

Methods for Conducting an Educational Needs Assessment

Guidelines for Cooperative Extension System Professionals

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WHAT IS A NEEDS ASSESSMENT, AND WHY CONDUCT ONE?

A needs assessment is a systematic approach to studying the state of knowledge, ability, interest, or attitude of a defined audience or group involving a particular subject. Cooperative Extension System professionals use needs assessments to learn about important issues and problems faced by our public in order to design effective educational programs.

Programs and products that specifically target documented needs are inherently effective and marketable. A needs assessment also provides a method to learn what has already been done and what gaps in learning remain. This allows the educator to make informed decisions about needed investments, thereby extending the reach and impact of educational programming.

For extension, the goals of needs assessment are nearly always the same. The first goal is to learn what our audience already knows and thinks, so that we can determine what educational products and services are needed. A second goal is to understand what we can do to make our educational products more accessible, acceptable, and useful to our clientele.

A needs assessment, thoughtfully performed, provides the following:

- **Impact.** Insights about how education and training can impact your audience;
- **Approaches.** Knowledge about educational approaches that may be most effective;
- **Awareness** of existing programs and of gaps in available training to enable efficient use of resources;
- **Outcomes.** Information about the current situation that can be used to document outcomes;
- **Demand.** Knowledge about the potential demand for future programs and products;
- **Credibility** that the program is serving the target audience, an important part of communicating greater competence and professionalism to funding authorities who want to know a program or product's impact.

A needs assessment is conducted so the target audience can verify its own level of knowledge and skill, its interests and opinions, or its learning habits and preferences. Collecting and analyzing needs assessment data allows the investigator to describe the "gap" between what exists and what is needed. Filling that gap becomes the purpose of the next generation of educational services and products.

Direct and indirect assessments

A **direct needs assessment** is accomplished through formal research that gathers data from clientele. An indirect approach uses secondary data or asks surrogates (advisors) for their opinions about priority needs and issues. The direct assessment will result in data that is more specific to the needs of individuals, and it can be quantitative in terms of probability and confidence. However, direct research requires considerably more resources to design and also requires institutional approval to conduct. Direct assessment should be conducted periodically for major program efforts.

An **indirect assessment** can be conducted at any time when an advisory committee is meeting and does not require the same level of investment in the design, implementation, and analysis. However, even for a non-formal assessment, if the results are to be credible, procedures must be followed, and findings must be carefully documented.

Comprehensive needs assessment research helps document actual problems and deficiencies. With the needs assessment in hand, an educator can 1) verify and describe the current situation, 2) explain how the program will address that need, and 3) describe the expected impacts of the program (i.e., build a logic model).

A needs assessment allows educators to demonstrate the foundation for their logic model to potential partners or funders. Because most funding sources insist that a project be evaluated, the information in a needs assessment forms the basis for a program evaluation. When the intervention results in measurable change, project managers will know whether they have succeeded and/or know what steps need to be taken next.

While goals for needs assessments are similar, the purposes to conduct needs assessments vary and will influence how the project is approached. Extension is required by statute to consider stakeholder input as part of the design and delivery of programs. There are also contractual agreements between state and local governments that extension address locally relevant issues. Granting agencies and organizations may require a needs assessment as a term of performance. Because of these legal and contractual purposes for needs assessments, the procedures need to be valid and the results verifiable.

Needs assessments are also conducted simply to generate better knowledge with which to make decisions. If better information is the sole purpose for conducting a needs assessment, the procedures may be less formal, although the steps to plan, gather, and analyze data are still relevant.

Six steps in conducting a needs assessment

The first step is to develop a plan. The assessment plan begins as a description of the what, when, who, how, and why of your project. This description becomes a plan for designing, conducting, and evaluating a needs assessment. Seven components of a needs assessment plan include:

1. **Write objectives:** What is it that you want to learn from the needs assessment?
2. **Select audience:** Who is the target audience? Whose needs are you measuring, and to whom will you give the required information?
3. **Collect data:** How will you collect data that will tell you what you need to know? Will you collect data directly from the target audience or indirectly?
4. **Select audience sample:** How will you select a sample of respondents who represent the target audience?
5. **Pick an instrument:** What instruments and techniques will you use to collect data?
6. **Analyze data:** How will you analyze the data you collect?

7. **Follow-up:** What will you do with information that you gain? Data gathering methods by themselves are not a needs assessment. For the process to be complete, the needs assessment has to result in decision-making.

Objectives of a needs assessment:

Which people need to know what?

Various objectives of a needs assessment are based on two things: who is asking the questions (what is your mission and responsibility?); and who is the target audience. The objectives will dictate how the needs assessment is to be designed and conducted.

Needs assessments can either document the current situation for a *group* or for a *target population*. A needs assessment is often conducted for a specific group, organization, or business in order to improve effectiveness or productivity of the group related to its mission. Assessment objectives relate to the objectives of the organization. For a company, organizational assessments learn how to close a training or performance gap (Gupta et al., 2007).

For example, a business might seek ways to improve customer service, and the target audience includes employees and customers of the business. Other examples of an organizational needs assessment might include a school district investigating the most efficient use of available teachers, or a volunteer organization trying to decide which fund-raising project to conduct next. In these examples, the target audiences (those who will provide the data) are teachers and/or parents/students in the district and the membership of the service organization. Extension professionals with opportunities to help organizations assess their needs will follow planning steps for a group.

When a needs assessment is conducted on behalf of the public (for the benefit of multiple individuals, but not a specific group), then objectives tend to focus on what is needed to improve the situation for individuals through changing knowledge, behavior, and/or conditions. A comprehensive needs assessment for such an audience should include objectives similar to those of a market analysis. In other words, it may not be enough to learn

your audience's needs if audience members are not interested in your recommended solution. The effort must also determine what services and products will appeal to the audience.

Objectives of a needs assessment for a target population, then, are not limited to information about their existing knowledge and skills. Objectives may also require an investigation into the audience's perceived solutions, as well as their priorities and their preferences. If you only ask stakeholders what their problems are, it falls to you to determine what kinds of education will help address those problems.

The limitation with an approach that does not ask the audience for perceived solutions is that the intervention you design may not be marketable to your audience. If you ask stakeholders only what they want, you may have insufficient information with which to address the problems that need solving. For most of extension's purposes, the needs assessment should be a systematic and comprehensive approach that reveals both the problems and the perceived solutions and allows the investigator to design a program that connects the current situation to the desired future.

A **Community needs assessment** is a specific application for a targeted population that has recurring value for extension. Some useful tools for working with community members to conduct needs assessments can be found on the Web (University of Kansas). Dozens of other guides and resources are available on the Web to guide the conduct of specific needs assessments for public and community health issues, public housing needs, community conservation, environmental protection needs, and much more.

Describe the target audience

The target audience refers to people whose needs you are trying to measure. For all target audiences, it is important to know the population size. For a study focusing on needs of an organization or group, a description of the target audience may include various categories of employees, customers, or members.

In your description of the target audience, include the reasons why they belong to the group, the length of time of their association, their geographic or organizational distribution, what they contribute to or receive from the group, cultural characteristics or biases, and age, sex, ethnicity, and other demographic characteristics.

