The nominal group technique: Applications for training needs assessment

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The Nominal Group Technique: Applications for Training Needs Assessment

By DOW SCOTT and DIANA DEADRICK

Performing a needs assessment is recognized as a fundamental first step in the development of a training program (Stein, 1981; Leach, 1979; Moore and Dutton, 1978). In the face of rapidly changing markets and technologies, organizations must make periodic adjustments in their mode of operation to survive. Training programs based on previously developed materials, such as the training director’s old notes or reruns of previously successful programs, will at best be discontinued for irrelevance, or at worst will be offered and will burn up scarce training resources.

Although numerous methods of conducting a training needs assessment have been proposed, the authors believe that the Nominal Group Technique (NGT) can be used for such assessments and may represent the most effective method in many situations.

Nominal Group Technique

The nominal group was originally developed by Andre Delbecq and Andrew Van de Ven in 1968 as a technique to involve disadvantaged citizens in community action agencies under funding by the Office of Economic Opportunity. Since then, it has been widely applied in health, social service, education, industrial and government organizations as a method for generating ideas in situations where the participants do not fully understand or agree upon the nature of the problem or how to solve the problem. More specifically, NGT is a special-purpose group process appropriate for identifying elements of a problem situation, identifying elements of a solution program and establishing priorities. It is extremely useful when the judgments of several individuals must be clarified and aggregated into a group decision.

Actually, NGT has become more than a “nominal” group. The term “nominal” is derived from earlier researchers’ work with groups in which no verbal communication existed between individuals. Since verbal exchange was excluded, these were groups in name only, or nominally. Now, the NGT structure contains both nonverbal and verbal stages which has increased the effectiveness of the group problem-solving process. Van de Ven and Delbecq (1974) provide empirical evidence that nominal groups can generate twice as many ideas as conventional groups.

The NGT is a structured group meeting conducted by a group leader or facilitator. Five to nine individuals sit around a table in full view of one another, but initially no talking takes place. Each individual has a sheet of paper with the “nominal question”* at the top, and then, independently and silently, writes down as many answers to the question as possible.

After five to 10 minutes of controlled and intense work effort, each member, in round-robin fashion, presents one idea from their listing. The responses receive a sequential number and the leader writes them on a large flip chart for all members to see. No discussion takes place during this recording session, other than to clarify ideas presented. The leader encourages the “hitchhiking” of ideas, yet group members should not evaluate each other’s suggestions. This recording continues until members have no more ideas to offer, thus concluding one “nominal” phase of the meeting.

The next stage consists of a structured discussion of each recorded idea, in sequence. The leader asks for clarification or

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*The nominal question provides the primary focus of the meeting. This question is carefully constructed prior to the meeting in order to generate the required information.
expressions of support or non-support for each idea and encourages all group members to participate. The suggestor, however, is not required to explain his or her suggestions; anyone in the group is free to do so. The leader must be sure each item is thoroughly examined.

At the conclusion of this non-nominal phase, the group returns to a nominal stage with independent, private and silent balloting, in which each group member selects priorities by rank ordering, or rating, the listed ideas. The pooled outcome of the individual votes represents the group’s priorities or decision. Thus, in approximately 90 minutes, five to nine individuals focusing on a single topic generally produce 25 or more "solutions/problems" with ranked priority judgments.

NGT & training needs analysis

Undoubtedly, training needs assessment is essential to the development of training programs. Information collected in this stage is necessary for identifying specific problem areas on which the program will focus, obtaining commitment from participants and top management and determining which criteria to use for evaluation purposes. Emphasis on the cost of training versus no training will aid in determining the necessity of a training program. Furthermore, training assessment can provide meaningful examples and illustrations for the training program and signal employees that organizational changes are in the making.

McGehee and Thayer (1961) suggest that the needs analysis be performed on three analytical levels:

- Organization analysis: determining where within the organization training emphasis can and should be placed;
- Operations analysis: determining what should be the contents of training in terms of what an employee must do to perform a task, job or assign-
ment in an effective way;

- Person analysis: determining what skills, knowledge or attitudes an individual employee must develop if he or she is to perform the tasks which constitute the job in the organization.

The applicability of NGT is examined in terms of its ability to extract information effectively at each one of these analytical levels.

At the organizational level, the analysis focuses most broadly on which training areas can and should be implemented. NGT participants examine such organizational factors as goals and objectives, resource allocations, efficiency standards and organization climate to ensure that the training programs are congruent with overall organizational needs. The use of NGT in this phase forces a clarification of long- and short-term objectives, determines the degree to which middle managers understand the organization mission, determines what human resources are available versus what are needed and emphasizes the impact of external forces on the future business operations. Moore and Dutton (1978) discuss the importance of this type of analysis, but indicate it is often not accomplished. The NGT process provides an efficient method of extracting this information from top level managers. In addition to linking the organization's needs for human resources to training, it provides an excellent mechanism for involving top managers in program design and facilitates an exchange of ideas. The diverse, sometimes conflicting, perceptions and equal participation of members ensures a shared analysis and decision as to what training programs are necessary in order to improve the overall operations of the organization.

