Tools

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Workshop on Survey Methods in Education Research: Facilitator's guide and resources

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Summary

This guide and its accompanying slide decks provide an overview of survey research design and administration methods. It can serve as a resource for conducting survey methods training for individuals who create or administer education-related surveys. The materials are drawn from research on survey methodology and offer guidance on designing and administering high-quality surveys. The materials provide practical advice and examples from surveys for local, state, and national education applications.

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This guidebook is available on the Regional Educational Laboratory website at http://ies.ed.gov/ncee/edlabs.

Summary

This Workshop on Survey Methods in Education Research tool consists of a facilitator guide and workshop handouts. The toolkit is intended for use by state or district education leaders and others who want to conduct training on developing and administering surveys. The facilitator guide provides materials related to various phases of the survey development process, including planning a survey, borrowing from existing surveys, writing survey items, pretesting surveys, sampling, survey administration, maximizing response rates, and measuring nonresponse bias. It also contains a section on focus groups (as part of the survey development process or as a supplementary or alternative data collection method). The materials include a sample workshop agenda, presentation handouts, activities, additional resources, and suggestions for adapting these materials to different contexts.

The guide and materials were created for workshops conducted by the Regional Educational Laboratory (REL) Midwest. These workshops were developed in response to district and state education leaders in the REL Midwest Region who were interested in building agency capacity to design and conduct high-quality surveys.

Contents

Introduction to the Workshop on Survey Methods in Education Research

The Workshop on Survey Methods in Education Research guide and its accompanying slide decks constitute a set of resources that can be used to learn more about survey design and administration. The guide is intended to help researchers in state and local education agencies organize and conduct a training session on surveys for their staff, but others who are developing surveys can use the materials to facilitate workshops, guide a survey project, or ensure that they are adhering to best practices in survey methodology. The workshop is structured in eight modules that describe the steps of survey design and administration from planning to data collection.

Why are surveys important in education research?

The need for accurate data to inform sound decisions—whether to determine district and school policies, practices, or programs; identify the professional development needs of teachers; or justify grant funding—often requires state and local education agencies to collect information through surveys. Surveys are important in education research because they can provide quantitative descriptions of the characteristics, behaviors, and attitudes of students, teachers, principals, parents, district leaders, and other specific populations. Accurate data from a well-designed survey can be instrumental in guiding effective policy and program decisions. For example, surveys in education research can be useful in:

- Assessing the needs of the parents of students who have individualized education programs.
- Understanding the experiences of teachers during and after the implementation of a professional development workshop.
- Tracking students' attitudes toward going to college and their use of counseling services across multiple years.
- Comparing the attitudes and experiences of school administrators who have experienced different districtwide education reforms.
- Measuring teacher supply and demand and assessing areas of future need.
- Understanding barriers to parent involvement from parents' viewpoints.

Although it is relatively easy to create and administer a survey, it is not easy to create and administer a high-quality survey that will provide accurate findings that can inform crucial decisions. For example, consider the following scenario:

> An administrator within the Department of College and Career Readiness in a large urban district wants to collect data about students' college plans to inform her about upcoming needs for counseling and programming and to help with college planning. Off the top of her head, the administrator types a few questions and distributes paper copies of the survey to principals at a districtwide meeting, asking them to pass the surveys along to their students, collect completed surveys, and send the surveys back to the district office. The administrator then compiles the answers from the completed surveys and writes a report.

What questions would you ask the district administrator about her survey design and administration? How might she have amended her process to conduct a survey that would

provide accurate and actionable information? Consider the following questions, organized by the topics covered in this workshop:

- ***Planning.*** What were the goals of the research project? Was a survey the best method for reaching these goals? What questions did the administrator hope to answer? What population did the administrator want to talk about in her research? How did the principals know whom to give the surveys to and when to return the completed surveys?
- ***Existing survey items.*** Did the administrator examine existing surveys on college-going plans for pre-existing, tested items? Are the items that she developed written in such a way that they will elicit reliable and valid data?
- ***Writing items.*** Were the items on the survey clear? Did the response options make sense? Were the questions and response options presented according to best practices?
- ***Pretesting items.*** Were the items tested to determine whether the survey respondents would interpret them as intended?
- ***Sampling.*** How were students selected to take the survey? Did the administrator determine and convey which students should take the survey?
- ***Survey administration.*** Was distributing a paper survey at a district meeting the best way to administer the survey to high school students? Was online data collection an option?
- ***Response rates.*** What percentage of the surveys were actually completed and mailed in? What implications does the response rate have for the final report? Are the results representative of the population of interest?

These questions are important to both survey methodologists and practitioners because the answers dictate the confidence that stakeholders can have in the results.

What is included in these workshop materials?

This guide and accompanying slide decks can be used for group or individual study to learn the basic principles and best practices of survey methodology in education research. The objective of a workshop conducted with these resources is to increase participants' knowledge of the basics of survey research so that they can design and administer effective surveys.

The materials are organized into eight modules:

- ***Planning for a survey.*** Covers survey goals, research questions, definitions of terms and constructs, survey reliability and validity, and alternatives to surveys.
- ***Exploring sources of existing survey items.*** Covers federal and other education survey sources.
- ***Writing survey items.*** Covers writing of clear items, open-ended and closed-ended items, response options, rating scales, and formatting and layout.
- ***Pretesting survey items.*** Covers expert review, cognitive interviews, focus groups, and field testing.
- ***Sampling.*** Covers sampling frames, random sampling, stratification, and census and other considerations.
- ***Administering the survey.*** Covers personal interviews, online surveys, and mailed surveys.

- ***Calculating response rates.*** Covers calculating response rates, maximizing response rates, and measuring nonresponse bias.
- ***Setting up a focus groups (as an alternative to a survey or to complement a survey project).*** Covers purposes of focus groups, preparing protocols, selecting focus group members, moderator strategies, collection and analysis of data.

Each module includes a basic overview of the topic, the purpose and goals of the session, logistical considerations, an annotated agenda, and participant materials (a slide deck, handouts, and sometimes an activity). A sample agenda, sample communication with participants, a needs-assessment questionnaire, and a postworkshop evaluation are in appendix A, and a glossary of survey-related terms is in appendix B. Slide decks for each module are available at https://ies.ed.gov/ncee/edlabs/projects/project.asp?projectID=4544.

What is the source of the information presented in this workshop?

The workshop materials are based on scholarly texts and literature on survey methodology and best practices recommended by the American Association of Public Opinion Research. The content has been reviewed by representatives of state and local agencies in the Regional Educational Laboratory (REL) Midwest Region to ensure that the methodological topics (for example, constructing sampling frames and practices for increasing response rates) address survey design needs in the contexts of their agencies. In addition, each module was prepared in consultation with experts at the Center for Survey Methods at American Institutes for Research. The authors have conducted workshops on general survey knowledge for state and local education agencies, and their workshop materials have been adapted for use with REL Midwest and REL Southwest research alliance projects to support the development of surveys for research agendas.[1] This guide incorporates feedback from participants and other lessons from those workshops.

Although the theory of survey research methodology forms the basis of the workshop materials, the content illustrates the practical needs of local and state education stakeholders. For example, discussions about different types of survey respondents refer to school district staff and administrators, principals, teachers, students, and parents. Furthermore, specific strategies to adapt the modules to local education contexts and issues are provided in each module.

Who should facilitate a workshop on survey methods?

Ideally, the facilitator of a survey methods workshop will have expertise with survey methodology in education research through training or practice. However, with advance preparation, leaders of education research studies (for example, leaders of research and evaluation departments in state education agencies, technical assistance consultants, and education research professors) can successfully facilitate this workshop.

Who should attend a workshop on survey methods?

Staff tasked with developing, evaluating, or administering surveys can benefit from this workshop. The workshop is also appropriate for staff members who oversee individuals (including contractors) who develop and administer surveys for their organizations.

How should these materials be used to facilitate a workshop on survey methods?

The main content of each module is found in the commentary paired with the slide decks. In addition, each module includes an agenda, background, handouts, and sometimes an activity.

The eight modules can be presented together as an overview of survey methods during a one-day workshop or two half-day workshops; alternatively, modules can be presented separately and expanded to support a working group's effort to plan or design elements of a survey project. For example, a working group might run the session on planning for a survey (module 1) and then work through the steps outlined in the session for a few weeks to finalize its plans. The group can then reconvene for the next two sessions about exploring sources of existing survey items (module 2) and writing survey items (module 3) to support the next stage of survey development. The workshop sessions can be strategically timed to support the group's learning needs as it develops a survey and outlines a plan for administering it.

The materials are flexible. The examples in each module can be replaced with examples related to an ongoing survey topic, and the activities can be adapted or expanded to meet specific learning and planning goals. The guide and accompanying materials were designed to support a workshop or working group effort, but the materials can also be used for individual study.

Getting started: Planning the workshop

This section presents the steps necessary to successfully plan and execute a workshop.

Workshop goals

Think about your organization's current needs for a survey methods workshop. Does it need a workshop for a specific project or one designed to introduce staff members to survey methods? What would you like participants to know and be able to do by the end of the workshop? How will you assess whether the workshop was successful?

Format of the workshop

As the facilitator, you can set up the workshop to meet precise goals. You can structure the workshop according to whether you want to increase the capacity of your staff to develop and administer surveys in general or guide and support a specific survey project. Each module can even be used as a standalone presentation to review a topic (for example, survey administration). Format options for the workshop include:

- ***A daylong introductory seminar on survey methods.*** This option enables you and your staff to learn how to design, develop, and administer surveys for a new project or an existing project that is being improved.
- ***A series of sessions over several weeks or months.*** With this format, you could tailor the activities provided in the modules to develop a survey specifically for your organization. You could also split the workshop into a section on survey design and development and a section on survey administration training:
  - ***Option 1: Survey design and development workshop.*** If you are interested in improving existing items on a current survey or developing items for a new survey, consider using modules 1–4.
  - ***Option 2: Survey administration training.*** If you are interested in improving response rates or sampling or want to think about the best method to administer an existing survey (for example, web or paper), consider using modules 1, 5, 6, and 7.
- ***Individual study.*** Ask individuals to peruse the participant materials of a particular subset of modules pertinent to your work and to develop a series of sessions on incorporating best practices into your current work.

Participant list

After you have researched and identified your organization's needs, think about the target audience for your workshop. Your target audience may include department staff, researchers, practitioners, students, and external partners. The choice of participants will depend on why you are conducting the workshop. For example, if you want to build your organization's capacity for survey research, you may want to invite a large number of people, including individuals in other departments. If you have a specific task in mind, you may want to limit participation to individuals working on that project—in which case, be sure to have all key staff attend. Other considerations include the size of the workshop space and the number of facilitators and support staff. The workshop should be broadly accessible but of a manageable size. After you have prepared a potential participant list, ensure that you have up-to-date contact information for each person.

Needs assessment

Consider sending a short survey to potential attendees about their prior experiences with survey methods. (You can adapt the "Preworkshop needs assessment survey" provided in appendix A.) Use the information from this survey to tailor your workshop to your participants. For example, if the participants frequently develop and administer surveys, select modules that can help them work through the development of a particular survey or troubleshoot such issues as low response rates or unreliable survey items. Conversely, if most of the participants have little to no prior experience with survey methodology, present an overview of concepts, giving special attention to how each concept might be useful in their work. Finally, if the participants represent a mixed-abilities group, consider breaking them into small groups throughout the workshop so that they can learn from each other as they work on discrete tasks of differing skill levels.

Some additional tips:

- Allow enough time for participants to acknowledge receipt of the preworkshop needs assessment survey, complete it, and return it. Also, build in time to review their responses and then tailor the workshop accordingly. Allowing at least four weeks between sending the preworkshop survey and completing design of the workshop is suggested.
- Increase buy-in for the workshop by asking members of your staff with experience in a particular module topic area to facilitate that portion of the workshop.
- Consider developing a small graph (for example, a bar graph with the number of individuals from each department) to use in your introduction in order to give participants a sense of who is in the room.

Logistics

Important components of a successful workshop are planning and communication. Use the following checklist to ensure that you are addressing all logistical concerns:

Invite participants

- Send the initial invitation.
- Incentivize participation, if appropriate.
- Send out preworkshop needs assessment survey.
- Tailor workshop to skill level of participants.
- Send a reminder to the participants three days prior to the workshop.

Reserve a room

- Ensure that the workshop space is large enough.
- Ensure access to a projector and a computer or laptop connection.
- Test the technology prior to the workshop date.

Gather materials

- Handouts (agendas, slide notes, worksheets).
- Facilitator guide.
- Slide deck.
- Session materials (markers, poster board, pens).

Other considerations

- Food and drink.
- Parking.
- Accommodations for attendees with special needs.

Agenda for session kickoff

Regardless of which modules you use, address the following agenda items at the beginning of the workshop (allow 15 minutes):

- Introduce yourself.
- Answer any logistics questions (for example, schedule and location of restrooms).
- Explain the goals of the workshop (for example, "Why have we convened this group?").
- Briefly review the agenda. (A sample one-day agenda is provided in table A1 in appendix A.)
- Ask participants to introduce themselves and quickly describe their interests in the workshop.

Postworkshop evaluation

After the workshop administer a postworkshop evaluation survey to assess whether the participants found the workshop useful. You can use the "Postworkshop needs assessment survey" provided in appendix A or adapt it by including items more specific to your goals or local context. If possible, administer the survey in person at the end of the workshop. Synthesize the responses into a format that you can use to gain a better understanding of participants' experiences. Tips for assessing responses are as follows:

- Count how many respondents answered in each response category for each item.
- Summarize the responses to open-ended items.
- If you are planning to offer the workshop again, conduct a participant focus group to assess the strengths and weaknesses of the workshop.

Module 1: Planning for a survey

Overview

Duration: 45 minutes, including 15 minutes for activity 1.1

Slides: Module 1 slide deck

Handout: Handout 1.1: Planning for a survey

Materials needed:

- One copy of slides and handout 1.1 per participant.
- Writing tools.
- Projector and computer.

Agenda

- Is a survey the right approach?
  - Deciding to conduct a survey.
  - Considering other approaches.
- Planning for a survey.
  - Setting research goals and research questions.
  - Defining constructs.
  - Identifying subgroups of interest.
  - Determining the unit of analysis.
  - Identifying types of survey respondents best able to provide accurate data.
- Considerations.
  - Ensuring reliability.
  - Ensuring validity.
- Activity 1.1.

Background

The first module walks participants through the process of planning a survey: setting research goals, composing research questions, defining the important topics and constructs to be measured, and thinking about the population that will be surveyed. Although it is tempting to skip ahead to writing survey items, having a clear plan that is agreed on by all stakeholders is a critical first step. The goal of this module is for participants to understand the importance of this phase of survey development.

Strategies for adapting module 1 to your context

The planning module can be broken down into multiple sessions to help stakeholders consider different aspects of a survey that is in the earliest stage of development. For example, one session might focus on developing goals and research questions, and the next might focus on identifying the subgroups of interest and the survey respondents. Consider whether you want participants to respond to questions about a hypothetical survey scenario, a scenario provided by you that is relevant to your local context, or an actual survey they are working on. If the participants are collaborating on an actual survey, use the activity to define research questions and other details for that survey. Have the participants complete the activity in teams or as a whole to produce something that is relevant to their work.

Slides and notes for module 1

Slide 1

Module 1 presentation

Planning for a SURVeY

Slide 2

Outline

- Is a survey the right approach?
- Planning for a survey.
- Considerations.
- Activity.

2

Slide 3

Outline

- Is a survey the right approach?
- Planning for a survey.
- Considerations.
- Activity.

3

Slide 4

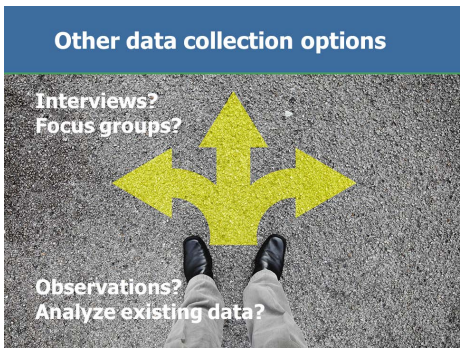
First, are you sure you want to create a survey?

A survey can produce quantitative descriptions of the characteristics and attributes of a population.

Surveys are appropriate data collection tools for many purposes but are not the best method for every research project.

Other methods can be considered before deciding to create a survey.

Slide 5



The four primary options for data collection, other than surveys, are semi-structured interviews, focus groups, observations, and analyzing existing data.

Slide 6

Interviews are suitable for investigating complex topics without well-defined research questions.

Slide 7

Focus groups may reveal interesting perspectives about a topic through group interaction. The discussion among participants about a topic can provide a more rich description of their views and experiences than a set of individual interviews or surveys with the same people.

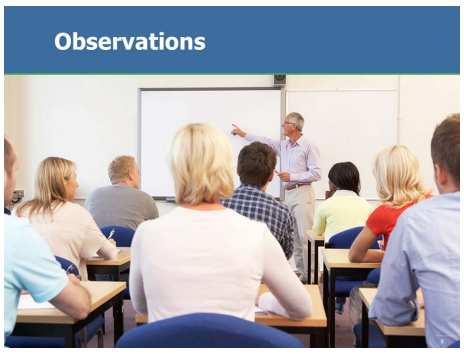
Focus group methodology is described in module 8.

Slide 8

In some cases, a focus group study may be more appropriate than a survey study. A focus group is preferred if:

- The important details and questions surrounding the topic are not well known or well defined.
- The topic is complex, and you want to understand people's views and positions.
- You do not need a representative sample of a population to meet the goals of the project.
- You think group interaction may reveal interesting perspectives about the topic.
- The issues or response categories are not clear.
- It is important to have individuals with a diverse range of opinions interact with each other.
- It is important to hear from and be responsive to multiple stakeholder groups.
- You are interested primarily in individuals' feelings and perceptions.
- You are trying to understand individuals' or organizations' processes.

Slide 9

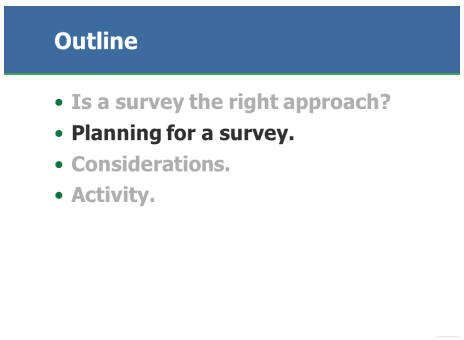


Observations can be used to collect data about behaviors or practices (for example, teacher–child interactions) that might not be reported accurately in a survey.

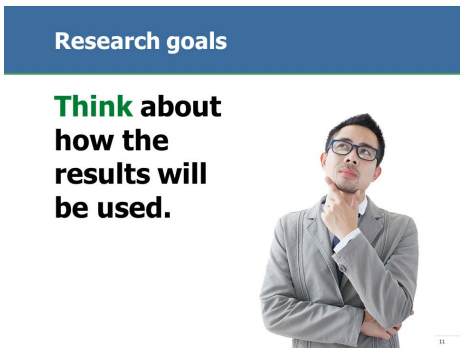
Slide 10

Analyzing existing data can be a cost-effective way to explore relationships between variables in administrative data files.

Slide 11



Slide 12



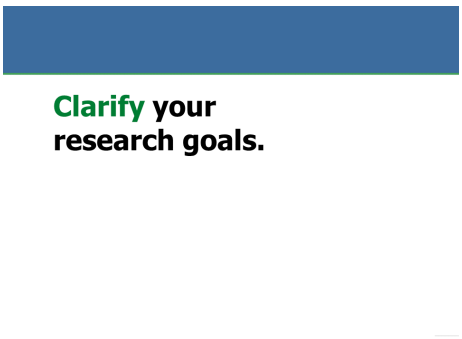
What are your goals? What do you want to learn from the survey results?

- Describe current practices or behaviors.
- Understand attitudes.
- Evaluate the outcomes of a program or an initiative.

Consider the following:

- Available funds.
- Timeframe.
- With whom will the findings be shared?
- What actions or decisions will the survey results inform?

Slide 13



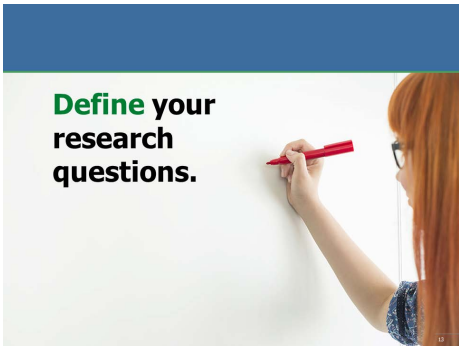
When specifying the goals of the survey, provide a clear explanation of why the survey is being created, whom the results will be shared with, and how the results will be used.

Clarify the actions or decisions you want the results of the survey to inform. Why do you want this information? For example:

- Should we spend more resources to encourage non–English-speaking parents to participate in kindergarten orientation activities?
- What is the best way to allocate resources for increasing school safety at our high schools?

Consider all stakeholders when setting the goals for a survey.

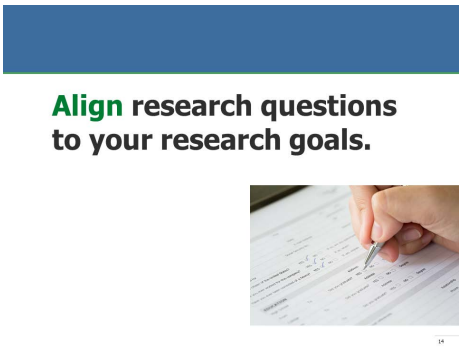
Slide 14



Write research questions, describing what you want answered by your survey data. Research questions should describe what you want to know and about whom. Consider the following examples:

- What barriers to school involvement are non–English-speaking parents experiencing?
- How physically safe do high school students feel at their school, and how does this relate to school safety measures?

Slide 15



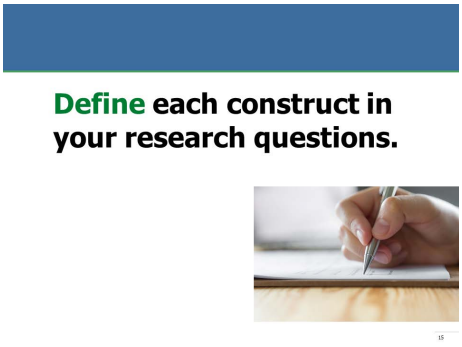
Evaluate each research question against the survey's research goals. Resist the temptation to add topics and items that do not directly serve the stated purpose.

One strategy to help clarify the plans for the survey is to envision writing the survey findings. What do you want to say in your report? For example:

- "____ percent of parents of English learner kindergartners and ____ percent of parents of non–English learner kindergartners attended kindergarten orientation activities."
- "____ percent of high school students reported witnessing violent crime in the school building or on school grounds in the past year."

Be mindful of time and budget when establishing what the survey will accomplish. Spend time preparing and gaining consensus on the goals and research questions. These important documents will guide every decision along the way.

Slide 16



A construct is an idea or a characteristic that may be thought of in different ways (for example, family engagement, leadership, or highly qualified). Explicitly defining the constructs for a survey is important at the planning stage. To ensure consideration of all important elements of a survey, survey developers should look to the literature, existing surveys, experts, stakeholders, and their own prior knowledge and experiences.

Be specific when defining constructs. For example, if district administrators are interested in teacher perceptions of family engagement, the survey might cover topics such as attendance at school events, frequency of communication, and shared decisionmaking. It will be important to reach a consensus on what each construct means and which aspects are important to include on a survey.

Slide 17

Example research question:

How is participation in extracurricular activities related to our high school students' academic engagement?

Example research question: How is participation in extracurricular activities related to our high school students' academic engagement?

- What do you want to know about participation in extracurricular activities?
- What is the type of activity (for example, social, academic, sports, or club)?
- What is the type of participation (for example, leadership role)?
- How many different activities do students participate in?
- How much time per week do they spend in activities?
- How many school years have students been involved in the activity?

There are multiple ways to define and measure the construct academic engagement.

- Review academic literature.
- Convene a panel of experts in the field.
- Consult existing surveys that measure the construct.

Constructs such as this are typically measured with a set of items.

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Identify subgroups of interest.

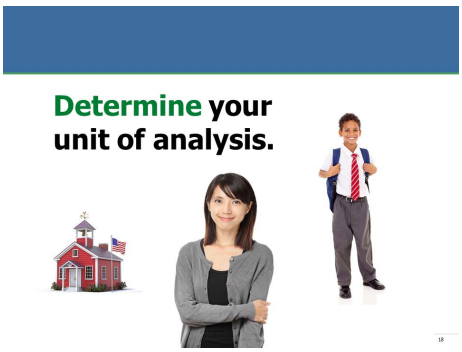
Within the population you want to describe (for example, students, teachers, or schools), across what characteristics do you want to compare the survey findings? Consider the following:

- Student: gender, race/ethnicity, grade level, English learner status, special education status, and eligibility for the school lunch program.
- Teacher: gender, race/ethnicity, grade level, license area, and years of experience.
- School: grade levels, enrollment, percentage of students from minority backgrounds, and school type.

Determine what subgroup comparisons would be of interest. These subgroups should be chosen based on a perceived relationship with the survey's topic of interest. For example, if a survey is about schools' implementation of response to intervention statewide, it should include items that relate to school characteristics that might affect implementation (for example, school size, school type, grade levels, and the number of qualified personnel).

Determining the appropriate subgroups is important so that the findings can be presented in light of these different subgroups. In some cases, the subgroup characteristics can be linked to the survey responses by linking identification numbers to administrative files or other databases and will not need to be included as additional items on the survey. For example, if school identification numbers are linked to school surveys, information about the school that can be obtained through records, such as school size, would not need to be included as survey items.

Slide 19



The unit of analysis is the set of people, programs, or institutions the researcher wants to make inferences about. For example, you might want to make statements about the following groups:

- Students (for example, 30 percent of the students walk to school).
- Families (for example, 30 percent of the families have a child who walks to school).
- Schools (for example, 30 percent of the schools have a majority of students who walk to school).
- Districts (for example, 30 percent of the districts have a majority of students who walk to school).

As another example, if the goal of the survey is to describe the characteristics of afterschool academic programs, the unit of analysis is the program. The program director, teacher, and student data will be structured so that the findings are about the program (for example, the percentage of programs that provide transportation, the percentage of programs with at least one highly qualified teacher, or the average number of students enrolled in a program).

It may be useful to consider multiple units of analysis for a survey about afterschool programs (for example, the percentage of schools with a program or the percentage of parents in schools with a program who are aware of the program).

Ensure that whom the survey is administered to and the unit of analysis align with the data structure needed to answer the research questions.

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Carefully identifying who can best provide the information needed will help determine the design of the study. For instance, if workshop participants are interested in measuring kindergarteners' adjustment to school, consider whether kindergartners themselves, teachers, or parents will be best suited to provide that information. This decision has implications for how the survey will be developed and administered.

Example research question: How physically safe do high school students feel at their school, and how does this relate to schools' safety measures?

- High school students can report how safe they feel.
- Who is best able to report on school safety measures (the principal, teachers, a trained observer, or security staff)? Are multiple respondents needed to get a complete picture?

Example research question: What professional supports are available and used by elementary school math teachers?

- Teachers can report what supports they know about and use.
- Who will give the most accurate data about what supports are available?

The unit of analysis and the data source are not always the same.

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Careful planning is essential for developing a survey.

In summary:

- Clarify the purpose of the survey.
- Write research questions.
- Carefully define important constructs.
- For drawing comparisons, determine the important subgroups of interest.
- Determine the most knowledgeable respondent or respondents for each construct. Decide if multiple respondents are needed to meet the survey goals.

Slide 22

Outline

- Is a survey the right approach?
- Planning for a survey.
- **Considerations.**
- Activity.

Slide 23

Reliability is the consistency with which a set of items measures an attribute.

(Pastor, 2013)

Reliability and validity are important considerations at multiple stages of survey development.

Reliability is the consistency with which a set of items measures an attribute. A reliable item is interpreted the same way by all respondents and adequately covers the elements of each construct, thereby producing stable results about those constructs. For a single item, reliability can relate to how item wording ensures that a respondent will understand the item the same way at different points in time. It also can relate to the extent to which different respondents understand an item to have the same meaning. With a group of items measuring the same construct, reliability can relate to the extent to which the items are answered consistently (for example, if item 1 is answered yes, item 2 also should be answered yes).

Survey items that are not reliable do not produce consistent responses at different points in time and across respondents. This inconsistency introduces measurement error (Pastor, 2013).

