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Needs Assessment Guidebook for Extension Professionals

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Contents

Using This Guidebook

This publication begins with how to organize a needs assessment and includes the three phases of conducting an effective needs assessment: exploration, assessment and utilization. Methods for each of these stages are provided, including document reviews, individual and group methods, and how to communicate the results of the assessment. This document provides helpful information and tools to help you design, conduct and interpret your needs assessment.

Introduction

Needs assessment is a process driven by the question, “What do clients need and how can those needs be met?” (Patton, 1982). A need is defined as a gap between “what currently is” and “what should be” (Altschuld & Watkins, 2014). Needs assessment is a process to identify what people need where they live, work or play. The purpose is to use the information gained to make plans to meet those needs. What are the needs of people you serve?

In a national assessment of training needs, Davis and colleagues (2012) found that Extension personnel (n = 1,434) wanted to acquire more skills and knowledge in needs assessment. The majority indicated a need to learn more about assessing individual client needs (69%), assessing community needs (79%), and engaging stakeholders in program development (83%).

Needs assessment is a term with abundant meanings, often very different meanings! Patton (1982) posited that needs assessment was used in many cases to mean surveying clients about what they wanted, “thereby making wants equivalent to needs.” Sometimes, needs assessment is used to describe the entire situation in a community, county or state. “Community situational analysis” is a broad term that refers to the process of analyzing the internal and external factors (including trends, capabilities, environment, economy, etc.) that affect a community. The term “situational analysis” is applicable to all of the techniques and activities in this guide.

Effective, engaging needs assessment is a principle of democracy and a hallmark of the Cooperative Extension system.

We, the researchers, have observed that Extension personnel use the term “needs assessment” more frequently than “situational analysis.” We have also observed that the term “need” connotes deficiency or an unmet problem. We believe that an effective community needs assessment would not only identify the needs of the community, but also underutilized resources, as in, “We need to utilize our lake and abundant natural beauty to promote tourism which will produce substantial economic benefits.” Therefore, we have chosen to use the term “needs assessment” as a synonym for situational analyses in this publication, and the term “assets” may be used in place of needs.

Another observation is that the term “needs assessment” is often used to refer to the assessment of an entire community or county population. This publication can apply to an entire community population or a single audience within the community, such as beef producers or families with young children.

We have prepared this publication to offer practical tools and techniques for understanding, conducting, and communicating needs assessment. It is our hope that this information is useful to you in helping people, addressing the issues that affect them, improving programs, and, ultimately, advancing Tennessee.

Why are needs assessments important?

Needs assessments are important for a number of reasons. Our world faces unlimited needs, but limited resources. Needs assessments help to identify areas that will do the most good for the most people over time. We live in a complex society, and it is not always clear which initiatives should be conducted or emphasized by public service organizations. Needs assessments clarify the work of public service agencies and promote effective program planning by engaging advisory leaders, elected officials, volunteers and other stakeholders in learning and talking about important community issues. Needs assessments are a democratic principle! Needs change over time, and a periodic assessment is necessary to understand changing needs and new situations that people face in daily life.

When is the right time to conduct a needs assessment?

An effective needs assessment allows you to construct a more objective picture of needs than you would receive from observation or public discussion. The checklist will help you pinpoint when needs assessments are a good idea. Because needs assessments take time, energy, money and other resources, it is critical to decide if a needs assessment is warranted for your program (see Table 1).

Table 1. Understanding When to Conduct a Needs Assessment

Reasons to Conduct a Needs Assessment	Reasons Not to Conduct a Needs Assessment[2]
❏ Your project or program is brand new. ❏ You are brand new to the community or your job. ❏ You want to learn more about what the audience or community needs related to a specific condition. ❏ You need to document needs for grant applications and other funding proposals.[1] ❏ You need additional information and perspectives to communicate with donors, advisory groups, elected officials and other stakeholders.[2] ❏ You want to focus the evaluation of a given program on how well it meets the needs of its intended audience.[3]	❏ The audience or community would view the assessment as "redundant or wasteful." ❏ The issue is urgent and requires quick action. ❏ A recent needs assessment has already been conducted, and the results are still timely.

[1] Angima, Etuk, & King, 2014; [2] Berkowitz & Nagy, 2014; [3] Patton, 1982

Organization

How should a needs assessment be organized?

To organize your assessment, think about what you need to accomplish. Key action steps and considerations are outlined below using three key phases: exploration, data gathering and utilization (McKillip, 1998). These phases may also be referred to as Preassessment, Assessment and Postassessment (Lepicki & Boggs, 2014).

Phase One: Exploration

First, determine the purpose of the needs assessment. What are the potential uses of the assessment information and who are the potential users of the assessment information? Identify the parameters for the assessment. Are you looking at one town or county or a specific audience? If you believe town mayors will be the users of the assessment information, for example, a county-wide assessment would not be valuable to them unless you break out data by town.

Second, identify all of the existing information available that fits your parameters. More data are available today from secondary sources than ever before (Borden, 2004), and you may be quite surprised at the treasure trove of information available from multiple agencies and organizations. Third, determine if other data still need to be collected. Identify the methods to collect this information.

Phase Two: Assessment

Collect, analyze and synthesize all of the data. Implement your needs assessment plan. Let's say you find from the National Agricultural Statistics Service the production of cattle, hay and soybeans has been declining steadily in your county for the past five years. The rate of decline is much higher for your county than for other counties in the state. It could be helpful to determine some of the major causes or issues that have produced the declining numbers. Is it because of weather? Is it related to land use? Is it because producers are transitioning to other enterprises? Farmers and retailers of farm equipment might be good sources of information, and they may be able to describe how and why the county's agricultural output is changing.

Phase Three: Utilization

Use the data to set program priorities, develop an action plan to address the needs or issues, evaluate the needs assessment, and communicate the results. A needs assessment process is not completed until the results are shared and utilized.

Worksheet: Organizing a Needs Assessment

Phase One: Exploration

- What are the potential uses of the assessment information and who are the potential users of the assessment information?

- Are you looking at one town or county or a specific audience?

- What existing information do you have?

- What data still need to be collected?

- How will you collect the data?

Phase Two: Assessment

- What data did you gather?

- How did you access the data?

- What did you learn or confirm?

- Was there overlap in the needs identified as shown by different sources?

Phase Three: Utilization

- What are your priorities based on the needs assessment?

- How will you share the needs assessment information with others?

We often dichotomize needs into known and unknown needs; in other words, some needs people know about and will talk about, but other needs are hidden to the casual observer.

Needs that are known can be described through these techniques:

- Focus Groups
- Surveys
- Observation
- Nominal Group Technique
- Interviews

Needs that are unknown are typically determined through these techniques:

- Environmental Scanning
- Document Reviews

Another way we sort needs assessment data is by source, that is, primary or secondary. Primary data are collected directly from the source, such as interviews with clients, whereas secondary data are from a third party, such as census data or data from a local Chamber of Commerce. Traditionally, a needs assessment that uses some mix of primary and secondary sources provides a rich and comprehensive assessment (Borden, 2004).

Issues are often obvious. Three home fires in one month in a neighborhood will get everyone's attention. This provides a teachable moment from fire prevention and home safety programs. Taking advantage of such teachable moments speeds adoption of recommended safety and fire prevention practices.

Likewise, issues are just as likely to be hidden from the casual observer. The personal bankruptcy rate is one problem that people may not be willing to discuss. Affected individuals just don't stand up and say, "I have a problem managing my money, and I need help."

Exploration

Document Review

Reviewing existing data should be a part of any needs assessment that you conduct. Document review is the foundation for your needs assessment. These data are important for several reasons.

- Reliable data sources provide detailed information from a large sample size that would be difficult and unrealistic for you to collect on your own.
- Many topics are sensitive and may be difficult for people to discuss such as homelessness, bankruptcy and food insecurity.
- Data sources such as the U.S. census can provide information over several years or decades, allowing you the opportunity to identify trends.

Questions to ask when thinking about data:

- What information do I need? What topics do I need information about?
- Will I be able to access county level data?
- How current do the data need to be? What's my cut-off date?

When looking for data sources, it is important to use reliable sources of data. Reliable online sources are listed below. There are other sources of information that can be helpful, such as local and regional media reports that have stories that impact your communities. For example, if there have been several house fires in your community, an important need could be fire safety education. Other examples include articles about trends in bankruptcy, crime, unemployment, etc.

Regional and county level data can be found at your local library or at your Chamber of Commerce. In addition, agencies and institutions that you work with often conduct needs assessments on a regular basis.