A careful and thorough description of the target audience leads to a more reliable sampling design and a more useful data set to be derived from your assessment. In many cases, the needs assessment can be used to validate or refute any preconceived notions of the audience.

One important aspect of describing the target audience is to research and describe the relationship between your audience and the issue or topic of the assessment. It is valuable to learn what the audience already knows or believes about the topic and what other efforts may have been mounted to address deficiencies. A reasonable effort to review the results from a previous needs assessment, to investigate previous training delivered by other providers, or to study other sources of data will greatly enhance the quality of your own study design.

For these reasons, it may be useful to think of a broad-based needs assessment as a group of more targeted assessments. In other words, if you plan to survey the public about their perceptions of diverse issues ranging from child care to water quality, you might consider proceeding as though you will bundle several needs assessments together in a single operation.

INSTITUTIONAL APPROVAL

Institutional approval is required for any direct human research at the University of Idaho or any other entity that receives funding from the federal government. Approval must be obtained before conducting direct needs assessment research. Indirect research (using secondary data or data that already exists) is not subject to institutional approval, and meetings or discussions asking for ideas from advisory committees are not research activities, thus are not subject to approval.

Getting permission. All universities that participate in Federal grant programs have in place an *Institutional Review Board* (IRB) that reviews human research to ensure compliance with Department of Health and Human Services (HHS) regulations. At the University of Idaho, once you have completed your assessment plan and have drafted your instrument, you must complete the Human Subjects Review form and submit it to the IRB. Depending on the nature of your research, you may also be required to complete an online course sponsored by National Institutes of Health, or you may be required to submit your study plan and your proposed instrument. Allow six weeks for committee approval of your proposal. In nearly all cases, your proposed research methods (for a needs assessment) will be determined to be either: 1) exempt from regulations for the protection of human subjects, or 2) qualified for expedited review by the IRB. For the University of Idaho, procedures for IRB approval of all human subjects research can be found at: <http://www.uro.uidaho.edu/hac>.

FOUR DATA COLLECTING METHODS

The following pages describe four basic ways to collect data. Principles outlined for these basic methods are directly transferable or adaptable to many other methods used to conduct needs assessments. The descriptions that follow include:

1. Surveys
2. Interviews
3. Focus groups
4. Working groups

Other options to gather needs assessment data include observation, testing, and analysis of existing data.

Sample procedure

It is important to determine whether you will collect data from the entire population or from a sample to represent the population. If your target audience is relatively small (say, the population of 80 adult 4-H volunteer leaders in a county), then it makes sense to survey the entire population because a statistically valid sample would require nearly the entire population anyway, and there is little economy gained by sampling.

For questionnaires and surveys handed out at a program, or when testing is used to assess the needs of a group, it is common to collect data from the entire population. An advantage when measuring the whole population is that it is not necessary to use statistics to verify that the data is representative.

For large populations, sampling is a practical alternative to reduce costs. If sampling is indicated, then selecting a sample that is representative of the whole population is crucial. For telephone or mail surveys, random mailing lists and phone lists are available for purchase from private sources for less than 2- or 3-cents per name, and can be found quickly using an Internet search engine. Many land-grant universities, including the University of Idaho, also have survey units that can access random mail or phone lists for investigators. Alternatively, a number of methods can be devised to select a random sample from a phone book or other listing of the entire population.

Sample size and design

The number of respondents needed to provide data will depend on the size of the entire population and on the level of confidence you want to have in your results (Table 1). Remember that the recommended sample size is based on the number of returned surveys from a random sample, not on the number of surveys that you send out to the public.

At University of Idaho, The Social Science Research Unit (within CALS) is a self-supporting (fee-for-service) source of expertise and assistance for creating and conducting surveys. Similar departments can be found at many land-grant universities.

When sampling your population, the rate of responses achieved becomes very important. Although there is no absolute rate of response necessary for any given instrument, rates less than 100% introduce the potential for bias: non-responders have different characteristics than those who chose to submit data for your project. For response rates below 50%, the risk of bias compromises statistical integrity. For surveys conducted as part of federal grants, agencies are seeking 75% or greater response rates.

Table 1. Sample size for validity. Number of returned, useable surveys needed are based on the size of the target population and on confidence level and confidence interval desired.

			Size of Target Population						
			100	1,000	5,000	10,000	50,000	100,000	
Confidence interval	+/- 4%	Confidence Level	90%	81	298	392	408	422	424
			95%	86	375	536	566	593	597
			99%	91	509	859	939	1016	1026
	+/- 5%	Confidence Level	90%	73	214	258	265	271	272
			95%	79	278	357	370	381	383
			99%	87	399	586	622	655	659

Sample design can range from simple to highly complex. The simplest case is a completely randomized design where every member of the population has the same likelihood of being included in the sample. However, certain kinds of comparisons can be more expensive using the completely randomized design.

Example: You may want to know how the needs of people living in town differ from those living out of town, but only 20 percent of the people live in town. In order to generate reliable data for town residents, you need to increase the size of your random sample five-fold. However, by stratifying your sample into town residents and rural residents, you only need to increase the size of the town sample, but not the rural sample. In this example, assuming a county with a population of 50,000 (about 10,000 live in town), a survey would require 2,040 returned samples to be able to compare town vs. rural residents (at 90% confidence +/-4%) in a completely randomized design, but only 830 returned samples if the sample were stratified (408 in town, plus 422 rural).

When to stratify sample

Stratifying your sample also can introduce bias into your interpretations. In the prior example, you want to know how far the average county resident commutes, so you ask your sample how far they drive to work. However, because you stratified your sample, you cannot simply average the responses across the county. Instead, your analyses must take into account that town residents are over-represented in your sample (by 4-times); and you would need to weight your results accordingly. As a rule of thumb, design-based weights usually reflect the probability of selecting that characteristic in a random sample.

Examples of other ways you may wish to stratify your sample might include agricultural producers with irrigation vs. those who only farm dry land; households with minor children vs. those without minor children in the household; or workers with employer-supported health insurance vs. those without. There are dozens of ways you may wish to stratify your sampling design based on the kinds of information you seek and what you wish to do with that information.

The first step in determining the appropriate design is to be very deliberate about your information needs and what you will do with the information after you receive it. The next step is to gather some information about your population and sub-populations. Only then can you determine which sampling design will provide the required information for the least cost.

1. SURVEYS

Written surveys and questionnaires

Written surveys may be conducted by mail, by e-mail, or by using a Web page. They also may be used to gather data from a group of individuals attending an event.

Advantages. Written surveys are useful tools to gather information for your needs assessment when your goals require:

- A cost-effective method to collect responses from a large number of individuals;
- A method to collect responses to a fairly large number of specific questions;
- A method to reach either random respondents or respondents who are unknown to the investigator;
- Data that is easy to summarize and report;
- Results that can be evaluated through the application of statistical measures;
- A method that allows a degree of anonymity for respondents, presumably resulting in more candid responses;
- A formal process with a permanent record of stakeholder input.