Slide 24

Validity is the extent to which the inferences made based on survey responses are accurate and meaningful.

(Pastor, 2013)

Validity is the extent to which the inferences made based on survey responses are accurate and meaningful. A valid survey instrument provides results that accurately reflect the measured constructs and the target population as intended by the individuals who designed the survey and who will interpret the results.

A valid item measures what the researchers intend it to measure. For example, a question on student perceptions of school safety must accurately measure student perceptions of safety in the school and not safety elsewhere.

Survey items that are not valid do not capture the true meaning of the construct and therefore do not measure what the researcher intended (Pastor, 2013).

Slide 25

Outline

- Is a survey the right approach?
- Planning for a survey.
- Considerations.
- **Activity.**

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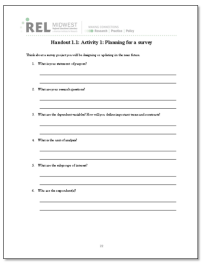
Slide 26

Activity 1: Planning for a survey



25

Slide 27

Additional resources

Kendziora, K., & Boccanfuso, C. (2011). *School climate survey series: Survey management* [Survey webinar series for the National Center on Safe Supportive Learning Environments]. Retrieved April 1, 2016, from http://safesupportiveschools.ed.gov/index.php?id=9&eid=6.

Shindler, J. (2011). *School climate survey series: Survey development* [Survey webinar series for the National Center on Safe Supportive Learning Environments]. Retrieved April 1, 2016, from http://safesupportiveschools.ed.gov/index.php?id=9&eid=8.

For more information, please visit the following websites:

- The American Association for Public Opinion Research: http://www.aapor.org/.
- *Public Opinion Quarterly:* https://poq.oxfordjournals.org/.
- *Journal of Survey Statistics and Methodology:* http://jssam.oxfordjournals.org/content/current.

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Slide 28

Reference

Pastor, D. A. (2013, April). *Considerations in evaluating, selecting and developing data sources and measures.* IES webinar for Regional Educational Laboratories.

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Activity 1.1: Planning for a survey

This activity consists of addressing the questions in handout 1.1. Choose one of the three options described here:

During the presentation. Having participants complete the activity during the slide presentation makes for a more interactive session. You could insert the questions in the following order:

- After slide 15: Questions 1 and 2 (purpose and research questions)
- After slide 18: Question 3 (constructs)
- After slide 19: Questions 4 and 5 (unit of analysis and subgroups with similar characteristics)
- After slide 20: Question 6 (respondents)

After the presentation. Participants can work individually or in groups to answer questions about a hypothetical survey scenario or about an actual survey that their team is developing. For a team developing a survey, the activity can guide important decisions about the survey's purpose and scope, which will require substantive discussion.

As a take-home activity. If the participants will complete the activity after the session, provide clear expectations for when and how they should deliver it, which resources they can use if they have questions, and what form of follow-up will take place (for example, another session to review answers). This option will work best if you are presenting the modules individually and if participants are all collaborating on a project that is directly related to their work.

Handout 1.1: Planning for a survey

Think about a survey project you will design or update in the near future.

1. What are the goals for the survey?

   _____

   _____

2. What are your research questions?

   _____

   _____

3. What are the constructs of interest? How will you define important constructs?

   _____

   _____

4. What is the unit of analysis?

   _____

   _____

5. What are the subgroups of interest?

   _____

   _____

6. Which types of respondent will provide the most accurate data for your survey?

   _____

   _____

Module 2: Exploring sources of existing survey items

Overview

Duration: 30–45 minutes

Slides: Module 2 slide deck

Handout: Handout 2.1: National Center for Education Statistics surveys.

This handout provides a table of 18 National Center for Education Statistics surveys that are sources for existing survey items, including each survey's name, topics, purpose, respondents, years administered, and a link to the survey.

Materials needed:

- One copy of slides and handout 2.1 per participant.
- Writing tools.
- Projector and computer.
- Participant computers (optional).

Agenda

- Why use existing surveys?
- About existing sources.
- Sources.
  - National Center for Education Statistics.
  - National Center for Education Evaluation and Regional Assistance.
  - Other resources.

Background

High-quality survey items can be costly and time intensive to develop, test, and revise so that they are both reliable and valid (see module 1 for information about these concepts). Using existing survey items or sets of items is not only more efficient, but it has the additional benefit of producing results that can be compared with results from other studies that use the same items. Several federal centers house survey items developed for education research. Two centers used in this module are the National Center for Education Statistics and the National Center for Education Evaluation and Regional Assistance, but other federal centers, such as the National Center for Health Statistics, post surveys online for survey developers.

The goal of this module is to introduce sources of items that are included in large-scale surveys and encourage participants to look for existing validated items before writing their own items.

Strategies for adapting module 2 to your context

- If your department or the participants in your workshop are interested in developing a specific survey, we highly encourage adapting this module to include examples

of that topic in lieu of the examples provided. Search tools on the websites of the National Center for Education Statistics (http://nces.ed.gov) and National Center for Education Evaluation and Regional Assistance (http://ies.ed.gov/ncee/) can help you locate appropriate surveys and survey items for your group. In addition, handout 2.1, which includes information about the topics covered by many National Center for Education Statistics surveys, may be a helpful reference for identifying relevant surveys.

- Allow participants a few extra minutes to review handout 2.1 and highlight the sources they are interested in learning more about. If participants have access to Internet-connected devices, encourage them to review the surveys for items that are pertinent to their work and have them discuss what they find.
- Consider downloading the entire survey, providing participants with copies, and asking them to circle or highlight items that would be useful for a survey currently under development.

Slides and notes for module 2

Slide 1

Slide 2

Outline

- **Why use existing survey items?**
- **About existing sources.**
- **Examples of sources.**

Slide 3

Outline

- **Why use existing survey items?**
- **About existing sources.**
- **Examples of sources.**

Slide 4

Why use existing survey items?

When developing a survey, a good strategy is to look at other tested surveys on a similar topic and consider borrowing or adapting existing items.

Why?

Slide 5

Why use existing survey items?

Time.

Slide 6

Why use existing survey items?

And money (if hiring someone to develop survey items).

Slide 7

Why use existing survey items?

Using existing survey items not only saves time and money but also allows you to measure constructs in the same way that others in the field have measured them.

Although writing new survey items may seem easy, if done correctly, it is actually a difficult and time-consuming process. New survey items need to be tested to ensure that they are capturing the information accurately and often require several revisions.

Not all existing survey items have been tested for reliability, validity, and other important psychometric properties. Whenever possible, use trusted sources that test survey items for reliability and validity. Some of these sources are cited here and in handout 2.1. When in doubt, check the documentation of existing survey items for details on their reliability and validity.

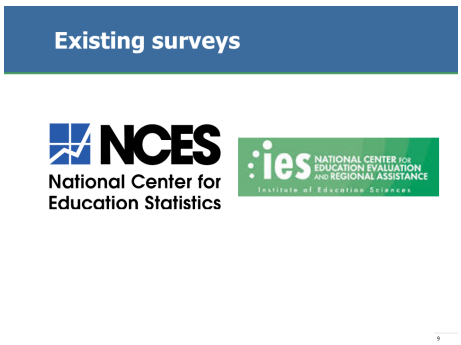
Ensure that you have permission to use an item before including it on your survey.

Slide 8

Outline

- Why use existing survey items?
- **About existing sources.**
- Examples of sources.

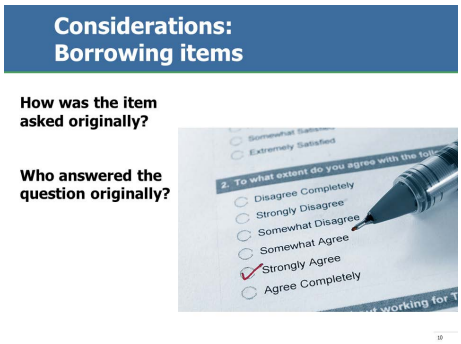
Slide 9



This discussion highlights sources from which you can find existing items and answer scales. The sources are from two centers within the Institute of Education Sciences:

- National Center for Education Statistics (NCES).
- National Center for Education Evaluation and Regional Assistance (NCEE).

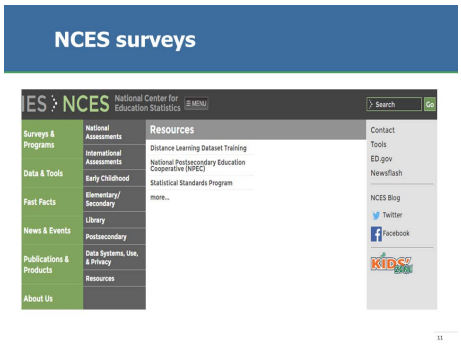
Slide 10



Before borrowing an existing item, consider the following:

- What was the mode of the survey (for example, phone interview, computer, or paper-and-pencil survey)? The mode can affect how an item is asked. For example, a survey administered on the phone by an interviewer allows the survey respondent to clarify any confusing aspects of an item. If you borrow an item designed to be asked over the phone to use in a paper-and-pencil survey that respondents must answer on their own, ensure that important terms and constructs are defined clearly.
- Who answered the original survey (for example, students, parents, or teachers)? Different groups may think and talk about the same topic differently, so carefully consider how an item may need to be adapted for the type of respondent answering the survey.
- One further consideration is whether the borrowed item is publicly available or if permission is needed. Always provide citations for borrowed items.

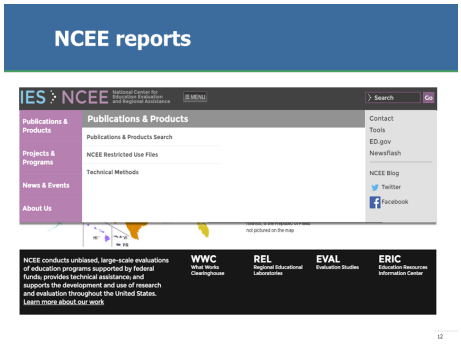
Slide 11



You can search NCES surveys online (http://nces.ed.gov) to identify items or scales for your survey. Survey experts have evaluated items and scales on these surveys to determine that they are capable of yielding valid and reliable data for a given population.

Check survey-specific documentation, such as data file user manuals, methodology reports, and psychometric reports, for detailed information on reliability and validity.

Slide 12



You can also search NCEE reports that summarize and detail survey item sets related to specific constructs, such as school readiness or student engagement (http://ies.ed.gov/ncee/; click on “Publications & Products”). Many of the reports detail survey items and sets of survey items used in evaluation studies.

Slide 13

NCES and NCEE administer surveys on a variety of topics, such as:

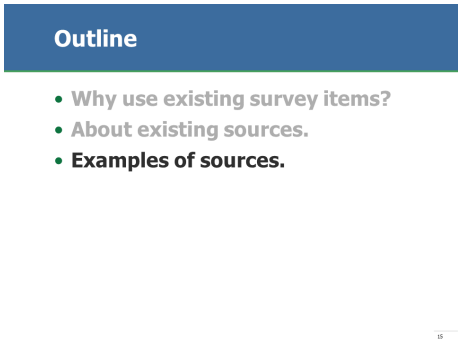
- Parent involvement.
- School climate.
- School readiness.

Slide 14

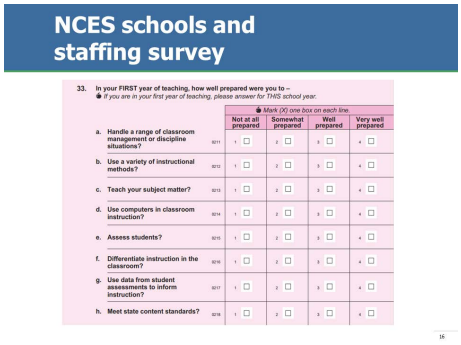
NCES and NCEE also administer surveys to a variety of respondents, such as:

- Teachers.
- Parents.
- School administrators.
- Students.

Slide 15

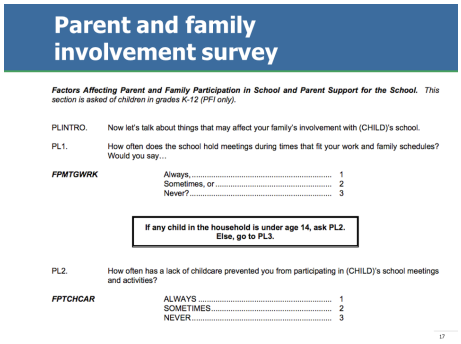


Slide 16



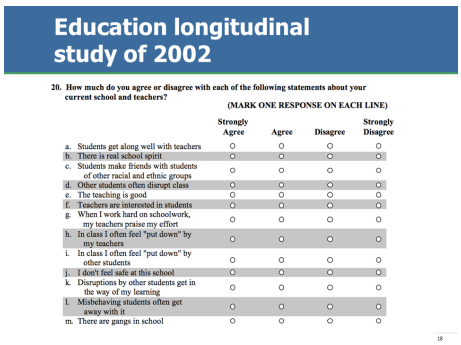
The NCES Schools and Staffing Survey includes items about teacher perceptions and practices (http://nces.ed.gov/surveys/sass/).

Slide 17



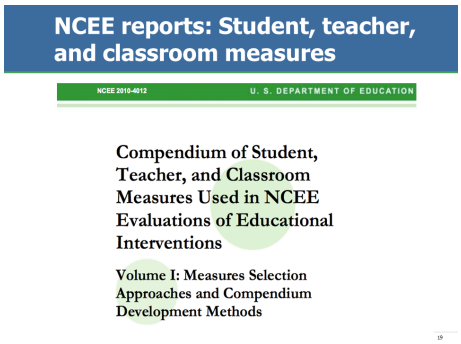
The NCES National Household Education Surveys include survey items for parents about many education topics (https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2013028rev). See also http://nces.ed.gov/nhes/.

Slide 18



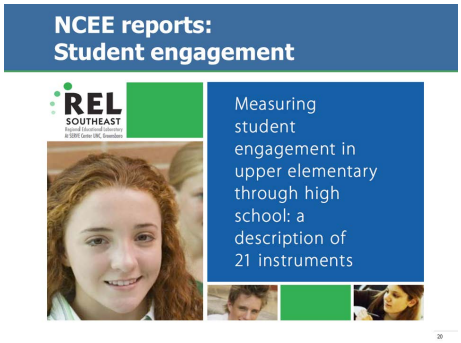
The NCES Education Longitudinal Studies include surveys of secondary teachers and students. An example of a set of items for a student survey about school climate can be found at http://nces.ed.gov/surveys/els2002/.

Slide 19



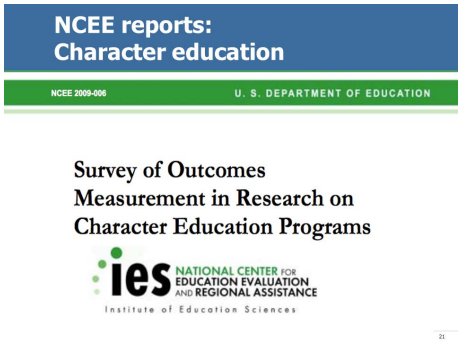
The NCEE report *Compendium of student, teacher, and classroom measures used in NCEE evaluations of educational interventions* is a two-volume compilation and review of 94 student, teacher, and classroom outcome measures used in IES-funded evaluations between 2005 and 2008 (http://ies.ed.gov/ncee/pubs/20104012).

Slide 20



The NCEE report *Measuring student engagement in upper elementary through high school: A description of 21 instruments* reviews 21 instruments that measure student engagement through the later years of elementary school through high school. Scales (that is, a set of survey items, typically three or more, that measure a construct) include student reports, teacher reports, and observation (http://ies.ed.gov/ncee/edlabs/regions/southeast/pdf/REL_2011098.pdf).

Slide 21



The NCEE report *Survey of outcomes measurement in research on character education programs* reviews the constructs, frameworks, and measures of character education programs. Examples include student outcomes, such as critical thinking and decisionmaking, attitudes, and various behaviors (http://ies.ed.gov/ncee/pdf/2009006.pdf).

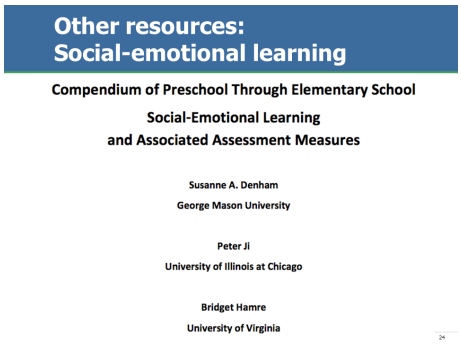
Slide 22

The NCEE report *A review of methods and instruments used in state and local school readiness evaluations* reviews the methods and instrumentation used in school-readiness analyses and program evaluation (http://files.eric.ed.gov/fulltext/ED497789.pdf).

Slide 23

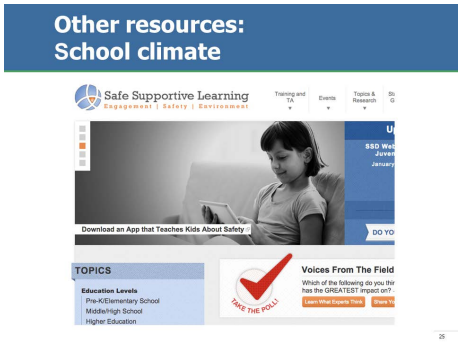
The NCEE report *Measuring resilience and youth development: the psychometric properties of the Healthy Kids Survey* describes the psychometric properties of resilience measures in the resilience and youth development component of the Healthy Kids Survey (http://ies.ed.gov/ncee/edlabs/projects/project.asp?ProjectID=84).

Slide 24



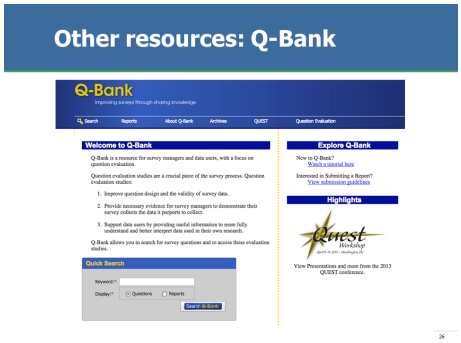
The NCEE report *Compendium of preschool through elementary school social-emotional learning and associated assessment measures* focuses on 5- to 10-year-olds and outlines a variety of scales that measure social-emotional learning (http://www.isbe.state.il.us/learningsupports/pdfs/sel-compendium.pdf).

Slide 25



The National Center on Safe Supportive Learning Environments website (http://safesupportiveschools.ed.gov/index.php?id=133) has links to approximately 50 school climate surveys or surveys that include school climate items. Some of these surveys are copyright protected, so check with the publisher before using any items.

Slide 26



Q-Bank is a resource that provides information about survey items included on many federal surveys (http://wwwn.cdc.gov/qbank/Home.aspx). It offers access to thousands of items that appear on federal surveys. Users can search items by keywords, topic, agencies that tested an item, and specific surveys where the item appears. Searches return links to reports that describe findings related to the items tested (for example, cognitive interview results). Typically, searches will link to reports related to items tested for a particular survey. Q-Bank is not a comprehensive system of every item on all federal surveys.

Slide 27

The Common Education Data Standards standardizes the way that agencies collect basic information so that comparisons can be made across local, state, and federal agencies. The website has standardized definitions of common variables (https://ceds.ed.gov/).

Slide 28

Final notes for existing items

Many existing item sources are available. In addition to the sources cited earlier, there are other federal surveys that include survey items, about disabilities and student risk-taking behavior. Examples include the American Community Survey administered by the U.S. Census Bureau and the Youth Behavior Risk Survey administered by the Centers for Disease Control and Prevention.

Finally, ensure that you have permission before using existing items. Check technical manuals to ensure that the item measures what you want to measure.

Slide 29

Additional resources

Shindler, J. V. (2011). *Survey development* [Survey webinar series for the National Center on Safe Supportive Learning Environments]. Retrieved April 1, 2016, from http://safesupportiveschools.ed.gov/index.php?id=9&eid=8.

For more information, please visit the following sites:

- The American Association for Public Opinion Research: http://www.aapor.org/.
- *Public Opinion Quarterly:* https://poq.oxfordjournals.org/.
- *Journal of Survey Statistics and Methodology:* http://jssam.oxfordjournals.org/content/current.

Slide 30

Reference

Pastor, D. A. (2013, April). *Considerations in evaluating, selecting, and developing data sources and measures.* IES webinar for Regional Educational Laboratories.

Handout 2.1: National Center for Education Statistics surveys

Study	Topics	Purpose	Respondents	Years	Survey link
National Household Education Surveys Program	Adult education, parent and family involvement in education, early childhood program participation, school readiness, after school programs and activities, civic involvement, household and library use, and school safety and discipline	• Provides reliable estimates of the U.S. population regarding specific education topics and conducts repeated measurements of the same education phenomena at different points in time.	Parents or guardians	1991, 1993, 1995, 1996, 1999, 2001, 2003, 2005, 2007, 2012	http://nces.ed.gov/nhes/
Early Childhood Longitudinal Study—Kindergarten Cohort of 1998	Schooling and performance in the elementary and middle grades; status and transition; and interaction of school, family, and community	• Focuses on children's early school experiences beginning with kindergarten and following them through middle school. • Provides descriptive information on children's status at entry to school, their transition into school, and their progression through grade 8. • Enables researchers to study how family, school, community, and individual factors are associated with school performance.	Teacher, school administrator, parent, child	1998–99, 1999–2000, 2002, 2004, 2007	http://nces.ed.gov/ecls/
Early Childhood Longitudinal Study—Birth Cohort	Children's growth and development, children's transitions, children's health status, father involvement, and school readiness	• Provides national data on children's status at birth and various points thereafter; children's transitions to nonparent care, early education programs, and school; and their experiences and growth through grade 5. • Enables researchers to test hypotheses about the effects of family, school, community, and individual variables on children's development, early learning, and early performance in school.	Parent, father-specific; teacher, early education care provider	2001–02, 2003–04, 2005–06, 2007	http://nces.ed.gov/ecls/
Early Childhood Longitudinal Study—Kindergarten Class of 2010–11	Child growth and development, school progress, school transition, socioemotional development, home education, curriculum, teacher qualifications, and before and after school care	• Provides comprehensive and reliable data that can be used to describe and better understand children's development and experiences in the elementary grades plus how early experiences relate to children's later development, learning, and experiences in school. • Enables researchers, policymakers, and educators to study how student, home, classroom, school, and community factors at various points in a child's life relate to cognitive, social, and emotional development.	Parent or guardian, child, school administrator, teacher	2010–11, 2011–12, 2013, 2014, 2015, 2016	http://nces.ed.gov/ecls/

Study	Topics	Purpose	Respondents	Years	Survey link
National Assessment of Educational Progress	Assessment: math, reading, writing, arts, science, civics, geography, technology and engineering literacy, U.S. history, economics, document literacy, computer competence, citizenship/social studies; and the Index of Basic Skills	• Continuously monitors the knowledge, skills, and performance of the nation's children and youth. • Provides objective data on student performance at the national, regional, and state levels.	Students, teachers, and school principals	1969–1981, 1984, 1986, 1988, 1990, 1992, 1994, 1996–2017	http://nces.ed.gov/nationsreportcard/
National Assessment of Adult Literacy	Assessment: prose literacy, document literacy, quantitative literacy	• Evaluates the English language literacy skills of adults (age 16 and older) living in households or prisons in the United States. • Relates the literacy skills of the nation's adults to a variety of demographic characteristics and explanatory variables and compares the results with those from the 1985 Young Adult Literacy Assessment and the 1990 Workplace Literacy Survey.	Adults age 16 and older	1992, 2003	http://nces.ed.gov/naal/
Beginning Teacher Longitudinal Study	Teaching profession and job satisfaction, life events, and career mobility and movement to new schools	• Permits a better understanding of the impact of life events (such as getting married, moving to a new location, or starting a family) on teachers' careers. • Provides insight into how school and district characteristics and policies affect teacher satisfaction and how teachers respond to transitions such as moving to a different school, changing grade level or subject taught, becoming a mentor, transitioning into a K–12 administrative position, or exiting the teaching field. • Contributes to policymakers' understanding of teachers and their careers as they enter, leave, or reenter the teaching workforce and make important career and life decisions.	Public school teachers	2007–08, 2008–09, 2009–10, 2011–12	http://nces.ed.gov//surveys/btls/
Common Core of Data	Public school universe (for example, information about school location, enrollment, demographic characteristics); local education agency (phone numbers, number of high school graduates, type of agency); state aggregate nonfiscal data; state aggregate fiscal data; and district fiscal data	• Provides basic statistical information on all children receiving a public education from prekindergarten through grade 12 plus information on the public funds collected and expended for public elementary and secondary education. • Provides an official listing of public elementary and secondary schools and education agencies in the United States, which can be used to select samples for other National Center for Education Statistics surveys, and basic descriptive statistics on public elementary and secondary schools and schooling.	Public agencies: schools and government	Every year: 1986–present	http://nces.ed.gov/ccd/

Study	Topics	Purpose	Respondents	Years	Survey link
High School & Beyond	School, work, and home experiences; transitions to work; role in education of parents and peers; and education and occupational aspirations	• Investigates the education and vocational development of high school students and how personal, social, and institutional factors shape this development.	Students, parents, teachers, and school administrators	1980, 1982, 1984, 1986, 1992	http://nces.ed.gov/surveys/hsb/
Education Longitudinal Study of 2002	Social background, home education support system, school and classroom characteristics, postsecondary education choice and enrollment, employment, and outcomes	• Monitors the transition of a national sample of young people as they progress from grade 10 through high school and on to postsecondary education or careers.	High school students, starting in grade 10	2002, 2004, 2006, 2012	http://nces.ed.gov/surveys/els2002/
Fast Response Survey System	Primary and secondary levels: racial/ethnic classification; telecommunications; libraries; education reform; violence and discipline problems; parental involvement; curriculum; nutrition education; teacher training/professional development; school readiness; and principals', administrators', and teachers' perspectives	• Collects small amounts of data on key education issues within a relatively short timeframe (at all education levels from 1975 to 1990 and at the elementary and secondary levels since 1991). More than 80 surveys have been conducted on topics ranging from racial/ethnic classifications at the state and school levels; the availability and use of resources, such as advanced telecommunications and libraries; education reform; violence and discipline problems; parent involvement; curriculum placement and arts education; nutrition education; teacher training and professional development; vocational education; children's readiness for school; and the perspectives of district superintendents, principals, and teachers on safe, disciplined, and drug-free schools.	Local education agencies, public and private schools, teachers, principals, and librarians	1975–present	http://nces.ed.gov/surveys/frss/
High School Longitudinal Study of 2009	Math and science education, changing environment of high school, and postsecondary education	• Focuses on understanding students' trajectories from the beginning of high school into postsecondary education, the workforce, and beyond, including what students decide to pursue when, why, and how, especially but not solely in regard to science, technology, engineering, and math courses, majors, and careers.	High school students, starting in grade 9; school administrators; school counselors; and parents	2009, 2012, 2013, 2016, 2021	http://nces.ed.gov/surveys/hsls09/
High School Transcript Studies Program	Student high school records: courses, grades, class rank, and standardized scores	• Informs researchers and policymakers about the course-taking patterns of students, which can then be analyzed in relation to students' academic performance on assessment tests.	High school students	1982, 1987, 1990, 1992, 1994, 1998, 2000, 2004	http://nces.ed.gov/surveys/hst/
National Education Longitudinal Study of 1988	School, work, and home experiences; educational resources and support; role in education of parents and peers; neighborhood characteristics; education and occupational aspirations; and student perceptions	• Provides data on critical transitions experienced by young people as they leave elementary school and progress through high school into postsecondary institutions or the workforce and compares trends in the results of the National Longitudinal Study of the High School Class of 1972 and the High School & Beyond study.	Students, school administrators, teachers, and parents	1988, 1990, 1992, 1994, 2000	http://nces.ed.gov/surveys/nels88/

Study	Topics	Purpose	Respondents	Years	Survey link
National Longitudinal Study of the High School Class of 1972	High school students and transitions into the workforce	• Provides information on the transitions of young adults from high school through postsecondary education and into the workplace.	High school seniors (sampled again as adults)	1972, 1973, 1974, 1976, 1979, 1986	http://nces.ed.gov/surveys/nls72/
Private School Universe Survey	Private school type, length of school year and day, total enrollment, demographics, number of graduates, and the number of teachers employed	• Builds an accurate and complete universe of private schools to serve as a sampling frame for National Center for Education Statistics surveys of private schools. • Generate biennial data on the total number of private schools, teachers, and students.	Private schools	Every two years: 1989–present	http://nces.ed.gov/surveys/pss/
School Survey on Crime and Safety	School practices and programs, parent and community involvement at school, school security, staff training, limitations on crime prevention, frequency of crime and violence at school, the number of incidents, disciplinary problems and actions, and school characteristics	• Provides detailed information on school crime and safety from the schools' perspective.	School principals	1999–2000, 2003–04, 2005–06, 2007–08, 2009–10, 2011–12	http://nces.ed.gov/surveys/ssocs/
Schools and Staffing Survey	Teacher demand, teacher and principal characteristics, general conditions of the school, teacher compensation, district hiring and retention, teacher perceptions, and student characteristics	• Collects the information necessary for a complete picture of U.S. elementary and secondary education. • Provides national estimates of public elementary, secondary, and combined schools and teachers; state estimates of public elementary and secondary schools and teachers; and estimates of private schools and teachers at the national level and by private school affiliation. • Measures teacher, district, and school capacity (since 1999–2000), including teacher qualifications, teacher career paths, professional development, school organization and decision-making, curriculum and instruction, parent involvement, school safety and discipline, and school resources.	Principals, teachers, and districts	1987–88, 1990–91, 1993–94, 1999–2000, 2003–04, 2007–08, 2011–12	http://nces.ed.gov/surveys/sass/

Source: Burns, Wang, & Henning (2011); Thurgood, Walter, Carter, Henn, Huang, Nooter, et al. (2003).

