SELECTING NEEDS ANALYSIS METHODS

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Training literature is replete with illustrations of a wide variety of methods for training needs assessment. Much of the rhetoric can be condensed into a few basic conclusions regarding the process, such as the following. First, needs analysis is important and should be conducted early in any systematic approach to training. Second, many techniques have been developed, and each has proven useful in a unique set of circumstances. Third, those techniques that produce objective data are generally preferred for decision-making programs over less systematic, subjective methods. Fourth, data-gathering approaches that allow participation by employees to be trained by their managers are more likely to produce conclusions acceptable to the trainees.

Despite such guidelines for the practice of needs analysis, there has been a critical lack of comparative assessments of the various methods available. A systematic framework for the critique of each method would prove to be a valuable tool for trainers seeking guidance in these decisions. This article provides the essence of such a framework, beginning with a review of the more common approaches, followed by a definition of five important criteria for differentiating among them, and concluding with a contingency model for decision-making.

A Multitude of Methods

Although no single inventory of needs analysis methods can exhaustively cover the many varieties used by trainers, some techniques tend to be used more frequently. Twelve such methods will be identified here, with a brief discussion of their defining characteristics and some operational guidelines for their use.

Advisory Committees: Some firms establish a committee representing all levels of supervision to identify training needs, determine whether the problem might be solved via training or in a different manner and to prioritize the needs. Other organizations establish multiple committees to represent various functional specialities (e.g., sales, clerical, technical) as well as each major organizational level (e.g., nonsupervisory, supervisory, middle management and executive). Kirkpatrick suggests that the purpose of the committee should be defined as to provide advice only, and not to make decisions. An important side benefit of the committee approach is often the generation of enthusiasm of its members for participation of their employees in the programs.

Assessment Centers: The assessment center technique is usually reserved for management, primarily because of its high cost. Usually lasting several days, participants engage in a variety of tasks, such as inbasket exercises, decision-making simulations, case analyses, psychological tests and group discussions. Trained observers assess the candidate's behavior, record their impressions in detail and combine their appraisals into a formal report. Two kinds of conclusions are typically generated, dealing with the person's perceived promotability and suggestions for further development.

Feedback is generally provided both to the candidate and his/her superior.

Attitude Surveys: An attitude survey is an opinion poll of a sample of employees, soliciting their feelings and emotions on a range of organizational and work related issues. Such a survey can have open-ended questions with narrative responses, or have structured questions with more objective responses. Because the topics covered are usually quite general, however, the data gathered are more useful for indicating general levels of satisfaction than they are for generating valid conclusions regarding specific training needs.

Group Discussions: This technique involves a series of meetings of employees from a given job area. The purpose is to crystallize specific problems, analyze their probable causes and identify areas in which training could most likely be of value. Its primary merit lies in emotional commitment gained by having the people who are to receive the training being involved in establishment of the need and selection of subject matter. Because of its limited structure, this technique works best for preliminary needs analysis or where more rigorous analytical approaches are not feasible.

Employee Interviews: Some trainers individually interview employees to obtain their perception of work problems and the areas in which employees feel they need training. These interviews usually obtain verbal responses to prepared questions asked by the trainer, with written notes taken for future study. Interviews have the merit of high employee involvement and the capacity to tailor the training solution more directly toward the individual. Occasionally, self-insights gained by employees become a motivating force for modifying their behavior directly. However, the technique is quite costly in terms of the trainer's time required.

Exit Interviews: Organizations with substantial turnover rates can gather many indications of troublesome areas through the conduct of structured exit inter- views. In particular, meaningful data can be obtained regarding supervisory training needs if the interviews are conducted by a neutral person (e.g., a member of the personnel department). However, the exit interview does not allow for direct involvement by either the employees to be trained or their supervisors, nor is the data very often specifically orient- ed toward training needs. Further, the time period required to inter- view a substantial sample of de- parting employees may be quite extended in smaller organizations, and therefore, meaningful conclu- sions could be significantly de- layed.

Management Requests: Another source of subjective input into the total needs assessment picture are solicited or unsolicited suggestions received from higher levels of management. Although these man- agers are well intentioned and often insightful because of their unique organizational perspective, these inputs suffer from total lack of trainee involvement. It is also improbable that they will produce an integrated, consistent portrait of an individual's training needs. The method is, however, inexpen- sive and seldom time consuming.

Observations of Behavior: Direct observation of employee behavior can take place on either work tasks or on simulated exercises, and can be conducted by either the trainer or other supervisory personnel. Observations could prove to be time consuming, costly and a passive data-collection from the standpoint of employees and their supervisors. However, it does tend to focus primarily on job-related skills and behaviors, as contrasted to job knowledge or attitudes.

