

Training Needs Assessment

Training Needs Assessment is the process of determining when and what training is required. Needs assessment should be a first step before making any training decision. Without it, training might be used to address problems that it cannot solve, or might not address the highest priority needs. In other words, significant effort might be expended in conducting training that will not have the desired impact. This resource provides some general guidelines and options for performing a training needs assessment.

How do training events come about?

Training events are costly. They require planning, development and implementation, all of which take a significant amount of time, and they can include travel expenses and loss of time on the job for participants (opportunity costs). There should always be sound reasons to justify training. Yet a full examination of when training is required and what training should occur is sometimes lacking.

Two general conditions call for training—(1) it is determined that new or existing staff members lack the knowledge and skills required by their posts (through some form of competency assessment), and (2) changes either within and outside an organization require changes to jobs or job processes.

As described in the WMO Guidelines for Trainers (WMO-No. 1114), factors causing changes that might create the need for training include (a) *political* changes, such as a new organizational structure, (b) *economic* changes, such as staffing changes due to budget or pressures to perform more efficiently, (c) *societal* changes, such as demands for higher quality or different services from customers, (d) *technological* changes, such as new tools and information sources, (e) *legislative* changes, such as new regulations or standards, and (f) *environmental* changes, such as needs for new services driven by a changing climate.

However, even if these conditions causing change are known to exist and training can help, organizations must still identify training *priorities*. It isn't possible to address all training needs through formal training, so the most critical gaps should be identified before training is developed. The procedures described here will help in doing that. But first, some clarification on the difference between *performance gaps* and *training needs* is provided.

Addressing performance gaps

A performance gap is the difference between the desired and actual performance of one or more of an organization's staff members. When people are unable to perform at the level required by the organization and its customers, the gaps must be examined to determine the sources and how best to address them, or even *if* to address them.

- **Training needs** are those performance gaps that can be addressed by training that enhances knowledge and skill. Not all performance gaps are related to knowledge and skill, however.
- **Some performance gaps CANNOT be solved by training.** Some can be addressed only when organizations provide either
 - more capable tools,
 - improved processes and procedures,
 - modified organizational structures,
 - increased motivation for staff members to perform well, or
 - additional opportunities to gain experience.

Training will not necessarily help in these cases because lack of knowledge and skills is not the root cause.

- **Not all performance gaps are critical** to address for each individual. For example, even if training could help, the gap might be more easily addressed by shifting responsibilities among individuals.

Training needs assessment is not primarily the responsibility of content experts, although experts should contribute to the process. Organizations should use a systematic process involving a variety of people within the organization to identify true and critical needs based on performance gaps. A recommended process is outlined below. While the process can take a lot of time if followed in detail, even a small amount of attention to each step in the process will improve training results.

Step One

Identify the desired competencies

Identify performance requirements by defining the desired job competencies. This can be done by examining existing standards and job descriptions, or by developing competencies if they don't yet exist.

A. Sources of existing competency requirements might include

- Organizational and international performance or competency standards and best practices
- Educational curricula standards
- Skills and abilities required for changes in processes or technologies. For example, the introduction of new forecast data display tools or the

availability of new radar or satellite data come with well documented performance requirements.

B. Competencies can also be identified through surveys, interviews, or in expert working group meetings that consider

- Customer expectations
- Management, organizational expectations
- Expert recommendations
- Staff recommendations

Step Two

Compare the desired competency to existing knowledge and performance

A. Current performance and knowledge level can be identified partially and objectively through existing documents, such as:

- Individual and group performance records
- Education and training records
- Records of customer concerns
- Records of training requests by staff and supervisors. (Numerous requests for training on a particular topic may indicate a perceived performance gap.)

B. Current performance can be identified in more detail through surveys, or even better, interviews with managers and staff, asking about:

- Experience levels
- Experience type (including which tools and techniques have been used)
- Most challenging tasks
- Most frequent problems or complaints

C. Current performance can also be identified through standardized assessments, such as:

- Practical exercises, like simulations
- Structured observations

Note: When collecting data and information on existing performance, also attempt to identify the perceived reasons for existing gaps.

Step Three

Determine the source of the gap through needs analysis

The final step is to analysis the information gathered in the assessment of current performance to determine sources of performance gaps. This might require additional interviews with managers, experts, and staff members.

If the gap is caused by a **lack of tools, poor motivation, or ineffective processes**, they must be addressed through organizational change (training alone won't help, but it might be useful to accompany organizational change with training)

If the gap is caused by a **lack of experience**, they must be addressed through additional practice, accompanied by coaching or mentorship if necessary

If the gap is caused by a **lack of knowledge or skills**, they must be addressed through **training**

Note that frequently it will be a combination of factors that are involved in a performance gap, and several forms of remediation will be useful in addressing the gap.