Shortcomings. Surveys may have shortcomings when your interests include:

- Gathering information in an unstructured manner, such as open-ended questions;
- Gaining insights and details from your respondents beyond those specific questions articulated in the questionnaire;
- Collaboration and dialogue among respondents;
- Achieving a high rate of response may require a significantly larger investment for written surveys when they are mailed or otherwise distributed at a distance.

Oral and telephone surveys

An oral survey is similar to a written survey in that a survey instrument (questionnaire) is first prepared. However, for oral surveys, the questions are read to the respondent in person or over the phone, and answers are recorded by the interviewer.

Advantages. In addition to attributes for written surveys, telephone and in-person oral surveys have added benefits including:

- Trained volunteers can reach a large number of people at relatively low cost (depending on the length of the survey);
- Very high rates of return (completed surveys per stakeholder surveyed);
- Responses can be entered directly into the database by the interviewer (especially for telephone surveys);
- Opportunity exists for the interviewer to note emphasis or additional information offered by the respondent;
- Respondents have opportunities to ask for clarification;
- Many people express themselves better orally than in writing;
- Oral surveys are not as strongly biased when audiences have mixed literacy skills.

Shortcomings. Oral surveys may have some additional shortcomings including:

- The opportunity for the interviewer to influence responses or to introduce bias;
- A tendency for respondents to tell personal stories or to vent about an issue;
- It is difficult to gather insights and details from your respondents beyond those inquiries articulated in the questionnaire;
- Answers to open-ended questions are very difficult to record and analyze;
- Too many answer categories or choices are difficult for the respondent to remember during an oral survey; true/false and yes/no questions are ideal;
- Collaboration and dialogue among respondents does not occur.

It is possible to combine some of the benefits of written and oral surveys by using survey administrators (volunteers or employees) to ask people in person to fill out a written survey and then to collect the completed instruments.

Survey procedures

The following outline describes considerations important in the creation, administration, and analysis of a survey. For more complete thoughts and procedures, see Salant and Dillman, 1994.

Create survey instrument—14 steps

1. **Audience.** Identify the audience from whom you wish to gather information. Be as specific as necessary, sufficient that you can describe in detail how you will know that you have reached that target population.
2. **Goals.** Make a list of the specific information that you wish to learn. Restrict your list by including only information that you know you will use. Refrain from asking questions in areas that you cannot impact or asking questions because it “would be good information to know.”
3. **Response Rate.** In most cases, the number of people who respond to your survey will be inversely proportional to the length and complexity of the instrument. For a high rate of response, keep your list short and clear.
4. **Questions.** Construct questions in similar formats so the sentence structure is the same for a series of questions. For example, begin a series of questions with the same phrase such as: “Which of the following products and services have you used?” or, “How often do you think about the following issues?”
5. **Organize questions.** Organize your instrument around groups of similar questions. This allows the respondent to get in a rhythm when answering, and provides better data because the respondent is not constantly changing gears.
6. **Response patterns.** Lay out your response categories so that they appear in the same order throughout the survey. For example, array your response categories so that highest to lowest are always presented from left to right across the page.
7. **Open-ended questions** (the respondent writes out an answer in a blank space) are easy to ask and difficult to analyze. It is much easier to collect and analyze data when respondents choose a specific answer (closed-ended; includes yes/no questions, multiple choice, Likert—scales—ratings 1 to 5, etc.). For example, If you want to know how much time people spend reading each day, try to give them categories to select (less than 30 minutes, 30-60 minutes, etc.).
8. **Analyzing open-ended questions.** If open-ended questions are important for your assessment, data can be sorted and compiled into response categories and subcategories with techniques commonly used to analyze qualitative data. (To learn about open, axial, and selective coding techniques, see Strauss and Corbin.)
9. **Concise instructions.** Write clear and concise instructions for each set of similar questions and for individual questions as needed. When the respondent is given a list of items to choose from, be sure to indicate whether you seek one or multiple answers. Note that it will always be easier to code and interpret data when only one answer per question is permitted.
10. **Correlated responses.** Different questions reasonably can be expected to produce highly correlated responses. For example, a person who has strong concerns about juvenile delinquency seems more likely to be interested in after school programs. For the sake of brevity, you should be conservative about asking highly correlated questions, unless you have specific needs to drill down into a topic. When it is desirable to ask closely related questions, group and format questions to optimize efficiency for both the respondent and the analyst.
11. **Validity vs. shorter survey.** Highly correlated (paired) questions can be used to validate the quality of a person’s responses. For example, in one question you might ask whether price or quality is more important; in another question, ask whether they would be willing to pay more for a better product. Comparing the answers to these questions is a measure of validity. However, it is not recommended to lengthen the survey unnecessarily, and paired questions should be re-worded to avoid offending your respondents.

12. **Limit open-ended questions.** Do not use open-ended questions to answer an "information need." Open-ended questions should be reserved for suggestive data and explanatory information, as statistical analysis is compromised.
13. **Demographic questions.** Be sure to include a limited number of questions to help you understand your audience. Common questions may include age, sex, and educational attainment. Be aware, however, that comparing responses among demographic groups may require a more complex sampling design (see previous discussion). For example, if you want to analyze how men respond differently from women, you may need to increase the number of completed surveys required.
14. **Demographic overlap questions.** Answers to demographic questions can also be highly correlated (e.g., education and income level), and asking about both characteristics may lengthen your survey without adding significant value.

Ten question-writing tips

1. Be clear and to the point. Questions should be fewer than 20 words.
2. Check your grammar, punctuation, and spelling carefully.
3. Use bold typeface or underline to highlight important words.
4. Good questions provide facts to the reader and are easy to read and to answer.
5. Ask about only one variable per question. Compound questions are difficult to interpret; separate compound questions into multiple individual questions. For example, the question *"Do you believe 4-H teaches important life skills and provides social opportunities?"* is asking two questions and forces the respondent to choose which question to answer.
6. People want to answer questions correctly. Avoid asking questions like *"which is better?"* or *"is it true that?"* Rather, word questions so that there is no wrong answer: *"Which method of learning do you prefer?"* or *"Which of these programs have you attended?"*
7. Avoid asking questions in the negative, such as *"shouldn't the government..."* or *"haven't you thought ...?"* Using negative forms produces confusion.
8. Avoid using jargon, acronyms, or terms of art. Do not abbreviate words or leave out important clarifications in order to shorten questions. Be sure to define words that may be interpreted more than one way.
9. Questions that ask the respondent to agree or disagree with a statement may be interpreted to reflect bias. Rather than asking, *"Do you agree that juvenile crime is a major problem?"* it is better to ask the respondent to rate the seriousness of juvenile crime on a scale, perhaps ranging choices from a minor problem to critical.
10. When it is important to gather objective data, your questions need to be carefully constructed to avoid subjective answers. For example, if you want to learn what impact high gasoline prices will have, you have different options. You might ask: *"How important is fuel economy to you?"* Alternatively, you could ask two objective questions: *"How many miles do you drive each week?"* and *"How many miles per gallon does your car achieve?"* Answers to the first question have limited value (how many people think it is important), whereas objective questions:
 - Are easier to answer, and answers are more precise;
 - Allow the analyst to consider multiple approaches to address the need (teachable solutions ranging from carpooling to bundling errands to alternative work schedules);
 - Provide baseline data to establish goals and measure impacts;
 - Protect the respondent from making judgments.