Module 3: Writing survey items

Overview

Duration: 45–60 minutes, including 10–15 minutes for activity 3.1

Slides: Module 3 slide deck

Handout: Handout 3.1: Writing survey items

Materials needed:

- One copy of slides and handout 3.1 per participant.
- Writing tools.
- Projector and computer.

Agenda

- Purpose of survey items.
- Goals for writing items.
- Guidelines for writing items.
- Rating scales.
- Response options.
- Formatting considerations.
- Skip patterns.
- Activity 3.1.

Background

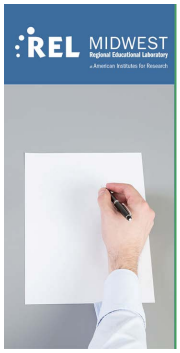
Whether adapting existing survey items for a new survey project or creating new items to cover questions and topics not found in existing sources, survey developers should follow best practices for writing survey items. This module describes considerations for writing concise survey items and effective response options and provides examples of effective survey formatting. The goal of this module is for participants to be able to identify and use best practices for writing survey items.

Strategies for adapting module 3 to your context

- If all participants are collaborating on the same project, this module can be used as a working session. When going through the slides, try to use examples from the participants' own survey to discuss how the items are representative of the guidelines presented in this module, focusing on what might be improved in each item. Or go through the slide presentation first, present the activity, and then have participants write their own survey items or revise items on one of their existing surveys.
- If all participants are not working on the same project, encourage them to bring or submit survey items that they are having trouble with or think are exemplary. Other participants can provide feedback about these items, either as a large group or in small groups.

Slides and notes for module 3

Slide 1



Module 3 presentation

Writing items

Slide 2

Outline

- **Purpose of survey items.**
- **Goals for writing items.**
- **Guidelines for writing items.**
- **Rating scales.**
- **Response options.**
- **Formatting considerations.**
- **Skip patterns.**

Slide 3

Outline

- **Purpose of survey items.**
- **Goals for writing items.**
- **Guidelines for writing items.**
- **Rating scales.**
- **Response options.**
- **Formatting considerations.**
- **Skip patterns.**

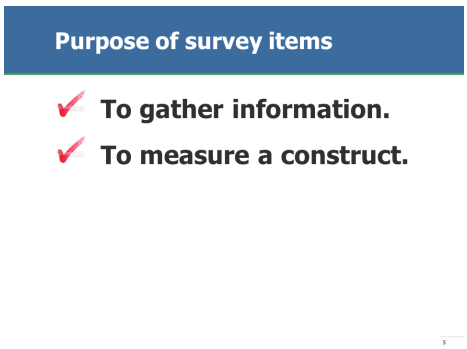
Slide 4

Purpose of survey items

✔ **To gather information.**

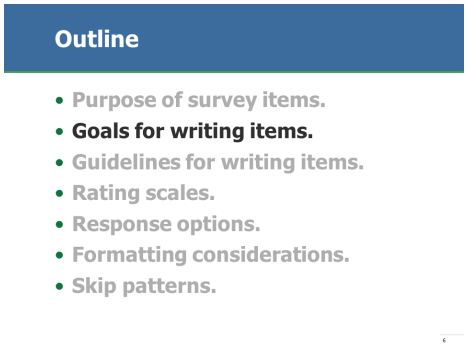
Many survey items are designed to gather information (for example, highest academic degree, age, gender, number of years teaching, and specific teaching practices).

Slide 5

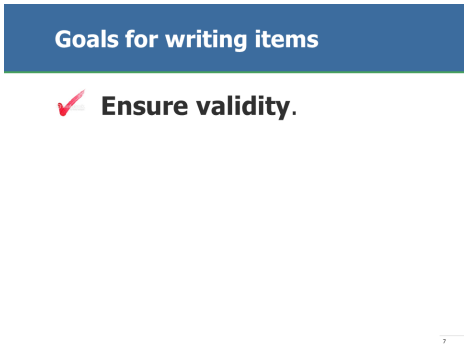


Some survey items are designed to measure a construct as accurately as possible (for example, job satisfaction, engagement, self-efficacy, and motivation).

Slide 6

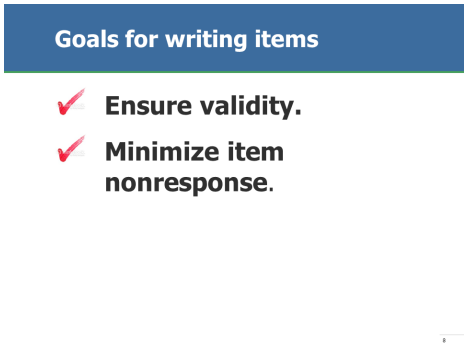


Slide 7



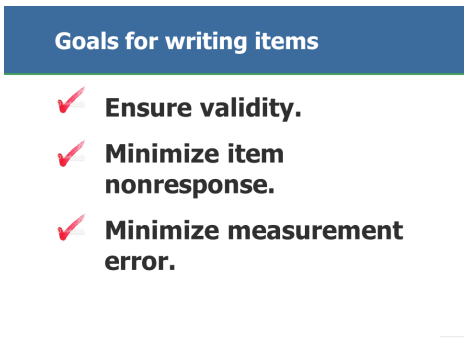
The overall goal is to ensure that survey items yield valid and reliable data that accurately represent what the researchers want to measure.

Slide 8



Minimize item nonresponse by ensuring that respondents are able and motivated to answer the item. Survey respondents may not be motivated to answer an item if it is unclear, irrelevant, or too difficult or if it asks for sensitive information.

Slide 9



Minimize measurement error by ensuring that:

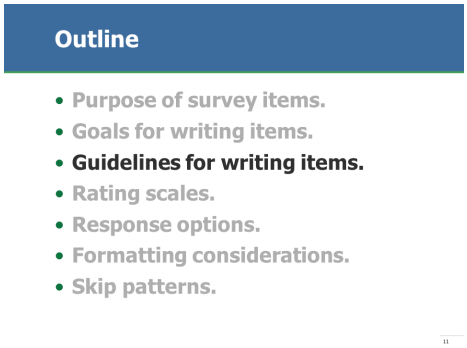
- Survey items are clear and concise so that all respondents will interpret them as intended.
- All respondents can formulate an answer.
- All respondents can figure out how to record their answers.

Slide 10

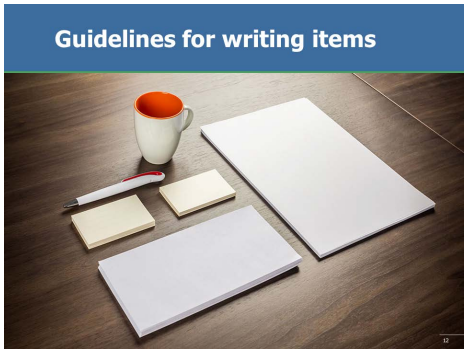
Measurement error can come from several sources, such as respondents not answering items, giving inappropriate answers because they did not understand the item, or errors in recording answers. Every item should be written to minimize measurement error. To do so, ensure that instructions, items, and answer choices are simple, clear, and exhaustive.

Measurement errors that are random or not systematic decrease reliability, meaning that the survey will produce less stable results over repeated administrations. Items with systematic measurement errors (that is, many responses are off in the same direction) produce less valid findings.

Slide 11



Slide 12



The guidelines for writing items are:

- Be specific.
- Include definitions if necessary.
- Avoid double-barreled items.
- Avoid double negatives.
- Use clear directions.
- Use a reading level that is appropriate for the respondents.

Slide 13

Be specific

- **Do you work full-time?**
- **About how many total hours per week do you usually work for pay, counting all jobs?**

Provide enough details for consistent interpretation of an item. For example, different people could interpret "Do you work full-time?" differently. It would be better to ask: "About how many total hours per week do you usually work for pay, counting all jobs?"

In addition to being more consistently interpreted, asking the item this way allows for multiple options for analyzing the answers (for example, looking at those who work more than 30, 35, or 40 hours per week).

Slide 14

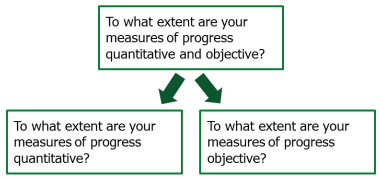
Include definitions if necessary

If you are not sure that all respondents will interpret a term as you intend, provide a definition. For example, to ensure that all principals interpreted the terms *coaches* and *mentors* in the same way on a professional development survey, these definitions should be included on the survey.

- A coach is someone who supports the principal's professional development by providing structured and consistent leadership focused on achieving a specific set of performance goals.
- A mentor is someone who provides informal advice and information to a principal on a variety of issues, which are not necessarily focused on achieving a specific goal.

Slide 15

Avoid double-barreled items



Each item should represent a unidimensional concept.

Each item should represent one concept. An example of a double-barreled item is: "To what extent are your measures of progress quantitative and objective?" Ask two separate items:

- "To what extent are your measures of progress quantitative?"
- "To what extent are your measures of progress objective?"

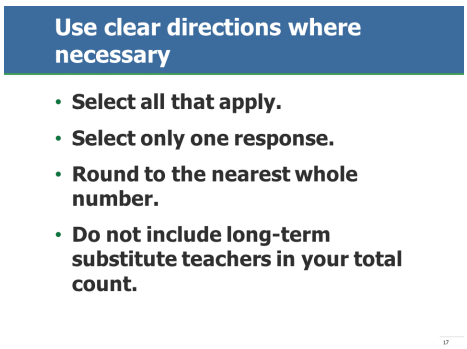
Slide 16

Avoid potential double negatives

- **My child's teacher does not seem to care much about my child.**
  Strongly agree/Agree/Disagree/Strongly disagree
- **My child's teacher cares about my child very much.**
  Strongly agree/Agree/Disagree/Strongly disagree

It is more straightforward to phrase this item positively: "My child's teacher cares about my child very much."

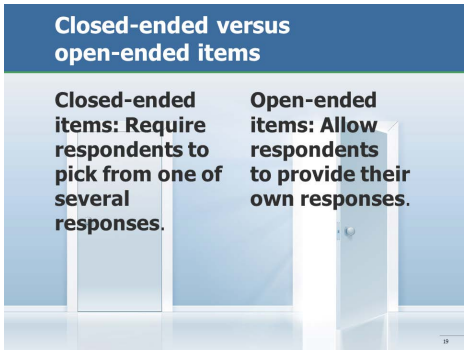
Slide 17



Slide 18

For adult surveys, a general rule of thumb is to use language at the grade 8 reading level. Avoid technical jargon that may not be understood by everyone. Provide definitions for key terms when necessary.

Slide 19

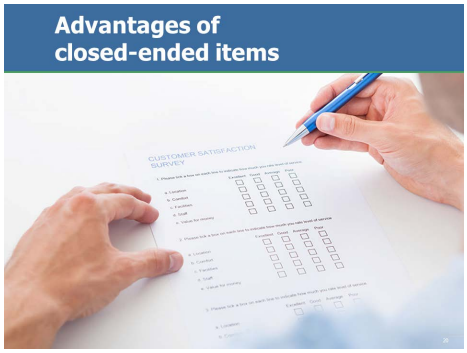


Closed-ended items ask the respondent to pick from one of several options.

Open-ended items allow respondents to provide their own responses. These can be a short answer, a fill in the blank, or a long answer.

Plan for how these answers will be categorized, analyzed, and reported. Analyzing and summarizing open-ended items can be very time consuming.

Slide 20



What are the advantages of closed-ended items?

- More reliable responses.
- Much quicker to analyze.
- Easier to interpret.
- Can incorporate an “Other, please specify” option to capture information missing from closed-ended options.

Slide 21

Advantages of open-ended items

What are the advantages of open-ended items?

- Unanticipated answers can be obtained (desirable if the range of responses for a closed-ended item is unknown). For example, you may want to ask respondents "What aspect of professional development do you find most useful?" rather than providing a list of professional development features that may or may not be comprehensive.
- Respondents may prefer to answer questions in their own words. For example, if you want to better understand respondents' career pathways, you may ask them to describe their trajectory in their own words in lieu of answering several closed-ended items.
- Open-ended answers on a field test can provide closed-ended options for a main study. For example, a field test of a survey on mentoring models may yield a finite set of mentoring models used in a school (such as coaching, peer-to-peer, formal mentor, and informal mentor) that can then be used in closed-ended items.

Slide 22

Outline

- Purpose of survey items.
- Goals for writing items.
- Guidelines for writing items.
- **Rating scales.**
- Response options.
- Formatting considerations.
- Skip patterns.

Slide 23

Types of rating scales

- **Agreement.**
- **Interest.**
- **Importance.**
- **Frequency.**
- **Degree or extent.**
- **Similarity (*like me* to *not like me*).**

Survey respondents have a tendency to agree with statements when given the usual *strongly agree* to *strongly disagree* scale, so alternatives should be considered when appropriate, such as not very interested to very interested, not very important to very important, never to very often, none to a lot, and very dissimilar to very similar.

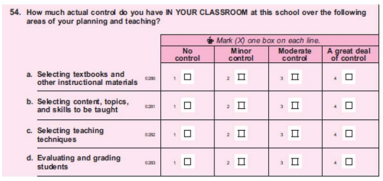
Slide 24

Types of rating scales

- **Unipolar scale: ranges from lack of attribute to a high level of the attribute.**

Slide 25

Unipolar example



54. How much actual control do you have IN YOUR CLASSROOM at this school over the following areas of your planning and teaching?

	Mark (X) one box on each line.			
	No control	Minor control	Moderate control	A great deal of control
a. Selecting textbooks and other instructional materials	1	2	3	4
b. Selecting content, topics, and skills to be taught	1	2	3	4
c. Selecting teaching techniques	1	2	3	4
d. Evaluating and grading students	1	2	3	4

25

Slide 26

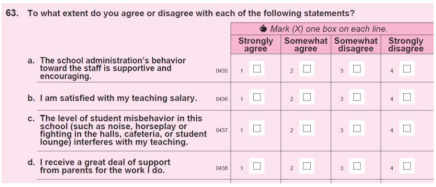
Types of rating scales

- Unipolar scale: ranges from lack of attribute to a high level of the attribute.
- **Bipolar scale: ranges from positive to negative (for example, *agree* to *disagree*).**

26

Slide 27

Bipolar example



63. To what extent do you agree or disagree with each of the following statements?

	Mark (X) one box on each line.			
	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree
a. The school administration's behavior toward the staff is supportive and encouraging.	1	2	3	4
b. I am satisfied with my teaching salary.	1	2	3	4
c. The level of student misbehavior in this school (such as noise, horseplay or fighting in the halls, cafeteria, or student lounge) interferes with my teaching.	1	2	3	4
d. I receive a great deal of support from parents for the work I do.	1	2	3	4

27

Slide 28

Types of rating scales

- Unipolar scale: ranges from lack of attribute to a high level of the attribute.
- Bipolar scale: ranges from positive to negative (for example, *agree* to *disagree*).
- **Match the type of scale to the structure of the attribute.**

28

Slide 29

Types of rating scales

- **Unipolar scale: ranges from lack of attribute to a high level of the attribute.**
- **Bipolar scale: ranges from positive to negative (for example, *agree* to *disagree*).**
- **Match the type of scale to the structure of the attribute.**

29

Slide 30

Outline

- Purpose of survey items.
- Goals for writing items.
- Guidelines for writing items.
- Rating scales.
- **Response options.**
- Formatting considerations.
- Skip patterns.

30

Slide 31

Writing response options for scales

- **Four to six response categories typically are used.**

31

Slide 32

Writing response options for scales

- Four to six response categories typically are used.
- **Use middle (undecided or neutral) categories thoughtfully.**

My teacher grades fairly.

- Strongly disagree.
- Disagree.
- Neutral.
- Agree.
- Strongly agree.

32

Slide 33

Using a middle category

There are no rules about offering a neutral category.

In some instances, it might be reasonable. However, respondents often choose the middle category because of a lack of knowledge, uncooperativeness, difficulty in reading or understanding, reluctance to answer, or inapplicability.

Think carefully about what makes the most sense given the context.

You can also offer a *not applicable* or *don't know* response option if these are legitimate answers. These options should be off to one side, not in the middle.

For example, to measure attitudes toward a professional development program, you may allow respondents to choose *not applicable* if they did not participate in the activity so as not to force inaccurate or missing responses.

Slide 34

Writing response options

Do not use rating scales with unlabeled options:

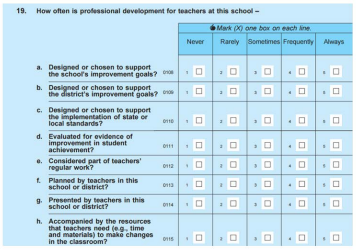
1 2 3 4 5

Rarely Frequently

In general, label all response options. Respondents will assign their own (possibly inconsistent) meanings to numbers that are not labeled.

Slide 35

Response options example



19. How often is professional development for teachers at this school –

		Never	Rarely	Sometimes	Frequently	Always
a. Designed or chosen to support the school's improvement goals?	D108	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
b. Designed or chosen to support the district's improvement goals?	D109	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
c. Designed or chosen to support the implementation of state or local standards?	D110	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
d. Evaluated for evidence of improvement in student achievement?	D111	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
e. Considered part of teachers' regular work?	D112	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
f. Planned by teachers in this school or district?	D113	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
g. Presented by teachers in this school or district?	D114	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
h. Accompanied by the resources that teachers need (e.g., time and materials) to make changes in the classroom?	D115	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

Slide 36

Make responses mutually exclusive

- **What is wrong with this item?**

How many years have you been teaching?

- **0–5 years.**
- **5–10 years.**
- **10+ years.**

Response options must be mutually exclusive. There must be only one possible correct answer.

A better set of responses for this question is as follows:

- 0–4 years.
- 5–9 years.
- 10 or more years.

Slide 37

Make responses collectively exhaustive

- **What is wrong with this item?**

How often do you do assign homework?

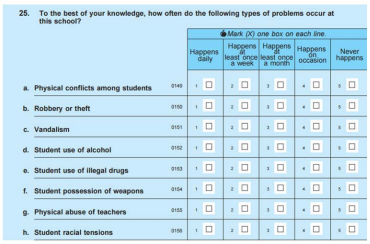
- **Monthly.**
- **Weekly.**
- **Daily.**

Response options must be collectively exhaustive.

What if a teacher never assigns homework? There should be an option for never.

Slide 38

Frequency scale example



25. To the best of your knowledge, how often do the following types of problems occur at this school?

Mark (X) one box on each line.

		Happens daily	Happens at least once a week	Happens at least once a month	Happens on occasion	Never happens
a. Physical conflicts among students	0149	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
b. Robbery or theft	0150	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
c. Vandalism	0151	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
d. Student use of alcohol	0152	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
e. Student use of illegal drugs	0153	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
f. Student possession of weapons	0154	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
g. Physical abuse of teachers	0155	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
h. Student racial tensions	0156	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

Slide 39

Outline

- Purpose of survey items.
- Goals for writing items.
- Guidelines for writing items.
- Rating scales.
- Response options.
- **Formatting considerations.**
- Skip patterns.

Slide 40

Formatting considerations

Having fewer items per page is better than crowding more items onto fewer pages. The survey will appear less burdensome if it has plenty of white space and an uncrowded layout.

Respondents may be put off by seeing sensitive questions, such as questions about the respondent's race/ethnicity and income, at the beginning of the survey and may therefore be less likely to complete the survey. Placing sensitive items at the end allows the respondent to become engaged in the survey content before encountering them.

Slide 41

Formatting considerations

- **Order all rating scales on the survey in one direction**

(either negative to positive or positive to negative).

Slide 42

Formatting considerations

- **Shade alternate rows.**

Does this child receive (or has he/she received during this school year) instruction in any of the following types of programs in your school? MARK YES OR NO ON EACH ROW.

	Yes	No
a. Individual tutoring remedial program in reading/language arts	☐	☐
b. Individual tutoring remedial program in mathematics	☐	☐
c Pull-out (i.e., out of classroom) small group remedial program in reading/language arts	☐	☐
d. Pull-out (i.e., out of classroom) small group remedial program in mathematics	☐	☐
e. Gifted and talented program in reading/language arts	☐	☐
f. Gifted and talented program in mathematics	☐	☐

Shading alternate rows helps the respondent read the items more easily and minimizes error. This strategy works for both paper and online surveys.

Slide 43

Outline

- Purpose of survey items.
- Goals for writing items.
- Guidelines for writing items.
- Rating scales.
- Response options.
- Formatting considerations.
- **Skip patterns.**

Slide 44

Clarify skip instructions

46. Did you answer "No formal evaluations are conducted" to both item 45a AND 45b?

0278 1 ☐ Yes → GO TO Item 49 on page 26

2 ☐ No

47. Are any of the following types of information included in the formal evaluation of any regular classroom teachers of grades K-12 and comparable ungraded levels?

a. Evaluation by the principal

0279 1 ☐ Yes → **(1) Which best describes the type of evaluation:**

0280 1 ☐ Checklist evaluation (Evaluation is based on satisfactory or unsatisfactory ratings of teacher competencies and behaviors.)

2 ☐ Standards-based evaluation (Evaluation is based on a certain standard that is established by district or school policy-makers as being essential to effective teaching.)

3 ☐ Both

Sometimes survey developers do not want every survey respondent to answer every item. They use skip patterns, which direct some respondents to skip items that are not relevant to them.

Instructions for skip patterns must be very clear. The illustrated survey item for principals is complex but clear. However, this level of complexity would not be appropriate for a student survey.

Some tips for skip instructions:

- Make it clear when an item should be skipped.
- Use arrows as visual clues in paper-and-pencil surveys.
- Avoid overly complicated skip instructions for paper-and-pencil surveys.
- In online surveys, skips can be automated, which makes navigating a survey with many skips appear seamless to the respondent.

Slide 45

Additional resources

Converse, J. M., & Presser, S. (1986). *Survey questions: Handcrafting the standardized questionnaire.* Newbury Park, CA: SAGE.

Fowler, F. J., Jr. (2009). Survey research methods. In L. Brickman & D. J. Rog (Series Eds.), *Applied social research methods series: Vol. 1.* Newbury Park, CA: SAGE.

Lavrakas, P. J. (2008). *Encyclopedia of survey research methods.* Thousand Oaks, CA: SAGE.

Swanlund, A., Brown, M., & Martin, B. (2012). *HSSI Survey Workshop II.* Chicago, IL: American Institutes for Research.

Slide 46

Additional resources

For more information, please visit the following websites:

- The American Association for Public Opinion Research: http://www.aapor.org/.
- *Public Opinion Quarterly:* https://poq.oxfordjournals.org/.
- *Journal of Survey Statistics and Methodology:* http://jssam.oxfordjournals.org/content/current.

Activity 3.1: Writing survey items

This 10–15 minute activity in handout 3.1 asks participants to improve survey items using best practices. It is best administered after the slide presentation. If the group of participants is small, encourage them to work on the items individually for approximately 5 minutes before convening the whole group and asking volunteers to share their improved items. If there are many participants, encourage them to work in small groups before reporting out as a whole. Leave time to review the answers so that participants can develop a sense of whether they understand the material in this module.

Consider using the suggestions given below each of the following items from handout 3.1 to show how they can be improved:

1. How do you feel about your job as a principal? Select one.
   a. Fulfilling
   b. Fulfilling but stressful
   c. Not fulfilling and very stressful

Problem: The response options are not mutually exclusive or collectively exhaustive.

Revision: Use two separate items with rating-scale response options, such as: "How stressful is your job as principal?" with a rating scale from *very stressful* to *not stressful* and "How fulfilling is your job as principal?" with a rating scale from *very fulfilling* to *not fulfilling.*

2. How many days was your child late to school? Select one.
   a. 1–5
   b. 6–10
   c. 10 or more

Problem: The response options are not mutually exclusive (two categories include 10) and are not exhaustive (no zero). In addition, no timeframe is mentioned, so a parent will not be sure how far back to count. Some parents might also wonder what is considered late.

Revision: An improved item solves each problem: "In the past month, how many days was your child late for the start of the school day by at least 15 minutes?" with response options of 0, 1–2, 3–5, 6–10, and more than 10.

3. How often do students in your class use a computer to write? Select one.
   a. Never
   b. Sometimes
   c. Often
   d. Frequently

Problems: "Use a computer to write" is vague. No indication is given of whether the writing must occur in class or can occur at home. No timeframe is given. The response options are also vague. One respondent might think that using a computer to write twice a month qualifies as "often," whereas another might think that using a computer to write twice a month warrants a "sometimes" response.

Revision: Each of these problems is solved in the following revision: "Since the start of the school year, how frequently did students in this class use a computer during class time to work on writing assignments?" with response options of never, less than once per month, about once per month, a few times per month, about once per week, and more than once per week.

4. Do you agree that the principal has a strong leadership style and is respected for it? Select one.
   a. Yes
   b. No
   c. Maybe

Problem: This survey item is double barreled; it asks the respondent to answer whether the principal has strong leadership and whether he or she is respected for such leadership. A respondent may agree that the principal demonstrates strong leadership but disagree that he or she is respected for it. Also, the option "maybe" is not a reasonable response for this kind of item.

Revision: This item can be split it into two separate items—one asking about the level of leadership (with a *strongly agree* to *strongly disagree* or *very weak* to *very strong* rating scale) and one asking about the principal being respected (with a *strongly agree* to *strongly disagree* or *not respected* to *highly respected* rating scale).

5. How many times have you visited your child's classroom? _____

Problem: This survey item is vague and parents may interpret it in different ways.

Revision: The specificity of the item can be improved with more details about what a "visit" means and the addition of a timeframe. For example, "Since the beginning of this school year, how many times have you visited your child's classroom during the school day to observe the class or participate in an activity?"

Handout 3.1: Writing survey items

What problems do you see with these survey items, and how can they be improved?

1. How do you feel about your job as a principal? Select one.
   - ☐ Fulfilling
   - ☐ Fulfilling but stressful
   - ☐ Not fulfilling and very stressful

   Problem: _____

   Revision: _____

2. How many days was your child late to school? Select one.
   - ☐ 1–5
   - ☐ 6–10
   - ☐ 10 or more

   Problem: _____

   Revision: _____

3. How often do students in your class use a computer to write? Select one.
   - ☐ Never
   - ☐ Sometimes
   - ☐ Often
   - ☐ Frequently

   Problem: _____

   Revision: _____

4. Do you agree that the principal has a strong leadership style and is respected for it? Select one.
   - ☐ Yes
   - ☐ No
   - ☐ Maybe

   Problem: _____

   Revision: _____

5. How many times have you visited your child's classroom? _____

   Problem: _____

   Revision: _____

6. Write a few survey items to address one of the research questions you identified in activity 1.1.

_____

_____

_____

Module 4: Pretesting survey items

Overview

Duration: 60 minutes, including 30 minutes for activity 4.1

Duration of activity: 30 minutes

Slides: Module 4 slide deck

Handout: Handout 4.1: Conducting cognitive interviews

Materials needed:

- One copy of slides and handout 4.1 per participant.
- Writing tools.
- Projector and computer.