Step Four

Determine training priorities

If you have determined that a lack of knowledge and skill is at least partly responsible for the performance gap, you will need to prioritize those gaps most critical to address with training. This may be clear from the information gathered during the first three steps, but if you relied on existing data, you will likely need to gather additional data to decide which knowledge and skills gaps **most** require training. You cannot assume you can cover all gaps through training.

You can gather this data through surveys, interviews, and focus groups with staff members, managers, experts, and customers. Additional methods, such as observing people directly on the job, or reviewing existing data that are related to quality of performance are also useful, if possible. First, decide who will be your target audiences, then decide the appropriate format or combination of formats. For a large, diverse audience, a survey obviously will be more appropriate than interviews due to time constraints. But you might still interview or conduct a focus group with a small subset to increase your data. If the audience is sufficiently

homogeneous, a smaller number of interviews might be preferred to a large survey for the increased depth it can provide.

Useful questions to ask in a Need Assessment

Whichever method of data gathering you use, your results depend on asking good questions. The following can be used as templates to adapt to your own particular needs assessment. They can be used in surveys, interviews, or focus groups, with staff members, managers, or customers (see Appendix I, “Needs Assessment Data Collection Techniques” below). They are just guidelines, and you will need to customize the language and topic for your particular audience. The list is long to cover many situations, and you may wish to use only a small number of questions for your needs assessment. They are designed to help determine the most critical performance challenges and to probe for learning needs. Many can be asked as both open-ended questions that allow for any form of response (Qualitative), or as closed questions, ones that require a rating of 1-5, for example (Quantitative).

- What are the 5-6 main responsibilities or tasks to perform this job?
- What knowledge and skills do you think are most critical to perform the job? (Or) Rate the following responsibilities in terms of their importance to successfully performing the job.
- Which knowledge and skills are most lacking? How is this evidenced? (Or) Which of the skills in this list are most lacking your organization?
- What are the most challenging aspects of the job? (Or) Rate the following job aspects in terms of the challenge the present.
- What problems or mistakes are reported most frequently by customers (by supervisors, or by staff members)?
- What critical incidents occur that can create serious consequences when the job is not performed well?
- Describe a common or critical incident when the job was not performed well.
- What are the differences in how successful staff members perform the job compared to less successful staff members?
- What prevents good performance on the job?
- Are procedures in place for performing the job?
- How is the job changing (How has the job changed...) in ways for which people are unprepared?
- What new and useful tools and techniques are available that people are not prepared to use?

- How do you expect these new tools or techniques to improve performance?
- How are people typically trained to do the jobs? How SHOULD training be conducted?
- Which of the following job knowledge and skills are most in need of training? (List items based on the job description)

Reflection Problem

(Please substitute another training project closer to your current organizational needs if this will help you in the exercise.)

Your department receives the following request from management:

Dear Training Department,

In response to the recent flooding events, the management team has decided that we need to improve flash flood forecasts. We want you to develop a training program to accomplish this.

Please let us know what you need to start this training project.

A Senior Manager

Your task is to reply to the manager considering your own organization:

- Provide a short description of how you would like to get started.
- What data would you want to collect?
- What questions would you ask during each of the steps in the Training Needs Assessment process?
- To whom do you want to ask the questions?

Useful References

Allison Rossett, **Training Needs Assessment**, Educational Technology, 1987, available free on Google books at: <http://books.google.ch/books?hl=en&lr=&id=IWBppwNMC-QC&oi=fnd&pg=PR7&dq=training+needs+assessment&ots=P6GZEDcmP-&sig=-hZr8LlpVbqTnzYRqAcq1UNQzNc#v=onepage&q=training%20needs%20assessment&f=false>

Catherine M. Sleezer, Darlene F. Russ-Eft, and Kavita Gupta, **A Practical Guide to Needs Assessment**. John Wiley & Sons, 2014.

Jean M. Converse, Stanley Presser, **Survey Questions: Handcrafting the Standardized Questionnaire**. Sage Publications, 1986.

Floyd J. Fowler, Jr., **Survey Methods Research**. Sage Publications, 2009.

Appendix I: Needs Assessment Data Collection Techniques

When you are planning your needs assessment, it will be important to consider the methods available to you for data collection. The follow are descriptions of several common techniques, along with guidelines for planning.

Surveys

Surveys are a good way to gather a wide range of responses, and can be conducted more rapidly than other methods, but preparation of an effective survey still takes time. A poorly designed survey may get few responses or gather data of limited use. Shorter surveys receive more responses than long ones, so balance the need for depth of information with the need for breadth of information (more responses).

Follow these steps in order to make your survey effective at getting the data you need.