Pilot tests: Refine your instrument

Always review your draft carefully. Have someone read each question out loud to "hear" what it is that you are asking. After you are satisfied with the questions, you are ready to pilot test your instrument with representative respondents. This may be a hand-picked set of testers or a random test.

Blank “other” spaces. For your pilot test, it may be advisable to include more blank spaces marked “other” for respondents to help you complete a list of choices. You can ask your test group to be sure to record “other” categories that occur to them. Then, when you revise your instrument, you can include new response choices that were suggested by multiple testers as “others.”

Extra margins, timing. If you have designed a written survey, include extra-wide margins for your test-run, and ask respondents to make notes about clarity or questions they have about the survey. Even if you plan to administer the survey on the Internet, it is useful to conduct a pilot test on paper so that your testers have an opportunity to record their comments. At the end of the questionnaire, ask your test respondents how much time they think it will take your sample population to complete the survey.

Review pilot surveys. When you review the completed pilot surveys, you should review each question and record the range of responses and comments returned to you by your testers. Make a record of the responses that you receive, just as you plan to do for the actual survey.

Is data useful? For each question and range of responses, verify that you are receiving useful data, and verify that your test group did not have any problems or difficulty answering each question.

Pilot test focus group. Bring your testers together as a focus group to discuss the kind and quality of results to expect from the survey. This is a valuable exercise to help you fine tune your instrument.

Conduct survey

For surveys by mail or e-mail, sending a notice in advance is known to improve response rates. Before the survey is sent, send a brief announcement to your audience or sample letting them know who you are, what you are doing, and when to expect the survey.

Cover letters. Write a brief cover letter to transmit the survey to respondents. Be sure to explain:

- Who is the target audience that you wish to survey, and how was the recipient chosen to represent that population?
- Why people should cooperate, and why the survey is being done?
- Who is conducting the survey?
- What is the scope of the questions in the survey? Should the respondent think about experiences over the past year or five years? Are you seeking individual opinions or the opinion of a family/group?
- What will you do with the information you learn from the survey?
- Will their responses be anonymous, confidential, or public?
- Thank them for their help and cooperation.

Ensure a high rate of return by following the Salant-Dillman survey protocols (Salant and Dillman, 1994) or similar methodology.

- **Postcard alert.** Send a postcard informing the respondents that a survey will soon be sent to them (1 to 2 weeks before mailing the actual survey instrument).
- **Or a letter.** If you are using a mailing list with unknown accuracy, instead of a postcard you may choose to send a first class letter informing your sample of the survey. Undeliverable letters will be returned allowing you to cull bad addresses out of your database prior to distributing the survey (this may require an extra week of lead time).
- **Mail the survey.** Mail the survey instrument with explanatory cover letter and a self-addressed, stamped return envelope. If the instrument is short, you may choose to send both English and Spanish versions of the survey and supporting materials. Alternatively, you may choose to include a page or postcard written in Spanish, instructing the recipient how to request a Spanish-language version of the instrument.
- **Due date.** Include a due date for responses—allow at least 3 weeks following receipt;
- **Due date reminder.** One week before the due date, send a follow-up postcard reminding them of the importance of their responses to your survey and asking them to complete the instrument. Include

contact information if they need to request a second copy of the survey.

- **Or, send survey again.** If you have kept track of returned surveys, you may choose to mail a second copy of the instrument to slow responders, either instead of, or after the follow-up postcard.
- **Phone call.** If the preceding step does not yield the rate of response necessary, continue with a phone call to non-respondents. This call should give them an opportunity to agree that they will return the completed survey. Alternatively, you might choose to ask respondents if they would be willing to take the survey over the phone, in order to reach your target return rate.
- **Address accuracy.** Accurate mailing addresses are critical for high response rates and for sample validity. Be sure that all addresses resulting in returned mail are removed from your count of number of surveys distributed.
- **Professional-looking survey.** Anything that makes the survey more professional looking, personalized, or more attractive has a small positive effect on the response rate. Ideas to increase response rates include high quality printing, colored paper, using an impressive letterhead, endorsements by neighbors or known leaders, and incentive payments, prize drawings, or gifts.

Analyze data

The effort needed to analyze your data is inversely proportional to the effort invested to plan and conduct your survey to ensure a high rate of return. Your effort invested up front will all be rewarded by a straightforward analysis of the data.

Estimates vs. actual results. When you survey the entire population rather than a sample, your results are not estimates but are actual results. Consequently, statistics are not needed to establish confidence levels around your results. Instead, your analyses are actual measures of the proportion of the population with a certain response.

Analysis methods. Methods to analyze data from a sample of the population are influenced by the sampling design and by the level of confidence you have in your

findings. For closed-ended questions, statistical analyses will help you rank responses in the order of frequency, and to determine whether there is a probable difference between two or more responses. For open-ended questions, analysis usually includes sorting and grouping responses first, followed by ranking, trend assessment, or statistical analysis of responses.

Weight answers. If your sample design includes stratification, it may be necessary to weight answers based on how precisely your sample represents your target population.

Most of the statistics needed to describe a survey are quite simple. However, if you are uncomfortable with statistical analysis, be sure to consult an expert early in the process.

For open-ended questions, your analysis will rely on recognition of major trends observed in the responses, on recognition of key words or phrases, and on various other means of grouping responses into categories.

You may also have individual responses to open-ended questions that can lead to important observations. However, those individual responses are only suggestive, and should not be taken to represent the target audience.

Data entry system. For mailed surveys, while you are waiting for your surveys to be returned, you have time to create your data entry system. This can be done with Excel or other spreadsheet software, or with SPSS, SAS, or other statistical software. For phone surveys, this must be done in advance of conducting the survey. For Internet surveys (using proprietary software like Survey Monkey™ or Zoomerang™), you will receive a report with some general statistics such as the frequency of responses in each response category to each question, and mean response and standard deviation related to each question.

The format of your data entry system will be dictated by the types of questions asked and by the range of responses available. Be sure to think through your desired analyses, perhaps with assistance from an expert, before you begin to enter data.

2. INTERVIEWS

Interviews are a means to collect needs assessment data through one or more conversations between two or more people. Interviews can be conducted either face to face or via technology (telephone, video conference, or on-line via the Web). Interviews may involve an interviewer and a single interviewee or multiple interviewees at the same time (group interviews).

Advantages of interviews as a tool for assessing needs:

Inexpensive. Interviews are inexpensive to conduct; the only resource investments are the interviewers' time, the interview plan, and the analyst.

Broad perspective. A variety of perspectives can be obtained; because the conversation is open-ended (compared to a questionnaire), it is permissible to probe for understanding during an interview.

Stakeholder influence. Interviews can lead to understanding and rapport with the stakeholders better than through questionnaires. Be open to what they have to say.