Performance Appraisals: Many companies have found that the in- formation gained from merit re- view programs provides a de- pendable basis for needs analysis. These records indicate develop- mental needs of employees and a longitudinal record of how they are being satisfied. The process can also provide clues regarding the supervisor's administration of the appraisal program. Better apprais- al systems allow for a comparison

of discrepancy between present and desired levels of performance, a specification of the job dimensions that are of greater and lesser importance, and a balance between results accomplished and abilities/functions to be performed. Data collection is inexpensive when the appraisal system is already in operation, the information is often quantifiable and both employee and supervisor are emotionally involved in the process.

Performance Documents: In most organizations, a wealth of useful and relevant data already exists pertinent to training needs. Trainers can collect and examine in-house reports on productivity, accidents, absenteeism, turnover, tardiness and other performance indicators. These reports are timely, involve no incremental cost, are updated frequently and the information is typically quantified already. Two major disadvantages exist, however. First, these reports only imply that there is a problem and seldom point to probable causes. Second, because data collection is passive, neither employee nor manager is psychologically involved in the needs analysis process.

Questionnaires: Survey questionnaires distributed to employees may be one of the more dependable methods of determining training needs. Most forms list a number of employee/supervisory behaviors and ask respondents to evaluate their needs on a rating scale (often five points). Two important modifications involve the question of *who* should evaluate the trainee (superior, self, peers or subordinates) and a differentiation between *how important* the behavior is for the job, and *how well* the person already performs on that dimension. Quantifiable data generally results, and it can be specific to individual trainees. Participants feel emotionally involved, and hence committed to the conclusions. Only a modest cost is usually involved, since many existing forms may be adjusted to fit a firm's needs.

Skills Tests: Proficiency tests can be applied to manual skills, basic job knowledge or high-order cognitive skills such as complex decision-making. Elements that need to be defined are the behavior to be performed, the standard of acceptable performance and the conditions under which the behavior is expected. Skills testing permits elimination of meaningless repetition of training for skills previously acquired, while also revealing the magnitude of the remaining training task. While the relevance of the data obtained is almost unquestioned, the costs to develop and administer such tests may be prohibitive. Where a meaningful sample of actual job tasks can be assessed, skills tests can be a powerful demonstration of the relative need for training.

Differentiating Criteria

Five criteria have been identified here for differentiating among needs assessment methods. They are employee involvement, management involvement, time required, cost and the relevance/quantifiability of data gathered. Other criteria could also be included (e.g., degree of familiarity with the technique by the trainer, organizational level for which the method is best suited). However, several of these other factors are somewhat organization-specific, and consequently the conclusions might vary considerably from firm to firm. A brief discussion of each basic criterion follows.

Employee Involvement: A fundamental assumption here is that it is difficult to enthuse employees about a training program when they have been "sent away to be fixed" without knowing the reason why. A widespread norm that prevails in the contemporary workforce is a desire to participate in decisions affecting the individual's career. These two factors create both a legitimate *need* to know and a *desire* to know why they have been selected for training. In addition, a powerful argument can be made for the self-insights that employees have about their strengths and weaknesses. Consequently, there are several reasons for carefully evaluating alternative needs analysis methods against the criterion of involvement of potential trainees.

Management Involvement: Someone has to absorb the costs of training, whether they are direct expenses or indirect costs, and managers have this responsibility. Further, direct supervisors often have valid information about the employee's performance deficiencies and training needs as a product of their unique observational perspective. Finally, supervisors create a climate to which the employee must return after being trained. If supervisors have been involved in the process of data collection, they are more likely to provide enthusiastic support for new skills that employees will practice upon their return to the job. On the contrary, if supervisors have been isolated from the needs analysis process, they are less likely to support the training program by encouraging attendance and providing an opportunity to apply the new knowledge.

Time Required: Most trainers don't have the luxury of unlimited personal time. One critical dimension in needs assessment is the total time frame allotted to the process of data-collection and analysis before a final report on high-priority needs is due. Another dimension is simply the proportion of the trainer's work day that can be productively devoted to needs analysis. A final factor is the amount of time required of the trainees, who can ill-afford to be away from their jobs for extended periods of time. Consequently, consideration of the time dimension will generally encourage trainers to select needs assessment methods that are brief and immediate, rather than those that are extended or require a large time investment.