Existing data from reliable sources provide information and numbers about a topic such as the number of farms, type of crops, health information, education, etc. Hard statistics from the U.S. census or a survey provide actual numbers you can include in your needs assessment, such as the number of people in your county who receive SNAP benefits or the number of farms. It can be helpful to look at trends in these numbers. Has the number of people receiving SNAP benefits decreased, increased or stayed the same in the past five years? Has the number of farms decreased or increased in the past five years? Has the number of farms remained the same but the number of acres decreased? Even though these numbers are straightforward, it helps to look at trends. Identifying these trends can be an important way to strategically meet the needs of your county.

Tips for working with data sets:

- *Have a point of reference that is comparable to your county*. It is good to compare your county to the state, but it's even more helpful to compare your county to similar counties as a way of gauging how well your county is doing.

- *Rates may be less reliable for smaller populations*. Rates are often based on the occurrence of an event out of 100,000 people. Because many counties in Tennessee have fewer than 100,000 people, rates often cannot be used to adequately predict accuracy. This is especially true for events that happen infrequently like infant mortality, suicides, etc. In these instances, it is better to look at the actual number (rather than the rate) and how the actual number may or may not vary over time.

- *Different data sets provide different estimates*. Make sure to look at similar data sets over time. This is especially true for estimates related to obesity, diabetes and heart disease. CDC provides the most accurate estimates of these diseases, but there are other estimates that can be used.

- *Data are only part of the overall picture*. Don't rely exclusively on data sets to provide a picture of your community. Numbers only provide part of the story, so it's important to back those up with information from other sources.

Baltimore County Public Schools (2010) listed the key pros and cons of a document review for research as follows:

Pros

- Document reviews do not interrupt a program.
- Documents can be collected from different time periods.
- Document reviews are helpful for corroborating with other sources.
- Document reviews are inexpensive.

Cons

- Documents may contain incomplete information.
- Documents may represent only one perspective.
- Documents may not "provide insight into participants' personal thinking."
- Documents may be out of date.

The following practices from the "Handbook of Practical Program Evaluation" are recommended for document reviews:

- Report aggregated (group) data, and do not capture individual identifiers.

- Check for inconsistencies in the data. As an illustration, if the age of a person is listed as 150 years old, the data lack consistency!
- Make sure that you know the time period for which the data were collected. A report published in a given year may reflect data collected over the previous five years.
- Send a thank-you letter to the public agency that shared the data; let them know how the data were used or how they were valuable to you (Hatry, 2004).

The data sources listed below are examples of data sets that could be incorporated into your document review. The websites are listed in parentheses and the list indicates the type of data included at each site. All of these sites have county-level data that is updated regularly.

- U. S. Census Bureau (census.gov)
    - Economic
    - Education
    - Employment
    - Families and living arrangements
    - Health
    - Housing
    - Income and poverty
    - International trade
    - Population
    - Public sector

- Annie E. Casey Foundation Kids Count (aecf.org)
    - Demographics
    - Economic well-being
    - Education
    - Family and community
    - Health
    - Safety and risk behaviors

- Tennessee Agricultural Statistics (nass.usda.gov/tn)
    - Crops and plants
    - Demographics
    - Economic and prices
    - Environmental
    - Livestock and animals
    - Research, science and technology

- Tennessee Department of Health (health.state.tn.us/data.htm)
    - General health data
    - Health reports
    - Health statistics

- Tennessee Department of Education (state.tn.us/education/data/index.shtml)
    - Graduation rates
    - School district performance outcomes (Report Card)
    - Standardized testing results

- Tennessee Department of Economic and Community Development (tnecd.com/county-profiles)
    - Demographics
    - Education
    - Infrastructure
    - Quality of life
    - Transportation

The document review is often a helpful starting point for a comprehensive needs assessment. It can help you to identify what is known and pinpoint what you still want to know. Document reviews tend to be helpful especially when used with individual and/or group methods. This process provides a sense of both what is happening and why it may be happening.

Individual Methods

Key Informants

A needs assessment is essentially an investigation, and a key informant is an individual who provides important perspectives and firsthand knowledge of a situation. An assessment of the health status of the community would be accentuated greatly by seeking the opinions of nursing home administrators, dementia caregivers, doctors and coordinated school health directors, just to name a few examples of key informants.

Key informants are often very helpful to add color or additional information to a needs assessment. They tend to be knowledgeable and may provide distinct information. They can help you understand why something is happening or understand the history of community attributes. It is not recommended to use key informants solely for an entire needs assessment because it could place too much importance on the opinions of a handful of individuals.

Worksheet: Pinpointing Key Informants

Contact name:

Phone or email:

Reason this person is a Key Informant:

Key Questions:

Information Shared by Key Informant:

Contact name:

Phone or email:

Reason this person is a Key Informant:

Key Questions:

Information Shared by Key Informant:

Contact name:

Phone or email:

Reason this person is a Key Informant:

Key Questions:

Information Shared by Key Informant:

Contact name:

Phone or email:

Reason this person is a Key Informant:

Key Questions:

Information Shared by Key Informant:

Personal Interviews

Personal interviews are useful in conducting needs assessments and provide the added benefit of getting to know people. Preparation is extremely important because interviews can be challenging if you ask about highly personal topics. Interviews mainly provide qualitative data, such as perceptions, values, opinions and information from personal observation (Witkin & Altschuld, 1995) in contrast to quantitative data (quantities, amounts, percentages, proportions, facts, etc.).

Conducting the Interview
Prepare your questions in advance and practice them so that you are well-prepared. When conducting an interview, you should be dressed in either business attire or in similar attire as the interviewee. If you do not understand an answer, be honest and ask the interviewee to clarify for you. Start a personal interview by making small talk to make the person feel comfortable (Vilela, 2014).

Interview Protocol
When conducting the interview, ask few questions and resist the temptation to offer advice (Creswell, 1998). An interview procedure is recommended. A written procedure helps you to stay on task and on time. Here is an example interview procedure:

Step 1. If recording, test equipment in the office the day before the interview. Purchase any needed supplies (i.e., batteries for the recorder).

Step 2. Travel to interview site.

Step 3. Engage in some small talk to put the interviewee at ease.

Step 4. Inform the interviewee of the purpose of the interview.

Step 5. Assure the interviewee that the interview is confidential.

Step 6. If recording, get the interviewee's verbal permission to tape record.

Step 7. Ask if the interviewee is ready for you to begin recording.

Step 8. Record the following information either verbally or in your notes:

- Date
- Time
- Location
- Participant pseudonym
- Interviewer's name

Step 9. Conduct the interview (using the protocol).

Step 10. Watch the time and do not go over time.

Step 11. Thank the interviewee for participating.

Step 12. Return to the office to review notes and reflect on the interview. Reflecting is important because it can provide a context for the interview. What was the mood of the person being interviewed? Were they engaged or distracted? Did they have an agenda separate from the topic of interest? What were the key findings from the interview?

Step 13. If recorded, transcribe the recording and reflect some more.

Timing and Length

Timing is important for all interviews and should be considered before contacting potential interviewees. Is there a certain day of the week or time of day that the person is likely available? If you are interviewing fast-food mangers about food safety training needs of their employees, the lunch hour is the worst possible time to call on them for an interview. The afternoon, say 2 p.m., might be much better.

When you contact the interviewee to invite them to participate in an interview, it's important to know how long the interview will last. Practicing questions in advance and thinking through possible answers can help you gain a sense of how long the interview will take. A useful step is to interview friends, family or coworkers to help determine the approximate length of the interview, to help build confidence in the questions and the interview process, and to identify any questions that are unclear. To be considerate of people's time and attention spans, ideally the interview should not last more than 30 minutes.

Clearly, it is more difficult to ask a question about child abuse or spousal abuse than about owning a television set.

Bradburn, Sudman, & Wansink, 2004

Questions

This section will provide suggestions for developing interview questions. Suggestions for asking about behaviors:

- More accurate information is obtained when you ask about a specific time period rather than asking people what they "usually" do.
- The time period you select should correspond to the topic. The last 12 months would apply to home ownership or pregnancy, whereas the last 24 hours would apply to eating dairy products (Bradburn, Sudman, & Wansink, 2004).

To write high-quality questions, start with some of these prompts:

- Describe for me...
- Tell me about a time when...
- Can you give me an example of...
- Tell me about a situation that... (Gupta, 1999)

Example Interview Protocol

The interview protocol in Figure 1 is targeted to a small business owner. These questions focus on three major domains: challenges of the small business owner, views on the community, and views on change. Notice a leadoff question reflects each of the major domains in the interview. Follow-up questions are listed, but these would be used only if the interviewee did not elaborate or did not mention them from their answer to the leadoff question.