Generate information. Interviews can generate both breadth and depth of information about a topic; probing further when an interesting point is made allows you to vary your approach and explore ideas you had not considered.

Clairfy. Interviewer can clarify questions for the respondent and can watch participants (body language) to determine if they understood what you are asking. Interviewer can ask for clarification from the interviewee if there is an answer that is not quite clear.

Nonverbal cues. Interviewer can receive additional information in the form of nonverbal clues. Watch the interviewee's body language for understanding, interest, restlessness, etc. Tailor your interview appropriately to gain the most information possible while maintaining rapport.

Shortcomings of using interviews as an assessment tool include:

Bias due to data collector's interest: have other reviewers look at your questions before the interview and edit out as much bias as possible. Also, self-reporting of participants may bias data. Interviewees might be

hesitant to reveal any shortcomings, even if training could help them.

Partial picture of training needs may arise due to the typically small number of people interviewed.

Time intensive. Interviews with several people can be productive as long as the interviewer keeps the group on task.

Data analysis issues. Data can be difficult to organize and quantify from open-ended interviews; planning up front can help; interviewer should assist in data analysis to correctly categorize answers.

Unfocused discussion. Discussion can wander from purpose of the interview; interviewer's primary goal is to keep the respondent on task.

Unskilled interviewers can make clients feel self-conscious; try to be comfortable, relaxed, and well organized.

Interview procedures

Preamble. Plan a consistent preamble including:

- Who the interviewer is;
- Who they are working for;
- What kind of questions will be asked;
- Time that will be needed;
- What will be done with the data;
- How confidentiality will be maintained.

Come prepared. Plan your interviews carefully; craft your questions precisely and memorize them.

Questions. Consider multiple directions that the questions and answers may lead. Use a blend of closed- and open-ended questions to ensure gathering some replicable data as well as the rich subjective data possible through the interview technique. Ask for clarification when you need it.

Try different techniques. Joking, a mild challenge, or asking a subject to elaborate with a story can sometimes give you better information.

Create a recording form. Unstructured discussions require significantly more time to analyze data. Carefully focused discussion will take more time to create and less time to analyze. Construct a recording form for

documenting the content of the conversation. Include a description and space to record responses to each specific question that you will ask.

Include abbreviated notations for a range of likely answers, so that you might be able to check off anticipated ideas as they surface. This will allow you to spend your time listening to and recording unique thoughts.

Test the recording form with several mock interviews to enhance your ability to focus on the interviewee while taking adequate notes.

Skilled interviewers keep discussions active and productive; practice active listening (state what you heard the participant say and ask if you got it right); plan ways to keep the conversation on track and to coax additional information when needed.

Good interviews are those where the subjects are comfortable and feel free to talk; do not interrupt subjects or change the direction of the conversations too quickly. Hold interviews in a comfortable private environment, free from interruptions. Avoid counseling the interviewee.

Off the record. If the interviewee asks for a comment to be “off record,” accommodate that request. Never betray your client’s trust.

Analyze interview data

The procedures for data analysis are similar to those for focus groups (see above). Most important is that notes be reviewed and clarified immediately after the interview. At the end of each group of interviews (perhaps daily), all of that day’s notes should be reviewed and summary observations should be documented.

3. FOCUS GROUPS

Focus groups are group discussions conducted in person with a limited number of stakeholders to gain information about their views and experiences on a topic. Focus group interviewing is particularly suited for obtaining several perspectives about the same topic. A focus group can be highly useful for planning a needs assessment because you can learn a great deal about attitudes and beliefs. It is also a useful method to gather detailed information as follow-up to a survey. The focus group,

however, is less useful as a primary tool for a needs assessment compared to more structured interviews and surveys.

Focus groups are a form of group interviewing with important distinctions. Group interviewing involves interviewing a number of people at the same time, the emphasis being on questions and responses between the researcher and participants. Focus groups are distinctive because they rely on interaction within the group based on topics that are supplied by the researcher (Morgan 1997). Hence, the key characteristic that distinguishes focus groups is the insight and data produced by the interaction among participants.

Purpose. The *purpose* of focus groups, then, is to promote disclosure among participants. It is important to allow individuals to express their perceptions, attitudes, and points of view about a specific topic in a friendly, relaxed, and comfortable atmosphere. Focus groups allow comments, explanations, and shared experiences.

When to use focus groups. Focus groups are useful tools to gather detailed information about a narrowly defined area of interest. Focus groups are indicated when the goals for your inquiry include:

- **Open-ended views.** To gain information from a selected group of individuals about their views and experiences on a topic; the use of open-ended questions allows individuals to respond according to their own experiences and interests.
- **Seek shared views.** To gain insights into people’s shared understandings rather than individual thoughts and interests.
- **Fresh ideas from interactions.** To gain insight and data produced by the participants including new ideas and perspectives drawn out because of the interaction among participants.
- **Qualitative data.** Gathering qualitative data where use of statistics is not needed to verify confidence.
- **Building relationships** or buy-in from stakeholders.

Focus groups are suited to analysis of a group view, but are problematic when the goal is to identify knowledge or experiences based on the individual. Logistics for focus groups may be challenging, and the personalities

of both the participants and the moderator introduce variability. The role of the moderator is especially significant. Strong group leadership and interpersonal skills are required to moderate a group successfully, but the moderator must exercise discipline to keep from swaying the discussion. Moderator training is available, and trained moderators/facilitators are highly recommended.

Advantages. Focus groups are easy to set up. The actual data collection step is fast and relatively inexpensive. They can bring project personnel and beneficiaries together. They stimulate dialogue and new ideas and often generate ideas for evaluation questions to be included in other survey methods. This format allows a moderator the flexibility to probe into interesting discussions. Socially oriented, they inspire a “synergism” (people responding in natural situations).

Focus groups offer high face validity (credible questions result in easily understood quotes and comments), and they can be good public relations activities.

Shortcomings. The format is easily misused; purposes must be consistent with the attributes of the method. They require an environment that is conducive to conversation and candor. They cannot be used to resolve conflicts or generate consensus.

Moderator skills and control. Focus groups require special moderator skills; the moderator has less control over the group and the direction of the discussion than for a group interview. Groups are highly variable—some are talkative, others not.

Tedious data interpretation includes risks with lifting comments out of context.

Groups are not suitable for generating detailed information.

Avoiding bias can be difficult, both in the conduct of the group and in data interpretation.

Capturing major issues can be difficult.

Results cannot be generalized to apply to the entire target population.

Time consuming. Work to identify, prepare, and assemble participants can be time consuming.

Focus group procedures

This section describes considerations important in the creation, administration, and analysis of a focus group. For more complete thoughts and procedures, see Templeton, 1996.

Choose a method

Focus groups are valid if they are used carefully for a problem suitable for focus group inquiry. Validity is the degree to which a procedure really measures what it proposes to measure.

Examples of purposes for which focus groups are appropriate include: Assessment of community needs and issues; citizens’ attitudes, perceptions and opinions on specific topics; impacts of a particular program on individuals and communities.

Focus groups are not suited to learning about the needs and issues of an individual, so the topic and questions need to focus on the community or group.