1. Plan the survey
 - a. Make sure you are sufficiently familiar with the subject area to ask good questions, or have someone on the survey development team who is.
 - b. Choose a format for the survey, online or paper, and if online, choose a software tool for conducting it. Make sure it will be easy for people to respond and for you to receive the responses.
 - c. Consider how you will analyze the data. If you have a large audience, you may want to use objective questions that can be analyzed automatically, within the survey tool, or in a spreadsheet, for example. If you are in need of more subtle and detailed information, you will need to read and track the verbal responses in other ways. Check online for freely available survey tools.
2. Develop the survey items
 - a. Write simple, unambiguous questions. Avoid embedding multiple questions in a single item.
 - b. Avoid negative structure to questions to avoid being misunderstood. (Which skills do you NOT apply? → Do you apply each of these skills?)
 - c. Use limited choice questions (closed) in combination with open-ended questions. This makes the survey faster to complete, but also open for more detailed comments.
 - d. Try to make similar questions consistent in format.
 - e. Sequence and group the questions in a logical way.
3. Introduce the survey

- a. Tell the purpose of the survey and how it will help both you and the person completing it.
- b. Provide clear instructions for completing and returning the survey, including an estimate of the time required.
- c. Thank the respondent in advance.

Interviews

Interviews are one of the most direct ways of gathering data about training needs. They can gather in-depth information, and can be customized and spontaneous if that becomes necessary. They might require little cost if you are making a small number of interviews. But they take time and may require travel. However, phone or online conference interviews are also possible. If you have a diverse audience, know very little about the job issues already, or need broad representation, they will take a lot of your time.

Follow these steps to conduct successful interviews.

1. Plan the interviews

- a. Make sure you are sufficiently familiar with the subject area to prepare good questions and understand the terminology interviewees might use.
- b. Choose questions as carefully as you would for a survey, even though you can customize them as necessary.
- c. Consistent questions for each interviewee will help you gather stronger evidence.
- d. Use open-ended questions to get the most information, not questions that can be answered with yes/no.
- e. Determine the appropriate mode of the interview—in-person, phone, web technology.
- f. Plan the interviews to be as short as possible for your needs.
- g. Notify the interviewees and managers or supervisors of the interview.
- h. In advance, explain how the interview will be conducted, how the information will be used, and whether the information will be confidential.

2. Conduct the interviews.

- a. Introduce the purpose of the interview, and how it will help both you and the interviewee.
- b. Use a moderate and friendly tone. Begin with questions that are easier and build rapport.
- c. Take sufficient notes to recall what was said, or record the interview for later review.

- d. Do not judge the responses. But probe to uncover opinions that have less basis.
- e. Enunciate clearly and slowly as required.
- f. Ask for clarification if you do not understand a response.
- g. Stay focused to address all questions, but probe for more in-depth responses when you feel they will contribute good information.
- h. Express appreciation for the interview time.
- i. Allow time to summarize your notes to an interview immediately afterward.

Focus Groups

Focus groups can be similar to interviews. They consist in interviewing several people at the same time, but also allow for discussion among the members of the group to explore topics more deeply and to help develop more in-depth responses. They might also reveal useful differences of opinion that point to varying needs for different groups. Focus groups can reveal information you might not uncover with a one-to-one interview.

Planning for a focus group session is very much like planning for an interview. There are some differences, however, in how to conduct a focus group session.

1. Focus groups can require more skill to keep the group on topic and productively providing the answers you need.
2. Be objective and non-judgmental, but guide the conversation.
3. You may need to work harder to create rapport and openness.
4. Make sure that everyone has a chance to contribute. Avoid allowing some people to dominate the discussion.
5. If possible, have one person record the comments and another ask questions and guide the group discussion.

Analyzing Needs Assessment Data

The data you collect in a Needs Assessment will not likely lead directly to the decisions you must make to prioritize. It will take some level of analysis to organize, categorize, and weigh what you have gathered. In the end, you need to determine which are (1) the most common or frequently identified needs and (2) the most critical needs, needs that create the most detrimental impact on performance. Training that addresses both common and critical needs will make the greatest improvements to overall job performance in an organization.

Quantitative data: This form of data can be more easily analyzed using graphs, tables, or various charts to reveal trends. However, you have to be sure that all potential biases or limitations are accounted for. In addition, you may have to use statistical techniques weight the data appropriately, accounting for low numbers of responses, or comparing frequency of response to ratings of criticality, for example.

Qualitative: The responses to open-ended or quantitative questions are harder to analyze, but often provide a more detailed and richer picture of the situation. It takes more effort than just reading the responses. Some guidelines include:

- Read the responses at least twice, to help get a good picture of the general trends, underlining what seem to be the key phrases.
- Code or label the responses according to the various general trends you see in the data. Give the trends a name and use it wherever you see responses that suggest it.
- Categorize the responses or phrases in the responses according to the codes to reveal the trends, revising as you go. This gives you a quantitative look at how frequently a trend occurs.
- Have an additional review read the responses and your codings to see how well you agree, and revise accordingly.

The last step in analyzing the data is to report it in a way that you feel best reveals what you learned. You might use graphics, tables, or narrative descriptions of the information you derived from the needs assessment to help you and/or others make prioritization decisions.