Topic Domain 1: Challenges

Leadoff Question	• When you consider your experience as a small business owner, what are some of your challenges?
Possible Follow-up Questions	• What challenges do you face supervising employees? • Do you have any challenges related to budgeting and/or bookkeeping?

Topic Domain 2: Views on Culture

Leadoff Question	• How has community influenced your business?
Possible Follow-up Questions	• What kinds of things do your customers say about the community in your store? • Do you consider that the community has a “shop local” culture?

Topic Domain 3: Views on Change

Leadoff Question	• What changes are you considering for your business?
Possible Follow-up Question	• What factors would speed or slow change in your business?

Figure 1. Example individual interview protocol for small business owners

Worksheet: Preparing Questions for Interviews

Make your leadoff question general in nature. It should be the most important question. Follow-up questions are used to gather additional information or to gather specifics.

Topic Domain 1:

Leadoff Question	
Possible Follow-up	

Topic Domain 2:

Leadoff Question	
Possible Follow-up	

Topic Domain 3:

Leadoff Question	
Possible Follow-up	

Group Methods

Advisory Committees

One of the most effective ways to assess needs and plan programs to meet those needs is to work with an advisory group (Barnett, Johnson, & Verma, 1999; University of Wisconsin Extension, 2003). Effective advisory groups represent the diversity of your county including members from different geographic, political, racial, ethnic and socioeconomic groups. The importance of involving nontraditional or underserved clientele cannot be underestimated. Also, advisory groups usually have representation from community coalitions, government agencies, schools, etc. Members do not serve forever; there must be a term of service and a rotation plan. This plan will contribute to a group that reflects the diversity of the audiences served, and it will contribute to new ideas and energy.

People will share their needs and goals if we ask.

Essential actions for involving advisory committees in needs assessments include:

- Identify members to reflect diversity.
- Establish term of service (for example, three-year terms) and rotation of members.
- Invite members to serve on the committee either face-to-face or by telephone.
- Remind members about the first meeting by a letter or personal email.
- Create an atmosphere where members feel free to discuss their community and concerns and where everyone's input is valued.
- Inform members about program accomplishments.

(Cummings & Franck, 2014; Donaldson, 2008; University of Wisconsin Extension, 2003)

Several methods are effective for involving and engaging advisory committees in the needs assessment process. These include the Delphi Technique, nominal group processing and environmental scans, which are explained in later sections of this publication. A good way to involve the group is to share data and information that you have already collected as a way to start the conversation, but focus on listening to their ideas and concerns. Example personal letters to committee members are shown in Figures 2 and 3.

Date
Name
Address
Town, TN ZIP

Dear Name,

It was a pleasure to speak with you today. Thank you for agreeing to serve as a member of the [Insert Name of County] 4-H Advisory Committee. This group:

- reviews the current 4-H program in our county,
- identifies under-served audiences,
- makes suggestions for improvements, and
- offers advice for how Extension can serve the needs of today's youth.

The Advisory Committee is made up of about 10-12 individuals: 4-H parents, teenagers, donors, educators, and others who are interested in youth development. The group meets two times a year. The first meeting will be held on [Insert Date] in the [Insert Location]. We will meet from [Insert Time] to [Insert Time] pm. We hope that you can accept this opportunity to determine the direction of the 4-H program in our county.

If you have questions, please do not hesitate to contact me at [Insert Phone or Email]. I look forward to working with you! Thank you!

Sincerely,
Name
Extension Agent

Figure 2. Sample advisory committee invitation

Date
Name
Address
Town, TN ZIP

Dear Name,

The next meeting of the [Insert Name of County] County 4-H Advisory Committee will be

[Insert Date] at the Extension Office. We will begin at [Insert Time] pm and should finish at [Inset Time] pm.

We appreciate your willingness to serve. Advisory groups help Extension and community leaders to focus attention on problems that can be solved through education and involvement. Individuals on advisory groups learn about educational programs and how they can help people access those programs. If for any reason you do not wish to serve on the advisory committee, please let us know.

We look forward to seeing you. Please let us know if you are unable to attend, and please feel free to use our voice mail system after hours. Our phone number is [Insert Phone]. If you have a question or concern about Extension programs, please do not hesitate to contact us. Thank you!

Yours truly,
Name
Extension Agent

Figure 3. Sample advisory committee meeting announcement

Stakeholder Groups

It is not always necessary to invite an entire county or town population to participate in a needs assessment. If you are focusing on improving the visual appeal of neighborhoods, consider assessing and starting with just one neighborhood. Invite people from the neighborhood to participate in the needs assessment. As the people who own property and live in the neighborhood, the residents are the key stakeholders. In fact, involving too many people from outside the neighborhood too early in the process might create distrust and a lack of engagement on the part of residents.

It is often advantageous to conduct needs assessments with stakeholder groups. For example, in focus groups or group interviews, people enjoy talking to others with similar interests and pursuits. Existing Extension mailing lists are a great place to start to identify stakeholders. If you are assessing the needs of orchard growers, it is a good idea to ask those stakeholders to name others who might be contacted to answer questions. That allows you to check your mailing list for accuracy and potentially involve new clients.

Focus Groups

The following discussion on focus groups is adapted from:

> Donaldson, J. L., Hastings, S., & Bower, L. K. (2013). Advancing Tennessee: *Focus group interviews facilitation guide for FCS programs*. Available from Author.

Focus Groups Overview
Focus groups are planned discussions to capture perceptions from a select group of people. Focus groups have multiple uses including needs assessment, program development, evaluation and marketing (Krueger & Casey, 2009; Martens, 2010). Focus groups are useful when you want to understand experiences, viewpoints and/or impressions. Focus groups can provide depth and breadth of information while helping to build relationships with clients (Martens, 2010). The ideal size of a focus group is seven to 10 people (Kreuger, 1988; Krueger & Casey, 2009; Smithson, 2008). The focus group moderator is critically important because the group discussion is many times reflective of his/her skills and values.

Why Focus Groups?
Focus groups have many characteristics that make them well-suited for Extension work including the needs assessment process. First, focus groups tend to lend themselves to open-ended questions. These questions are helpful for thinking about complex problems and programs. The information gained from focus groups can help address problems at the program design stage. Focus groups are useful when:

- You need visual aids.
- You ask sensitive questions.
- You need a group to develop ideas.
- Interaction and “building on ideas” will provide useful information.
- One person shares and it triggers a memory for someone else.

- Time to collect information is limited.
- People get along.

Examples of Successful Focus Group Interviews

- How Farmers Learn — Six focus groups were conducted to understand how today's farmers prefer to learn. The participants represented beef/forages, organic fruits/vegetables, tobacco, row crops, women in agriculture and clients of the Center for Profitable Agriculture. The results continue to inform teaching methods for Extension programs reaching farmers.
- State Extension Strategic Plan — Four focus groups were conducted by members of the State Extension Strategic Planning Leadership Team. The participants were 24 leaders from state agencies or statewide organizations. The groups were helpful in improving the draft strategic plan and confirmed information gathered from other sources.
- Local Advisory Groups — Annually, Tennessee Extension personnel conduct more than 400 advisory committee meetings throughout the state. Many of the successful efforts used focus group interview techniques and/or some of the other group methods discussed in this publication.

Participant Selection

- Consider seven to 10 people for a single session. Consider those who would be comfortable with one another, but do not necessarily know one another. Consider diversity in gender, race/ethnicity, residence and other areas to offer rich perspectives.
- Plan two to three focus group sessions with different people. This provides you with a greater cross-section of your clients and allows you to see patterns across the groups.
- Consider selecting participants who have a similar association to the topic being discussed. As an illustration, if you are assessing infant and child nutrition, select participants who are all parents. Another group might be all elected officials.

Focus Group Protocol/Discussion Guide

A protocol or discussion guide provides the structure for guiding your focus groups. This structure acts as a checklist to ensure that all the topics are covered. The main parts of the protocol include the introduction, the opening questions, the key questions, the summary and the closing.

The introduction sets the tone for the focus group. The moderator introduces themselves and the note takers, provides a brief overview of the purpose, discusses the importance of confidentiality, and establishes some ground rules. It is important that you memorize the introduction. A sample introduction is provided in Figure 4.

