The Performance Technologist's Toolbox

Surveys

by Anne F. Marrelli, PhD, CPT

This article is the first in a bimonthly series devoted to data-collection methods. In-depth knowledge of data collection methods is an essential competency for performance technologists. The systematic collection of data is required to meet several of the Standards of Performance Technology (International Society for Performance Improvement, 2004):

- Assessing needs or opportunities
- Analyzing the work and workplace to identify the factors that limit performance
- Specifying the requirements for performance solutions
- Checking the progress of the solution implementation
- Evaluating the performance technology process and results

This initial article explains the survey method of data collection, including appropriate applications, advantages and disadvantages, complementary methods, guidelines for development, and an illustration of the application of surveys in an organization.

In the survey method, data are collected by asking a selected group of people a set of questions on a specific topic. The set of questions with accompanying instructions is often called a questionnaire. The questions may be presented and answered in print, electronically, or via telephone. If the survey is administered in print, it may be distributed and completed in a group setting or mailed to respondents and returned via mail or fax. Electronic surveys may be distributed and completed on a computer touch screen; on a diskette; or via email, the Internet, or an organization's intranet. Telephone surveys may be conducted by a live caller or via interactive voice response, in which the participant listens to prerecorded questions and then indicates the selected responses via a touch-tone phone (Rogelberg, Church, Waclawski, & Stanton, 2002).

The number of questions asked in a survey can vary from just a few to several hundred. For example, some organizations distribute monthly surveys of five or six questions to check the progress of a new intervention (Hastings, 1995). Others may administer annual surveys of employee satisfaction that consist of 150 or more questions. The survey may be distributed to an entire population (as with an organizational survey that is distributed to all employees), termed a census survey, or to a representative sample of the population, termed a sample survey (Paul & Bracken, 1998).

Question Formats

Several question formats may be used in surveys (Marrelli, 1993). Often, a survey will be divided into sections, with different formats for each section.

Multiple Choice

Participants select one or more responses from a list of choices. For example:

Which of the following is the biggest obstacle you face in providing feedback and coaching to the employees you supervise?

A. I don't have enough time.
B. I don't have enough information about the quality of my employees' work.
C. I am not skilled in providing feedback and coaching.
D. I am not comfortable providing feedback and coaching.
E. Other (write in) ______________________________.

Rating Scale

Participants select the description that best matches their attitudes, perceptions, or opinions:

How satisfied are you with your physical office environment?

A. Very dissatisfied
B. Dissatisfied
C. Neither satisfied nor dissatisfied
D. Satisfied
E. Very satisfied
F. No opinion

Ranking Scale

Participants order a list of items according to priority:

Five possible reasons for attending our training session are listed below. Please rank them from 1 to 5 by marking a 1 for the most important reason, a 2 for the next most important reason, and so on.

___ My supervisor told me to attend.
___ I need to learn the information for my job.
___ I want the continuing education credit.
___ I want to further my professional development.
___ I want a break from the work routine.

Open Ended

In this format, respondents construct their own answers to questions, such as the following:

What obstacles do you face in applying formal training to your job?

Applications of Surveys in Performance Technology

Surveys are a valuable data collection method for performance technology. Several common applications are described below.

Performance Analysis

Surveys can be used both to obtain information concerning the discrepancy between current and desired workplace performance, and to facilitate organizational and environmental analysis. Surveys answer such questions as:

- What is the current performance?
- What is the desired performance?
- How serious is a perceived problem (for example, turnover, low morale, dissatisfaction with leadership)?

Cause Analysis

Surveys are also useful in identifying the potential root causes of performance problems. They provide answers to questions such as:

- What are the obstacles to superior performance?
- What mechanisms support performance?
- What is the relationship of employee attitudes to important organizational outcomes?

Evaluation

Data can be collected through surveys about the impact of performance improvement interventions. Questions that can be answered include the following:

- How do employees and supervisors feel about the intervention?
- How do supervisors believe an intervention has affected employee performance?
- Is there adequate performance support provided to ensure the success of the intervention?
- What obstacles are there to the application of learning on the job?
- What obstacles are there to the successful implementation of the intervention?

Organizational Development

Surveys administered to employees in an organization can become potent communication vehicles. The content of a survey sends strong messages to employees about what is important to management and can help drive change. How an organization's management responds to the survey results can promote change initiatives and build a desired culture (Kraut, 1996). Surveys can also answer the following questions:

- What are our employees' preferences (for example, for benefits, work schedules, or development opportunities)?
- What do our employees like about working in this organization? What do they dislike?