Agenda

- Methods to test new survey items.
  - Expert reviews.
  - Cognitive interviews.
  - Focus groups.
  - Field testing.
- Activity 4.1.

Background

Pretesting, which evaluates the items intended for the final survey, can occur in one of four ways: expert review, cognitive interviews, focus groups, or field testing. This module focuses on cognitive interviews as a tool for pretesting items because it is the most common method, and the interviews allow for the most detailed feedback regarding new or revised survey items. Ideally, if time and resources allow, a project will use all four methods to some degree. Depending on the nature of the survey and available resources, survey developers may have to choose the most appropriate method. The goal of this module is for participants to understand the importance of pretesting items and the methods used for pretesting.

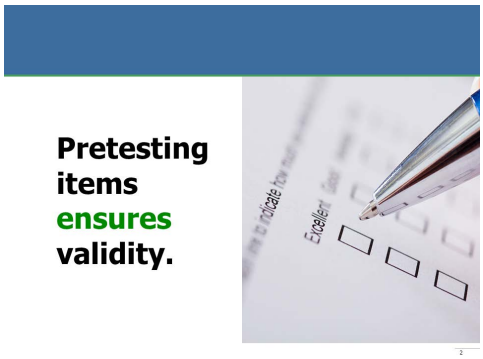
Strategies for adapting module 4 to your context

- If you are using this module as a working session, consider using the presentation as a precursor to a working session in which the team writes a cognitive interview protocol and introduction appropriate for their survey project.
- If a team has already developed a survey and a cognitive interview protocol and intends to use this module to train staff unfamiliar in cognitive interviewing techniques, then use this presentation and substitute its survey and protocol for activity 4.1.

Slides and notes for module 4

Slide 1

Slide 2

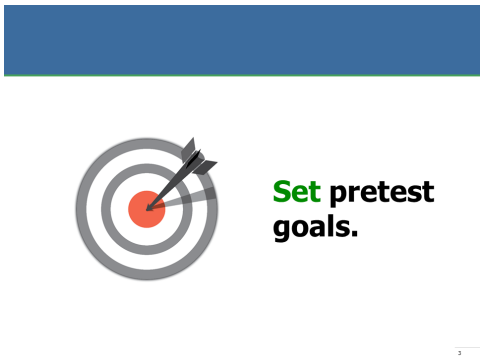


Pretesting is a set of processes for reviewing items before using them in the final survey (Lavrakas, 2008). Pretesting increases the validity of a survey by ensuring that the relevant aspects of the topics are included and that respondents understand the items as intended.

The results of pretesting will inform revisions to the survey to improve its validity.

If items have been administered or tested previously but will be used in a different context, with a different type of respondent, or in a different survey mode, you should still pretest them to ensure that they will work well in your context.

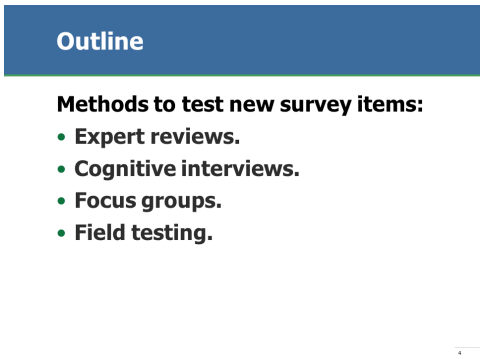
Slide 3



Pretesting should have its own set of specific goals. What do you want to learn about? Example goals could include:

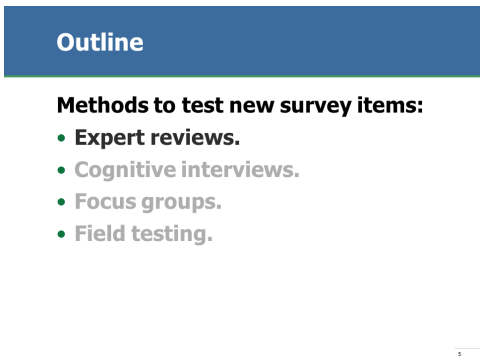
- To ensure that the survey items appropriately capture all facets of the topic under investigation.
- To examine whether respondents understand what the survey items are asking.
- To test response categories so that all respondents interpret them in a similar way.

Slide 4



Depending on the goals of pretesting, survey developers may employ one, or possibly all four, pretesting methods.

Slide 5



Slide 6

If you ask experts to review a draft of the survey, give specific guidance about what aspects of the survey you want them to focus on. Experts may provide valuable insights into what important items might be missing from the survey or how to improve the wording of survey items given their knowledge of certain respondent types. Be sure to provide background about the purpose and eventual use of the survey results so that the experts can offer the most appropriate feedback.

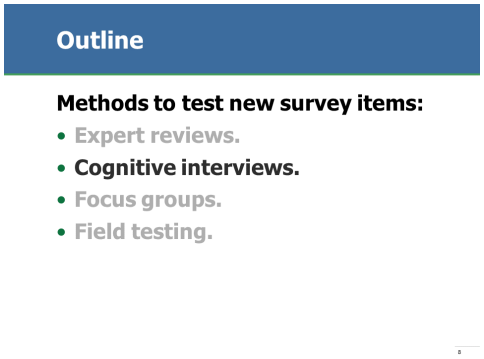
Expert reviews can also occur at other points in the survey development process. For example, you may ask experts to suggest surveys from which to borrow items, review findings from other pretest methods, or help make final revisions.

Slide 7

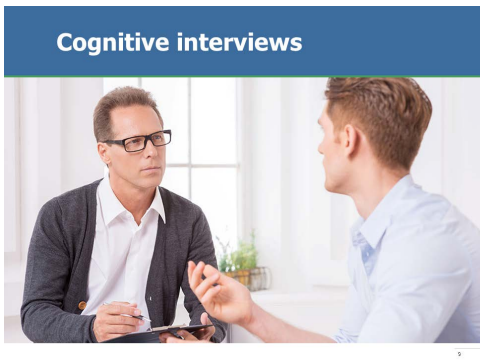
Experts can be academics, practitioners, or other professionals who are knowledgeable about the topics covered in the survey. Who are the leading experts in the topic you want to study?

Although expert reviewers can provide depth of knowledge on a subject, they often do not represent the viewpoint of the respondent. Therefore, pretesting surveys with potential respondents is also encouraged.

Slide 8



Slide 9



A cognitive interview is a one-on-one interview between an interviewer and a respondent that is designed to reveal how respondents understand and respond to the survey items. The technique draws from the field of cognitive aspects of survey methodology (Jabine, Straf, Tanur, & Tourangeau, 1984; Lavrakas, 2008).

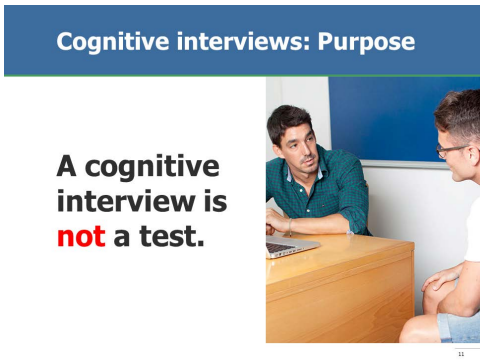
Four key processes are investigated:

- How respondents understand and interpret an item.
- How respondents retrieve information to answer the item.
- The process respondents use for making a decision.
- How respondents answer the item.

Slide 10

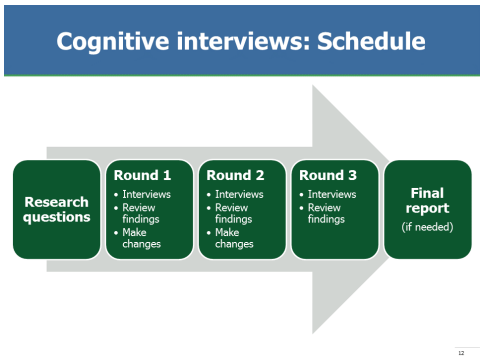
A cognitive interview is an appraisal of the items being administered. It is geared toward uncovering sources of error.

Slide 11



A cognitive interview is not a test of whether the respondent answers the items correctly. Although the respondent's answer is of interest, specifically in identifying response errors, the interviewer is equally interested in how the respondent arrives at that answer, how the respondent interacts with the items, and what the respondent says.

Slide 12



This slide shows a typical cognitive interview schedule, beginning with documentation of the research questions for the cognitive interviews and ending with a final summary of interview findings and recommendations for the final survey draft.

Round 1 usually catches major misunderstandings of the items, particularly if they are new. After round 1, review your notes and revise the items as necessary.

Ideally, you will have time to conduct at least one more round to ensure that the revised items eliminate any confusion identified in round 1.

Multiple rounds with multiple respondents (for example, three rounds with nine respondents each) may be needed to incorporate feedback, revise items, and test the revised items. As a general rule of thumb, cognitive interviews can cease when no new sources of error are discovered after interviewing several respondents.

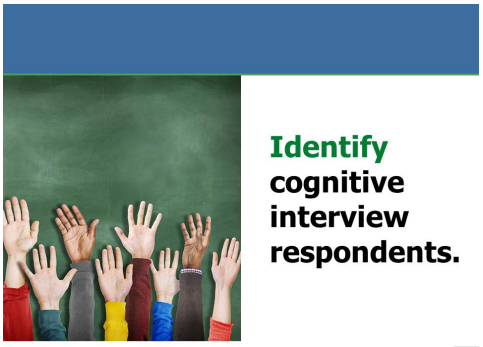
You may wish to write a final report that details the number of interviews conducted, important respondent characteristics, and a summary of your procedure and findings.

Slide 13

The basic outline of a cognitive interview is:

- Recruit individuals from the target population.
- Identify who will conduct the interviews.
- Train interviewers on the cognitive interviewing techniques discussed in this module.
- Conduct the interviews.
- Compile and review interview notes.

Slide 14



It is important to make sure that the respondents who participate in cognitive interviews are similar to the respondents who will take the survey. For example, if you are designing a survey about teacher professional development and perceptions about the usefulness of training content, think about all kinds of teachers who will participate in the final survey (for example, new teachers and science teachers).

Recruit cognitive interview participants who are similar to the sample (and important subgroups) who will take the final survey.

- Recruitment is similar to that of focus groups (see module 8).
- Use flyers, newspapers, the Internet, and points of contact for rare populations.

Slide 15

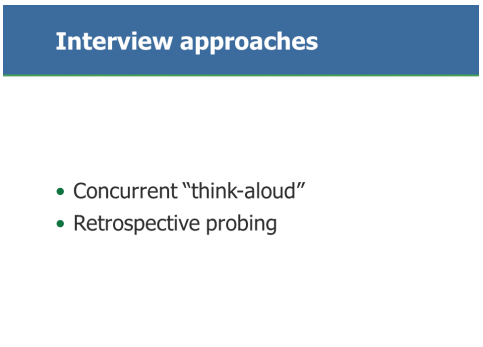
Who should do the interviews?

Someone:

- With good interpersonal skills.
- With knowledge of issues related to measurement.
- Familiar with surveys and survey design.
- Familiar with the survey topic.

(Willis, 2005)

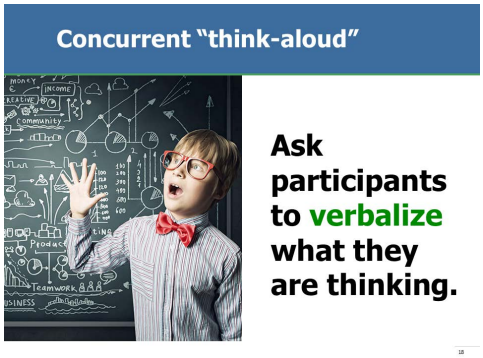
Slide 16



It is not the interviewer's role to explain what an item means; rather, the interviewer gets the respondent to talk about what he or she is or was thinking when answering the item (that is, what the respondent thinks the item is asking).

Cognitive interviewers often employ two types of interview approaches: concurrent think-alouds and retrospective probing. The goal of the interview will determine which approach is used. Interviewers can use either method or a mixture of both.

Slide 17



What happens in concurrent think-alouds?

- Respondents verbally tell you what they are thinking as they answer an item.
- Respondents allow the interviewer to understand their cognitive processes in answering the item.

In a concurrent think-aloud, the interviewer asks the respondent to read the item aloud and verbalize aloud what he or she is thinking about when formulating an answer. After the respondent thinks through and gives a response, the interviewer should seek clarification on statements that may represent sources of error. Concurrent think-alouds are useful when knowing the process that a respondent uses to answer an item is important.

For example, suppose that you are testing an item that asks parents about weekly, regularly scheduled child care arrangements with relatives ("Does this child have any regularly scheduled relative care arrangements in a typical week?"). To answer this item, parents are required to think through who cares for the child, and whether the care is regularly scheduled on a weekly basis.

The interviewer should pay attention to how the parent answers. Parents may forget about certain days or times of the week, such as weekends or evenings, when a child is cared for by a relative. Are all days of the week mentioned, or are there gaps in days or times (are evenings mentioned?). If, after several interviews, it is determined that parents are omitting relative care arrangements, the item may need to be revised, either through changes in wording or format.

Concurrent think-alouds also may be useful when you are testing a brand new item that has never been used before. Sometimes important sources of error can be found by just having the respondent think aloud while answering an item.

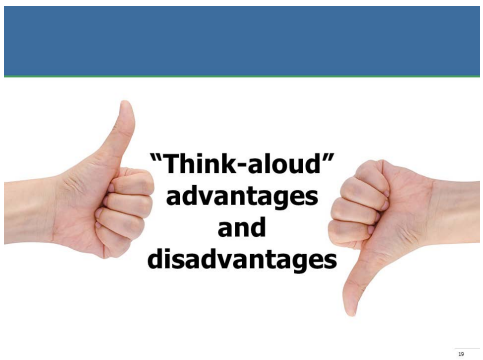
Slide 18

In retrospective probing, interview questions are asked after the respondent has completed a task: an item, a section of the survey, or the entire survey. Interview teams should determine which is most appropriate for their needs (Willis, 1999).

Retrospective probing provides targeted information about how respondents navigate through, interact with, and answer the items. Retrospective probes are useful when testing items that have been used before, or in later stages of survey development when finalizing the survey and ensuring that no lingering issues with understanding remain.

Retrospective probing is less taxing for the respondent than concurrent think-alouds, but some detail in how respondents answer an item may be lost because respondents may be unable to accurately recall what they were thinking when they answered an item.

Slide 19



What are the advantages of think-alouds?

- There is less concern for interviewers leading respondents and causing bias.
- Less interviewer training is involved because respondents do most of the talking while the interviewer actively listens.
- The open-ended format lends itself to richer information that otherwise may not be collected.

What are the disadvantages of think-alouds?

- Respondents must be given an example of a probe because not everyone is used to thinking aloud.
- The burden is on respondents because they are required to verbalize their thoughts while interviewers actively listen and jot down notes.
- Some respondents may not explain their thought process and just give an answer to the survey item.
- Some respondents may stray from the survey item and interview question at hand.

(Willis, 1999)

Slide 20

What are the advantages of retrospective probing?

- It is less taxing for respondents because they are not required to verbalize their thoughts.
- Retrospective probes are a more structured type of interview, where the interviewer asks predetermined interview questions and the respondents answer. Therefore it can be easier to keep respondents focused on the survey item and interview question at hand.
- The interviewer has more control of the interview (compared with concurrent think-alouds) and can ensure that the respondent stays on task.

What are the disadvantages of retrospective probing?

- The more structured interview protocol (compared with the more open-ended think-aloud) could lead to respondents giving only superficial answers because many of the interview questions are predetermined.
- The interviewer could unintentionally—by the way that questions are phrased or asked—lead respondents to answer in a particular way.
- More interviewer training may be needed on the cognitive interview protocol and follow-up interview questions (for example, scripted and spontaneous probes) based on feedback from respondents.

Slide 21

Types of probes

Scripted
and
spontaneous

Scripted probes are predetermined interview questions that all respondents are asked. Scripted probes are based on the cognitive interview protocols and driven by the goals of the interviews.

Spontaneous probes are interview questions that arise out of something specific that the respondent said. Allowing the interviewer to react to what a respondent says may uncover sources of error that were previously unknown.

In practice, most cognitive interviews include a combination of both scripted and spontaneous probes (in other words, interview questions; Willis, 1999).

Retrospective probes are a type of scripted probe that are asked of everyone and are driven by the goals of the interviews (for example, what you want to know). However, sometimes more spontaneous probes are needed to further clarify what the respondent says. The following slides provide examples of probes that interviewers can use and adapt.

Slide 22

Cognitive interview example probes

- Comprehension or interpretation: What does the word *equivalent* mean to you?
- Paraphrasing: In your own words, what is this item asking you to do?
- Confidence judgment: Can you tell me how sure you are that you…?

(Willis, 1999)

Slide 23

Types of probes

- Recall: How do you remember…?
- Specific: Why do you think this item was asked?
- General: Was it easy or hard to answer this item?

(Willis, 1999)

Slide 24

Cognitive interview probes

Possible probes:

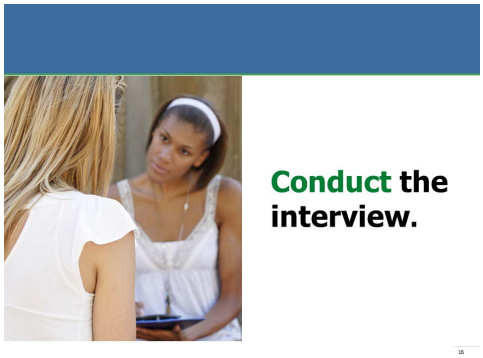
- Were there any items you were unsure about?
- Does this cover all of your involvement?

Unscripted follow-up probes:

- Probe: Was this item easy or hard for you to answer?
- Respondent: It was easy!
- Follow-up probe: Can you tell me why it was easy?

(Willis, 1999)

Slide 25



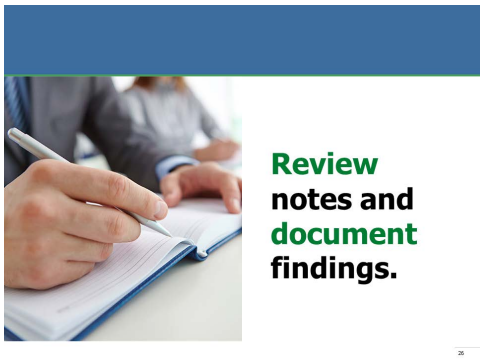
As respondents arrive for the cognitive interviews, have them complete any necessary documentation to participate, such as signing an informed consent form. If interviews are recorded, this must be included in the informed consent form and made known to the respondent.

In the interview process, the interviewer:

- Begins with an overview of the purpose of the study.
- Demonstrates an example of a "think-aloud" probe (if this approach is used) so that the respondent is clear about what is expected.
- Asks questions of interest based on the interview protocol.
- Ends the interview.

Cognitive interviews usually take 30–60 minutes. (The interviewer should be cognizant of the time. If the survey is long, the interviewer should prioritize sections and items for which more information is needed.)

Slide 26



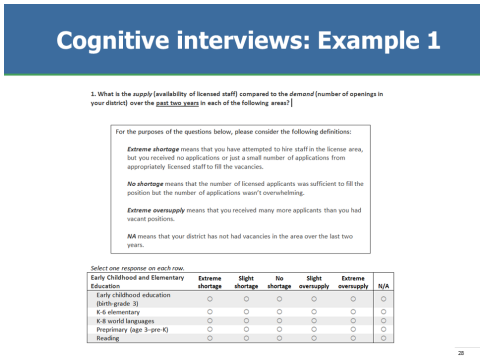
After completing the cognitive interview, review the notes (and audio tapes if sessions were recorded) as soon as possible so that important details are not forgotten.

Slide 27

Analysis is done by reviewing notes and listening to audio recordings of interviews:

- Look for common themes across interviews.
- Return to the research questions and discuss findings and unexpected problems.
- Revise problematic items to improve their clarity.
- Discuss items with the team, make changes, and conduct more interviews.
- Note that the analysis may take twice as long as the interviews.
- Use later interviews to fine-tune the survey.

Slide 28



Respondent 2 had problems with the definitions. Suggested percentages in definitions to clarify the categories are as follows:

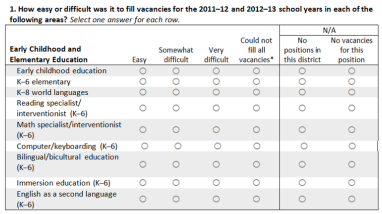
- Slight oversupply = 25 percent higher than what I needed.
- Extreme oversupply = 50 percent higher than what I needed.

How could you modify the survey item based on this feedback?

The response categories should be clearly defined so that all respondents interpret them in a similar way. Cognitive interviewers asked respondents to tell, in their own words, what the words *shortage* and *oversupply* meant, but the respondents went through different thought processes to answer the item. After the interviews, the team revisited the item's focus.

Slide 29

Cognitive interviews: Example 1



1. How easy or difficult was it to fill vacancies for the 2011–12 and 2012–13 school years in each of the following areas? *Select one answer for each row.*

Early Childhood and Elementary Education	Easy	Somewhat difficult	Very difficult	Could not fill all vacancies*	N/A: No positions in this district	N/A: No vacancies for this position
Early childhood education	○	○	○	○	○	○
K–6 elementary	○	○	○	○	○	○
K–8 world languages	○	○	○	○	○	○
Reading specialist/ interventionist (K–6)	○	○	○	○	○	○
Math specialist/interventionist (K–6)	○	○	○	○	○	○
Computer/keyboarding (K–6)	○	○	○	○	○	○
Bilingual/bicultural education (K–6)	○	○	○	○	○	○
Immersion education (K–6)	○	○	○	○	○	○
English as a second language (K–6)	○	○	○	○	○	○

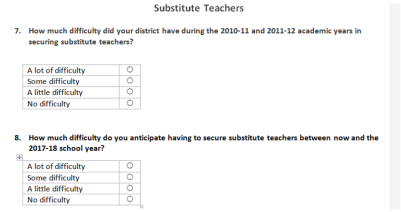
29

The cognitive interview team decided that the item was really trying to capture how easy or difficult it was for the district to hire teachers in specific areas.

Rather than asking respondents to differentiate between extreme shortage and extreme oversupply, they turned to response categories borrowed from a National Center for Education Statistics survey. This slide shows the revised item.

Slide 30

Cognitive interviews: Example 2



Substitute Teachers

7. How much difficulty did your district have during the 2010-11 and 2011-12 academic years in securing substitute teachers?

A lot of difficulty	○
Some difficulty	○
A little difficulty	○
No difficulty	○

8. How much difficulty do you anticipate having to secure substitute teachers between now and the 2017-18 school year?

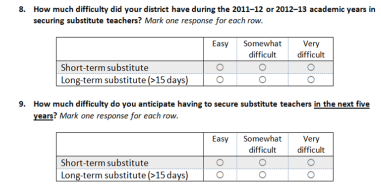
A lot of difficulty	○
Some difficulty	○
A little difficulty	○
No difficulty	○

30

The respondent stated that there was a difference between finding short-term and long-term substitutes. How would you revise the survey item based on this feedback?

Slide 31

Cognitive interviews: Example 2



8. How much difficulty did your district have during the 2011–12 or 2012–13 academic years in securing substitute teachers? *Mark one response for each row.*

	Easy	Somewhat difficult	Very difficult
Short-term substitute	○	○	○
Long-term substitute (>15 days)	○	○	○

9. How much difficulty do you anticipate having to secure substitute teachers in the next five years? *Mark one response for each row.*

	Easy	Somewhat difficult	Very difficult
Short-term substitute	○	○	○
Long-term substitute (>15 days)	○	○	○

31

This slide shows the revised item for example 2 (Lavrakas, 2008).

Slide 32

Outline

Methods to test new survey items:

- Expert reviews.
- Cognitive interviews.
- **Focus groups.**
- Field testing.

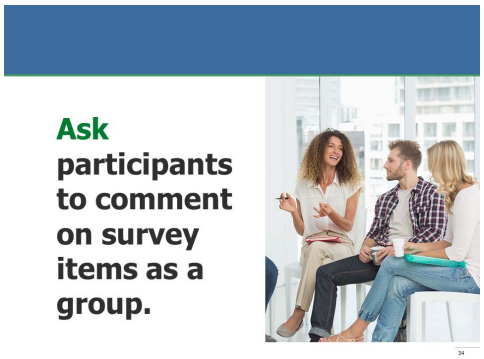
32

Slide 33

Focus groups are a type of qualitative research that can be used to pretest items during survey development. Focus groups typically have one or two moderators and six to eight participants. Depending on the goal of the pretest, the participants may include experts or potential respondents.

Focus groups can provide a better understanding of whether the survey covers all the important elements of the topic and how typical respondents interpret or react to the items on the survey. The group format allows for discussions about how well the items cover all the relevant aspects of the survey topic. Focus groups may highlight potential sources of error, but because of the group setting it may be difficult to get into detailed discussions about that error. Focus groups typically last 60–90 minutes. Additional information on focus groups is in module 8.

Slide 34



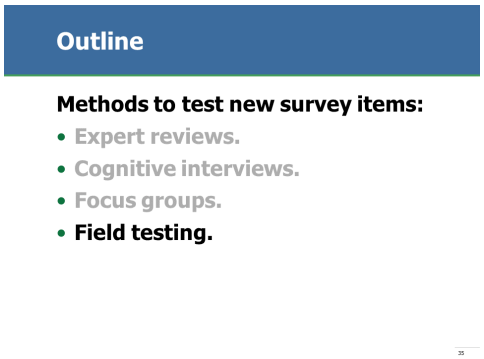
Focus group participants can be asked to comment on an early draft of a survey as a group to:

- Identify unclear concepts.
- Explain how they conceptualize each topic on a list.

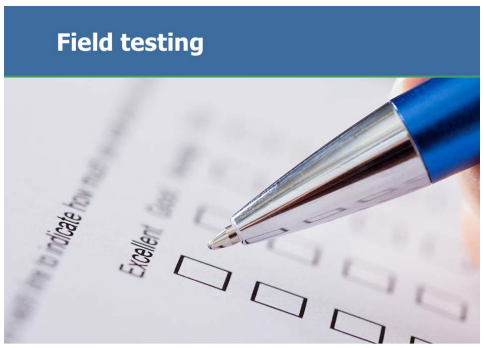
Generally, focus groups are best suited for generating ideas about an unfamiliar topic. They can also inform researchers on how to write items to capture accurate responses.

Cognitive interviews are the preferred method when you have a good understanding of the topic you are trying to measure and want to refine the survey items.

Slide 35



Slide 36



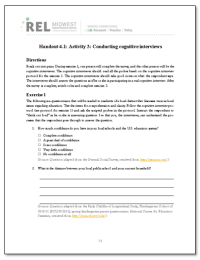
A field test is a small-scale administration of the survey designed to evaluate the survey items and administration procedures. Field test data may suggest item revisions if, for example, there are many missing responses for certain items or nearly all the respondents answered an item with the same response. Typically, high-stakes surveys include a field test.

Field tests can include methodological experiments (for example, comparing approaches to maximizing response rates or alternative item wording).

The sample size for a field test is determined by the budget available. Typically, the larger the sample, the more comparisons you can make between different groups. Field-test samples should reflect the characteristics of the target population.

Slide 37

Activity 3: Conducting cognitive interviews



Handout 4.1: Activity 3: Conducting cognitive interviews

Directions

Exercise 1

Protocol for conducting cognitive interviews

Exercise 1

General Introduction

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Slide 38

Additional resources

For more information, please visit the following websites:

- The American Association for Public Opinion Research: http://www.aapor.org/.
- *Public Opinion Quarterly:* https://poq.oxfordjournals.org/.
- *Journal of Survey Statistics and Methodology:* http://jssam.oxfordjournals.org/content/current.

Slide 39

References

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Activity 4.1: Conducting cognitive interviews

This activity in handout 4.1 contains two exercises in which participants can take turns being the cognitive interviewer and the respondent. The individual playing the role of the cognitive interviewer should use the protocol in exercise 1 of handout 4.1 to probe the respondent, who will fill out the short survey in exercise 1 of handout 4.1. After the first exercise, the pair should switch roles—the respondent becomes the interviewer, and the interviewer becomes the respondent—to complete exercise 2. Each exercise should take about 15 minutes. The following schedule should provide sufficient time for participants to get a sense of the purpose and general structure of a cognitive interview:

- Introduce activity and distribute handout 4.1: 2–3 minutes.
- Exercise 1: About 15 minutes.
- Exercise 2: About 15 minutes.
- Reconvene the whole group (if time allows): What was it like for the participants to "think out loud"? To reflect on their thought process? What else did participants notice?

