-making skills.

Diagnosis of Training and Development Needs

Quick, easy training methods don't change people's skill levels. Skill acquisition requires intensive, time-consuming classroom training and must be coupled with opportunities for on-the-job practice and feedback so new behaviors are “set” in the individual's repertoire. Because skill development takes a lot of time and effort, everyone cannot be trained in every skill. The assessment center method provides an effective means to determine training or developmental needs. Individuals then can be placed in the most appropriate program.

The assessment center method is an excellent diagnostic tool because it separates an individual's abilities into specific areas (dimensions) and then seeks specific examples of good and poor behavior within each dimension. This helps the assessee and his/her boss determine more precisely what training and developmental activities are required.

Almost all organizations using assessment centers for selection or promotion also use the information obtained to diagnose training needs. However, a major shift in focus is the large number of firms now using assessment centers solely to diagnose training needs.

One example is of two individuals who were assessed in a training-needs diagnostic program. One had extensive needs in interpersonal skills, the other in decision making. As a result of these profiles, very different training prescriptions emerged. Such information saves the individuals and their organizations a great deal of time and effort by getting them into the right training program at the most appropriate time.

Most diagnostic assessment for managers is done within an organization using consultants. Assessment at the executive level takes place in elaborate, specially built assessment facilities operated by consultants.

Diagnosing Management Skills and Assumptions as Part of a Corporate Culture Change Strategy

Individual assessments in a plant or department can be combined to form an integral part of an organization's culture change strategy. After an organization has decided on the desired culture, the next logical step is to define the behaviors necessary to implement that culture and evaluate incumbents' skill levels in these behavioral areas. For example, an essential ingredient of a participative culture is the ability to run a meeting so all participants can speak their minds and have a sense of ownership in decision making. A leader's skill in accomplishing this can be determined in an assessment center.



This kind of diagnostic information is extremely useful in developing a culture-change strategy. Individuals who lack the skills needed to manage participatively cannot implement a participative strategy even if they want to—they must increase their basic skill level first. In addition, research shows that the easiest way to change a person's attitudes or basic assumptions about people is to change the person's behavior first. This represents a marked departure from the previous strategy in which organizations tried to change attitudes and hoped that behavioral change would follow. With the new strategy, individuals are identified whose attitudes or basic assumptions about people can be considered out of line with the desired culture. Their behavior is changed through an effective training and developmental program. This addresses their attitudes and assumptions through the positive reinforcement they receive for improved behavior. In time, management effects the desired culture change throughout the organization.

Evaluating the Effectiveness of Training Programs

The American Society for Training and Development (ASTD) estimates that U.S. companies spend over \$60 billion each year on training. The fastest-growing portion of this amount is for sales, supervisory, and management training, yet most companies have not evaluated the effectiveness of their training programs properly.

Assessment center methodology is an excellent method for establishing the validity and effectiveness of training programs. Three research designs commonly are used. In the first design, a group of individuals is trained while a matched group is not. Both groups then are put through an assessment center. The second and third designs have a group of individuals assessed, then trained, then assessed again. The assessment center results show that there were marked changes in individuals' performance after training.

Organizations such as SOHIO, Lukens Steel, AT&T, the New York Metropolitan Transit Authority, and over a dozen undergraduate and graduate

business schools have used assessment center technology to evaluate training programs (Byham, 1982). The advent of video technology, which allows the relatively inexpensive evaluation of individuals, has increased the application of assessment center methodology dramatically in this area.

SECTION 4: New Simulations, Tests, and Methods

Simulations such as In-basket exercises, group discussions, management games, and analysis exercises described in Byham's 1970 *Harvard Business Review* article are still the bedrock of assessment center methodology. However, they have been supplemented by new types of exercises, most importantly the interaction simulation. In this exercise the assessee is given background information about the need to interact with an individual (subordinate, peer, or customer), and personal information about the individual. After the assessee has had an opportunity to prepare, he or she conducts a simulated interaction with a person trained as a roleplayer. The "interviewee" follows a well-defined role and makes standard responses to all issues that might come up. A trained assessor observes the assessee's behavior.