- What do our employees want to communicate to management?
- What do our employees want to know about this organization? How would they prefer to receive communications?

Multi-rater Feedback

Surveys are commonly used in multi-rater assessments of both individuals and teams. These assessments are also called 360° feedback tools when supervisors, peers, and subordinates are all surveyed. Most of these instruments ask respondents to rate the individual's or team's performance on a set of behaviors or competencies. The results are then used for development, evaluation, or both.

Benchmarking

Benchmarking surveys are used to compare the practices of similar organizations to one's own. For example, before redesigning its performance management system, an organization may distribute a survey to organizations of similar size to identify potential approaches. Many large organizations participate in survey consortiums. The member organizations agree to use the same core set of questions in their annual organizational surveys and then share the results. These data provide a measure for each organization of how well it is functioning as compared to its peers (Johnson, 1996; Kraut, 1996).

Competency Modeling and Job Analysis

Surveys are commonly used to identify the duties and tasks of a job role and the competencies required for successful performance. The results can then be applied in a wide range of human resource management systems, including selection, development, succession planning, strategic workforce planning, and compensation.

Advantages and Disadvantages of Surveys

As with all data collection methods, surveys offer both advantages and disadvantages.

Advantages

- A large amount of data can be collected, often quickly and inexpensively.
- Information can be easily and economically collected from large groups of people, especially those that are geographically dispersed.
- Respondents may complete the survey at a time and place that is convenient for them.
- Surveys allow for broad representative input and can build consensus for the study results.
- Survey questionnaires can be easily customized for subgroups of respondents.
- The anonymity available with surveys can encourage candid responses.
- Multiple-choice or rating-type questions yield quantitative data that can be easily summarized, analyzed, and reported.
- Surveys offer flexibility for both assessing attitudes and collecting facts.

Disadvantages

- The data collected are limited to what can be obtained through simple questions. Thus, it becomes difficult to obtain in-depth information. One cannot aid respondents' thinking process by posing impromptu probing questions, as is possible in interviews and focus groups.
- The quality of the data collected depends heavily on the specific experiences of the respondents as well as their awareness, perceptions, honesty, and memory.
- Some people are bored with surveys or object to the impersonal nature and therefore respond carelessly.
- There is no mechanism to check for individual respondents' understanding of the questions or to ensure that they know enough to respond appropriately. (This can be partially mitigated through pilot testing the survey.)
- Unless respondents have a strong motivation to complete the survey, response rates may be low; it can be challenging to secure a representative sample of the population.
- It can be difficult to summarize and analyze the responses to open-ended questions.

Survey questions are often based on data previously collected in interviews, focus groups, or observations. Surveys are often used to verify the data collected with these methods because surveys are less expensive to administer to a large group of respondents. Conversely, interviews, focus groups, and observations can be used as follow-ups to surveys to probe more deeply into the initial information collected.

Guidelines for Developing Surveys

Define the Information Needed

The first step in developing a survey is to precisely define the information required. Carefully consider the information you need to make decisions before you begin writing questions. Remember that the time spent by respondents in completing a survey is expensive for an organization. Ask only questions that will provide the information you will actually use (Marrelli, 2002).

Identify the Appropriate Respondents

Just as essential as ensuring that you ask the right questions in a survey is ensuring that you ask the questions of the right people. You need to be sure that your respondents have the knowledge they need to provide accurate answers. For example, trainees are often asked to indicate how much they have learned in a course or to rate the impact of a course on their work performance. Research consistently shows, however, that people are not good judges of their own level of competency either before or after participating in a training course or other intervention. Most people overestimate the positive impact of interventions (Marrelli, 2002). Learning should be evaluated with assessments such as criterion-referenced knowledge or performance tests. Impact on performance is better evaluated by supervisors or customers or by other data collection methods such as observations, work samples, or performance records.

Plan the Data Analysis

Data analysis should be planned as the survey questions and the response scales are designed. Successful execution of the selected analysis methods depends on collecting specific types of data which in turn depends on both the way the questions are asked and the response choices provided. Many surveys use a simple computation of the percentage of respondents who selected each response choice. This is a good approach because it is this information on frequency of individual response choices that guides decision making and action planning in survey research.