Choose participants

Identify and describe the target population as carefully as possible; this will enable you to select a panel representing that group. Select participants with the purpose of building a group that is comfortable talking together. Your goal is to form a relatively homogeneous group (Individuals with common ages, interests, professions, etc.). They should be unfamiliar to each other. (Familiarity tends to inhibit disclosure.)

Commonality, not diversity. Diversity among participants is accomplished through multiple focus group sessions, not through diverse participation in a single event. Ideally, focus group members should be strangers with enough key traits in common that they are comfortable.

While this is not always possible, it is important to avoid using participants with certain kinds of relationships: Do not invite spouses to the same focus group or people who might be expected to have undue influence over the other, such as a boss and employee, a teacher and student, a parent and child, etc.

Describe recruitment qualifications in advance, in order to avoid bias in the selection process (qualifications may include age, ethnicity, membership in certain groups, etc.).

Seek participants through membership lists, directories, and associations whose members you can expect will meet your criteria.

Logistics

The session is managed by a moderator and an assistant moderator. The number of participants for each focus group should be between 7 and 10, small enough for everyone to have an opportunity to share, large enough to provide a variety of perceptions and attitudes.

It is advisable to recruit 12 participants and hope that at least 7 attend. Each focus group will take between 1.5 and 2 hours, depending on the number of participants and length of responses.

The meeting space needs to be a comfortable room for conducting the group.

Equipment and materials needed include:

- A high quality tape or video recorder and high quality microphone;
- Sufficient audio or video tapes or discs to record the session;
- Name tags for participants and moderators (first names only);
- Notepad for taking notes;
- Form to report/reimburse mileage;
- Educational material for handouts;
- Refreshments (at least have water).

Check equipment before the session.

Focus groups must be replicated several times; sufficient replication has occurred when discussions become repetitive and when new groups cease to surface any new major themes.

Describe questions or topics

The moderator uses predetermined open-ended questions that appear spontaneous but are carefully designed and in a logical sequence.

The moderator, who memorizes the questions, must explain and establish the context for each question.

Tips for developing questions: Include fewer than 10 questions, usually 5 to 6 total. Researchers recommend no more than 3 topics (with sub-issues under each) for discussion.

Additional tips:

- Open-ended questions reveal what's on participants' minds about a topic.
- Go from general to specific questions.
- "Why" questions are rarely used.
- Take time to develop questions for clarity, precision, phrasing, and brevity.
- Use phrases like "thinking back to ..." or "what prompted you ..." or "describe" or "if you could change ..."
- Encourage conversation and involve others by asking, "Who can add to that?" or "Does everyone accept that?"
- Close-ended questions might include phrases like "to what extent ..." or "how much ..."
- Test the questions with others. Review the sequence of questions and the path of the discussions. Pay attention to possible opportunities to probe for detail or clarity.
- The first focus group is actually the pilot test and an opportunity to make any changes to improve subsequent groups.

Ending questions are very important. This question asks participants to reflect on the entire discussion and then offer their positions or opinions on topics of central importance to the researchers. For your final question, ask something reflective. "Of all the things we discussed, what to you is the most important?" Repeat back what you heard, then ask, "Did I hear you correctly?" After a brief oral summary of what the moderator heard, he/she asks: "Is this an adequate summary?" "Is there something you would like to add?" The moderator reviews the purpose of the study and then asks the participants: "Have we missed anything?"

Select moderators

Identify a trained moderator and an assistant to conduct the focus group interview. The moderator creates a warm and friendly atmosphere, is focused and a good listener, directs and keeps the flow of the conversation, and is knowledgeable about the topic. He or she must be skilled at drawing information and opinions from participants, asking for clarification, and teasing out detailed information.

He or she must remain neutral and should not influence the discussion while challenging, probing, and exploring each issue. The assistant moderator takes careful notes, monitors recording equipment, and manages logistics.

Timeline

Check community activities before setting a time and date for the focus group. Call potential participants 10 to 14 days before the session. Send personalized invitations one week before. Telephone each individual the day before the session.

Contact perspective participants

The most important factor in recruiting is *what's in it for them?* Upon initial contact with perspective participants, verify their qualifications to be a participant. Briefly tell them why the focus groups are being conducted without discussing the specific questions that will be asked.

If they are interested in participating, ask for their phone number and address. Ask what days and times would be best for them to attend a focus group. Tell them approximately how long the focus group will take and where it will be.

Participant incentives

Participants provide you with a source of data, perceptions, ideas, and attitudes. Because they are necessary for you to conduct your research, they should be compensated for their time. It is common to provide incentives to participants such as meals, coupons, or cash: \$15 to \$25 is reasonable for participants who are easy to reach and available any time; \$25 to \$50 is reasonable for participants who must meet a number of specific criteria.

Incentives should be identified in invitations when possible. Knowledge of incentives helps participants know they are appreciated and that their thoughts are important. Their sense of value to the project will likely improve their participation.

Follow-up on your sessions by sending letters to participants and thanking them for their help.

Manage focus group sessions

Before the session begins: Greet participants as they arrive; be warm and friendly and answer questions they might have without discussing key questions to be asked during the focus group.

Hand out and ask participants to fill out registration forms necessary to receive the incentive, mileage reimbursement, etc. Distribute educational material or handouts.

This is a good time to hand out and collect demographic questionnaires.

Begin discussions. The first few moments in focus group discussion are critical. In a brief time the moderator must create a thoughtful, permissive atmosphere, provide the ground rules, and set the discussion tone. Much of the success of group interviewing can be attributed to the development of this open environment.

Deliver a prepared introduction to the focus group to:

- Thank participants for coming;
- Explain the purpose of the discussion and goals for the session, how it will proceed, and how participants will contribute;
- Describe ground rules; (one speaker at a time, please speak up, there are no right or wrong answers, we seek different opinions, etc.);
- Describe your recording procedures. Mention that because a tape recorder is being used, it is important for only one person to speak at a time;
- Remind participants that all answers are confidential;
- Offer to answer any questions they might have about how this information will be used.

Begin discussions by asking the opening question. The lead question is often quite general, like "*what are your thoughts about X?*" Make sure that everyone's opinion about that question has a chance to be heard. Follow with your successive questions.

Immediately after the focus group:

- Diagram the seating arrangement.
- Spot check your tape recording to ensure it worked.
- Debrief your moderator and assistant moderator.

Kinds of questions to ask

Below are examples of general questions (courtesy of University of Kansas). These apply largely to groups discussing a current program or service, but they can be adjusted for planned programs as well as for groups dealing with other concerns. The precise language and order of presentation will depend on your topic and group. Some of these questions may be adapted to your own needs.

General

- What are some of your thoughts about what's going on now?
- Would you say you are satisfied with the current situation, with the way things are going on?
- If so, what are you satisfied about? Why is that? (Or, what's going well?)
- Are there things you are dissatisfied with, that you would like to see changed? (Or, what's not going well?)
- If you are dissatisfied with things, what are they? Why is that? How should they change? What kinds of things would you like to see happen?