- **Introductions:** Hello everyone. Thanks so much for being here. My name is Joseph Donaldson and I will serve as facilitator. Because we want to make sure that we capture all of your ideas, Karen Franck is here to take notes.
- **Purpose of the Group:** Our purpose is to conduct focus group discussions about the needs in your county that can be addressed by Extension programs.
- **Confidentiality:** Everything that you say is confidential. We ask that you do not share what others have discussed with people outside of this group.
- **Length of the focus group:** We will conclude in approximately two hours, and we will take a break after the first hour.
- **Ground Rules:**
    - First, there are no right or wrong answers. We are interested in your opinions and perspectives on the needs of your community.
    - Second, you do not have to agree with everyone else in this room if that is not how you really feel. We expect people will have different views on these questions.
    - Third, we want you to feel comfortable saying good things as well as critical things. We are not here to promote a particular way of thinking. We just want to understand your viewpoints.
    - Fourth, we ask that you talk one at a time.
- **Check for Questions:** Does anyone have any questions before we get started?

Figure 4. Focus group introduction example

Quality Questions

- Open-ended questions are best... "Where does your child do homework?" rather than "Does your child do homework in your car on the way to school?"
- "What do you like best about...?" and "Think back..." questions usually work well.
- Question order needs to be logical; ordering questions from general to specific works well.
- Many focus groups use fewer than 10 questions.
- Avoid "Why" questions — Instead of "Why did you attend the Grain Conference?" ask, "What prompted you to attend the Grain Conference?"

Focus Group Best Practices

- Invite people personally.
- Secure comfortable location.
- Provide pens/pencils/paper.
- Provide refreshments.

- Take a break after one hour.
- Have one or more people serving as recorders.
- Provide name tags/table tents.

Room Setup
A recommended room setup for a focus group interview is shown in Figure 5. This is an actual seating chart used for focus groups in Jackson County, Tennessee. Notice that the focus group had 10 participants, two note takers and one moderator. The room setup includes four tables (each table being 6 feet long), 13 chairs, and two battery-powered recorders on the tabletop.

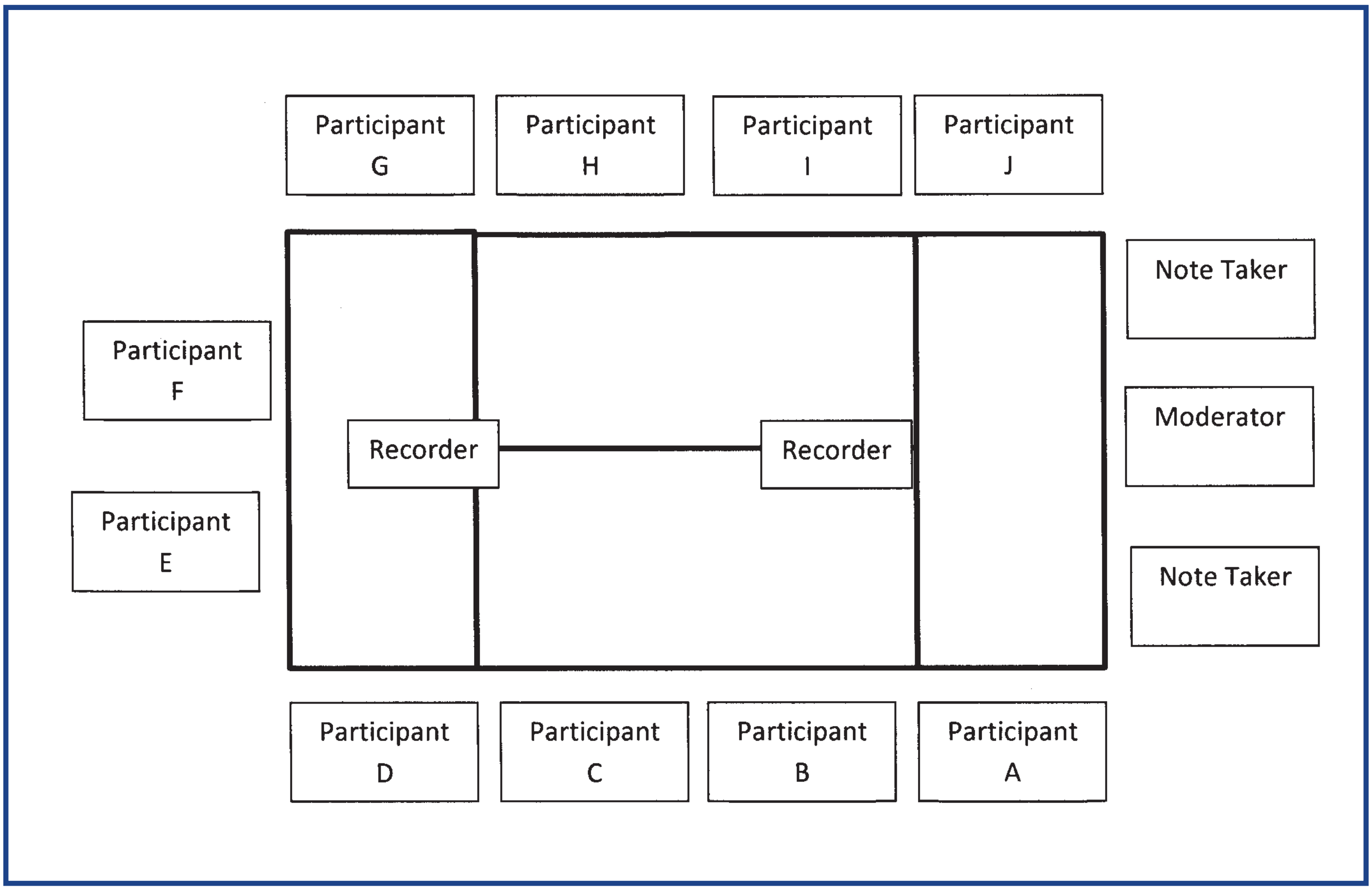

Figure 5. Recommended room setup for a focus group interview

Moderator Skills

The first skill is the ability to "initiate and maintain a conversation with a stranger" (Frey & Oishi, 1995). A good moderator uses the following skills:

- **Be mentally prepared.**
  - Be alert, friendly and free from distractions.
  - Listen.
  - Be completely familiar with questions.
- **Discourage any controlling talkers.**
  - Look at other participants.
  - Look down while they are talking.
  - Cross your hands.
  - Change your posture.
  - Shuffle your notes.
  - More direct techniques — "Let's take the next four minutes to silently write ideas for this question. [After four minutes] Now I would like each person to share one idea at a time."
- **Control your reactions.**
  - Remain neutral; don't evaluate or judge in any capacity.
  - Keep your opinion to yourself.
  - Never say "that's good" or "excellent."
  - Nod your head to encourage dialogue but don't show agreement with an idea.
  - Think about what you are communicating verbally and nonverbally.
- **Keep listening.**
  - Do not defend or justify.
  - If a participant seems especially emotional (angry, euphoric, etc.), ask the person to describe how they feel.
  - Validate by saying, "I understand why you would feel that way. Tell me more."
  - Validate by saying, "We're trying to get as much information as possible, so I appreciate you. Would anyone else like to share?"
- **Offer appropriate questions.**
  - Use pauses and probes.
  - Ask your question then pause.
  - Don't talk to fill the silence — allow people to think about the question.
  - After someone stops speaking and no one else responds, wait five seconds, then call on someone else to comment.
  - Probes:
  - "Would you explain further?"
  - "Tell me more."
  - "Would you provide an example?"
  - "I don't understand. Tell me more."

- Repeat the question.
- Repeat the reply.

- **Be flexible and consistent.**
  - Moderators balance flexibility in questioning with consistency
  - between and among different focus groups.
  - If everyone has spoken, ask if there's anything else, then move on to the next question.
  - Participants should be having a conversation with each other; you are listening to that conversation.

Analyze your data
One disadvantage of focus groups is that the data can be challenging to analyze as compared to questionnaires (Martens, 2010). In general terms, you can analyze your data by doing these two tasks:

- Identify common responses within each focus group; these are referred to as common themes.
- Compare and contrast themes across the different focus groups.
- More information about analyzing focus group data is found in the Utilization section of this publication.

Surveys

Surveys of the General Population
In survey research, a census of the population is challenging. The United States Census Bureau provides a survey of the entire population with important information about communities, including gender, age, race and ethnicity and other demographic data. Access the United States Census data at census.gov.