A common survey analysis error is to compute mean responses for ordinal level data such as 1 to 5 rating scales. Ordinal data expresses magnitude but not quantity; one response expresses more or less of something than another but the intervals between the responses are not equal. For example, we could not say that "Satisfied" indicates half as much satisfaction as "Very Satisfied". The computation of means involves adding and dividing, mathematical operations that cannot legitimately be performed on ordinal level data (Marrelli, 2002).

Another common error in analyzing survey data is collapsing response categories. In organizational surveys, for example, a five-point scale is often used with two positive choices (e.g., very satisfied and satisfied), one neutral choice (e.g., neither satisfied nor dissatisfied), and two negative choices (e.g., dissatisfied, very dissatisfied). Responses to the two positive choices are collapsed into one "percent favorable" rating and responses to the two negative choices are often collapsed into one "percent unfavorable" rating. When the response categories are combined in this way, important psychometric information is lost. The variability in responses is greatly reduced, and discriminations between choices made by survey respondents are lost. In addition, by collapsing a measurement scale after it has been used to collect data, the researcher is imposing new restrictions on the underlying data structure. Why provide five choices if we are not going to use all five in reporting and interpreting the data? This approach can result in substantial misinterpretations of the data collected and miscommunication of the results (Marrelli, 2002; Rogelberg et al., 2002).

Develop the Survey Content

Self-reported information is strongly influenced by the format, question wording, response choices, sequence of questions, and other features of the survey. It is important to have a strong knowledge of the principles of questionnaire design and to apply them to ensure an accurate interpretation of the data (Rogelberg et al., 2002). General guidelines for survey development are summarized below.

Question Content and Wording.

- Make the questions specific enough to provide the information needed to make decisions or take action.
- Ask one question at a time. If you include two topics in one question, you will not obtain the specific information you need to make decisions. For example, in a training evaluation survey, do not ask trainees how they liked "the class exercises and participant guide" in the same question.
- Use clear, simple language. Use the reading level and vocabulary appropriate to your respondents.
- Use short questions (fewer than 20 words), as they are easier to understand.
- Do not use jargon or technical terms unless it is integral to the survey content.
- Do not use abbreviations or acronyms.
- Because they are often overlooked, avoid negative terms such as "not" or qualifiers such as "except."
- Do not use absolute terms such as "all," "none," or "never."
- Define words or phrases that may be ambiguous.
- Be careful in writing the questions that you are not leading people to select a particular answer, such as a socially desirable choice.
- Do not include potentially threatening or offensive questions. Do not use words or phrases that have strong ethnic, gender, or religious associations.
- Combine open-ended questions with closed-ended questions to allow people to explain their answers. These combinations will help you interpret the data more accurately.
- Provide an opportunity for respondents to add additional comments.
- In most cases, a survey should not take more than 20 or 30 minutes to complete.
- Pilot test the survey to ensure the questions and instructions are clear, accurate, and appropriate.

Organization of Questions.

- Group related questions together. Within the group of related questions, place questions with the same response choices together.
- Begin the survey with the questions that are easiest to answer to encourage respondents to move forward.
- Place any summary questions (e.g., "How would you rate the overall quality of company communications?") at the end of a series of related questions. If the summary question

appears first, respondents tend to feel the need to justify their response by responding similarly to the succeeding questions.
- Place demographic questions at the end of the survey. If you place them at the beginning, they can tire respondents or provoke a negative reaction and discourage them from completing the survey.

Format.
- The questionnaire should have a crisp, professional look.
- Be sure the font is large enough to read easily and there is sufficient white space between questions and sections.
- Number the questions and pages.

Instructions.
- If possible, hold small group orientation sessions before distributing the survey to encourage respondents to give it their best efforts, assure them of its value, allow them to ask questions, and dispel misgivings.
- Include an introductory letter or memo from a high-ranking sponsor that explains how the information collected will be used. The letter should also explain if the survey is voluntary, any benefits or risks involved in participation, and if and how responses will be kept confidential or anonymous.
- Provide examples of responses for each section.
- Explain how to use the rating scales.
- Be sure to repeat the rating scales on each printed page or each electronic screen.
- Indicate clearly the due date and explain how and where to return the survey.
- Include the name and phone number of someone to contact with questions.
- Provide instructions on how to change a response.
- Always include in the instructions an expression of appreciation to the respondents for taking the time to complete the survey.