If there is insufficient time to complete both activities, consider having participants work through exercise 1 and either reserve exercise 2 for later or work through it during lunch or a break.

Handout 4.1: Conducting cognitive interviews

Directions

Break into pairs. During exercise 1, one person completes the sample survey, and the other person is the cognitive interviewer. The cognitive interviewer should read all the probes based on the interview protocol for exercise 1 and take good notes on what the respondent says. The interviewee should answer the questions as if participating in a real cognitive interview. After the interview, the two participants switch roles and complete exercise 2. Each exercise includes an open-ended item to think through out loud as well as several multiple choice items.

Exercise 1

For cognitive interviewer: Protocol for conducting a cognitive interview for exercise 1

(Note to interviewer: This script should be read to the respondent.)

I would like to begin by thanking you for coming here today to help us. We're scheduled to be here for 15 minutes, and I will make sure that we do not go beyond that time. We've asked you to come because your local school district is conducting a survey on residents' attitudes about various education issues. Today, I'm going to ask you to fill out a survey and provide feedback so that we can help the school district make sure that all different types of residents will understand the actual survey.

To help keep track of everything you say today, I'm going to audio record this session. I'll also be taking notes, so you might notice me writing as we are talking. I want you to know that your responses are voluntary and confidential.

In just a minute I'm going to hand you a short survey, and I'd like you to fill it out the same way you would if it came to you at home in the mail. Unlike the case of responding to a survey at home, though, I'll ask you to stop periodically so that we can talk about what you were thinking as you answered the items.

There also will be one item for which I will ask you to think "out loud." For this item, it is important that you tell me what you are thinking and feeling while you are actually in the process of coming up with your answer.

Now, because some people aren't used to reading, thinking, and expressing their feelings aloud, I'd like to begin today with a short practice item. Please read out loud the item I'm about to give you and tell me your thoughts and feelings from the moment I handed you the item until you finish explaining your answer.

(Note to interviewer: Give the practice item on the next page to the respondent for the think-aloud exercise.)

Question: How many times did you eat a meal at a restaurant in the past week?

Thank you. I'm going to hand you the sample survey now. Please read it and fill it out as if you were responding to the actual survey. As you go through the survey, if any item sticks out to you in any way (maybe you think an item is hard to answer, difficult to understand, located in a strange place, or you just don't like it)—anything at all that you would like to say about an item—please tell me so that we can discuss it.

(Note to interviewer: Give survey to respondent.)

For respondent: Survey for exercise 1

This survey on education issues will be mailed to residents of a local school district. We are testing the items for comprehension and clarity.

7. How much confidence do you have in your local schools and the U.S. education system?
   - ☐ Complete confidence
   - ☐ A great deal of confidence
   - ☐ Some confidence
   - ☐ Very little confidence
   - ☐ No confidence at all

   Source: Item adapted from the General Social Survey, retrieved from http://gss.norc.org/.

8. What is the distance between your local public school and your current household?

   Source: Item adapted from the Spring Parent Interview instrument of the Early Childhood Longitudinal Study, Kindergarten Cohort of 2010–11, by the National Center for Education Statistics, retrieved from http://nces.ed.gov/ecls/.

9. The amount of money spent on public schools varies greatly from community to community and state to state because some communities and states are richer than others and have more tax dollars to spend on education. It has been proposed that some revenues from richer states and communities be shifted to the school systems of poorer states and communities to provide those poorer states and communities with more resources for their schools. Would you favor or oppose such a policy?
   - ☐ Favor
   - ☐ Oppose

   Source: ABC News Education Poll, February 1990. Retrieved from Inter-university Consortium for Political and Social Research, retrieved from http://www.icpsr.umich.edu/icpsrweb/landing.jsp.

10. Several different ideas have been proposed about how to teach children who don't speak English when they enter our public schools. Please tell me which of the following programs you feel is the best approach to teach English learners.
    - ☐ Two-way immersion programs
    - ☐ Late-exit transitional programs
    - ☐ Early-exit bilingual programs
    - ☐ Something else

    Source: Item adapted from the General Social Survey, retrieved from http://gss.norc.org/.

Question-by-question follow-ups

Q1	How much confidence do you have in your local schools and the U.S. education system? *Probe: After the respondent answers the item, ask* 1. In your own words, what is this item asking? What does the word *confidence* mean to you? 2. Was this item easy or difficult for you to answer? *If difficult, ask* What made it difficult?
Q2	What is the distance between your local public school and your current household? *Have the respondent think out loud when answering this item and ask the following probes after the respondent answers the item:* 1. Was this item easy or difficult for you to answer? *If difficult, ask* What made it difficult? Note the unit of measure that the respondent uses: for example, does the respondent answer in minutes away from the school or does the respondent respond in miles or blocks?
Q3	The amount of money spent on public schools varies greatly from community to community and state to state because some communities and states are richer than others and have more tax dollars to spend on education. It has been proposed that some revenues from richer states and communities be shifted to the school systems of poorer states and communities to provide those poorer states and communities with more resources for their schools. Would you favor or oppose such a policy? *Probe: After respondent answers the item, ask the following questions:* 1. In your own words, what is this item asking? 2. Was this item easy or difficult for you to answer? *If difficult, ask* What made it difficult?
Q4	Several different ideas have been proposed about how to teach children who don't speak English when they enter our public schools. Please tell me which of the listed programs you feel is the best approach to teach English learners. *Probe: After respondent answers the item, ask the following questions:* 1. In your own words, can you tell me what each response category means? 2. Was this item easy or difficult for you to answer? *If difficult, ask* What made it difficult?

Exercise 2

For cognitive interviewer: Protocol for conducting a cognitive interview for exercise 2

(Note to interviewer: This script should be read to the respondent.)

I would like to begin by thanking you for coming here today to help us. We're scheduled to be here for 15 minutes, and I will make sure that we do not go beyond that time. We've asked you to come because your local school district is conducting a survey on residents' attitudes about various education issues. Today, I'm going to ask you to fill out a survey and provide feedback so that we can help the school district make sure that all different types of residents will understand the actual survey.

To help keep track of everything you say today, I'm going to audio record this session. I'll also be taking notes, so you might notice me writing as we are talking. I want you to know that your responses are voluntary and confidential.

In just a minute I'm going to hand you a short survey, and I'd like you to fill it out the same way you would if it came to you at home in the mail. Unlike the case of responding to a survey at home, though, I'll ask you to stop periodically so that we can talk about what you were thinking as you answered the items.

There also will be one item for which I will ask you to think "out loud." For this item, it is important that you tell me what you are thinking and feeling while you are actually in the process of coming up with your answer.

Now, because some people aren't used to reading, thinking, and expressing their feelings aloud, I'd like to begin today with a short practice item. Please read out loud the item I'm about to give you and tell me your thoughts and feelings from the moment I handed you the item until you finish explaining your answer.

(Note to interviewer: Give the practice item on the next page to the respondent for the think-aloud exercise.)

Question: How many times did you eat a meal at a restaurant in the past week?

Thank you. I'm going to hand you the sample survey now. Please read it and fill it out as if you were responding to the actual survey. As you go through the survey, if any item sticks out to you in any way (maybe you think an item is hard to answer, difficult to understand, located in a strange place, or you just don't like it)—anything at all that you would like to say about an item—please tell me so that we can discuss it.

(Note to interviewer: Give survey to respondent.)

For respondent: Survey for exercise 2

The following survey will be mailed to a local school district. We are testing the items for comprehension and clarity.

1. Do you think your child has an opportunity to obtain an education that corresponds to his or her abilities and talents?
   - ☐ Yes
   - ☐ No

   Source: Item adapted from the General Social Survey, retrieved from http://gss.norc.org/.

2. How important do you think having well-educated parents is for getting ahead in life?
   - ☐ Essential
   - ☐ Very important
   - ☐ Fairly important
   - ☐ Not very important
   - ☐ Not important at all

   Source: Item adapted from the General Social Survey, retrieved from http://gss.norc.org/.

3. How important do you think having a good education yourself is for getting ahead in life?
   - ☐ Essential
   - ☐ Very important
   - ☐ Fairly important
   - ☐ Not very important
   - ☐ Not important at all

   Source: Item adapted from the General Social Survey, retrieved from http://gss.norc.org/.

4. How many times in the past year have you read about or watched a television program about topics related to education?
   _____ times in the past year

   Source: New item created for exercise.

Question-by-question follow-ups

Q1	Do you think your child has an opportunity to obtain an education that corresponds to his or her abilities and talents? *Probe: After respondent answers the item, ask the following questions:* 1. In your own words, what is this item asking? 2. Was this item easy or difficult for you to answer? *If difficult, ask* What made it difficult?
Q2	How important do you think having well-educated parents is for getting ahead in life? *Probe: After respondent answers the item, ask:* 1. What does the phrase *getting ahead in life* mean to you? 2. What about the term *well-educated*? In your own words, what does this mean?
Q3	How important do you think having a good education yourself is for getting ahead in life? *Probe: After respondent answers the item, ask:* 1. What does the term *good education* mean to you? 2. Was this item easy or difficult for you to answer? *If difficult, ask* What made it difficult?
Q4	How many times in the past year have you read about or watched a television program about topics related to education? *Have the respondent think out loud when answering this item and ask the following probes after the respondent answers the item:* 1. What does the phrase *in the past year* mean to you? Were you thinking of since January or of the previous 12 months? 2. Can you tell me that it was definitely this many times within the past year? 3. Was this item easy or difficult for you to answer? *If difficult, ask* What made it difficult?

Module 5: Sampling

Overview

Duration: 30–45 minutes

Slides: Module 5 slide deck

Materials needed:

- One copy of slides per participant.
- Projector and computer.

Agenda

- Target population.
- Sampling frame.
- Random sampling.
- Stratified random sampling.
- Attempting a large census.
- Other considerations.

Background

Defining the target population is an important first step in designing a survey project. A target population is the group of people or institutions (for example, schools) that the survey results are intended to represent.

The goal of this module is for participants to understand how to select a sample of survey respondents that will represent the target population.

Strategies for adapting module 5 to your context

- No activity is provided for this module. However, as facilitator, you may want to develop a hands-on activity asking participants to select a sample for a project they are planning. They can discuss the following issues in small groups or the whole-group setting:
  - The definition of the target population.
  - The sampling frame and strategies for checking that the sampling frame is up-to-date and complete.
  - Whether a census of the whole target population or sample of it is most appropriate.
  - Whether to use random sampling and what subpopulations, if any, are appropriate to use for stratified sampling.
- If participants are not planning a survey, they can spend time in small groups considering a scenario in which district administrators would like to collect data about teachers' experiences with professional development during the past three years. To collect the data, the administrators plan to email a survey link to principals in the district with a request that they forward the link to teachers in their schools so the teachers can take the survey. What issues might arise regarding the

target population, the sampling frame quality, and sampling strategies in this situation? On the basis of the information covered in this session, what advice would participants offer the district?

- Another possible activity would be to present the example in the notes to slide 18 and then give participants time to discuss their answers to the following question: Which situation will yield the most representative data? Pairs or small groups can take a few minutes to work on their own; then everyone can report to the whole group.

Slides and notes for module 5

Slide 1

Module 5 presentation

Sampling

Slide 2

Outline

- **Defining a target population.**
- **Sampling frame.**
- **Random sampling.**
- **Stratified random sampling.**
- **Attempting a large census.**
- **Other considerations.**

Slide 3

Outline

- **Defining a target population.**
- **Sampling frame.**
- **Random sampling.**
- **Stratified random sampling.**
- **Attempting a large census.**
- **Other considerations.**

Slide 4

The target population is the group of people (or institutions) that the survey results will represent. For example, if the unit of analysis (as described in module 1) is the school, the target population is some set of schools. The target population will be determined by a research question, such as:

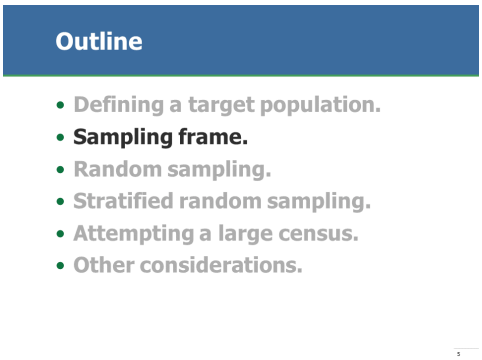
- How safe do high school students feel at their school?
- What barriers to school involvement do parents of English learner elementary school children experience?
- What professional development activities are most prevalent among grade K–3 teachers?

Carefully define who is in your target population.

- Teachers. Which grade levels? Which subject areas? What about specialists, special education teachers, full-time versus part-time teachers, long-term substitutes, or educational assistants?
- Parents. Of all students? Can you include non-English-speaking parents?
- Administrators. Principals and assistant principals? Other administrative positions?
- Students. All grades? Prekindergarteners? Special education students? Students in alternative schools?

The definition of the target population should be agreed on in the planning phase in order for it to align with the research questions (Fowler, 2009).

Slide 5



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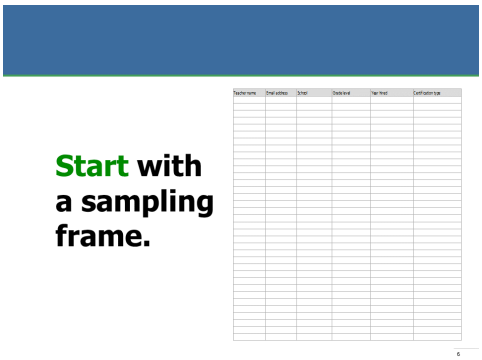


A sampling frame is a complete list of all eligible members of the target population. Ideally, the sampling frame has the following characteristics:

- Includes every member of the target population.
- Does not include members outside the target population (for example, retired teachers or students who have transferred).
- Does not include duplicates (for example, two listings for parents with multiple students or for teachers who teach in two schools).
- Is current.

Slide 7

It is not necessary to survey every member of the target population.

It is not necessary to survey every member of the target population (that is, everyone in the sampling frame). If fewer than 1,000 members are in your target population (such as principals within a district), you may want to do a census and invite all members to take the survey. For larger target populations, high-quality survey data can be obtained with a carefully selected sample of population members.

A random sample of sufficient size will elicit approximately the same overall results as a census of the target population.

Slide 8

Outline

- Defining a target population.
- Sampling frame.
- **Random sampling.**
- Stratified random sampling.
- Attempting a large census.
- Other considerations.

Random sampling is a powerful tool in survey research. A subset of target population members selected at random (where each member has an equal chance of being selected) can provide accurate data about the entire target population. Sample data allow statistical inferences about the population.

Slide 9

Simple random sample

In a simple random sample, all members of a population have an equal chance of selection. A random sample can be selected in an Excel spreadsheet that includes the sampling frame as follows:

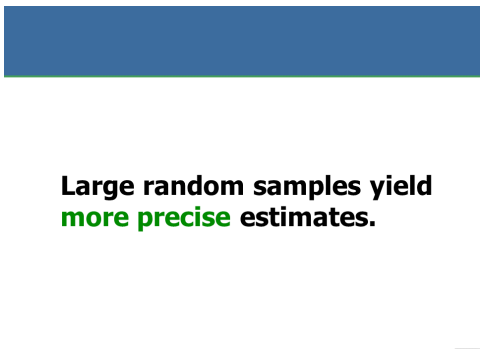
- Create a column that calculates "=RAND()" for each member of the population (each row).
- The RAND function returns random numbers between zero and one.
- Sort rows by this random number.
- If you want a sample of 500, take the top 500 rows.

Slide 10

Large random samples are more representative than smaller random samples.

In general, the larger the sample, the better able you will be to detect statistical significance and draw inferences about the target population or census. Large random samples are preferable because they are more representative than smaller random samples. However, representativeness is more important than size for drawing inferences about the target population. That is, if you have the option of drawing a smaller random sample or a larger nonrandom sample, a smaller random sample is often preferable.

Slide 11

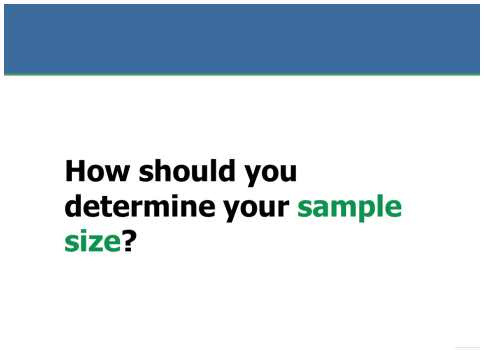


A large random sample yields more precise estimates than a small random sample. For example, assume the proportion of all parents (your target population) who favor school uniforms is 60 percent:

- Ninety-five percent of the time, a random sample of 1,000 parents will give you an estimate ranging between 57.0 percent and 63.0 percent.
- Ninety-five percent of the time, a random sample of 500 parents will give you an estimate ranging between 55.6 percent and 64.4 percent.

There is a diminishing return on the precision benefits of a large sample size. Large sample sizes can be costly and may have implications for data quality; therefore, the benefits of increasing the sample size beyond what is needed for data analysis must be weighed against these costs.

Slide 12

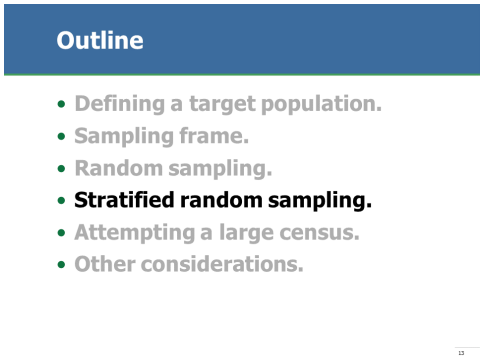


Ideal sample size depends on the following:

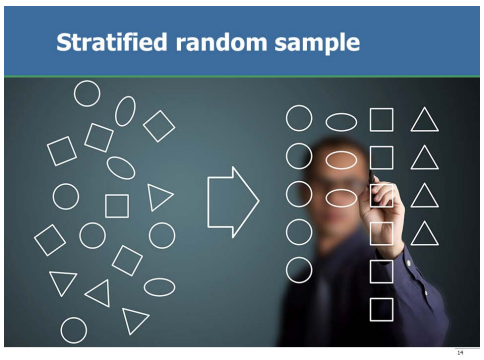
- The importance of decisions that will be made on the basis of the survey results (a larger sample produces estimates with higher precision and confidence).
- How many subgroups of interest there are (a large enough sample of each subgroup is needed for precise subgroup estimates).
- The fact that not everyone sampled will participate (so sample size needs to be considered within the context of the anticipated response rate).
- Budget.

You may want to consider hiring a sampling statistician for large-scale, high-stakes surveys. Such a person can conduct power analyses to determine the appropriate sample size for your survey.

Slide 13



Slide 14

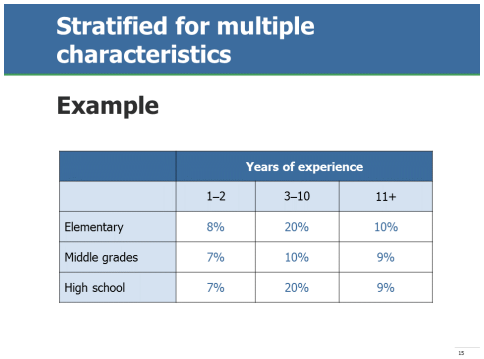


A stratified random sample forces the sample to match the target population on the distribution of important characteristics (such as region, race/ethnicity, or English learner status). It can increase the precision of your estimates compared with a simple random sample of the same size.

A stratified random sample can be selected as follows:

- Create separate sample frames for each subgroup. Randomly select the number of cases needed in each subgroup so that your sample will have the same percentage of members in each subgroup as the target population.
- If, for example, your target population is 10,000 students (80 percent non–English learner students, 20 percent English learner students) and you want a sample size of 2,000:
- Randomly select 1,600 from the non–English learner student frame.
- Randomly select 400 from the English learner student frame.

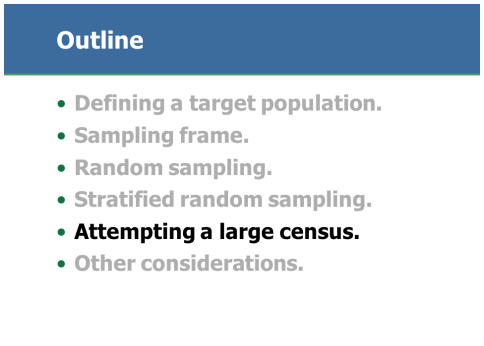
Slide 15



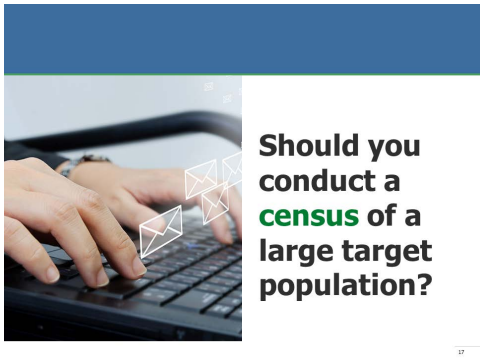
Stratification can be done for more than one characteristic.

- Select a sample of teachers that matches the target population by school level and experience.
- Determine cell percentages that match the target population (sum to 100 percent).
- Create a separate frame for each cell, and sample with the frames so that the percentages within your final sample match the percentages in the target population.
- Follow the method described in slide 9 to use Excel to randomly select the number of respondents needed in each frame to achieve the desired percentages in each cell.

Slide 16



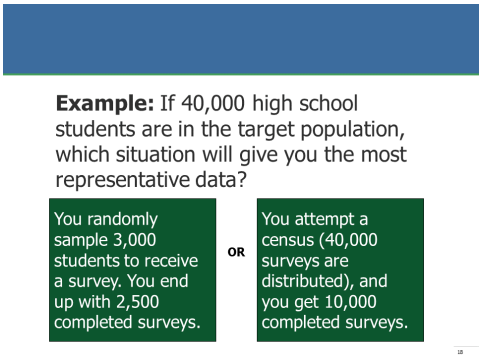
Slide 17



Given the ease of sending survey invitations by email, it is tempting to invite every member of a large target population to take a survey.

This approach can result in a large number of completed surveys but may not produce accurate survey data if the respondents are only a small fraction of the individuals invited to take the survey.

Slide 18



Example:

If 40,000 high school students are in the target population, which situation will give you the most representative data?

- You randomly sample 3,000 students to receive a survey. You end up with 2,500 completed surveys.
- You attempt a census (40,000 surveys are distributed), and you get 10,000 completed surveys.

Receiving 2,500 completed surveys out of 3,000 distributed surveys is an 83 percent response rate. It might be hard to achieve that level of response, but it will be worth it in terms of data quality.

Receiving 10,000 completed surveys out of 40,000 distributed surveys is a 25 percent response rate. Resources (such as the time required for staff to follow up with or track respondents or monetary incentives) are better spent on increasing the response rate of a smaller random sample than on administering, processing, and analyzing many surveys that may not be very representative. It is typically easier to achieve a high response rate with a smaller random sample than with the entire target population if that population is very large.

It is possible that a sample of 2,500 might give you more representative data than a sample of 10,000.

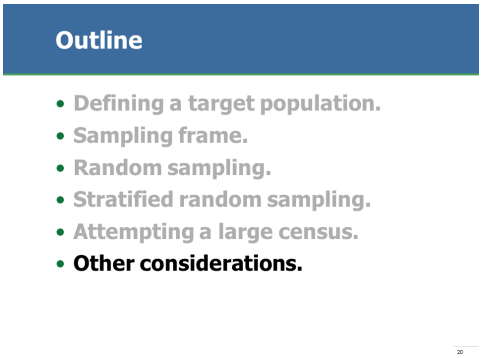
Those who easily agree to complete the survey may be very different in important ways from those who do not return a survey. For example, if the survey is gauging interest in afterschool programs, and students who have a strong interest in the programs are eager to respond to the survey, the results from the easily obtained 10,000 students would strongly overestimate interest.

Slide 19

In general, the higher the proportion of respondents from the selected sample, the more representative the survey results are likely to be. Response rates are a key consideration for the representativeness of the sample. (More on this in module 7.)

Conducting a census of a very large target population is often not necessary to get accurate data about the target population. A large census should be attempted only if there are enough resources to ensure a high response rate.

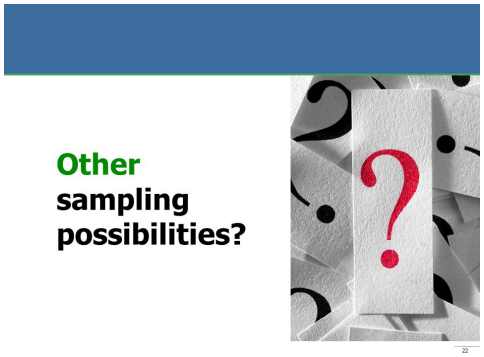
Slide 20



Slide 21

Administering a survey at a convenient gathering of target population members (such as a football game or a parent–teacher association meeting), to individuals on a convenient contact list, or to individuals who have been responsive to surveys in the past—called convenience sampling—will likely lead to responses that are unrepresentative of the target population in important ways. For example, survey data collected from parents attending a parent–teacher association meeting should certainly not be considered representative of all parents at a school.

Slide 22



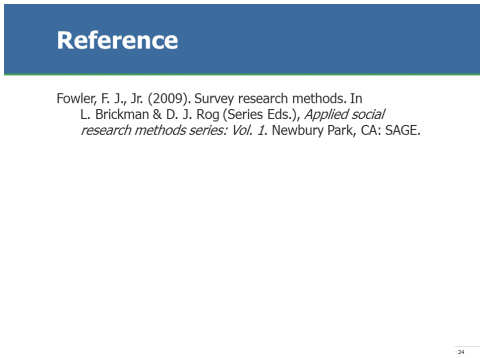
Other sampling possibilities:

- Intentionally oversampling rare subgroups to ensure an adequate sample size for separate estimates.
- Randomly selecting schools and then randomly selecting students within those schools.

These methods can be useful but require special technical operations, including creating weights for the data. If contemplating these methods, consider hiring a sampling statistician for large-scale, high-stakes surveys.

Slide 23

Slide 24



Module 6: Survey administration

Overview

Duration: 30–45 minutes

Slides: Module 6 slide deck

Materials needed:

- One copy of slides per participant.
- Writing tools.
- Projector and computer.

Agenda

- Data collection modes.
- Choose a mode.
- Implementation.
- Other considerations.

Background

This module describes the common modes for administering a survey and collecting data from respondents. A mode is how respondents are contacted, items are administered, and data are collected.

The goal of this module is for participants to understand the strengths and weaknesses of each mode of data collection, the scenarios in which each mode is appropriate, and the logistics of survey administration.

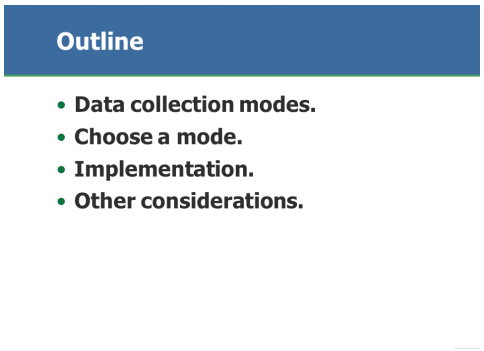
Strategies for adapting module 6 to your context

- Many online survey tools are available. If participants are particularly interested in online tools, build in some time for each participant to explore one of the survey tools mentioned in the presentation (for example, Qualtrics, SurveyMonkey, Zoomerang, SurveyGizmo, WebSurveyor, Vovici, or Snap) and report to the group on its features, pricing, capabilities, and data storage issues as they relate to confidentiality concerns. Many of these tools have free trial services for a certain number of surveys and for students.
- Another option for participant engagement is to develop scenarios related to your local context and ask participants to identify the mode of data collection they would use in each scenario.