Even when you have access to an entire population, it might not be practical to conduct a census because the number is far too many to contact or include. For example, in one county in Tennessee there are more than 6,000 4-H youth members. For this county, a sample of these 4-H youth is more practical than a census. Using random and/or stratified sampling ensures that the sample reflects all of the varied aspects (socioeconomic, racial, ethnic, etc.) of the population.

Random Sampling
In random sampling, every member of the population has an equal opportunity of being selected for the sample. A random sample is obtained by placing individual names on individual pieces of paper, and then names are drawn at random (UC Davis, 2014). Another helpful technique would be to place the names in a spreadsheet, so that every name is on a different row. Then, use free online software such as a random number generator from Random.org (2014) to obtain a sample.

How many people should be in your sample for valid results? This important question is critical because the sample needs to be large enough to represent the various diversities of the population. If the sample size is too low, you have not represented the population. If the sample size is too high, you may be using valuable resources that are not necessary for the same results with a more accurate sample number.

Krejcie and Morgan (1970) provided the following calculations based on a formula provided by the National Education Association (see Figure 1). Based on these calculations, for the population of 6,000 4-H members, a random sample of 361 should be drawn.

When conducting a survey, it is also important to factor in the response rate. The average return rate of mailed surveys is 55.6 percent (Baruch, 1999), and the average completion rate of emailed surveys is 39.6 percent (Cook, Heath, & Thompson, 2000). Therefore, it is important to send out enough surveys to achieve the recommended sample size for accuracy. In the example above, for the population of 6,000 4-H members, to achieve a random sample of 361 youth, approximately 580 youth would need to be emailed. See table 2.

Table 2. Population and Sample Size

Population Size	Sample Size	Surveys that need to be emailed*
24 or less	Everyone	All
25	24	All
50	44	All
100	80	All
200	132	All
300	169	All
400	196	320
500	217	350
600	234	375
700	248	400
800	260	420
900	269	430
1,000	278	445
2,000	322	515
3,000	341	550
4,000	351	565
5,000	357	575
6,000	361	580
7,000	364	585
8,000	367	590
9,000	368	590
10,000	370	600
20,000	377	605
30,000	379	610
40,000	380	610
50,000	381	610
75,000	382	615
100,000	384	615

*Estimates rounded to nearest 10th based on average response rate of 39.6 percent for emailed surveys.

Stratified Sampling

In stratified sampling, the population is grouped into the most important characteristic before the sample is drawn (UC Davis, 2014). To continue the example of the county 4-H program with a population of 6,000, you might be interested in any differences in how youth of different races or ethnicities perceive 4-H experiences. If race and ethnicity are an important part of the study, the population would need to be stratified, or grouped, by race first. The population is then randomly sampled within the groups (Table 3).

Table 3. Example of Stratified Sampling

Population by Race/ Ethnicity (*N* = 6,000)	Sample by Race/Ethnicity (*n* = 361)
30% White/Not of Hispanic Origin	109 White/Not of Hispanic Origin
61% Black/Not of Hispanic Origin	220 Black/Not of Hispanic Origin
5% Hispanic	18 Hispanic
2% American Indian/Alaskan Native	7 American Indian/Alaskan Native
2% Asian or Pacific Islander	7 Asian or Pacific Islander
The 361 sample size reflects the racial and ethnic makeup of the entire population. Again, this is an example in which the key characteristic being studied was perception of 4-H projects by race/ethnicity.	

Snowball Sampling

There might be occasions when it is important to include additional perspectives from a targeted group. For example, you might want to include individuals who are not presently vegetable producers but may want to become vegetable producers. One approach would be to ask farmers and agribusiness owners if they know anyone who might be interested and, if so, who they recommend. This is a sampling method known as the "snowball sample," because you add potential contacts as you go, much like adding snow to a snowball that grows exponentially. A snowball sample is an example of a sample that is not necessarily representative of the population. It is a purposive sample that serves a specific need — in this case, targeting a specific audience (UC Davis, 2014).

Surveys of Targeted Audiences

Once Extension personnel have identified a target audience for educational programming, determine if there are existing mailing lists in the county Extension office. Throughout Tennessee's 95 county

Extension offices, mailing lists for specific audiences are maintained. Some of the sample lists available across the state include commercial vegetable producers, small fruit and nut producers, Tennessee Nutrition and Consumer Education Program volunteers, 4-H volunteers, and many, many more.

A very important caveat is that sometimes existing clients have too much influence over a needs assessment, and the results produce neither new programming efforts nor new audiences served. This is another reason for using multiple methods when conducting a needs assessment.

Survey Characteristics
Surveys can be a great way to get information from diverse groups of people. Surveys can be written, verbal or online, but for surveys to be successful it is important that they have certain characteristics:

- Make questions easy to understand and easy to answer — word questions so that there is no wrong answer.
- Keep it short — both the questions and the survey itself. For questions, try for fewer than 20 words. For surveys, try for 10 to 15 questions.
- Don't ask people to rank a long list of options. About four ranks is valid because people's preferences fluctuate and it can be difficult to make meaningful distinctions between large-ranked groups.
- Make sure all questions relate to what you are interested in learning. When putting together a survey, look at each question and make sure that it needs to be included.
- Make sure the survey goes to the right person — don't ask someone for information that they would not know.
- Make sure that you can get an adequate number of people to complete the survey.
- Be careful about bias — biased questions include, "Do you agree that obesity is a serious issue in our county?" versus "Rate the seriousness of obesity in our county."
- Place the most important question first, or at least a question closely tied to the title of the survey. Demographic questions are typically asked last.
- Keep the visual design simple. Have a "clean" layout. The top should have a logo and title. The bottom right should have navigation (Gouldthorpe & Israel, 2015). Do not include any extra content (lines, logos, URLs). It can distract the respondent and reduce response rates. It is okay to use a background color with white answer spaces.
- Focus on what you are trying to accomplish and any benefits of the study. For example, it would be better to state instructions as, "From time to time we evaluate certain programs," instead of stating, "I really need lots of respondents to have any hope of obtaining an 'Exemplary' performance appraisal rating."

Paper Surveys
Paper surveys can be used with people to whom you have access, such as during a meeting or after a program. Just make sure to allow enough time to compile the surveys so that you can use the information.

For paper surveys, 12 pages printed front and back in booklet form is the recommended *limit*, but collect this much information only if it is necessary to meet the needs of your assessment.

Online Surveys
Qualtrics can be an easy way to collect information from people who are willing to take an online survey. Qualtrics provides a report and gives you up-to-date information about how many people have completed the survey.

"With the increased expectation of Extension program accountability, one of the most frequently used evaluation methodologies, survey research, is becoming less useful due to declining response rates."

(Shinn, Baker, & Briers, 2007)

Tips for a successful online survey:

- Send out the link at a time when people are more willing to complete a survey — avoid sending out the survey at 8 a.m. on a Monday or a Friday, or at lunch time.
- Send out at least one reminder — most people take surveys right after they receive them, so it's important to send out reminders to increase response rates. Average respondents complete surveys in about four days (Shinn, Baker, & Briers, 2007). Follow up by focusing on the person, such as, "We realize this is a busy time of year, and we understand how valuable your time is. We are hoping you could give about five minutes to complete a short survey…"
- Use multiple screens when laying out your survey. This will prevent respondents from scrolling excessively.

Increasing Response Rates
Survey response rates have been decreasing for both paper and online surveys for at least the past 15 years in Europe and the United States.

While numerous researchers have reported a decline in survey response rates, one study by Nulty (2008) is particularly striking. Nulty conducted a meta-analysis of eight different studies that used both paper and online surveys. All of the studies were surveys of Australian college students. Nulty showed that online surveys had response rates that lagged behind paper surveys in six out of seven surveys administered to random samples of participants.

Tips to increase response rates for an online survey:

- Send out the link at an optimal time if at all possible (Tuesday-Thursday between 10 and 11 a.m. or between 2 and 4 p.m.).
- Send out at least one reminder to nonrespondents about one week after the initial email. Personalize the reminders as much as possible.

Tips to increase response rates for mailed surveys:

- Personalize the letter as much as possible.
- Include a self-addressed, stamped envelope.

- Send out follow-up letters to nonrespondents about one week apart.

An initial contact letter is shown in Figure 6. See Figures 7, 8 and 9 for follow-up letters.

Dear Master Gardener,

From time to time we seek the opinions of a number of Tennesseans, including statewide Extension personnel, decision-makers, clientele and other stakeholders, to improve Extension programs. Today, we are asking you to help us assess the Master Gardener program. Our goal is to use the information to plan effective Master Gardener programs in the future.