Consider this

- How about this particular aspect (of the topic). What do you think about that?
- Repeat for different aspects of the topic, with variations in style. For example, if the main focus group topic was "community policing," some key aspects to cover might be visibility, sensitivity, interaction, respect, etc.

- Some people say that one way to improve X is to do Y.
- Do you agree with this? (Or, how do you feel about that?)
- Do you have other recommendations or suggestions you would like to make? What are they?
- What else would you like to say before we wind up?

Follow-ups. Use some "probes" or "follow-up" questions to get more information on a given question.

- Can you say more about that?
- Can you give an example?
- Jane says X. How about others of you. What do you think?
 - How about you, Joe; or, you folks in the corner over there ... do you have some thoughts on this?
 - Does anyone else have some thoughts on that?

Analyze data

Analysis is a systematic process; begin while the group is in session. Listen for inconsistent comments and probe for understanding. Listen for vague or cryptic comments and probe for understanding. Consider asking each participant a final preference question. Offer a summary of key questions and seek confirmation.

Within hours, analyze individual groups.

- Backup tapes and send a copy to a transcriber for computer entry if a transcript is wanted.
- Analyst listens to the tapes, reviews field notes, and reads transcript if available.
- Prepare a report of the individual focus group in a question-by-question format with amplifying quotes.
- Share reports for verification with other researchers who were present at the focus group.

Within days, analyze the whole series of groups.

- Compare and contrast results by categories of individual focus groups.
- Look for emerging themes by question and then overall.
- Construct typologies or diagram the analysis.
- Describe findings and use quotes to illustrate your points.

Prepare draft and final reports. Circulate it/them.

- Consider narrative style vs. bulleted style.
- Use a few quotes to illustrate.
- Sequence could be question by question or by theme.
- Share report with moderator and assistant and with other researchers.
- Revise and finalize report.
- Note themes, hunches, interpretations, and ideas.

Label and archive field notes, tapes, and other materials.

Analysis tips

When conducting this analysis, remember that you are looking for trends and patterns.

Consider the words. A variety of words and phrases will be used, and the analyst will need to determine the degree of similarity among these responses. Think about both the actual words used by the participants and meanings of those words.

Context. Participants respond to stimuli – a question asked by the moderator or a comment from another participant. Examine the context by finding the triggering stimulus, and then interpret the comment in light of the preceding discussion and also by the tone and intensity of the oral comment.

Internal consistency. Participants in focus groups change and sometimes even reverse their positions after interaction with others. This phenomenon rarely occurs in individual interviews due to a lack of interaction from other participants. When there is a shift in opinion, the researcher typically traces the flow of the conversation to determine clues that might explain the change.

Frequent, extensive comments. Some topics are discussed by more participants (extensiveness), and some comments are made more often (frequency) than others. These topics could be more important or of special interest to participants. Also, consider what wasn't said or what received limited attention. Did you expect and not receive certain comments?

Intensity. Sometimes participants talk about a topic with a special intensity or emotion. Note when participants use words that illustrate their strength of feeling. Intensity may go undetected when analyzing transcripts alone because the tone of voice, speed, and emphasis on certain words are not recorded.

Specifics are good. Specific responses based on personal experience should be given more weight than responses that are vague and impersonal. Greater weight is often placed on responses that are in the first person (as opposed to hypothetical answers) or when respondents can provide specific details when asked a follow-up question. For example, "I feel the new technique has increased my income" has more weight than "the methods will help people make more money."

Find big ideas. The researcher can get so close to a multitude of comments and details that trends or ideas that cut across the entire discussion are missed. One trap of analysis is overlooking the big ideas. It may be helpful to take a few steps back from discussions by allowing an extra day for the big ideas to percolate. For example, after finishing the analysis, the researcher might set the report aside for a brief period and then jot down three or four of the most important findings. Assistant moderators or others skilled in qualitative analysis might review the process and verify the big ideas.

4. WORKING GROUPS

Group process is used to manage how people work together in groups. Group processes refer to a variety of techniques and activities through which a facilitator leads a group to a desired output and corresponding outcome.

Group activities can be used to identify issues and opportunities, to build consensus, to prioritize issues or alternatives, and to assess clientele needs. A facilitator can lead a group through one or more activities to create an output over a period of 2 to 3 hours, or it may require dozens of successive activities (processes) conducted during hundreds of hours of meetings and spread over multiple years.

When group process is used to inform a needs assessment, the output is an assessment report that documents needs based on direct stakeholder input, consultation, and consensus. See Tropman, 1996, for a valuable resource on using group processes for building consensus.

Uses of working groups: Opinions plus a product

In many ways, the appropriate uses of group processes are comparable to the appropriate uses of focus groups except that the output from a group process can be a specific product in addition to a record of the session. The similarity with focus groups is largely due to the interaction among participants. As a consequence, the resulting output is more of a collective product and less reflective of the needs of any one individual.

Group processes are useful when your goals are to:

1. Gain information from a selected group of individuals about their views and experiences on a topic;
2. Gain insights into people's shared understandings rather than individual thoughts and interests;
3. Create a product that reflects a consensus viewpoint among participants;
4. Build consensus while organizing data or considering alternatives (such as a prioritized list of issues or options);
5. Enhance organizational credibility and develop a relationship with participating stakeholders; and to
6. Assemble qualitative data that does not need to represent a larger population.

Advantages. Similar to focus groups, working groups are relatively easy to set up. They can be fast and inexpensive. They can accommodate 12 to 30 participants comfortably—18 is an ideal number, depending on the facilitator and various activities chosen for the group work. This is considerably more participation than is desired for focus groups.

Working groups can bring project personnel and program beneficiaries together. They are flexible, allowing a skilled facilitator to probe interesting topics, and they often produce stimulating dialogue and fresh ideas. They also can generate insights, ideas, and questions to include in other evaluations or surveys.

Groups can form a social synergism—displaying a greater creativity than if each person was interviewed privately. A well-designed process can lead to a participant-created product with minimal data analysis. Working groups can resolve conflicts or generate consensus. And they provide high face validity (individual stakeholders contribute to a consensus product).

Shortcomings. Also similar to those for focus groups: It can be difficult to separate individual from group views.

Arrangements. Working groups require logistical and practical arrangements that meet the needs of a fairly large number of people. They may be time consuming to assemble and require an environment conducive to conversation and candor.

Avoiding bias. The format is easily misused; purposes must be consistent with attributes of the methods. Avoiding bias can be difficult, both in the conduct of the group and in interpretation of the outputs.

Time commitment. Most groups are unwilling to commit the time necessary to go beyond major issues sufficiently to generate detailed data.

Results cannot be generalized to apply to the entire target population.

Facilitator role

Here, too, the facilitator's role is very significant. A skillful group facilitator will produce different results than a less skilled facilitator. Strong group leadership and interpersonal skills are required to facilitate a group successfully, but the facilitator must exercise self-discipline to keep from swaying the discussion.

The facilitator's role includes:

- Create and maintain structure in the conversation, keep proceedings on track and moving forward.
- Acknowledge all ideas and contributions made by participants.
- Ensure that all participants feel safe to contribute.
- Protect participants from reprisals or personal attacks.
- Downplay the relationship between an idea and its author.
- Reduce the influence of group opinion on the individual.
- Allow an objective comparison of alternatives.