Slides and notes for module 6

Slide 1

Slide 2



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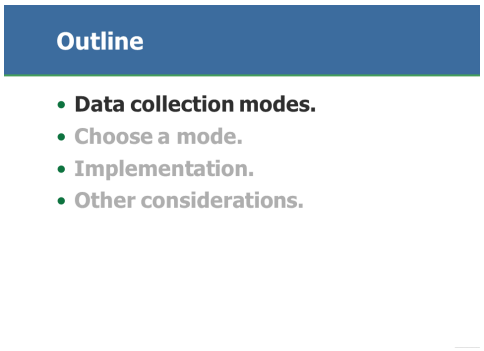

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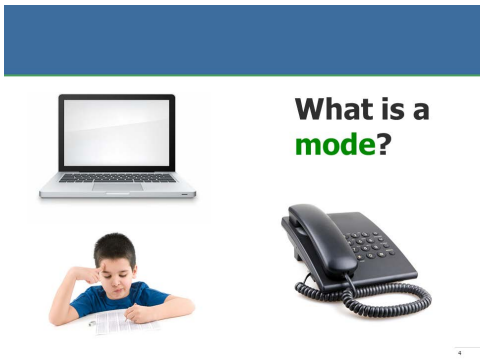
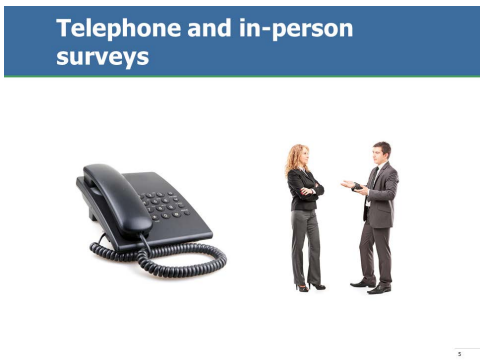


A mode is how sampled respondents are contacted (for example, in person, by telephone, by mail, or by email), how the survey is administered (that is, by an interviewer versus self-administered), and how data are collected from respondents (that is, on paper versus online; Klein, 2008).

A survey can have multiple modes of data collection, such as a combination of computers and paper and pencil. Generally, modes are categorized as follows:

- In person (personal interview).
- Telephone (personal interview).
- Paper and pencil (self-administered).
- Online (self-administered).

Slide 5

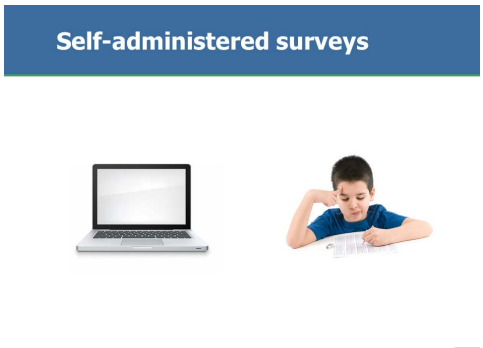


In-person and telephone surveys tend to be more expensive than self-administered surveys.

In-person interviews require paying a person to travel and interview respondents.

Telephone surveys require some capacity to administer (such as a call center). Response rates for telephone surveys can be problematic because of the advent of Caller ID, which allows potential respondents to screen calls. Another important consideration for telephone surveys is whether phone numbers are available for the respondents from whom you wish to collect data.

Slide 6

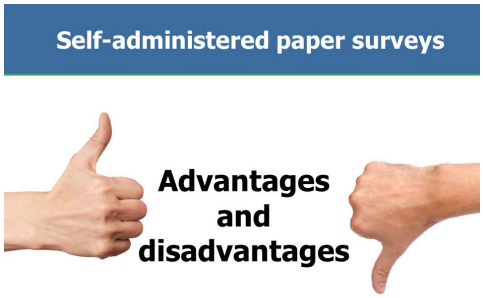


Self-administered surveys (paper-and-pencil and online) are the most common modes. They are generally less expensive but must be set up so that the respondent can complete them without help.

Respondents' reading ability and language proficiency are key factors in designing a self-administered survey. Your pretesting protocol should address these concerns. Directions must be clear to eliminate respondent confusion, because no interviewer will be available to provide assistance.

Response rates for online surveys can be lower than for surveys administered in person (Klein, 2008; Lavrakas, 2008).

Slide 7



What are the advantages of self-administered paper surveys?

- They do not require knowledge of or access to computers and technology.
- They can be created quickly.
- They can be administered anywhere.

What are the disadvantages of self-administered paper surveys?

- They may require extensive time scanning data or individually inputting data into a database.
- They are prone to respondent error if complex skips are included.
- Paper forms can be lost.
- Large-scale surveys are expensive.
- Researchers may be unable to confirm that the survey was completed by appropriate respondent.

(Ruddy, 2011)

Slide 8

What are the advantages of self-administered online surveys?

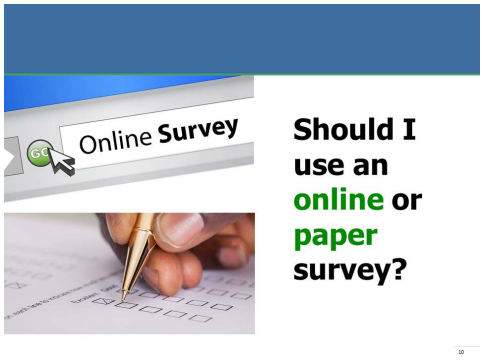
- No worries about collecting paper copies.
- Responses are easily stored in a database.
- Better options to navigate complex surveys with many skip patterns.
- Faster responses.

What are the disadvantages of self-administered online surveys?

- Respondents need access to computers and the Internet, which may affect coverage or the number of people who can respond to the survey. Certain subpopulations (including, for example, geographic regions, elderly populations, and low-income households) may have variable access to and facility with computers and the Internet.
- They take more time to develop than paper surveys.
- Surveys that are administered via email only tend to have lower response rates.
- Email addresses are not always available for all individuals within a target population.

(Kendziora & Boccanfuso, 2011; Lavrakas, 2008; Ruddy, 2011)

Slide 9



When choosing a mode for your study, consider the:

- Types of respondents.
- Survey complexity and item formatting.
- Time available for administering the survey.
- Resources, including money and staff expertise.
- Location of survey administration.

Slide 10

Online versus paper?

Respondent type

Considerations related to respondent type:

- Students.
  - Paper.
    - Easy to administer in classrooms.
    - Students are familiar with the format.
    - Is scanning software, such as Scantron, available?
  - Online.
    - Can you administer in a school setting (for example, a school computer lab) so that computer access is not an issue?
    - If possible, try to administer the survey in a group setting (for example, in homeroom) to boost response.
    - Online may be a good option for sensitive topics in order to preserve respondents' privacy.
- Staff.
  - Paper—can do at home or at school.
  - Online—can do at home or at school.
    - If staff share computers, this will be a consideration for certain kinds of online surveys that require different users to access the survey from different computers.
- Families/guardians.
  - Paper—how will the survey be returned? May need stamped, preaddressed envelopes for mailing back or a location at the school where families can return them.
  - Online—computer access or familiarity may be an issue. May need to send a link to the survey by mail and email.

Slide 11

Online versus paper?

Survey complexity and item formats

Considerations related to survey complexity and item format:

- How complex is the survey?
- Does it contain many skip patterns?
- What item formats do you want to include?
- Online surveys allow for a very complex survey structure that will be seamless to the respondent.
- Paper surveys that require the respondent to skip items can be difficult for some respondents to complete. If directions are not followed as expected, inconsistencies will need to be corrected.
- If your survey includes many open-ended items, an online survey will be preferred. Typed responses on an online survey will be captured, automatically saving data-entry costs. Having to decipher illegible responses is avoided in an online survey.

Slide 12

Online versus paper?

Timing of survey completion

Factors that may impact the timing of survey completion:

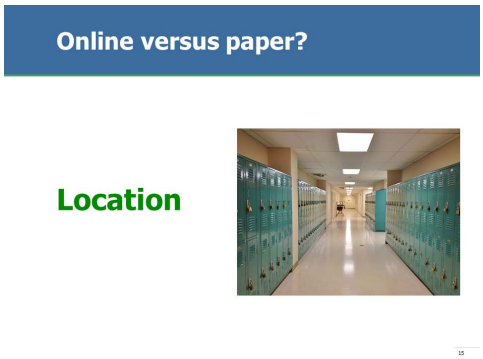
- When will the survey be conducted? The more complex the survey, the longer it will take to program and test for online surveys, which can possibly delay when administration begins.
- Paper surveys that require the respondent to skip items may be difficult for the respondent to complete and may require additional editing time after you receive the final data file.
- Paper surveys generally are quick to launch but take longer to process, whereas online surveys can involve more time up front but are quicker on the back end.

Slide 13

Considerations related to resources:

- Are staff members available to program an online survey? Making online surveys compatible with tablets and smartphones is another programming consideration.
- Will you need scanning capability (for example, Scantron) for paper surveys?
- Larger-scale projects will require more resources regardless of the mode.

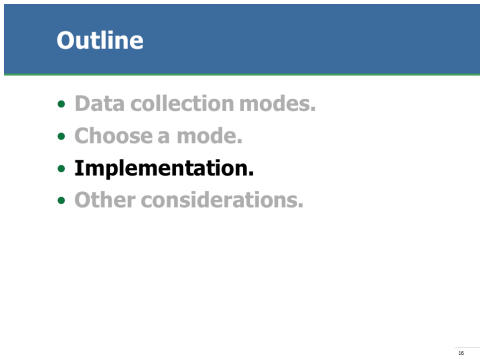
Slide 14



Considerations related to location:

- Paper surveys are easier to administer in a group setting. If you already have the target population in a group setting (for example, participants in a professional development session), you can administer a paper survey while everyone is in the room, which is likely to achieve a higher response rate than having participants log in to an online survey after the training.
- School-based surveys can take advantage of school computer resources (such as a computer lab) to administer an online survey in a group setting.

Slide 15



Slide 16

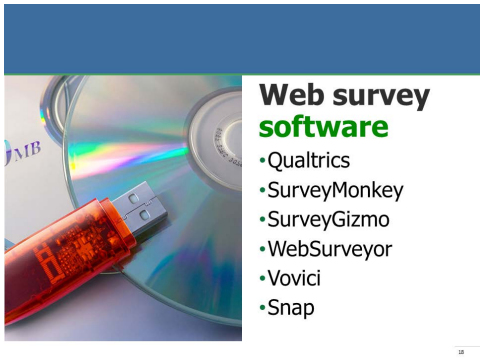
Start planning early.

Identify a survey coordinator who will:

- Work with the information technology staff if necessary to manage survey invitations.
- Coordinate the survey administration and act as the point of contact.
- Monitor response rates.
- Follow up with nonrespondents.

(Kendziora & Boccanfuso, 2011; Ruddy, 2011)

Slide 17



Identify a survey program if administering online. Some districts have data systems (for example, Naviance, eSchool, and Aesop). There also are several commercially available online software programs. Commercial online survey programs include:

- Qualtrics.
- SurveyMonkey.
- SurveyGizmo.
- WebSurveyor.
- Vovici.
- Snap.

Allow time for development and multiple rounds of testing.

Slide 18

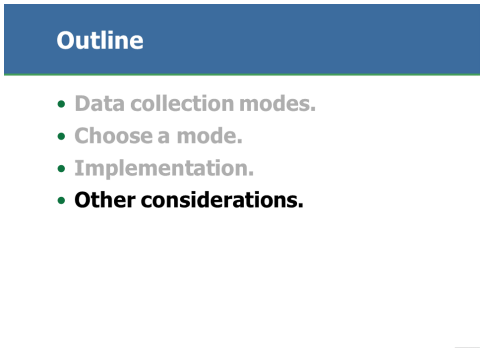
Select a time to implement the survey:

- Depending on the purpose of the survey, choosing the end of the school year or semester in education settings may be preferable.
- Avoid conflicts with other surveys and school and district activities (for example, the assessment calendar).
- For an online survey—ensure that computers or computer labs will be available.
- For a paper survey—allow additional time for printing and entering data into a database.

Identify ways to "get the word out" about the survey, such as newsletters or meetings.

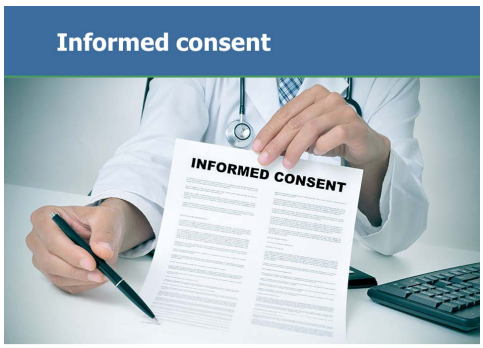
Identify respondents who might need special accommodations, such as those with low English proficiency, low literacy, or special needs. Schools usually facilitate accommodations during standardized testing for these students, and you might be able to use the same accommodations to administer surveys (Ruddy, 2011).

Slide 19



Other considerations relate to informed consent and data confidentiality.

Slide 20



Many schools and districts have procedures for obtaining permission from parents for their children to participate in data collection activities and guidelines on what information participants should be given before participating in a study. Generally, participants should be told how long the study is expected to last, that participation is voluntary, and how their personal information and responses will be protected and used.

Slide 21

Some schools or districts require parent permission for student participation in surveys. Survey information is sent to parents, and a signed form is required for the student to participate. For example, the letter requesting parent consent could include such language as "If you agree to let your son or daughter participate, please sign and return the consent form enclosed with this letter by [month day, year]."

In these districts, parents who do not respond to a request for permission are assumed to be declining to let their child participate in a survey.

Other districts require only parent notification for students' participation in surveys. In this case, parents are asked whether they would like their child to opt out of the survey. If a parent does not respond, it is assumed that the child can participate if the child assents.

Survey information and permission and notification forms should be provided in the parents' home language and easily understood. If permission forms need to be signed, researchers should retain copies for their records.

It is important to find out what requirements are applicable at all schools in advance to allow time for this process.

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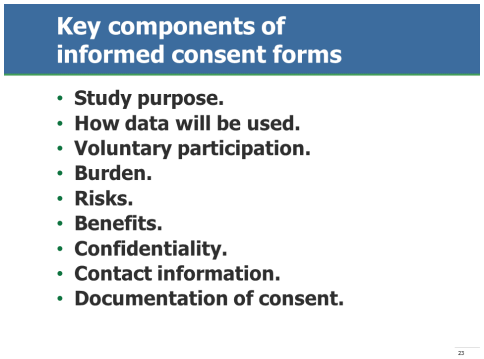

Informed consent forms should include the following components:

- The purpose and benefits of the study (for example, "The survey results will be used to gain understanding about ____," or "The survey results will be used to inform decisions about ____").
- How the data will be stored and used.
- That participation in the study is voluntary.
- How long the survey will take.
- Risks (for example, "No anticipated or known risks are expected in participating in this study.").
- Privacy (for example, "All information we collect for the study will be used for research purposes only and will be kept confidential.").
- A person to contact for more information.
- Documentation of consent.

Such consent forms ensure that individuals are voluntarily participating in research by making a fully informed decision. Parents are asked for permission to include their children in research studies. Children are asked to give their assent to participate.

The language used in an informed consent form should be clear, fair, and at an appropriate level for the individual's ability to understand the information being presented. If needed, consent forms should be translated into languages appropriate for the intended research audience.

Remember, informed consent does not consist of simply getting signed consent forms; it is a communication process by which project staff members reach agreement with people to participate in their projects. Its ethical intent is to communicate clearly and respectfully; foster trust, comprehension, and good decisionmaking; and ensure that participation is informed and voluntary.

Entities such as institutional review boards (for example, the Institutional Review Board of American Institutes for Research) and the Office for Human Research Protections aid in the determination of whether project staff are behaving ethically.

Slide 23

Ensure data security and confidentiality.

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- Data security issues:
  - Paper—instead of using respondent names or other information that could be used to personally identify a respondent, use barcodes or unique identification codes to track who has responded to the survey.
  - Online—provide users with logins. Consider using passwords so that respondents can return to the survey if they are interrupted.
- Confidentiality:
  - A confidential survey collects but does not report any identifying information.
  - If identifying information is collected, describe how it will be stored separately from survey responses (for example, linked only by an identification number).
  - Data should be reported in aggregate so that specific people cannot be identified.
  - Confidential and anonymous are not the same thing. An anonymous survey does not collect any identifying information. If survey administrators or data collectors can identify the respondent in any way, it is not an anonymous survey.

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Additional resources

For more information, please visit the following websites:

- The American Association for Public Opinion Research: http://www.aapor.org/.
- *Public Opinion Quarterly:* https://poq.oxfordjournals.org/.
- *Journal of Survey Statistics and Methodology:* http://jssam.oxfordjournals.org/content/current.

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Slide 25

References

Kendziora, K. K., & Boccanfuso, C. (2011). *Survey management* [Survey webinar series for the National Center on Safe Supportive Learning Environments]. Retrieved April 1, 2016, from http://safesupportiveschools.ed.gov/index.php?id=9&eid=6.

Klein, L. (2008). *Modes of survey data collection.* Retrieved April 1, 2016, from http://www.nri-inc.org/projects/SDICC/TA/Klein_2.pdf.

Lavrakas, P. J. (2008). *Encyclopedia of survey research methods.* Thousand Oaks, CA: SAGE.

Ruddy, S. (2011). *Survey administration* [Survey webinar series for the National Center on Safe Supportive Learning Environments]. Retrieved April 1, 2016, from http://safesupportiveschools.ed.gov/index.php?id=9&eid=10.

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Module 7: Response rates

Overview

Duration: 45–60 minutes

Slides: Module 7 slide deck

Handouts:

- Handout 7.1: Guidelines for using incentives in surveys.
- Handout 7.2: Examples of emails to respondents.
- Handout 7.3: Sample report on potential nonresponse bias.

No activity is provided for this module, but the three handouts offer guidance and can be mentioned during the presentation as helpful resources. If time allows and the participants have a particular interest in incentives (handout 7.1), communicating with respondents (handout 7.2), or investigating and reporting potential nonresponse bias (handout 7.3), these materials can be incorporated into the session. Participants can be given time to read a handout and ask questions or make observations to generate discussion. Encourage participants to draw from their own experiences and contexts to make the discussion more relevant.

Materials needed:

- One copy of slides and handouts 7.1, 7.2, and 7.3 per participant.
- Writing tools.
- Projector and computer.

Agenda

- What are response rates?
- Strategies for maximizing response rates.
- Nonresponse bias.
- Summary of best practices.

Background

The response rate is the percentage of eligible individuals in the sample who complete a survey. A survey's response rate is a key indicator of quality because low response rates can severely limit the representativeness of the survey data and therefore limit the usefulness of the survey results. The goal of this module is for participants to learn how to calculate response rates, maximize response rates, and investigate bias caused by nonresponse.

Strategies for adapting module 7 to your context

- Use surveys that someone in the group has administered to calculate response rates. Have a group discussion about what response rates the group would find acceptable and strategies they might have used to improve response rates.

Slides and notes for module 7

Slide 1

Module 7 presentation

Response rates

April 2016

Slide 2

Outline

- What are response rates?
- Strategies for maximizing response rates.
- Nonresponse bias.
- Summary of best practices.

Slide 3

Outline

- What are response rates?
- Strategies for maximizing response rates.
- Nonresponse bias.
- Summary of best practices.

Slide 4

What is a response rate?

The response rate is the percentage of people who complete and return a survey out of the total number of eligible sample members. It is a measure of the level of success achieved in collecting survey data (American Association for Public Opinion Research, 2009a).

Slide 5

Calculating response rate

$$\text{Response rate} = \frac{\text{\# of completed surveys}}{\text{\# of eligible units sampled}}$$

The response rate is calculated by dividing the number of completed surveys by the total number of eligible sample members (American Association for Public Opinion Research, 2009a). For example, if a survey is sent to a teacher who you later learn has retired and your target population is "current teachers," that teacher is not eligible and not included in the denominator.

Slide 6

Calculating response rate

For example: If you send out 200 questionnaires and you get 125 questionnaires back, your response rate is 62.5%.

$$\text{Response rate} = \frac{125}{200} \times 100 = 62.5\%$$

Slide 7

Why are response rates important?

The response rate is one way to gauge whether survey results represent the target population:

- A high response rate maximizes the chance that the results are representative of the target population.
- A low response rate increases the chance of biased results, which cannot be generalized to the target population.

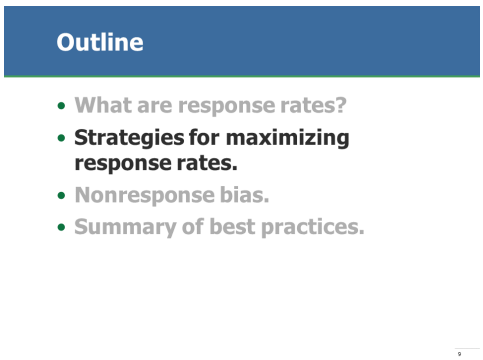
Slide 8

Is there a standard target response rate?

No standard target response rate exists. Higher response rates typically (but not always) mean that data better reflect the target population.

Various federal agencies have standards for data collection response rates. For example, the National Center for Education Statistics has a response rate target of 85 percent. In some contexts, a response rate in the 70 percent range is considered adequate. Achieving a high response rate should be a priority for any survey project (Groves, 2006).

Slide 9



Slide 10

Response rates are influenced by:

- Salience of the topic—interest of respondents in the topic of the survey.
- Personalized requests and communications.
- Multiple follow-up contacts.
- Respondents' respect for and trust in the survey sponsor.
- Conciseness and easiness of the survey.
- Data collection mode.

(Dillman, 2000)

Slide 11

How do you maximize response rates?

- Generate positive publicity for your survey.
- Send an endorsement letter from a respected leader.
- Appeal to people's tendency to help—ask them to help by giving their input.
- Make the survey topic salient:
  - Ensure that respondents see the value of the survey and their responses.
  - Point out respondents' personal connection to the topic.
  - Tailor and personalize communications about the survey and its purpose.
- Make the survey attractive and easy to complete and return.
- Provide clear instructions about how to complete and submit the survey.
- Show positive regard; say thank you.
- Ensure the confidentiality of the information provided.
- Provide an incentive (a token of appreciation).
- For a mailed survey, provide return postage.
- Follow up several times by mail, email, telephone, or in person.
- Use a combination of survey modes (for example, telephone plus mail, or online plus mail).

(Dillman, 2000)

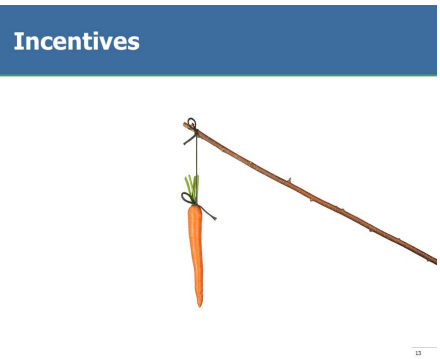
Slide 12

To motivate people to respond, appeal to their tendency to help.

- Use the person's name and, if appropriate or possible, personalize salutations.
  - Impersonal: "Dear principal."
  - Personal: "Dear Principal Lopez."
- Personalize the importance of the survey to the respondent.
  - Impersonal: "This survey will help us better understand the importance of instructional coaching for elementary school reading specialists."
  - Personal: "This survey will provide information that can help better support you as a reading specialist and enable you to better support your students."
- Use recognizable logos or graphics.
- Tailor the materials to a school or district, if appropriate or possible, using local letterhead or colors.

(Scheuren, n.d.)

Slide 13

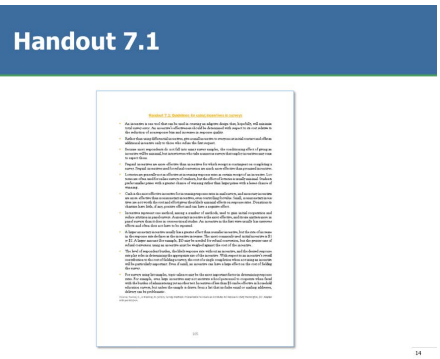


Research shows that incentives increase response rates (see handout 7.1; Dillman, 2000). In general, a prepaid incentive works better than a promised reward for completing the survey.

Types of incentives:

- Cash (most effective).
- Nonmonetary gift (for example, a coffee mug or a pen).
- Lotteries—for example, respondents are promised a chance of winning a prize (least effective).

Slide 14



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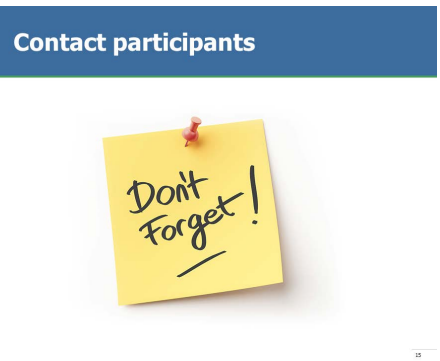
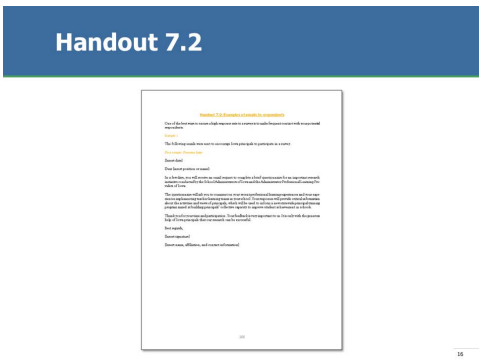


Consider making the following contacts:

- Brief prenotification (in online surveys this is particularly useful because bounceback notifications of undeliverable emails allow time to update the contact list before the survey invitations are sent).
- Survey mailed with a cover letter or survey link sent in an invitation email.
- Thank you follow-up.
- Reminder with replacement survey or survey link.
- Final contact: reminder with replacement survey or survey link.
- Thank you note.

(See appendix A; Dillman, 2000; Scheuren, n.d.)

Slide 16

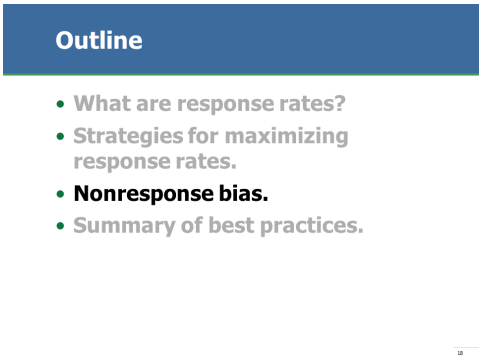


Slide 17

Nonrespondents are individuals who were randomly chosen for the sample and given the survey but did not return it. Failure to follow up with nonrespondents can ruin an otherwise well-designed survey (Dillman, 2000; Scheuren, n.d.).

About a week or two after sending the survey, send a gentle reminder to anyone who has not responded. Allow an adequate amount of time between the survey being sent out and the time it would take someone to respond. The follow-up timeline differs by mode. For phone or online surveys, follow up within a week. For mailed surveys, follow up within two weeks. The reminder can be by email, postcard, or phone call.

Slide 18



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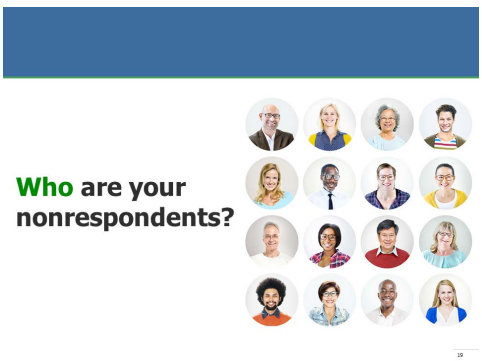


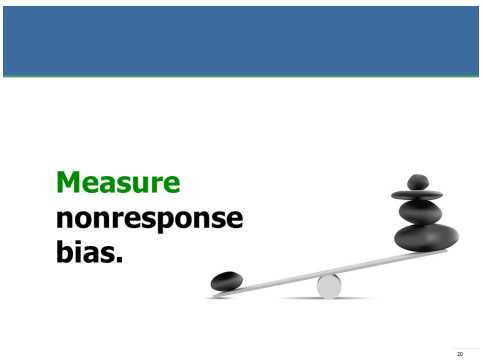
A potential for nonresponse bias exists if responders and nonresponders differ on characteristics that are related to the topic of interest. Responders and nonresponders may differ in many ways, but as long as the differences are not related to the topic of interest, they should not result in nonresponse bias.

However, if these differences are related to the topic of interest, nonresponse bias could arise (Groves, 2006).

Nonresponse bias harms the validity of the survey. It weakens the ability to draw accurate conclusions about the target population.

- If the characteristics of survey respondents and nonrespondents that are different are also related to the topic of interest, there may be bias, and the data should not be generalized even if the response rate is relatively high.
- If the characteristics of the survey respondents are the same as the nonrespondents, it may be okay to generalize the results to the population even if the response rate is low.
- Even if all measured characteristics are the same for respondents and nonrespondents, there may be nonresponse bias related to unmeasured differences.