Although leaderless group exercises still are used commonly to assess leadership, one-to-one interaction simulations have become more popular. This change reflects a general feeling that individual leadership skills are not necessarily correlated with group leadership skills. Another reason for the switch is that people going through the same group exercise may have quite different experiences. Group interactions depend on the nature of the people involved. Sometimes the group is highly competitive; other times it is quite cooperative. Sometimes several people vie for leadership; other times only one person takes charge. This lack of consistency has caused organizations especially concerned with EEO issues to opt for the more standardized interaction simulations or different forms of group exercises.



A growing number of organizations have adopted a “total simulation” approach to assessment. Instead of having a number of distinct and independent exercises, these organizations have integrated their exercises into a common scenario. Characters introduced in the In-basket exercise are seen in later simulations, and candidates play the same role throughout the assessment process.

Using Videotape to Stimulate Behavior

A development in the last 15 years involves the use of videotape to stimulate assessee behavior. An assessee watches a video of a situation he or she will face on the job (e.g., an interaction with a subordinate). Periodically the tape stops and the assessee is presented with four choices of what to do or say. A score is calculated based on the assessee’s responses to a number of these situations. The scoring system is developed based on a validity study.

Other applications use the video simulation to elicit verbal responses. This unaided overcomes any bias caused by the multiple choice format.

Psychological Inventories and Projective Tests

The original AT&T research assessment centers used psychological inventories (e.g., the Edwards Personal Preference Schedule) and projective tests (e.g., the Thematic Apperception Test) to supplement observations of assessee’s behaviors as they progressed through assessment center simulations. AT&T dropped these instruments after they converted their research assessment centers to operational assessment centers run by the Bell operating companies. AT&T dropped the tests for two reasons: (1) the operational assessment centers used managers (rather than psychologists) as assessors, and (2) paper-and-pencil instruments were disputed during this period (1960s) because of possible adverse impact on protected groups. Most organizations that adopted the assessment center methodology

followed AT&T’s lead, concentrating on behavioral exercises rather than paper-and-pencil tests. Most even dropped intelligence tests because of the common finding of adverse influence on blacks. However, the Bell companies retained these tests.

Today intelligence tests (general ability tests), are being used again in conjunction with assessment centers. Research data show that the combination of intelligence data and behavioral observations provides a markedly better means of evaluating people than either used alone (Thornton & Byham, 1982). The problem with using paper-and-pencil intelligence tests and other psychological instruments is that they require very careful validation efforts, and assessors must be specially trained in both data interpretation and how to integrate that data with behavioral data.

Projective tests are frequently used in executive level assessment centers. Inventories to match job and candidate motivation profiles are used at all levels.

Multiple Perspective (Self-Report, Boss, Subordinate, and Workplace Peer Evaluation Instruments)

An assessment center provides insights into many job dimensions, but usually not all important dimensions. Dimensions such as Work Standards and Energy are not evaluated well in assessment centers. To fill in these gaps and to get additional insights to dimensions that are assessed in assessment centers, many organizations supplement their assessment centers with self-reports and with evaluations by the assessee’s boss and workplace peers or subordinates. In the usual situation, an assessee is given six questionnaires that list the target dimensions with definitions. The assessee completes one and gives the other five to his/her boss, peers, or subordinates. All questions are sent directly to a central location where a computer summarizes the data and prepares a report.



The combination of assessment center, self-, and boss/peer/subordinate evaluations of a common set of dimensions makes a powerful impact on assesses. The feedback counselor and the assessee can compare and contrast each dimension's ratings from each source (self, others, and the assessment center). Based on these insights, they can define developmental actions more accurately.

New Methodologies

The biggest drawback in the ongoing use of traditional assessment centers is the amount of managerial time required. In a typical assessment center, a manager leaves his/her job for two or three days to observe participants' performance in simulations and then spends an additional day or two meeting with other observers to make final evaluations. Although managers recognize the importance of selection and promotion decisions, they are often reluctant to devote this much concentrated time to assessment. A related problem is the formality of the traditional assessment center, which tends to make the center an "event." This may build expectations and call attention to who is being assessed and who has not been asked to participate. The traditional assessment center also forces organizations to put people through the process in groups; the method is useless when there are only two candidates for a position.