Nominal Group Technique (NGT)

The Nominal Group Technique is a structured process to gather information from a group. First described in 1975 (Delbecq, et al.), the technique has since become a widely-used standard to facilitate working groups. NGT is effective for generating large numbers of creative new ideas and for group priority setting. It is designed to encourage every member of the group to express his or her ideas and to minimize the influence of other participants. Using NGT, individuals work alone but in a group setting.

NGT is a technique for work groups to set goals, identify problems (a component of a needs assessment), create ideas and suggestions to solve problems, or plan programs for an organization. The process is particularly useful with advisory groups to help identify problems or opportunities and to set priorities for extension programming. The process allows the facilitator to:

1. Manage the meeting and discussion;
2. Keep the group working toward the task at hand;
3. Ensure that everyone participates; and
4. Set priorities and reach consensus on the goals, problems, solutions, or program suggestions proposed by the group.

Appropriate uses for NGT

NGT is particularly effective when you want to:

1. Generate a lot of ideas relevant to some issue;
2. Make sure that all members participate freely without influence from other participants;
3. Identify priorities or select a few alternatives for further examination;
4. Confront controversy or uncertainty concerning the nature of an issue or problem and its possible resolution.

Materials and logistics

Meeting room. Choose a room large enough to seat participants comfortably at a table and so that they can all look at one another (tables set in a hollow square or a large “U” are ideal).

Breakout space. If breakout sessions are needed, consider individual rooms. If they aren’t available, choose a meeting room large enough that small groups can meet in the corners without distractions from the other groups.

Easels and flip charts for each group. Also, provide enough dark-colored, watercolor-based markers so they can be seen across the room and so they don’t stain hands, clothes, or walls.

Tape, tacks, or other means to post flip chart sheets on a wall; or use self-adhesive flip chart pads.

Sticky dots, felt-tip pens so participants can record their votes.

3x5 cards or writing tablets and pencils for each participant.

Refreshments—at the very least, cold water and glasses.

Steps for conducting NGT activity

Introduction: Frame the question. Always begin by having participants introduce themselves. Spending time to meet and greet helps establish a level of trust and comfort among participants.

Facilitator triggers discussions with a key issue or question. State it in an objective tone and avoid giving indications of possible or potential solutions. For a needs assessment, the issue statement prepares your group to identify major issues, concerns, or problems faced by your clientele or community that they feel might be extension priorities.

One way to set the stage is to present a review of current programs, a look at the current five-year State Plan of Work, etc.

Brainstorm: the “nominal” phase. Participants generate ideas silently, in response to the key question. It is wise to ask participants to write their ideas on a sheet of paper or 3”x5” cards. Participants are instructed NOT to discuss their ideas with each other until the brainstorming session is over; usually about 10-minutes.

Facilitator asks each participant in turn to share his/her top response (idea) with the group.

Ideas are recorded on a flip chart or other device that allows all participants to see and read the “group memory” clearly.

Participants are asked not to repeat responses that have already been listed; instead they should share their second most important idea. Do not combine ideas at this time. Record each item separately.

After each participant has shared his/her top idea, repeat the process by asking each participant to share a second idea. Continue until all participants have shared all of their ideas with the group.

No discussion of ideas should occur during the brainstorming activity. The facilitator should explain that ideas are not to be judged or evaluated at this time, and that discussion will take place during the next phase.

Discuss: the “clarification” phase. Each idea is explained by the participant who presented it. Other participants can ask questions that help clarify the idea and the intention of the author. Ideas are discussed in turn, in the order in which they were recorded—not based on popularity, controversy, or any other judgment.

The facilitator leads a discussion about each idea, ensuring that all participants are invited to share their thoughts, pros and cons, about any given idea. The facilitator also keeps the conversation moving forward, avoiding spending too much time on any one issue. Discussions continue until all participants are comfortable with the meaning and intent of each idea.

If you are dealing with an unmanageable number of ideas, it may be desirable to insert an optional “ranking” step here. Have each participant write down on a 3”x5” card his/her top 10 (or top 5) ideas from the entire list, and then rank them 1 to 10 (or 1 to 5) with 10 being highest priority. Or, participants can write their rankings next to ideas on the flip charts. Compile ranking numbers and create a refined list of ideas that includes only those original ideas that were ranked on at least one participant’s individual list.

Closely related ideas may be combined during this phase if both authors agree. Restate a single idea to reflect the combination.

Decide: the “voting” phase. Group decisions are made through a process of voting or ranking of ideas or alternatives. The process results in a prioritization of the recorded ideas or responses to the original issue or question.

Before any vote is taken, it is useful to decide within the group the number of ideas to include on the final list. This defuses a potentially awkward situation by giving additional information to participants before they vote.

Once all discussion is completed, participants cast individual votes. Votes are tallied to make a group decision. Authors of the original NGT process describe the voting procedure as a “private” activity. However, others find benefits in a more public voting process. This is particularly helpful in improving the long-term acceptance of the results (Bartunek and Murningham).

In the original description, each participant is asked to rank his or her top alternatives with a score of 10 being the most important. Participants write each idea and its rank on a 3x5 card. The facilitator collects the cards and records each ranking beside each alternative. Ranks for each alternative are averaged.

An alternative method is for each participant to write his/her choices first in private on a card or sheet of paper. Then, in an open (public) voting process, participants indicate their choices by placing sticky dots or by marking with a felt-tip pen on flip charts next to the ideas that they prefer. The number of votes per participant may be small (3 to 4 votes) or large (even up to 100 votes). The number of votes per participant should depend on the absolute number of ideas that are being considered (more ideas require more votes) and on the number of ideas to be included on the final list of priorities. Allowing participants to cast multiple votes increases the likelihood that each participant will support at least one of the ideas on the final list.

Participants should be instructed how they may cast their votes (all of their votes for a few ideas, or spread across a larger number of ideas). If participants can cast multiple votes for a single idea, then the process allows them to weight their preferences by assigning more votes to their first choice. However, allowing all votes to be cast on a single item increases chances that a participant will fail to see their preference on the final list of priorities.

An intermediate solution is to allow participants to cast a large number of votes but to also require that they vote for a minimum number of ideas.

After voting, reconfigure the final list of ideas in ranked order.

Discuss each item on the final list. The final discussion helps participants understand what was accomplished during the session and what steps come next.

In some cases, the list produced may not represent the group's wishes. Discussing and asking questions about the final list may reveal that the vote should be repeated.

The final list becomes a concrete product of the group process.

Tips for conducting NGT activity

Large groups. If your group is large, some participants may not feel the opportunity or desire to participate. Dividing into smaller groups (5 to 8 each) encourages more active participation.

Small group leaders. When smaller groups are formed, it is necessary for someone to facilitate the small group, keeping track of progress and leading to a group product. This person can be appointed by the main facilitator or can be selected by the members of the small group.

Bring small groups together. Small groups can be used for any or all three phases of NGT. However, it is important for the small groups to come together after each phase to share with the large group what each small group has accomplished.

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