Slide 20



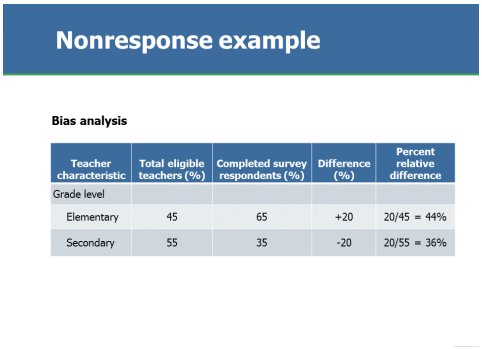
How can nonresponse bias be measured? Assess the degree to which your survey respondents differ from the people in the sampling frame on key characteristics. Ideally, the sampling frame includes some key characteristics on which you can compare respondents with nonrespondents. For example, a sampling frame of teachers may include each teacher's grade level, tenure, and gender (Groves, 2006).

Nonresponse bias cannot be truly measured because the true value of what is being estimated is rarely known. However, the possibility of nonresponse bias can be measured.

Example:

- Two hundred elementary school and secondary school teachers need to be contacted for a survey.
- The secondary teachers have annual assessments at the same time and are less likely to answer the survey.
- Because of a response rate of 35 percent of secondary teachers, the survey data may not be representative of all teachers because secondary teachers will be underrepresented.
- Compare the percentage of respondents who teach elementary and secondary school grades with the percentage of elementary and secondary school teachers in the sampling frame.
- If the percentages are notably different, and you think that elementary and secondary school teachers differ on the topic of interest (for example, methods for addressing discipline problems), you likely have nonresponse bias. The degree of bias reflects the degree to which the topic of interest relates to grade level.

Slide 21



Bias analysis:

- Look at the difference between the percentage distributions of the eligible teachers and the responding teachers, by characteristic.
- Difference can be expressed as percent relative difference, which is the difference between the eligible percentage and the respondent percentage, divided by the eligible percentage, and multiplied by 100. In this case, the relative differences are 44 percent for elementary teachers and 36 percent for secondary teachers, which suggests that bias may be occurring.
- If you think that elementary and secondary school teachers differ on the topic of interest (for example, importance of teacher collaboration), a difference in their response rates may affect the validity of the results. The presence of nonresponse bias depends on whether a link exists between the characteristics of the respondents and nonrespondents and the topic of interest.

Slide 22

Address potential bias.

What if large differences between characteristics of respondents and nonrespondents are found?

- Describe the results in terms of who did respond.
- Do not imply that the results apply to anyone other than those who responded.
- Specify who responded (that is, the group the data represent).
- Report results by subgroups for which there were large differences in response rates (for example, by elementary and secondary school teachers).
- Consult a statistician about other options for addressing nonresponse bias.

(Scheuren, n.d.)

Slide 23

Handout 7.3

Slide 24

Acknowledge low response rates.

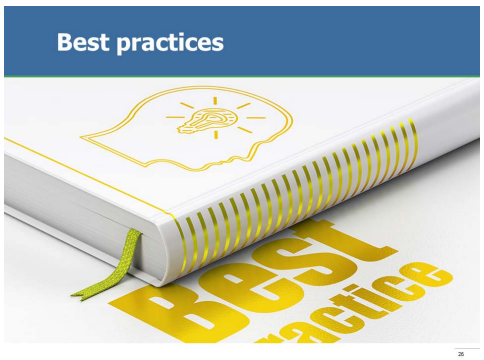
If the response rates are low (for example, lower than 70 percent), use a summary statement in reporting results, such as: "The response rate was only 42 percent, so care should be taken when reviewing these results. The results should be applied to individuals who responded, not to the entire population of teachers" (Scheuren, n.d.). If a nonresponse bias investigation suggests that the responders and nonresponders were similar on certain characteristics, this could be noted as evidence about the potential representativeness of data from a study with a low response rate.

Slide 25

Outline

- What are response rates?
- Strategies for maximizing response rates.
- Nonresponse bias.
- **Summary of best practices.**

Slide 26



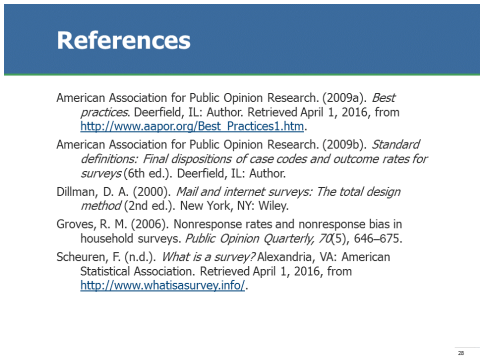
What are the best practices regarding response rates? Follow the strategies presented here to maximize the response rate:

- Monitor response rate overall and within groups of interest during data collection, and target additional follow-up contact if warranted.
- Calculate and report the response rate.
- Examine the data for nonresponse bias.
- Discuss the survey results in the context of the response rate and any possible nonresponse bias identified.

(American Association for Public Opinion Research, 2009b)

Slide 27

Slide 28



Handout 7.1: Guidelines for using incentives in surveys

- An incentive is one tool that can maximize response rates. An incentive's effectiveness should be determined with respect to its cost relative to the reduction of nonresponse bias and increases in response quality. If surveying within an organization, check policies related to staff accepting incentives.
- Rather than using differential incentives, give a small incentive to everyone at initial contact and offer an additional incentive only to those who refuse the first request.
- Because most respondents do not fall into many survey samples, the conditioning effect of giving an incentive will be minimal. But interviewees who take numerous surveys that employ incentives may come to expect them.
- Prepaid incentives are more effective than incentives for which receipt is contingent on completing a survey. Prepaid incentives used for refusal conversion are much more effective than promised incentives.
- Lotteries are generally not as effective at increasing response rates as certain receipt of an incentive. Lotteries are often used for online surveys of students, but the effect of lotteries is usually minimal. Students often prefer smaller prizes with a greater chance of winning to larger prizes with a lesser chance of winning.
- Cash is the most effective incentive for increasing response rates in mail surveys, and monetary incentives are more effective than nonmonetary incentives, even controlling for value. Small, nonmonetary incentives are not worth the cost and effort given their likely minimal effects on response rates. Donations to charities have little, if any, positive effect and can have a negative effect.
- Incentives represent one method, among a number of methods, used to gain initial cooperation and reduce attrition in panel surveys. A monetary incentive is the most effective, and its size matters more in panel surveys (surveys that are repeated over time with the same sample) than it does in cross-sectional studies (surveys that are conducted once). An incentive in the first wave usually has carryover effects and often does not have to be repeated.
- A larger monetary incentive usually has a greater effect than a smaller incentive, but the rate of increase in the response rate declines as the incentive increases. The most commonly used initial incentive is $1 or $2. A larger amount (for example, $5) may be needed for refusal conversion, but the greater ease of refusal conversion using an incentive must be weighed against the cost of the incentive.
- The level of respondent burden, the likely response rate without an incentive, and the desired response rate play roles in determining the appropriate size of the incentive. With respect to an incentive's overall contribution to the cost of fielding a survey, the cost of a single completion when not using an incentive will be particularly important. Even a small incentive can have a large effect on the cost of fielding the survey.

Source: Tucker & Medway (2013).

Handout 7.2: Examples of emails to respondents

One of the best ways to ensure a high response rate to a survey is to make frequent contact with your potential respondents.

Example 1

The following emails were sent to encourage Iowa principals to participate in a survey.

First contact: Prenotice letter

Subject: Important Principal Survey Coming Soon

[Insert date]

Dear [insert position or name]:

In a few days, you will receive an email request to complete a brief survey for an important research initiative conducted by the School Administrators of Iowa and the Administrator Professional Learning Providers of Iowa.

The survey will ask you to comment on your recent professional learning experiences and your experiences implementing teacher learning teams in your school. Your responses will provide critical information about the activities and views of principals, which will be used to inform a new statewide principal-training program aimed at building principals' collective capacity to improve student achievement in schools.

Thank you for your time and participation. Your feedback is very important to us. It is only with the generous help of Iowa principals that our research can be successful.

Best regards,

[Insert signature]

[Insert name, affiliation, and contact information]

Second contact: Cover letter

Subject: Professional Learning Survey Invitation

[Insert date]

Dear [insert position or name]:

I am writing to request your help in a study of professional learning experiences of Iowa principals and the use of teacher learning teams in their schools. The School Administrators of Iowa (SAI) and the Administrator Professional Learning Providers of Iowa (APLPI) are conducting the study. Data from this survey will help SAI and APLPI better understand principals' experiences interacting with and learning from executive coaches and implementing teacher learning teams in their schools. Your feedback is very important to us; it will help us develop plans for a prospective statewide training program that offers individualized leadership coaching to principals. Coaching will focus on helping principals build the collective capacity of their schools through the implementation of teacher learning teams.

Your responses are completely confidential. Only the researchers from an external research organization will have access to the responses, and results will be shared only as summaries; individual answers will not be identifiable. The survey is brief and should take only about 10 minutes to complete. To begin, please use the following link:

GO TO SURVEY → [insert hyperlink].

We know that principals frequently are asked to complete surveys and share their views. As a fellow educator, please consider the benefits this study has in shaping the principalship and schools in Iowa. If you have any questions about the content of the survey, please contact me at [insert email address]. If you experience any technical difficulties with the survey, please contact [insert name] at [insert email address].

Thank you very much for helping with this important work.

Best regards,

[Insert signature]

[Insert name, affiliation, and contact information]

Third contact (follow-up 1): Thank you and reminder

Subject: Professional Learning Survey Reminder

[Insert date]

Dear [insert position or name]:

Last week, you received an email asking you to complete a survey about your professional learning experiences and the use of teacher learning teams in Iowa schools. If you have already completed the survey, please accept my sincere thanks. If not, please do so today. The survey is brief and will take only about 10 minutes to complete. To begin, please use the following link:

GO TO SURVEY → [insert hyperlink].

We truly appreciate your time and participation. It is only by you sharing your ideas and experiences that we can develop high-quality and relevant professional learning experiences for Iowa principals. If you have any questions about the content of the survey, please contact me at [insert email address]. If you experience any technical difficulties with the survey, please contact [insert name] at [insert email address].

Best regards,

[Insert signature]

[Insert name, affiliation, and contact information]

Fourth contact (follow-up 2): Final contact

Subject: Final Chance to Participate in Professional Learning Survey

[Insert date]

Dear Iowa Principal:

During the last couple of weeks, we have sent you email requests regarding an Iowa principal survey. If you have already completed the survey, please accept my sincere thanks. This very brief 10-minute survey is an important element of a research initiative we are conducting to better understand principals' attitudes and thoughts about professional supports and teacher learning teams. In addition, the survey will help us identify the barriers and challenges in building collective capacity to improve student achievement in schools.

We are sending the survey link one last time to ensure that all Iowa principals who have not responded have an opportunity to do so. In addition, those principals who have not responded may have different experiences, thoughts, and attitudes than those who have responded. Hearing from all Iowa principals helps ensure that the survey results are as accurate as possible.

Your responses are completely confidential and will be released only as summaries in which no individual's answers can be identified. To begin, please use the following link:

GO TO SURVEY → [insert hyperlink].

We truly appreciate your time and participation. It is only with the generous help of Iowa principals that our research can be successful. If you have any questions about the content of the survey, please contact me at [insert email address]. If you experience any technical difficulties with the survey, please contact [insert name] at [insert email address].

Best regards,

[Insert signature]

[Insert name, affiliation, and contact information]

Example 2

These emails were sent to persuade district hiring officers in Minnesota to participate in a recurring survey.

First contact: Prenotice letter

Subject: Important Survey Coming Soon

[Insert date]

Dear [insert name]:

It is time again for [insert survey name]. [Insert a few sentences about the survey and any relevant information that could be relayed to the respondent.]

We are mindful of the data burden schools face and have made the survey much shorter than in previous years. It should take about 30 minutes to complete.

The due date for this survey is [insert due date]. Please watch for the survey to arrive in your email inbox next week.

Anytime you have questions, please email [insert contact name] at [insert email address]. Thank you very much for helping with this important work!

Best regards,

[Insert signature]

[Insert name, affiliation, and contact information]

Second contact: Cover letter

Subject: Survey Invitation

[Insert date]

Dear [insert name]:

[Insert a few sentences about the survey's purpose.]

GO TO SURVEY → [insert survey link]

Login: [insert login]

Password: [insert password]

Please complete the survey by [insert due date]. We would like a 100 percent response rate so that we get an accurate picture of [insert topic]. We are mindful of the data burden schools face and have kept the survey as short as possible. The survey should take no more than 30 minutes to complete. [Replace previous two sentences with relevant information.]

You can access the Web survey from multiple computers by using the login and password included in this email. All responses are saved as you complete each page in case you have to close the survey and come back to it later.

Results from the survey will be presented in aggregate in the final report.

If you have questions, contact [insert contact name] at [insert email address].

Thank you very much for helping with this important work!

Best regards,

[Insert signature]

[Insert name, affiliation, and contact information]

Third contact (follow-up 1): reminder

Subject: Survey Reminder

[Insert date]

Dear [insert name]:

We are sending you this friendly reminder to make sure someone from your school or district responds to the [insert name of survey]. The link to the electronic survey and the login and password information are as follows:

GO TO SURVEY → [insert survey link]

Login: [insert login]

Password: [insert password]

The following are answers to questions you might have:

- *What is the due date?* Please complete the survey by [insert date in bold]. The survey should take less than [insert time in bold] minutes to complete.
- *How will the survey information be used?* [Insert a brief description about how the information will be used.]
- *Why another survey?* [If needed, use this space to explain the importance of this survey.]
- *Will my responses be singled out?* [Use this space to address confidentiality issues.]
- *Who do I contact with questions?* Contact [insert contact name] at [insert email address].

Thank you very much for helping with this important work!

Best regards,

[Insert signature]

[Insert name, affiliation, and contact information]

Fourth contact (follow-up 2): Final contact

Subject: Final Chance to Participate in Important Survey

[Insert date]

Dear [insert name]:

We noticed that you have not yet had a chance to complete the [insert survey name]. We recognize how busy you must be at this time of year and have extended the deadline for this survey to [insert date in bold]. It is important that we hear from everyone to ensure that we have the most accurate information. The survey is expected to take about 30 minutes.

GO TO SURVEY → [insert survey link]

Login: [insert login]

Password: [insert password]

The following table represents the response rates we have, by region. Please respond soon so that your region is fully represented in the results of the survey.

Region	Response Rate
West	72%
East	70%
South	87%
North	82%
Central	88%

Please contact [insert contact name] at [insert email address] if you have any questions.

We appreciate your prompt cooperation.

Best regards,

[Insert signature]

[Insert name, affiliation, and contact information]

Handout 7.3: Sample report on potential nonresponse bias

This excerpt from an unpublished report describes the potential for nonresponse bias. It can be used as a model for reporting a nonresponse bias analysis.

> The sampling frame consisted of the 1,218 principals. The frame included email addresses for principals from all elementary, middle, junior, and senior high schools; special education, alternative, and charter schools; plus early childhood centers.
>
> We sent email invitations to all these principals to take the online survey. Surveys were returned by 707 principals, for a 58 percent response rate.
>
> To compare the characteristics of the schools of our survey respondents with characteristics of the target population of all schools in the state, we looked at an existing data source about all state schools. We used 2010/11 data from the National Center for Education Statistics (NCES) Common Core of Data, which had data from 1,164 public schools to compare the characteristics of responding schools to the known characteristics of all schools, including those that were nonrespondents (our sampling frame and the population of schools from the 2010/11 NCES data file differed by 54 schools). The table below shows the percentage distribution of some defining school characteristics of responding and nonresponding schools. The sample of schools for which we have survey data is quite similar to all schools in the sampling frame in terms of school size, school type, and area education agency. However, principals in city schools and, relatedly, Title I schools with relatively high minority enrollment are somewhat underrepresented in this survey. For example, 18 percent of schools in the sampling frame are located in a city, but only 14 percent of the survey respondents are principals of city schools.
>
> The findings presented in this report should be interpreted with the understanding that not all types of schools are represented in the same proportions as they appear in the full population. See the table below for more details about the respondents and nonrespondents to this survey.

Number and percentage of schools participating and not participating in the survey, by school characteristics

School characteristic	All schools in the state, Common Core of Data (*N* = 1,164)		Responding schools (*n* = 707)		Nonresponding schools (*n* = 457)		Difference between respondents and all principals (percentage points)
	Number	Percent	Number	Percent	Number	Percent	
Locale							
City	210	18	101	14	109	24	–4
Suburb	78	7	51	7	27	6	0
Town	278	24	182	26	96	21	2
Rural	586	51	369	52	217	48	2
School size (number of students)							
0–500	916	80	563	80	353	79	1
501–1,000	189	16	113	16	76	17	0
1,001–1,500	30	3	15	2	15	3	0
1,500+	16	1	12	2	4	1	0
Area education agency							
1	75	6	42	6	33	7	1
5	93	8	46	7	47	10	2
7	169	14	106	15	63	14	0
9	101	9	66	9	35	8	–1
10	150	13	90	13	60	13	0
11	254	22	151	21	103	23	1
12	102	9	69	10	33	7	–2
13	125	11	83	12	42	9	–2
15	94	8	54	8	40	9	1
School level							
Elementary	596	52	355	50	241	54	–1
Middle	235	20	144	20	91	20	0
High	282	25	182	26	100	22	1
Other	39	3	22	3	17	4	0
Title I school?							
No	359	31	239	34	120	27	3
Yes	415	36	232	33	183	41	–3
Not applicable	378	33	232	33	146	33	0
Percentage of students who are a racial/ethnic minority							
0–5	348	30	209	30	139	31	0
6–25	596	52	394	56	202	45	4
26+	205	18	98	14	107	24	–4

Module 8: Focus groups

Overview

Duration: 45 minutes, including 15 minutes for activity 8.1

Slides: Module 8 slide deck

Handouts:

- Handout 8.1: Planning for a focus group.
- Handout 8.2: Sample moderator guide for a structured focus group conducted to pretest survey items.

Materials needed:

- One copy of slides and handouts per participant.
- Writing tools.
- Projector and computer.

Agenda

- Overview.
- Planning.
- Recruiting.
- Moderating.
- Analyzing and reporting.
- Activity 8.1.

Background

A focus group is a qualitative research method that can be used to formulate and pretest survey items (see module 4) or to supplement information gathered from a survey. The goal of this module is to introduce participants to focus groups and to the considerations for planning, recruiting, and moderating them and for analyzing and reporting results.

Strategies for adapting module 8 to your context

- Module 8 is optional. If participants prefer to focus on survey development and administration, omit module 8 and instead conduct the activities in the other modules. If you skip this module, let participants know that they can find resources about conducting focus groups on the Institute of Education Sciences website at http://ies.ed.gov/ncee/edlabs/projects/project.asp?projectID=4544.
- A second option is to use module 8 in a separate workshop for participants interested in conducting focus groups.
- You may choose to emphasize focus groups as a standalone research method for gathering information or as a way of formulating and pretesting survey items. If focusing on one aspect, inform participants that a focus group can serve both purposes.

Slides and notes for module 8

Slide 1

Module 8 presentation

Focus groups

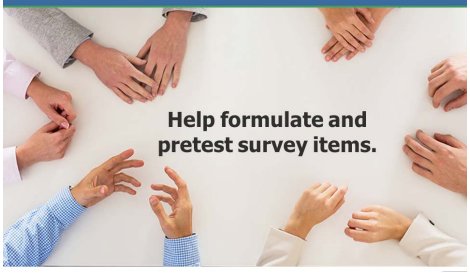
Slide 2

Outline

- **Overview.**
- **Planning.**
- **Recruiting.**
- **Moderating.**
- **Analyzing and reporting.**

Slide 3

Why focus groups?



Focus group results can be used to formulate research questions for survey projects and create survey items. When conducted early in the survey development process, focus groups can provide information about important aspects of the survey topic and the language that potential respondents use to describe their experiences and attitudes about the survey topic.

In addition, focus groups can be used to pretest survey items (see module 4). Focus group feedback about an early draft of a survey can provide insight into how respondents may interpret and react to the survey items and how well the items cover all the relevant aspects of the survey topic.

Slide 4

Why focus groups?

Focus groups can also be used to gain more information about interesting research questions that arise from the survey findings. Focus groups can help researchers better understand why respondents may have chosen certain answers, and they can provide richer content or illustrative information about the topic covered in the survey.

For example, if survey results indicate that many teachers are unhappy with a change in a district policy, a focus group may reveal more information about why teachers feel this way. The opportunity for participants to interact with each other can provide more intensive information than would be obtained through a series of individual interviews.

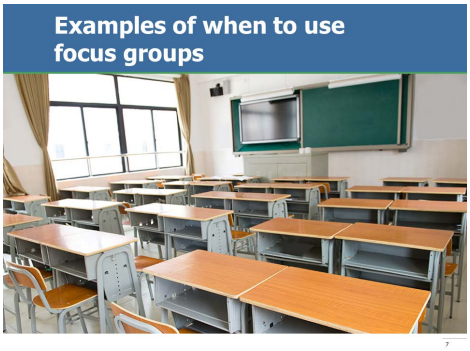
Many mixed-methods studies use surveys and focus groups as complementary research methods.

Slide 5

This module explains how to conduct a focus group in the context of survey development.

However, focus groups are also an effective research method outside the context of survey development, and the information here is relevant to standalone focus-group research efforts.

Slide 6

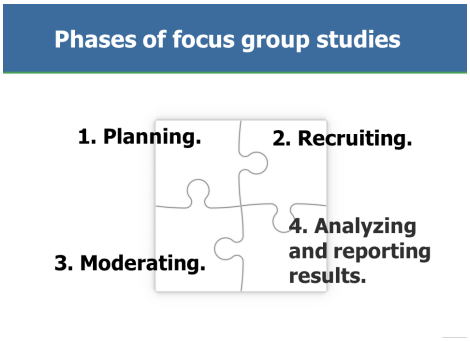


Sample situations when the use of a focus group could be productive:

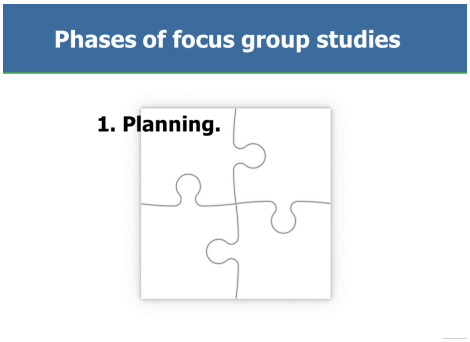
- Your school is interested in implementing an afterschool program, and you want to get information from parents about their preferences, needs, concerns, and interest.
- Your district has rolled out a new online student evaluation tool, and you want to get teachers' feedback on how the tool is being used, problems with its implementation, and ideas for how it can be improved to support instruction.
- A school community is concerned about an increase in bullying. District leaders want to understand the nature and extent of the problem and identify possible solutions from the viewpoints of students, parents, and school staff members.

In each case, having a group discussion with stakeholder groups may yield different information from what a survey would.

Slide 7



Slide 8



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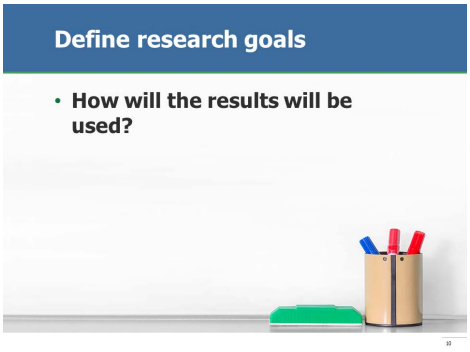

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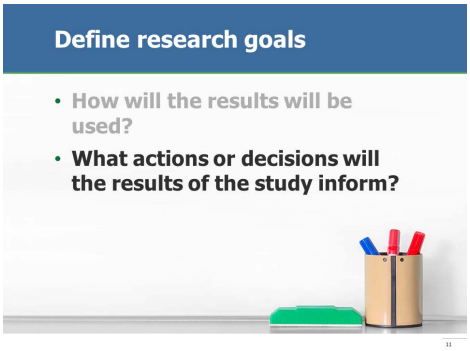
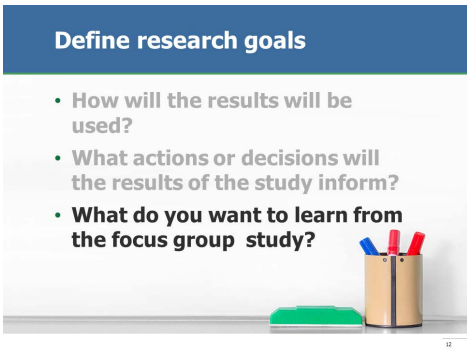


Slide 11

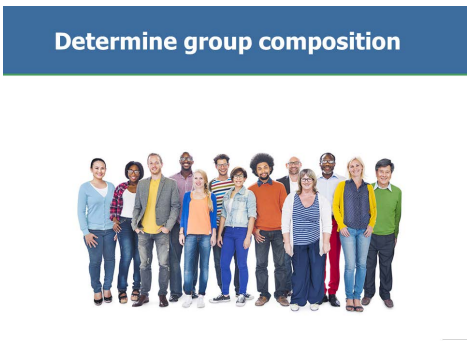


Slide 12

Carefully consider who should be represented in a focus group:

- What are the important subgroups with common characteristics?
- What subgroups might have different perspectives? Ensure that they are represented in your focus groups.

Slide 13

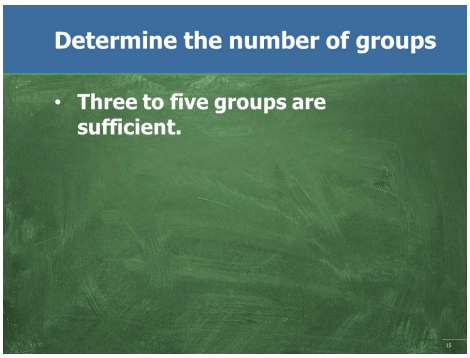


Each focus group typically has 6–10 members. Homogeneous grouping is typically better than heterogeneous grouping because:

- Less time is required for participants to become comfortable with each other.
- Group members will have a common style of communication.
- Conversation is more likely to focus on the research topic.

Be mindful of differences that may make focus group members feel less comfortable about sharing their thoughts. For example, if you want to know school administrators' and teachers' perspectives on a school reform initiative, it is better to have separate groups of administrators and teachers. Teachers may not feel comfortable expressing their views with local administrators in the room.

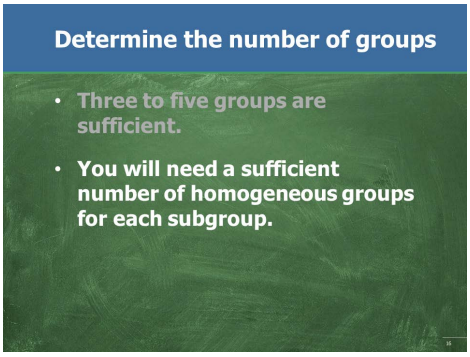
Slide 14



In general, three to five focus groups are sufficient; however, the number depends on the topic and questions of interest.

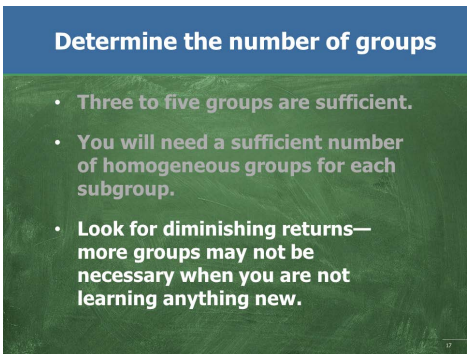
For example, if you are interested in learning about parent, teacher, principal, and district administrator perceptions of a new statewide policy, you will likely want to conduct focus groups with different subgroups and in different geographic regions within the state.

Slide 15



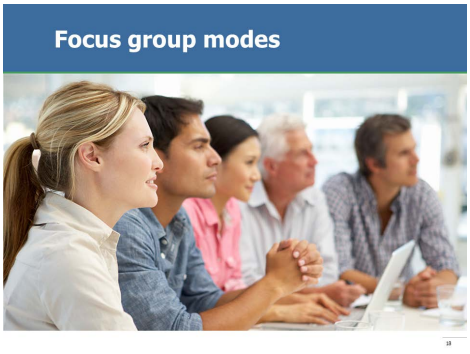
For example, if you are interested in student and teacher views on a district initiative, you will want to conduct at least two focus groups of students and two focus groups of teachers to capture enough information about each type of participant.