Cost: The element of cost should not be considered simplistically, but should be examined in light of both the costs and benefits produced from the method used. Realistically, training budgets often preclude the use of "better" methods simply because resources are sharply limited. Therefore, low-cost methods are generally

chosen. This is often possible because of the previous availability of a system for gathering the data (e.g., exit interviews).

Relevance and Quantifiability: During troubled economic times, corporate executives overseeing the training function are predictably concerned about the rationality of training expenditures. Emotional pleas supported by subjective assessments of training needs will fail to convince most managers that critical needs truly exist. Additionally, the technical (engineering), quantitative (financial) and logical reasoning (legal) backgrounds of many corporate executives leads them to be highly oriented toward objective data as a basis for their decisions. Therefore, to the degree that information can be gathered that is directly relevant and quantifiable, these managers will likely be more receptive to the conclusions drawn from subjective sources.

Contingency Model

An extensive review of needs-analysis literature has been condensed into a single-integrated model as Figure 1 (page 56). This model presents highlights of the earlier discussion of needs assessment methods, evaluated against five classic criteria for differentiating among them. The result is a pictorial presentation of conclusions regarding the 12 methods. In addition, trainers can use the model as a basis for making decisions about which assessment method to use in a given situation, contingent on the degree to which it incorporates each of the five criteria. In this sense, criteria are independent variables that serve to determine the selection of needs analysis methods (the dependent variable).

Ideally, an assessment method would involve both the employees and their superiors, would require only modest investment of time and money, and would produce relevant, objective data useful for making decisions to train or not to train. Visual inspection of the rows in Figure 1 indicates that none of the methods receive a superior

rating on all five categories. (Note that ideally columns 1, 2 and 5 would be rated "high," and columns 3 and 4 would be rated "low.") Similarly, none of the methods reviewed here receive consistently poor ratings; all have some merit. The strongest methods overall appear to be survey questionnaires and performance appraisals. Attitude surveys, exit interviews and observations of employee behavior are considerably weaker.

Examination of the columns indicates an equally wide variation among methods. For each criterion there are some assessment methods that are deemed relatively effective. For example, managerial requests for training require little time to obtain the information and are low cost, as are existing performance records. Assessment centers, group discussions, employee interviews, questionnaires and skills tests involve potential trainees. Only management requests and performance appraisals

Figure 1.
CONTINGENCY MODEL OF NEEDS ASSESSMENT METHODS

| Methods | CRITERIA | | | | |
	Incumbent Involvement	Management Involvement	Time Requirement	Cost	Relevant Quantifiable Data
Advisory Committees	Low	Moderate	Moderate	Low	Low
Assessment Centers (external)	High	Low	High	High	High
Attitude Surveys	Moderate	Low	Moderate	Moderate	Low
Group Discussions	High	Moderate	Moderate	Moderate	Moderate
Employee Interviews (by trainer)	High	Low	High	High	Moderate
Exit Interviews (by personnel dept.)	Low	Low	Low	Low	Low
Management Requests	Low	High	Low	Low	Low
Observations of Behavior (by trainer)	Moderate	Low	High	High	Moderate
Performance Appraisals	Moderate	High	Moderate	Low	High
Performance Documents	Low	Moderate	Low	Low	High
Questionnaire Surveys and Inventories	High	High	Moderate	Moderate	High
Skills Tests	High	Low	High	High	High

clearly incorporate input from managers. Five techniques successfully generate relevant, quantifiable data — assessment centers, performance appraisals, performance documents, questionnaires and skills tests.

Clearly, there is no "one best method" for the analysis of training needs. Some of the weaknesses of the methods reported here might be overcome through adaptations and adjustments. For example, managerial involvement in the assessment center approach could be sharply increased by drawing them in as part of the assessment staff, or at least by specific inclusion of them as an integral part of the feedback discussions.

Another major implication of the contingency model is that the professional trainer should seek to balance the weaknesses of one method with the inclusion of a second approach that complements it well. For example, management requests for employee training would be followed up with a questionnaire which, on balance, produces at least one superior rating on all five criteria.

A final implication is that trainers may wish to weigh the various criteria in terms of their importance in their organization. Perhaps time and cost are not significant factors, the gathering of relevant data is deemed most critical,

and management has already given tacit approval to the results of any assessment approach. Under these conditions assessment centers, questionnaires and skill tests would all rate highly, followed by group discussions and performance appraisals as viable alternatives.

There are numerous alternative methods that can be used for the assessment of training needs. Rather than relying upon historical precedent or arbitrary selection, trainers are encouraged to thoroughly investigate the pros and cons of each method in comparison to the selection criteria most important to them. The contingency model will provide general guidance in these important decisions.

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