Response Choices.
- Use the response choices that will provide the most accurate information for each question. It is fine to use multiple types of response choices as long as you group the questions by type of response choices. A common mistake is to use the same response scale for all questions regardless of their content. For example, many questionnaires use a "strongly agree" to "strongly disagree" scale for all questions even when, say, frequency of a behavior and not agreement is the issue.
- Be sure there is the same number of favorable and unfavorable response choices.
- Indicate when more than one response may be selected for a single question.
- If you are providing a list of reasons, experiences, opinions, or other verbal choices (rather than using a rating scale), list the most likely response choices. Include an "other" choice and a space for respondents to explain.
- Routinely include a "don't know," "no opinion," or "not applicable" choice so respondents are not forced to select a response for topics for which they have no knowledge, opinion, or experience. Without these options, respondents may select the middle response; it is important to differentiate knowledgeable respondents by providing a neutral option.
- The labels on the response choices and the number of response choices can have a strong impact on the survey results. It is important to be aware of the advantages and disadvantages of different approaches as described in the research literature (Paul & Bracken, 1998; Kraut, 1996; Marrelli, 2002, 1993; Morrell-Samuels, 2002).

Case Study

The following case study illustrates the application of the survey method of data collection within an actual organization.

Background

A global Fortune 100 company develops and distributes an annual employee survey to all employees. Participation is voluntary, and annual response rates are 80% or higher. The vast majority of employees respond via the Internet, but a paper-based version is also available. The survey is actively promoted by the CEO and senior leaders, and the results are taken very seriously. The survey is presented to employees as their opportunity to raise issues that the company needs to address to win in the marketplace and to make the company a better place to work. Most employees see the survey as a good opportunity to have their opinions heard because they see that the CEO and senior leaders take action based on the survey results.

Survey Content

The number of survey items varies each year, but the survey usually includes 110–125 items plus demographic questions that allow the company to group responses to determine how well the needs of various subgroups are being met. A core set of questions appears on every survey, to allow year-to-year internal and external comparisons. The company belongs to a consortium of large organizations that have agreed to use a core set of questions in each of their employee surveys and then to share the results to provide benchmarks for each other.

In addition to the core items, other items are included that address current needs or areas of emphasis. Every year, the draft questions are developed by a task force with representatives from each business unit and global region. In addition, the owners of key human resources processes are asked to review the draft questions and suggest revisions or additions that will help them understand employees' perceptions and needs related to their processes. Before the questions are finalized, they undergo extensive review by senior leaders and representatives of each business unit. Because the survey is distributed to employees in more than 100 countries, it is carefully reviewed for sensitivity to cultural and linguistic differences and translated into several languages.

Several different response scales are used, but all are based on a five-point scale. They include an agreement scale, a satisfaction scale, a quality scale, and a quantity scale. Employees are also asked open-ended questions; for example, they are asked to describe the obstacles they face to doing their job well. If they wish, individual business units may insert additional questions for their employees.

Data Analysis and Results

The survey questions are organized into 12 dimensions for analysis. The first six are based on the company's values, and the remainder are based on special focus areas such as employee development or reward and recognition. Question-by-question results are reported as well as overall results for each dimension.

The survey results are used in several ways:

- to identify employee satisfaction issues and potential problems with fairness and consistency
- for organizational research and development
- to assess the performance of senior leaders
- for human resources planning.

Each business unit has one or more employee satisfaction action teams established to address issues identified in the survey. After the survey results are distributed each year, the teams create and implement an action plan to resolve the problems surfaced by the survey. Examples of the strategies implemented by employee satisfaction action teams within business units include monthly town hall meetings for all employees to update them on the business and discuss their concerns, required twice monthly individual updates for all employees and their managers, and development planning workshops.

The survey results from the past two years were used in an organizational research study of leadership behavior and the underlying causes for ineffective leadership. The surveys results are also used, in part, to determine the compensation for executives. The survey responses of the employees in the executive's organization are included in a formula used to compute the executives' performance ratings. The survey results are also used to make decisions about employee compensation, benefits, and work schedules that will help the company attract and retain employees.

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Anne Marrelli, PhD, CPT, has more 20 years of experience in the performance technology field with deep and broad expertise in selection and assessment, performance management, instructional design and development, performance improvement, evaluation, organizational development, competency modeling, and leadership development. Her former employers include Caliber Associates, American Express, Hughes Electronics, Educational Testing Service, and the County of Los Angeles. Anne earned a BS degree in Psychology and Sociology from Whittier College and MS and PhD degrees in Educational Psychology from the University of Southern California. She is the author of numerous journal articles, book chapters, and technical reports. Anne may be reached at annemarrelli@earthlink.net.