You were one of a sample of Tennessee Extension Master Gardeners who was randomly selected for this survey. The responses we receive to this survey from you and other citizens will assist us in setting priorities for the Master Gardener program.

This will be a confidential survey. It will take approximately 20 minutes to complete. Your responses will be grouped with those of other citizens across the state. Your response is very important. Direct any questions about this survey to:

[Insert Name of Extension Professional]	[Insert Name of Extension Professional]
[Insert Title]	[Insert Title]
[Insert Phone]	[Insert Phone]
[Insert Email]	[Insert Email]

Thank you for your participation. ***Please click the link below to take our survey:***
[Insert Survey Link]

Thank you!
[Insert Name of Extension Professional]
[Insert Name of Extension Professional]

Figure 6. Example of an initial contact letter

Dear Master Gardener,

Last week we sent you an email asking you to complete a survey about effective Master Gardener programs in the future. Thank you to everyone who has completed the survey so far!

If you have not completed the survey, we hope that you will do so as soon as possible. Because of the small number of people being asked to participate in this survey, it is important that each person complete the survey. It will take approximately 20 minutes to complete. Your responses are confidential and will be grouped with those of other citizens across the state. Please click this link to take our survey: [Insert Survey Link]

Direct any questions about this survey to:

[Insert Name of Extension Professional]
[Insert Title]
[Insert Phone]
[Insert Email]

[Insert Name of Extension Professional]
[Insert Title]
[Insert Phone]
[Insert Email]

Thank you for your participation!
Sincerely,
[Insert Name of Extension Professional]
[Insert Name of Extension Professional]

Figure 7. Example of a one-week follow-up letter

Dear Master Gardener,

We realize that this is a busy time of year for you, and we know how valuable your time is. We are asking for 20 minutes of your time to share your opinions about Master Gardener programs in the future.

We hope that you will complete the survey as soon as possible. Because of the small number of people being asked to participate in this survey, it is important that each person complete the survey. It will take approximately 20 minutes to complete. Your responses are confidential and will be grouped with those of other citizens across the state. Please click this link to take our survey: [Insert Survey Link]
Direct any questions about this survey to:

[Insert Name of Extension Professional]
[Insert Title]
[Insert Phone]
[Insert Email]

[Insert Name of Extension Professional]
[Insert Title]
[Insert Phone]
[Insert Email]

Your response is important because it will help us assess the program and make future plans that represent the perspectives of Master Gardeners.

Thank you for your participation!
Sincerely,
[Insert Name of Extension Professional]
[Insert Name of Extension Professional]

Figure 8. Example of a three-week follow-up letter

Dear Master Gardener,

Several weeks ago, we sent you an email message asking you to complete a short survey regarding your opinions about future Master Gardener programs. As of today, we have not received your completed survey.

We have received many responses from across the state, and these opinions will be valuable to us in planning future Master Gardener programs. We are contacting you today because your response helps us to get an accurate, representative picture of statewide opinions. This is the "last call" to receive responses to the survey.

We hope that you will complete the survey as soon as possible; it will take about 20 minutes. Your responses are confidential and will be grouped with those of other citizens across the state. Please click this link to take our survey: [Insert Survey Link]

Direct any questions about this survey to:

[Insert Name of Extension Professional]	[Insert Name of Extension Professional]
[Insert Title]	[Insert Title]
[Insert Phone]	[Insert Phone]
[Insert Email]	[Insert Email]

Thank you for your help!

Thank you for your participation!
Sincerely,
[Insert Name of Extension Professional]
[Insert Name of Extension Professional]

Figure 9. Example of a final follow-up letter

Open Listening Sessions

Open listening sessions is a needs assessment method similar to a focus group. Key differences are that open listening sessions can be small or large, and the sessions are usually open to everyone to attend. Open listening sessions can be great ways for multiple public agencies to collect information at one time and discuss the intricacies of complex issues. This approach may help you build strong working relationships with other agencies and officials.

People can be invited to attend or invitations can be extended to the community through advertisements. People who are interested in attending are usually asked to bring a friend, a family member or someone they know who is interested in the topic.

In general, to start the meeting, you or a panel of experts share information about the topic of interest. Then attendees are invited to respond, share their concerns and issues, and pose questions about the issue. Large groups can be separated into smaller groups to facilitate discussion. The key is to ensure that important information is captured. It is important that you have someone who can help take notes about what is discussed. Review the notes to look for trends.

Here are some suggestions for an effective listening session:

- Secure a location for the listening session. Think about the potential size of the group that might attend. Consider the meeting room space, acoustics and the number of people who will attend. Microphones might be needed for the panel and the audience. Some locations will require more time and energy to prepare.
- Send out invitations or advertise the listening session to the community.
- Plan the structure. Will you present the information or will there be a panel of experts? Will you need volunteers to help facilitate smaller discussions?
- Make sure everyone knows the agenda for the meeting. The agenda is critical, as people need to know that their comments are welcome at a scheduled time. Panel members need to be aware of their time limits for their comments to ensure time for audience comments.
- Let all panelists know in advance who you are inviting to serve on the panel. If the panelists do not know each other, make introductions and provide a short meet-and-greet session before the meeting starts.
- Provide water for the panelists.
- Conduct the listening session and collect information.
- Compile the results, looking for trends.
- Communicate the results with the community.

Delphi Technique

The Delphi Technique is a method for soliciting ideas from a nominated group of experts using a series of questionnaires (Hsu & Sandford, 2007; Ludwig, 1997). This technique is credited to Norman Dalkey and Olaf Helmer of the Rand Corporation and was pioneered by the United States Department of Defense for making predictions about large-scale issues including war and population changes (Dalkey & Helmer, 1963; Lindeman, 1981). Over the next 50 years, numerous public service agencies and organizations including Cooperative Extension used the Delphi Technique for needs assessments, program planning and evaluation purposes (Gamon, 1991; Ludwig, 1997).

The Delphi Technique allows for collecting information from a diverse group of participants (Mayfield, Wingenbach, & Chalmers, 2005). Furthermore, the process allows different groups to identify their own key needs and issues without influence from other groups (Lorenzo, Blanche, & Henson, 2003).

A strength of the Delphi Technique is that a diverse group can be included, but privacy can be maintained. Another strength is that the Delphi participants identify and prioritize the needs and issues so that the process and outcomes are participant-driven and not controlled by you (Gross, 1981). Furthermore, having multiple rounds of questions allows participants to consider and potentially revise or refine their original ideas based on the feedback of other participants. This process allows a more focused and thoughtful response than the one-shot answers of a focus group or survey. Another strength is that everyone is anonymous, so one person cannot dominate the group — an issue that can happen in focus groups or open listening sessions.

Delphis are conducted using the following steps. These steps take place over several weeks or even several months, and participants work individually on this process.

Step 1. Ask for nominations for experts to participate on the panel. Nominations should be solicited from key stakeholders or others who are knowledgeable in the area of interest. For example, in a study of 4-H professionals related to healthy living, state 4-H leaders were contacted by email and asked to nominate county 4-H professionals who had worked with this project.

Step 2. Invite nominees to participate.

Step 3. Round One — Traditionally, participants are asked to answer an open-ended question (Hsu & Sandford, 2007) that is sent to panelists on the topic of interest. For example, the question could be "What is the greatest issue facing X in your county?" X could be farmers, agricultural producers, families, children, students, teachers, health care practitioners, etc.

Step 4. Round Two — The Round Two survey is developed based on Round One responses. Participants are asked to rank order the responses to the first question, and sometimes they are asked to justify their rankings.

Step 5. Round Three — The Round Three survey is developed from Round Two responses. Participants are provided a summary of ratings for Round Two and then asked to revise their rankings based on the group scores and to clarify their reasons.

Step 6. Round Four — The Round Four survey is a final summary of rankings. Participants are asked to review and revise these rankings if needed.

Environmental Scanning

Environmental scanning has been defined as a way of collecting information to examine emerging trends and provide early warnings of external changes that can impact an organization or community (Brown & Weiner, 1985; Coates, 1985; Morrison, 1992). The process involves several of the methods discussed previously; the difference is that this technique focuses more on future and emerging trends that can impact your county both in positive and negative ways (Bukowski & Michael, 2014).

This technique is best performed by a team using the steps outlined here:

Step 1. Review existing data.

Step 2. List topics that are important based on the document review.

Step 3. Involve advisory committee and other stakeholder groups to provide information and feedback about the identified topics — what do they see as important or critical?