These constraints have limited assessment center method applications in some organizations to only a few selection or promotion decisions. As a result, many important and effective applications, such as defining training needs, have not been utilized widely. Although organizations recognize the increasing importance of accurately diagnosing training needs before sending people to training programs, the problems associated with staffing developmental assessment centers often make their use prohibitive, even though assessment center methodology is the best available diagnos-

tic instrument for many positions. Managers agree on the importance of thorough and accurate diagnoses, but are reluctant to spend the time needed to produce the excellent diagnoses that the assessment center methodology yields.

Deformalizing the Method

A number of organizations in the United States and overseas have overcome the implementation problems noted earlier by making their assessment centers less formal and rigid while keeping the basic components that provide validity. Organizations do this by incorporating the assessment center method into an organization's day-to-day activities, rather than by having their managers go off to a designated place, or to a "center."

The individual to be assessed is given a list of managers responsible for filling the position. The assessee then schedules his/her own meetings with these managers over a period of several weeks, according to the schedules of all parties. The managers involved fit the time for the exercises into their usual activities.

During these meetings the managers put the assessee through the same job simulations used in formal assessment centers. For example, one manager might interview the assessee about why he or she took certain actions in the In-basket exercise; another might have the assessee present findings from an analysis and planning exercise; and a third might observe the assessee in a one-to-one interaction with another manager who role-plays a subordinate.

At an appointed time the managers (assessors) meet to hold an assessor discussion that works exactly like such discussions in a traditional assessment center. The assessors give actual examples of the participant's behavior to back-up their ratings on each of the dimensions they evaluated. After sharing all their observations, the assessors reach consensus on the individual's strengths and weaknesses in each dimension.



Then, if the purpose of the assessment center is to provide the basis for selection or promotion decisions, the assessors make an overall evaluation. If the objective of assessment is to diagnose training needs, the assessors' final step is to develop a profile of the assessee's strengths and developmental needs.

All key components of the assessment center method are present: multiple job simulations; use of behavior observed in simulations to predict future behavior in the target job; organization of observed behavior around job-related dimensions; and a systematic data integration session involving several assessors who have observed participants independently in the simulations. Only the rigidity is removed. This allows even the smallest organization to apply the assessment center method in making selection/promotion decisions.

Using Videotape To Record Behavior

Another increasingly popular technology is the use of videotape equipment to capture assessee behavior. Rather than having assessors observe individuals in simulations, participant's behavior is recorded on videotape. The tape and the assessee's written output then can be sent virtually anywhere and assessors can view and evaluate the taped and written performance at their convenience. After each assessor has observed and evaluated the assigned simulation, a standard data integration session can be held, or the data can be integrated by a computer using an expert system.

Automated Integration of Data

Software programs can expedite the assessment process, and are therefore advocated by many assessors and administrators. In a common system assessors input their observations directly into computers. The computer organizes behavior by dimension and feeds it back to the assessor in a way that facilitates the rating of each dimension. The computer, using an expert system, then checks the rating and if the computer's rating differs from that of the assessor, a second assessor reviews the data and shares his or her insights

with the assessor. Together, they make a decision on the dimension rating for the exercise.

At the integration meeting, a computer integrates all the behavioral observations across exercises and presents the data in a convenient way for assessor analysis and decision making. In some organizations, an expert system substitutes for the integration meeting. This mathematical data integration is possible because of the high reliability of the assessor exercise dimensional ratings, where reliabilities of .90 and higher are common.

The computer prints out a detailed final report giving dimensional ratings with behavioral examples. The computer system decreases assessor time by more than half and dramatically decreases assessor and administrator training time.

Use of Outside Assessors

Because of downsizing, etc., there are fewer middle managers to act as assessors. Thus, more than half of the organizations operating assessment centers in the United States have turned to trained outsiders to administer and assess candidates.

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