The operations analysis focuses on specific jobs or groups of jobs, performance standards and job specifications. Through the nominal group process, a thorough examination can be made of how managers, supervisors and employees perceived the actual duties of the job, the importance of the job and the environmental factors involved. NGT can be a method of identifying important job elements and development required to attain performance standards. Information generated by the group will provide management with more accurate, employee inventories and more descriptive bases for employee placements and advances. In addition, career paths and retraining programs may be identified through the collective insights of the "family" work groups. Again, joint involvement.

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permits a shared data analysis and builds emotional commitment for the training programs.

The employee traits analysis is an extension of the operational analysis, and the objective is to determine what personal traits and skills are necessary to perform the job at a desired performance level. During this phase of analysis, NGT groups specify the abilities and behaviors required for the job. Although discrepancies will surface, an on-the-spot synthesis of these opinions will take place to mesh the diverse views and lead to a group consensus. Personal attributes such as responsibility, analytical ability and stress threshold will emerge to indicate where training is needed and whether individual and organizational objectives are being achieved. Furthermore, the NGT process strengthens both awareness and commitment for the programs designed to alleviate problem areas. Thus, NGT will result in a training plan that is directly related to specific employee training needs. Care must be taken, however, to prevent NGT participants from identifying specific “problem” individuals, since this could result in personal attacks on individuals rather than on the problem itself.

Evaluating NGT

As discussed previously, NGT is directly applicable as a method of assessing training needs analysis. With the multitude of other methods available, however, NGT should be examined in terms of its effectiveness and efficiency relative to other assessment methods. Newstrom and Lillyquist (1979) provide criteria for this evaluation. The following is a discussion of how each criterion relates to the NGT:

- **Employee involvement.** The nominal group process involves potential trainees in problem analysis as well as goal-setting. Typically, employees participate in training programs without a clear understanding of the organization’s reasons and expectations. The shared approach of nominal groups motivates employees by actively involving them in the needs analysis. Furthermore, the NGT process ensures that certain participants do not dominate the discussions or force their ideas on less powerful or aggressive participants.

- **Management involvement.** The participants in the nominal group process can be selected to include all hierarchical levels of management. This involvement is a major factor in stimulating true commitment to the resulting training program implementation. The NGT process is designed to obtain consensus and to deemphasize the origin of individual ideas.

- **Time required.** The time it takes to complete an NGT training needs assessment compares
favorably with other assessment techniques. For instance, it is unnecessary to construct and test a questionnaire. The total time span of interviewing individuals will be considerably longer than this group meeting, which typically requires less than two hours for seven to 10 participants. Although this method does not decrease participant time as compared to an interview, it substantially reduces the time required to collect the information. Furthermore, the data are quantified during the nominal group process so this step is alleviated. Job observation would be more time consuming depending on the job cycle.

- Relevance and quantifiability. The relevance of NGT is determined by the nominal question and the people selected to participate. Care must be taken in selecting appropriate people to participate, which will depend on the level of analysis. Unique insights may be provided from members who do not typically deal at the target level of analysis. For instance, if a nominal group is considering organizational issues such as mission, an employee from the production department can articulate his or her interpretation of the mission after it has filtered down through the organization. Because the NGT process protects minority views and people who are reluctant to express their ideas, it is more likely that diverse ideas will at least be considered.

The reliability of the information gathered is increased in the NGT process because a number of people are involved in each session. Furthermore, once the ideas are generated, a priority setting process encourages consensus. The data are quantified into a priority ranking, based on evaluation of importance, feasibility, cost, etc.

- Cost. In an absolute sense, the costs of NGT are moderately low. It does not require a questionnaire, group facilitators can be easily trained, professional staff members do not have to review interview data. Cost is relative, however, since quantity and quality of the data obtained from the process must be considered.

The strengths of nominal groups include:

- The process allows all participants to have an opportunity for influencing the group decision, which imposes a burden on all to work and contribute their ideas. Furthermore, it stimulates the generation of ideas without allowing the evaluation of those ideas until later in the process. Thus, the structured format prevents closure and evaluation while problem dimensions are generated.

- The NGT avoids the dominance of group output by strong personalities. In addition, it encourages and uses minority opinions and views. In this sense it reduces political group maneuverings. The recording process provides ample time and opportunity for individuals to engage in reflection and consider diverse views.

- NGT encourages a shared commitment to objectives and implementation. The group process induces a sense of responsibility to achieve group success by taking individual ideas and making the group responsible for those ideas.

As with any managerial technique, NGT has several potential weaknesses. First, if the nominal questions are improperly framed, the groups may waste time attempting to clarify the questions. The ideas generated may not be appropriate. Second, facilitators must be interpersonally skilled. The facilitator must not allow the group to evaluate each other’s ideas or allow certain people to dominate group discussion. At the same time, however, the facilitator must not alienate the group and cut off the flow of

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ideas. Finally, like other techniques for obtaining input, participants must receive timely feedback. If participants in nominal groups do not perceive that their ideas were used, future use of NGT is jeopardized.

A principal value of the NGT is the emotional commitment developed by involving not only supervisors but also potential trainees. When considering this process, a trainer should devote attention to the group formation, the range and relevance of nominal questions and the solicitation of feedback. With these factors in mind, the NGT will improve the training needs analysis by increasing synergy among participants and actively involving employees in both analysis and goal setting. The increased cohesion of the group results in a greater motivation to achieve the goals of a training program.

Bibliography