Step 4. Use surveys and other methods to collect information across the county from diverse groups about the identified topics.

Step 5. List topics that emerged as important from numbers 3 and 4.

Step 6. Prioritize topics — focus on what Extension can address (adapted from Guion, 2010).

Brainstorming

Brainstorming provides a way for groups to generate ideas socially. If the need is to generate more solutions to a problem, then brainstorming is necessary. While you don't have to use the entire meeting time to brainstorm, make sure you have allowed adequate time for the group to think about solutions and share solutions. Suggestions for conducting a brainstorming session include:

Step 1. Present the ground rules for brainstorming.

- All ideas are valuable.
- Share as many ideas as possible.
- Brainstorming is not a time to judge or evaluate any issues.

Step 2. Present a specific problem or question for the group to address.

Step 3. Request that each individual spend time thinking silently about the issue. This is an essential step of brainstorming because it deters the group from getting bogged down on any one idea (Adams, 2013; Berkun, 2004). Provide paper and pens for participants to make notes.

Step 4. Ask for ideas to be shared either at random or round-robin fashion by going around the room and asking each person to share one idea at a time. You can add some interest by asking everyone to share the last idea they wrote down or the first idea they wrote down.

Step 5. Capture every idea — one of the most important tasks for a facilitator of a brainstorming session. Think of ways for everyone to see all ideas being shared. Using newsprint, flip chart paper, or a computer and projector can help everyone see the ideas.

Step 6. Use one or more facilitation tools to help the group continue to generate ideas.

- Add a roadblock to help the group think about the issue in a different way, as in, "If you only had $5,000, how would you invest it" (Berkun, 2004).

- Remove roadblocks by explaining to the group that you want their most creative thinking not to be constrained by time, money, other resources, etc. (Berkun, 2004).

After the brainstorming session, use these approaches to focus the group on evaluation:

- Ask: "Which of these ideas do you like best?"
- Ask: "Which idea is the easiest to accomplish and why?"
- You could also give every participant one or more votes and allow them to cast their votes for their favorite ideas.

Future Wheels

Future wheels focus on some event, trend or proposed change. This method was developed in the early 1970s by Jerome Glenn who originally suggested that future wheels were useful in documenting possible consequences, but future wheels can be used more broadly for general needs assessment (Glenn, n.d.). They can be a great way for groups to focus on a single change or event, brainstorm consequences and relationships, and promote group dialogue.

Five steps have been suggested:

Step 1. Identify the change.

Step 2. Identify the first, or most immediate, consequences that you expect to occur.

Step 3. Identify the second, or next, consequences that you expect to occur.

Step 4. Discuss implications.

Step 5. Identify actions or specific ways to manage the consequences (Mind Tools, 2014).

Usually it is best to have just one person serve as both facilitator and recorder, but two people may be used. It is imperative that the recorder not interpret or make their own decisions about what the group contributes. The future wheel should be a brainstorming exercise.

Notice that in Figure 10 a future wheel has been created for a proposed employee wellness program. It started with a single wheel, the center wheel representing the proposed program. The group first brainstormed four major components: curriculum, organization, outcomes and incentives. Notice that additional brainstorming was captured, and consequences were also noted. Figure 11 presents a future wheel for the trend of increased demand for local food.

Figure 10. Example of a future wheel for a proposed employee wellness program

Figure 11. Example of a future wheel for brainstorming how to increase the demand for local food

Nominal Group Technique

Nominal group technique (NGT) is a form of structured interactions (Averch, 2004). It can work well for a needs assessment in the context of any group meeting, including community forums and advisory committee meetings.

Sample (1984) outlined steps to effective NGT as follows:

Step 1. *NGT Setup* — NGT works best in groups of five to seven people. Ideally, these people would be seated around a table or flip chart/screen where their ideas are shown.

Step 2. *NGT Question* — Ask an open-ended question such as "What are some ways we could encourage consumers to buy local food?"

Step 3. *Phase One* — Phase One is also known as the silent phase. Explain that the first phase is individual brainstorming. Ask everyone to think about their ideas and encourage them to write them down silently. Let the groups know how long they will work. Usually one to two minutes is sufficient.

Step 4. *Phase Two* — In Phase Two, in round-robin fashion have each person share one idea. As the person shares their idea, capture it electronically or on flip chart paper. The key is to make sure everyone can view the ideas easily. Make sure to emphasize before Phase Two begins that no judgment is allowed. However, it is a good idea to allow people to ask questions to clarify or understand the ideas. Sometimes this is done after all of the ideas are listed.

Step 5. *Phase Three* — In Phase Three ask each person to evaluate the ideas silently and vote individually for the best ones. If using flip chart paper, this can be done by using dots. Each person receives three dots (or votes) to place beside the ideas that they like the best.

Step 6. *Phase Four* — Show the group votes and lead a discussion on the major ideas presented.

For a single group meeting or event, multiple rounds could be used with a different question in each round. To continue the local food example, additional rounds might explore:

- "What would encourage more farmers to produce fruits and vegetables?"
- "What are the key ways to reach consumers about local food?"
- "What are the major barriers to purchasing local food?"

Concept Mapping

Concept mapping is a nominal group technique that allows individuals and groups to study concepts. It can be advantageous over the traditional nominal group technique because it allows participants to see relationships and patterns. In Extension, this method has been used successfully for program planning (Duttweiler, 1991) and evaluation (Wheeler & Szymanski, 2005).

Donaldson (2010) described several commercial software products and a free alternative called *Freemind*. The *Freemind* software includes graphics to enter and arrange relationships between and among overarching ideas and related concepts. In the software, these ideas and concepts are referred to as "parent" and "child" concepts, respectively.

Comparing Needs Assessment Methods

Every method described in this guidebook has pros and cons. It is important to include three or more methods when planning your needs assessment. Incorporating multiple methods is important for the following reasons:

- Allows more people to participate in the process.
- Provides a richer context for identifying the needs and strengths in the community.
- Controls for some of the drawbacks of each individual method.

Table 4 highlights the pros and cons of the top needs assessment methods.

Table 4. Pros and Cons of the Top Needs Assessment Methods

Methods	Pros	Cons	Best used when
Document Review	• Provides detailed information from a large sample size • Provides information from multiple years so trends can be examined	• Does not address details about information (why something is occurring) • Small numbers/ rare occurrences might not be captured	This should be part of every needs assessment.

Methods	**Pros**	**Cons**	**Best used when**
Key Informant Interviews	• Provides firsthand knowledge of a situation • Provides information about why something is happening	• Knowledge of situation can be limited to their own context	This should be part of every needs assessment if key informants have been identified.
Personal Interviews	• Provides firsthand knowledge of a situation • Provides information about why something is happening	• Knowledge of situation can be limited to their own context • Time-intensive	• Group methods such as focus groups are not practical • Additional opinions are needed to clarify issues
Focus Groups	• Can get detailed information about a topic • Can discuss both depth and breadth of an issue	• One person can dominate a group • People are not always willing to share sensitive information in a group setting	• Rich data are needed • Enough participants (5 or more) can be recruited to participate

Methods	Pros	Cons	Best used when
In-Person Surveys	• High response rates • Easy to distribute	• Difficult to get complex information • Might not answer questions about sensitive topics • Not capturing viewpoints from people who are not engaged with Extension programs or services	• Limited time to collect data
Mailed Surveys	• Can include a large number of people • Easy to distribute	• Difficult to get complex information • Might not answer questions about sensitive topics • Must have access to addresses • SASEs and printing costs can be expensive	• Limited time to collect data • Adequate funds are available • Access to mailing addresses

Methods	Pros	Cons	Best used when
Online Surveys	• Can include a large number of people • Easy to distribute • Affordable	• Difficult to get complex information • Might not answer questions about sensitive topics • Might not complete • Must have access to email addresses • Lower response rate compared to mailed surveys that include SASEs	• Limited time to collect data • Access to email addresses • Do not have funds for mailed surveys
Open Listening Sessions	• Can be small or large • Everyone from the community can attend	• Need involvement from multiple agencies • Need extensive experience facilitating large groups • Need adequate time to plan and conduct	• Have extensive buy-in from different agencies

Methods	**Pros**	**Cons**	**Best used when**
Delphi	• Can get detailed information from experts	• Time-intensive • Has to be planned well in advance of when results are needed	• Respondents are needed geographically dispersed • Expert opinions are needed • Experts are available and willing to participate
Environmental Scan	• Combines different methods to provide a comprehensive picture	• Time-intensive • Group effort (more than one Extension employee needs to be involved)	• Group is committed to the process
Brainstorming, Future Wheels, Nominal Group Technique, Concept Mapping	• Provides multiple perspectives • Helps prioritize issues • Provides visual cues	• Must be done with groups of people • One person could dominate the group	• Enough participants can be recruited (5 or more depending on the method)

Cautions and Caveats When Performing Needs Assessments

There are some common mistakes that people can make when conducting needs assessments, and it is important to be aware of these issues from the beginning.

Disregarding issues — This is usually not intentional, but it is easy to disregard issues that surface during needs assessments for several reasons. First, you might not feel the issue is important. Second, the issue might be controversial. Third, it could be an issue that you are not familiar with.

Allowing undue influence — Certain people or groups can be very outspoken. It is important not to give these groups more influence about the needs assessment process. For example, it is important to talk with a broad audience and not just focus on a few key stakeholders. By talking to several people throughout the community, you will get a more accurate reflection of what is going on in your county.

Focusing too narrowly or too broadly — A common problem is focusing the needs assessment on only one topic — often an area with which you have the most knowledge. However, it is important to look at other issues when conducting the assessment — even issues that might not be addressed by Extension. This will give you a better understanding of factors that might unintentionally impact your programs and your county. It is also important to not look too broadly. For example, it is important to look at county-level statistics and not just at statewide or national data. For counties with large populations, it is helpful to look at specific communities. Countywide data can sometimes “hide” issues that affect different communities.

Relying only on one data source — A needs assessment has to consist of several methods. Only looking at census data does not give more detailed information about what is going on in a community. All of these methods have limited value if they are performed in isolation. A good needs assessment starts with a plan including the different methods that will be used.

Utilization

Interpreting the Results of the Needs Assessment

Needs assessment should be a multitiered approach — one source of information is not going to provide a comprehensive understanding of an issue or your county. When looking at data from different sources, it is important to make sure you have different types of information — both quantitative (hard numbers and percentages) and qualitative (open-ended comments, focus group and other group discussion). For each method, there is an appropriate way to interpret data.

Quantitative Data

For quantitative data, it is important to start with a description. If you conducted a survey, answer the following questions:

- How many people received the survey?
- Was this a specific group of people (for example, TNCEP coalition members, agriculture producers or teachers) or was the survey sent to a sample from the community?
- How many people responded?
- Describe the respondents by gender, race/ethnicity, age, location.

Now look at the actual findings. Calculate the findings for each question either as a percentage or mean based upon the question. Look for similarities and differences. Think about your expectations. Do the findings agree with or contradict what you thought would happen? Do the findings agree with the information that you found during the document review?

Qualitative Data

For qualitative data, again start with a description. Answer the following questions:

- How many people were invited to participate (specifically for the focus group or advisory committee meetings)?
- How many people attended?
- How many people actively participated in the process? (This number would represent the amount of people who spoke or contributed during the process, if known. Sometimes the group is large but only a few participants talk.)
- If applicable, describe the respondents by gender, race/ethnicity, age, location.

Now look at the actual findings. Sort and compile data into response categories and subcategories. Look for trends and patterns in the data.

Coding is one technique to organize the data. Start out with codes that you would expect to find based on the participants. For example, if you conducted a focus group with parents of young children, "day care" could be one code that you would expect to find. You will create other codes as you read through the data. Look for ideas and words that are mentioned frequently. Using the example of young parents, you might find that "money" or "finances" come up frequently, or concerns about "picky eaters" or "potty-training." As you examine the statements associated with different codes, look at the context. Did different people mention these ideas? How many times did participants include specific words? Individual responses often provoke different ideas, but it is important to look for issues and ideas that are mentioned several times by different people.

Putting the Findings Together

Once you have looked at the findings separately by method, it is time to put the results together. Now look for similarities and differences. What were the major findings from each method? Are these findings similar or were there differences?

It is possible some findings contradict other findings. For example, a document review could identify bankruptcy as a major issue for your county. However, you conducted several focus groups, and focus group members did not feel bankruptcy was important. They did not see a need for programming for this issue. Your Advisory Committee also felt that overall resource management specifically relating to spending food dollars wisely was more important. It is important to keep in mind that some issues are sensitive and might not emerge from focus groups or open listening sessions. People might react more positively to programs that deal with issues from a broader standpoint rather than bankruptcy class. The sections on setting priorities provide tips for dealing with needs assessments that include contradictory findings.

Communicating the Results of the Needs Assessment

Because needs assessments take time and resources, it is important to share results with others in the community. Key stakeholders who have an interest in community issues should be informed through meetings and reports. Reports are helpful because you can articulate the needs in the community as well as demonstrate ways Extension can help meet those needs. Newsletters and media reports can reach a broader audience and can help you promote Extension because you can explain your involvement with the community as well as inform the community about programs to address those needs.

Tailor the report to the specific audience. For example, reports to stakeholders and consumers need to be short and contain charts and other graphics summarizing findings. Reports to a specific funder might need to be more detailed.

Numbers and statements work together well. Numbers tell what is going on, but statements can illustrate those numbers. For example, perhaps you have the obesity rate from the Centers for Disease Control and Prevention (CDC) for your county, and it's 33 percent for adults. One of the responses from a Tennessee Nutrition and Consumer Education Program (TNCEP) coalition member states, "A major problem here is that there is not a grocery store. Even if people want to eat better it's hard to buy healthy foods." This participant statement illustrates one of the reasons for the obesity issue in your community. The statement also highlights a potential solution that could be addressed by community members and politicians who could use it to advocate for grocery stores.

Setting Priorities

Consider a “size and seriousness” test to set priorities for programming:

- *Size*: What is the percentage of the population affected by the issue…from 1 percent to 100 percent? Assign ranks to the issues based on the size of the population affected; 100 percent would be assigned a 1 and the next ascending percentage would be assigned 2, etc.
- *Seriousness*: What is the urgency of this issue? To what degree will it affect the quality of life, environment and/or economy? Assign ranks to the issues based on the seriousness; 1 would be assigned to the most urgent issue, 2 would be assigned to the issue judged to be the next most urgent, etc.
- Finally, add the two ranks together. The issue with the lowest score is the priority issue.

Another strategy is the PEARL Test. PEARL is an acronym for propriety, economics, acceptability, resources and legality. Use this series of questions to evaluate each issue systematically and determine the priority issue:

- *Propriety*: Is a program for this issue suitable? Can the issue be solved through education (as education is the business of Extension)?
- *Economics*: Does it make economic sense to address this problem? Are there economic consequences if a program is not conducted?
- *Acceptability*: Will this program be accepted in the community? Can any barriers to acceptability be overcome?
- *Resources*: Do we have what we need to conduct the program?
- *Legality*: Do current laws allow program activities to be implemented?

Both the “size and seriousness test” and the PEARL test were adapted from the National Association of County and City Health Officials (2016).

Teachable Moments

Sometimes it's helpful to think about specific, teachable moments that reflect the needs of a specific audience. You can take advantage of teachable moments based on human development or current events.

In the case of parenting education, what is the most teachable moment for teaching how to parent an adolescent? Is it before a couple gives birth to their first child or before their first child starts middle school? For most parents, it's before their first child starts middle school. Just before and during the adolescence of their first child is likely a teachable moment. Just before birth, parents are likely consumed with getting ready for their first child and getting information on pregnancy care and child care in the first few days and weeks of life. These two examples illustrate the essence of teachable moments.

Another example is fire safety. After three home fires in one month in one neighborhood, an Extension agent used community resources to conduct a countywide fire safety program. The timing of the fires presented a teachable moment (Donaldson, 2008). What are some teachable moments happening now in your community?

Worksheet: Thinking About Teachable Moments

What activities or events have been affected by the weather?

What have been the biggest headlines this year in community blogs or newspapers?

What news events are topics of conversation?

What other recent events are affecting your county?

Additional Resources

- The REACH program is dedicated to supporting military families through research and outreach. The University of Minnesota's REACH program has a series of "how-to guides" about reading and interpreting research articles. Sample guides include *Understanding Correlation: A How-to Guide and Understanding Statistical Language: A How-to Guide*. Visit: reachmilitaryfamilies.umn.edu/research/how-to-guides

- University of Tennessee Institutional Review Board, Office of Research and Engagement. Visit: irb.utk.edu

- Random Number Generator. Available at: random.org/ MindTools

- The Future Wheel: Identifying Future Consequences of Change. Available at: mindtools.com/pages/article/futures-wheel.htm

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