Slide 16



When no new themes are emerging from a subgroup, no more focus groups are needed.

Slide 17



Most focus groups are conducted in person, and this is generally the most effective format. However, groups also can be conducted in the following modes:

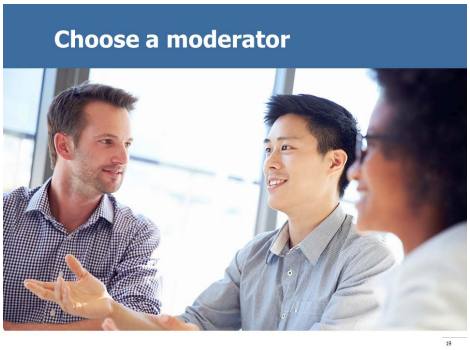
Phone conference call.

Internet webinar, with slides and audio.

Computer-networked “chat-room” style groups, with typed moderator questions and typed participant responses (offers anonymity for sensitive issues).

Whatever mode is used, specific directions regarding how to use technology (or participate in person) should be offered prior to beginning the focus group (Lavrakas, 2008; Morgan, 1997).

Slide 18



Professional focus group moderators are highly skilled in working with people, but most are more experienced in consumer research than in education issues.

Staff members can learn good moderator skills by reading literature about focus groups and participating in mock focus groups, in which participants give feedback to the moderator.

A successful moderator has the following characteristics:

- Is neutral.
- Is a good listener.
- Facilitates group discussion without leading or interjecting viewpoints.
- Is able to engender trust.
- Knows the topic and goals of the focus group.

Slide 19

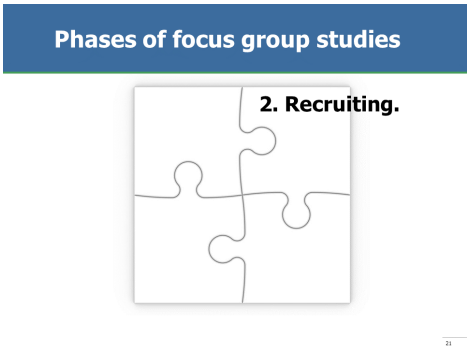
A moderator guide is similar to an interview protocol in that it lists questions that the moderator should ask the group and includes an introductory script and a list of prompts to facilitate conversation and probe further as needed (Morgan, 1997).

The moderator guide can be unstructured or structured.

An unstructured guide simply lists the topics. It allows the moderator more spontaneity and is better for exploratory studies.

A structured guide has a list of specific questions and follow-up probes, and the moderator follows a script. Scripted focus groups allow more efficient analysis and are better for refining research questions.

Slide 20

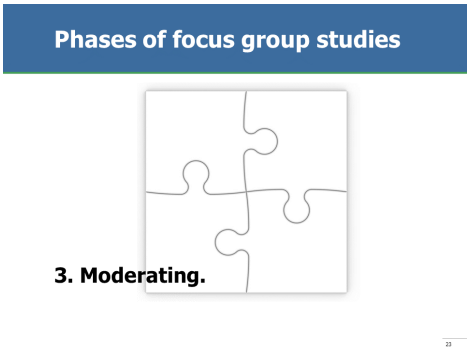


Slide 21

Recruiting strategies:

- Select participants from a target population sampling frame (for example, parent or teacher lists).
- Recruit participants through newsletters or emails.
- Invite more than the desired number of participants to account for no-shows.
- Offer monetary incentives if possible. Nonmonetary benefits, such as the opportunity to contribute to research about an important topic, also can be motivating.
- Send multiple reminders to encourage attendance.

Slide 22



Slide 23

As focus group members arrive, be sure that they complete any documentation required to participate, such as an informed consent form (Morgan, 1997).

The moderator should introduce the study and his or her role in it: the moderator is not an expert and is present only to facilitate the conversation. The goal of the focus group is for members to share and discuss their own perspectives.

You may ask respondents to say something about themselves. This activity may ease nervousness among some members and break the ice.

Common ground rules are:

- Specify breaks.
- State the confidentiality rules.
- Note that only one person at a time may talk.
- Urge respect for other opinions.
- Start with a question that is applicable to all.

Slide 24

Moderator questions

Question type	Purpose
Opening	Helps participants get acquainted and feel connected
Introductory	Begins discussion of topic
Transition	Moves smoothly into key questions
Key	Obtains insight into areas of central concern to the study
Ending	Helps researchers determine where to place emphasis and brings closure to the discussion

Opening questions. These questions are easy to answer and are designed to break the ice and make everyone feel comfortable. For example:

In a focus group of parents: "Tell us your name and what grade your child is in."

In a focus group of students: "I'd like to take a few minutes for us to get to know each other. Instead of having you introduce yourselves the way it's usually done, I'm going to ask you to introduce the person sitting next to you. Take a couple of minutes to talk to the person on your right. Find out his or her first name, age, grade in school, name of school, number of brothers and sisters, and what hobbies or afterschool activities the person is involved in" (Nolin & Chandler, 1996, p. 29).

Introductory questions. These questions focus on the topic. The moderator asks about general impressions (the responses will give hints about participants' experiences). For a student focus group on school safety, a good question is, "I'd like to start by talking about things that make you (or your friends) feel afraid or unsafe at school, such as things that may take place either while you are in school or going to or from school. What comes to mind first? What different things can you think of? (List on board.)" (Nolin & Chandler, 1996, p. 29). Probes about physical/verbal abuse, theft, vandalism, substance use, or locker crime, can be used as needed (Morgan & Krueger, 1998).

Slide 25

Moderator questions

Question type	Purpose
Opening	Helps participants get acquainted and feel connected
Introductory	Begins discussion of topic
Transition	Moves smoothly into key questions
Key	Obtains insight into areas of central concern to the study
Ending	Helps researchers determine where to place emphasis and brings closure to the discussion

Transition questions. These ask about experiences related to the topic, such as, "Let me bring up something else here: disruptive behavior. Does this go on at your school? What do you think of when I say "disruptive behavior?" What kinds of disruptive behaviors make the atmosphere at school seem unsafe or make it difficult for students to learn?" (Nolin & Chandler, 1996, p. 29).

Key questions:

- Ask targeted questions about the topic.
- Ask follow-up questions.
- Focus on specific questions, such as:
  - What did you do when…?
  - What prompted…? What happened…?
  - What would happen if…?
  - What would you change…?
- Probe for clarity.

Example: "Can you give me an example of something that happened at your school that made it seem unsafe—something that happened to you or one of your friends? How did this make you feel?"

(Nolin & Chandler, 1996, p. 30)

Slide 26

Moderator questions

Question type	Purpose
Opening	Helps participants get acquainted and feel connected
Introductory	Begins discussion of topic
Transition	Moves smoothly into key questions
Key	Obtains insight into areas of central concern to the study
Ending	Helps researchers determine where to place emphasis and brings closure to the discussion

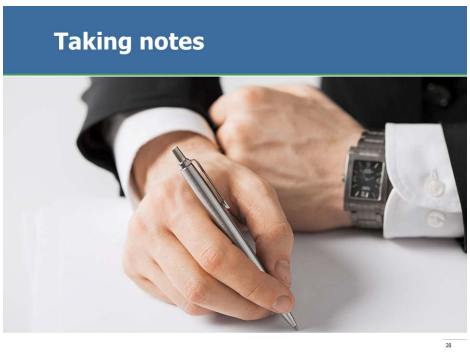
Ending questions. Participants are encouraged to summarize and clarify thoughts:

- How would you describe your position on…?
- Which…is most important?
- What advice do you have about…?

Example: "We've come to the end of the session. Is there anything you'd like to add on anything we've talked about?"

(Nolin & Chandler, 1996, p. 33)

Slide 27



The moderator should not take notes during sessions. Plan for a note taker.

The note taker should be familiar with the research goals of the study. Notes should include the following elements:

- Quotations.
- Key phrases word for word.
- Major themes.
- Areas of agreement and disagreement.
- Other observations that may be relevant (for example, notable body language or tension between participants).

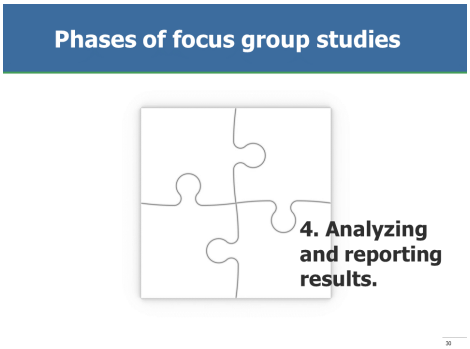
Immediately after the focus group, even if the session has been recorded, the moderator should record impressions and general themes. It is imperative to do this immediately afterward so that recollection is not impeded by other experiences. (Morgan & Krueger, 1998).

Slide 28

Audio recordings are recommended. If resources allow, make transcripts of the audio recordings. Video recording can be obtrusive and inhibit participation.

If you audio or video record a focus group, include notice of the recording in the informed consent form that participants sign. In addition, participants should be explicitly told by the moderator at the beginning of the focus group that the session will be audio or video recorded. If any objections to recording are raised by any of the participants, recording should not take place (Morgan & Krueger, 1998).

Slide 29



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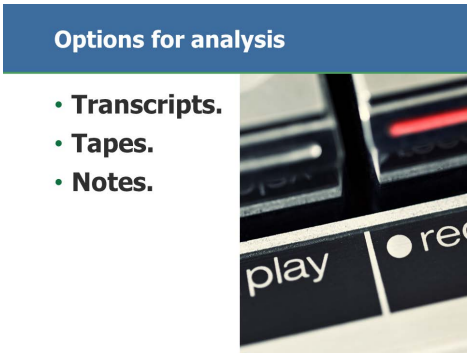

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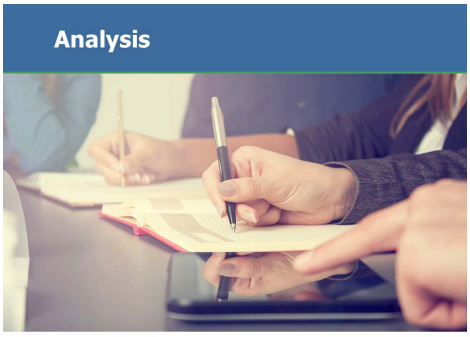
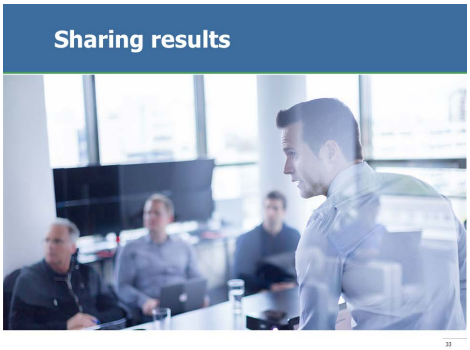


Key steps in analysis:

- Have multiple people review the transcript, recording, or notes.
- Detect and summarize themes.
- Note how many groups mentioned a topic, how often the topic was mentioned within the groups, and the agreement by group members.
- Note differences in themes among subgroups. Record quotes that give evidence of each theme.

(Morgan & Krueger, 1998)

Slide 32

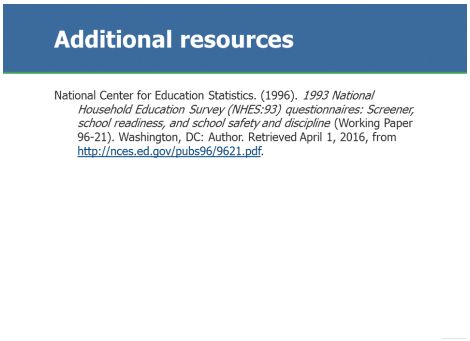


Sharing the results:

- Recall the purpose of the study.
- Consider the audience. Will the results be shared externally or only internally with the team?
- Focus on clarity. Share common themes and note any differences in themes for different respondent types.
- Avoid making statements that claim to represent a broader population. Do not write, “70 percent of teachers feel…”; instead write “Seven out of 10 participants mentioned….”
- Link to decisions informed by findings.
- Use quotations as examples of major themes. Quotations should not be attributed to individuals by name or associated with any other unique identifying feature.

(Morgan & Krueger, 1998)

Slide 33



Slide 34

Slide 35

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Morgan, D. L. (1997). *Focus groups as qualitative research* (2nd ed.). Thousand Oaks, CA: SAGE.

Morgan D. L., & Krueger, R. A. (1998). *The focus group kit*. Thousand Oaks, CA: SAGE.

Nolin, M. J., & Chandler, K. (1996). *Use of cognitive laboratories and recorded interviews in the National Household Education Survey* (NCES 96-332). Washington, DC: National Center for Education Statistics. Retrieved April 1, 2016, from http://nces.ed.gov/pubs/96332.pdf.

Activity 8.1: Planning for a focus group

After presenting the material in the slide deck, distribute handout 8.1.

Encourage participants to work with a partner, particularly if they are working on the same project. Like activity 1.1, this activity can be completed quickly using a hypothetical focus group project, or it can take longer if the group is planning a real project. This activity also can be used as a resource document for participants outside the workshop. If you run out of time, encourage participants to complete the activity on their own.

If you are completing this activity during the workshop, circulate among the participants to answer questions. Refer to the notes in the slide deck as a resource.

If there is time at the end of the session, ask one or two individuals or groups to share their plan; then generate discussion and answer any questions from participants.

Handout 8.1: Planning for a focus group

Think about a focus group project you will design in the near future.

1. What actions or decisions will the results of the study inform? What do you want the project to accomplish? What is your statement of purpose? What do you want the final report to include?

   _____

   _____

2. What resources (money, time, and staff) are available for the project?

   _____

   _____

3. Identify the target population. What are the important subgroups? Do you want homogeneous groups? Heterogeneous groups? Define the eligibility criteria.

   _____

   _____

4. What is your recruitment strategy? What methods are likely to be most successful with this target population? How will the initial contact be made?

   _____

   _____

5. How will you encourage attendance? What is the best location and time for these participants?

   _____

   _____

6. Who will moderate the groups?

   _____

   _____

7. Begin outlining the moderator questions.

_____

_____

8. How will data be collected? Who will take notes? Will a recording or a transcript be made?

_____

_____

9. How will data be summarized?

_____

_____

Handout 8.2: Sample moderator guide for a structured focus group conducted to pretest survey items

Introduction

Thank you for agreeing to come. Your participation is very important. We are [self-introductions for facilitator and note taker]. As you know, our state has a relatively new principal evaluation system, and one feature of the system is that districts can collect survey data from teachers about principals and schools to provide data that can be used in principal evaluations. A draft survey will be piloted early next year. The current survey items were developed to align with the state's principal performance measures.

Our discussion will focus on your reactions to the first draft of this survey and should last about 90 minutes. We will not take any breaks, but please feel free to get up at any time to stretch or use the restroom. Here are some ground rules for the discussion:

- I am going to guide the discussion, asking the group a series of questions. [Note taker name] will be taking notes. We would like to hear from everybody, and I will encourage each of you to speak up.
- There are no right or wrong answers, and it is okay to disagree with one another.
- No one outside of our research team will have access to the notes from this focus group. All comments are confidential, and we will not identify anyone by name or their school in our reporting. Please keep in mind that information shared by your colleagues here today should be kept confidential by everyone in the room. Agreed? [Wait for nods.] Great, thank you.
- This is a group discussion. You do not need to wait for me to call on you, but please speak one at a time to allow for accurate note-taking.
- We have a lot of survey items to talk about, so I may cut short a conversation to move ahead so that we can cover everything.

Before we begin, does anyone have any questions?

Let's start by going around the room and introducing ourselves. Please share:

- Your first name.
- Three words to describe the school you work in.
- One quick example of a positive experience, good piece of feedback, or surprising lesson learned from one of your principal evaluation processes.

Focus group task orientation

As you may know, our state has defined five measures of principal effectiveness.

Display the measures and read them aloud.

The survey development team created a survey to align with these five measures and their indicators. Not all aspects of principal effectiveness and leadership are suitable for a teacher survey. An effective principal does many things related to these measures that are either not well known by all teachers or are better measured through other data sources or stakeholders. This survey focuses on elements of these measures of principal effectiveness

that are knowable and easily reported by teachers and that can provide data that will be useful to principals and superintendents during the evaluation and feedback process.

The survey development team's goal is to create a survey that can be used to collect data from teachers that will be accurate and relevant and, therefore, useful to principals as they reflect on their work and leadership practices. Your honest feedback is welcome and needed for the survey development team to achieve this goal.

Discuss survey items

First let's look at the indicators associated with performance measure 1: Establishes a vision for high student achievement supported by a culture of high expectations and family engagement. Take a moment to look through these handouts.

Distribute handouts with indicators for this performance measure.

Now I will share the items that are being considered for the survey that relate to this measure. Take a moment to look over these survey items.

Distribute handout with survey items associated with this measure.

Moderator questions. After the survey draft is constructed, these questions may be modified to highlight particular survey items about which the team is especially interested in hearing principal feedback or to generate a comparison and expressed preference between two similar survey items. It is unlikely that the moderator will use all 10 questions for each set of items, but they are here to guide the conversation as needed.

1. Which of these survey items seem to you to align very well with this performance measure? Why?

2. If you could select only five items from this set, which ones are the most important?

3. Are there things you do at your school related to this performance measure—that teachers are aware of—that would not be captured by this set of survey items? Describe these things.

4. Are any of these items asking teachers to provide information that you think they might not know or might not have an informed opinion about?

5. Would principals who are very effective in this area get high ratings on these items from the teachers in their school? Why or why not?

6. Would principals who are not effective in this area get low ratings on these items from the teachers in their school? Why or why not?

7. Do you think you know how teachers in your school would answer these questions?

8. In what ways could your teachers' answers to these items be useful to you and your work?

9. Any other comments or suggestions for this set of items?

10. How would you quickly summarize the feedback this group has for the survey development team about this set of survey items? How would you characterize your level of agreement about these recommendations?

Repeat the cycle for the next four performance measures and related sets of survey items.

Closing

Thank you for sharing your views about this draft of the survey. Feedback from this focus group and information we are gathering from other principals, superintendents, and teachers will be used to revise this survey. A pilot test of the revised survey will be conducted next spring. Your contributions will help make this a survey that districts can use with confidence that it was created with the thoughtful input of principals. Thank you.

Appendix A. Resources for the workshop on survey methods in education research

This appendix contains resources that are useful for planning and evaluating a survey methods workshop, including an agenda, a preworkshop survey, and a postworkshop evaluation survey. Each resource can be adapted to fit the structure and purpose of your workshop.

Sample workshop agenda

This sample is for a full-day workshop covering all eight modules. This would be a lot of material to cover in one day for many audiences, so splitting this into two half-day sessions may be preferable.

Time	Session	Topics	Activities and handouts	Presenter
8:00–8:15 a.m.	Introduction			
8:15–9:15 a.m.	1. Planning for a survey	Is a survey the right approach? Defining survey goals Writing research questions Defining topics and constructs Identifying subgroups and types of respondents Determining the unit of analysis Validity and reliability in surveys	Activity 1.1 Handout 1.1	
9:15–10:30 a.m.	2. Exploring sources of existing survey items	Why use existing surveys? Federal and other education survey sources	Handout 2.1	
10:30–10:45 a.m.	Break			
10:45–11:30 a.m.	3. Writing survey items	Purpose of survey items (questions) Writing clear items Open-ended and closed-ended items Response options Ratings scales and response options Formatting and layout	Activity 3.1 Handout 3.1	
11:30 a.m.–12:30 p.m.	4. Pretesting survey items	Expert reviews Cognitive interviews Focus groups Field testing	Activity 4.1 Handout 4.1	
12:30–1:00 p.m.	Lunch			
1:00–1:45 p.m.	5. Sampling	Defining a target population Sampling frames Random sampling Stratification Census and other considerations		
1:45–2:30 p.m.	6. Survey administration	Personal interviews Online surveys Mailed surveys		
2:30–3:15 p.m.	7. Response rates	What are response rates? Calculating response rates Maximizing response rates Measuring nonresponse bias	Handout 7.1 Handout 7.2 Handout 7.3	
3:15–3:30 p.m.	Break			
3:30–4:15 p.m.	8. Focus groups	Purposes of focus groups Preparing protocols Choosing focus group members Moderator strategies Collecting and analyzing data	Activity 8.1 Handout 8.1 Handout 8.2	
4:15–4:30 p.m.	Closing and evaluations			

Preworkshop needs assessment survey

1. Have you ever taken a course in survey methodology?
   a. Yes
   b. No

   If yes, list the courses you have taken.

   _____

   _____

2. Have you ever participated in the development of a survey?
   a. Yes
   b. No

   If yes, briefly describe the project(s) and your role(s).

   _____

   _____

3. Have you ever participated in the administration of a survey?
   a. Yes
   b. No

   If yes, briefly describe the project(s) and your role(s).

   _____

   _____

4. Have you ever participated in the analysis of survey results?
   a. Yes
   b. No

   If yes, briefly describe the project(s) and your role(s).

   _____

   _____

5. List any other relevant experience related to survey methodology that you have.

_____

_____

6. What do you want to learn about conducting high-quality surveys?

_____

_____

Postworkshop evaluation survey

Workshop on survey methods in education research	Strongly disagree	Disagree	Agree	Strongly agree	Not applicable
The goals for the workshop were clearly stated at or before the beginning of the event.	☐	☐	☐	☐	☐
The structure of the workshop was appropriate for meeting the stated goals.	☐	☐	☐	☐	☐
The presenter(s) explained the research evidence clearly.	☐	☐	☐	☐	☐
The presenter(s) clearly connected research evidence to practical implementation.	☐	☐	☐	☐	☐
Because of my participation, I have better knowledge of the basics of survey research.	☐	☐	☐	☐	☐
Because of my participation, I feel better equipped to carry out my organization's research agenda and needs.	☐	☐	☐	☐	☐
Because of my participation, I feel that I can improve how my organization collects survey data.	☐	☐	☐	☐	☐
The format of the workshop provided sufficient time for the participants to meaningfully interact with each other.	☐	☐	☐	☐	☐
The workshop actively engaged me in learning the content.	☐	☐	☐	☐	☐
The workshop was relevant to an issue currently facing my organization.	☐	☐	☐	☐	☐
The presenter was knowledgeable or experienced with the type of setting or role in which I work.	☐	☐	☐	☐	☐
The workshop provided opportunities to consider how to use research or effectively incorporate data into decisionmaking within my agency or organization.	☐	☐	☐	☐	☐
I expect to apply information from the workshop in my work.	☐	☐	☐	☐	☐
I expect to share the information I learned at the workshop with my colleagues.	☐	☐	☐	☐	☐
If additional workshops or trainings were offered, I would be likely to attend.	☐	☐	☐	☐	☐
I am satisfied with the overall quality of this workshop.	☐	☐	☐	☐	☐
The benefits of attending this workshop were worth the time I invested.	☐	☐	☐	☐	☐

18. What aspects of this workshop were most helpful and why?

_____

_____

19. What aspects of this workshop were least helpful and why?

_____

_____

20. What additional follow-up activities would help you increase your knowledge of this topic or apply the information to your own work?

_____

_____

21. What part of this workshop would you suggest changing to make it better for future participants?

_____

_____

22. As a result of this workshop, what action steps will you take?

_____

_____

Appendix B. Glossary of terms and additional resources for the workshop on survey methods in education research

Census. A form of data collection in which every member, rather than a sample, of a target population is surveyed.

Closed-ended item. An item that requires respondents to choose from a predetermined set of options, such as a point on a scale that ranges from *strongly agree* to *strongly disagree*.

Cognitive interview. A one-on-one interview designed to evaluate measurement error in survey items. Individuals selected to participate in a cognitive interview should be similar to the respondents of interest.

Collectively exhaustive. A desirable characteristic of a set of responses for a closed-ended item whereby the response categories fully cover the range of possible responses.

Construct. A conceptual idea that can be measured through one or multiple survey items. A construct may have multiple subcomponents. For example, the construct "parent involvement" includes supporting student learning at home, volunteering in the classroom, communicating with teachers, and other components. A subcomponent may be measured through one item or a series of survey items.

Convenience sampling. A method of sampling in which the researcher surveys a group of individuals who are readily available or easily contacted (for example, attending a parent-teacher association meeting). These kinds of samples are not considered representative of the target population, although they may be useful for some pretesting activities.

Double-barreled item. An item that contains two separate concepts (for example, "Do you agree the principal has a strong leadership style and is respected?"). Double-barreled items should be avoided.

Expert review. Consultation with researchers or practitioners who have experience in and knowledge of a particular topic area to inform research goals, including issues related to data collection and what survey items should be asked.

Field test. A small-scale administration of a survey designed to mirror the data collection procedures of the full-scale study. The purpose of a field test is to evaluate administration procedures and survey items to identify potential problems before commencing full-scale data collection. Often used in high-stakes surveys, field testing can lead to revisions that improve the survey with respect to administration procedures, clarity, completeness of data, and accuracy.

Focus group. A qualitative research method in which a moderator facilitates a group interview and discussion among 6–10 individuals on a particular topic. Focus groups can be used to generate research questions, formulate and pretest potential survey items, or supplement the information gathered from surveys.

Measurement error. The difference between a measured value of a quantity or construct and its true value. Measurement error can be caused by several factors, including missing responses, lack of clarity, omitted items that address a subcomponent of the construct, and errors in data collection and recording.

Mode. The method by which respondents complete a survey (for example, telephone, web, or mail).

Mutually exclusive. A desirable characteristic of a set of closed-ended responses for a survey item whereby each category is distinct and only one response could be true.

Nonresponse bias. Bias in survey findings that occurs when the individuals who did not respond to a survey item differ from the individuals who did respond with respect to how they would answer the items. For example, if participants are asked to rate their experiences with a program and individuals who liked the program are more likely to respond to the survey, the survey results will contain bias and be misleading.

Open-ended item. An item in which respondents are given space to construct their own response rather than choose from a list of provided responses (closed-ended item).

Pretesting. The process of evaluating whether items are likely to capture the desired information from respondents. Pretesting can occur in one of four primary ways: expert review, cognitive interviews, focus groups, and field testing.

Random sampling. A sampling method in which a subset of the target population is selected at random, where each member has a known chance of being selected. A random sample of sufficient size will elicit approximately the same overall responses as a census of the target population.

Rating scale. A response option set of ordered categories indicating the degree of some characteristic, such as importance (for example, *not important, somewhat important, important,* and *very important*).

Reliability. The consistency with which a set of items measures an underlying construct over repeated administrations (or within an administration). A reliable survey instrument has items that produce stable results about its constructs.

Respondent. An individual who responds to a survey or questionnaire.

Response rate. The percentage of people who complete and return the survey out of the total number of surveys intended to be completed.

Retrospective probing. A strategy used during cognitive interviews in which the interviewer asks the respondent specific questions after the respondent has answered a survey item or set of survey items.

Sample. A subset of the target population from which data will be collected. Several methods can be used to select a sample, including convenience sampling, random sampling, and stratified random sampling.

Sampling frame. A complete list of all eligible members of a target population.

Scale. A set of survey items (typically three or more) that measure a construct.

Scripted probe. In a cognitive interview, a question asked by all interviewers from an interview protocol.

Spontaneous probe. In a cognitive interview, a question asked as a follow-up to a participant's response to an item that was not scripted.

Stratified random sampling. A sampling method in which the target population is divided into groups, or strata, based on a characteristic or set of characteristics (for example, age or location), and then a random sample is taken from each group. Stratified random sampling often is used to increase representativeness of the random sample by controlling its alignment to population characteristics.

Survey methodology. The science of survey design, data collection, processing, and analysis.

Target population. The group of people or organizations that the survey results will represent and the group of individuals or organizations from which a sample is drawn or a census is conducted.

Think-aloud. A strategy used during cognitive interviews in which the interviewer asks respondents to describe what they are thinking as they answer survey items. This strategy allows the interviewer to understand respondents' cognitive processes while answering the item and reveals items that are not interpreted as expected.

Unit of analysis. The people, programs, or institutions the researcher wants to make statements about.

Validity. The extent to which the inferences made on the basis of survey responses are accurate and meaningful. A valid survey instrument provides results that accurately reflect the measured constructs and the target population as intended by the survey designers and audiences of the survey findings.

Note

1. See, for example, the YouTube video of a webinar for a survey development project with REL Midwest's Early Childhood Education Research Alliance (https://youtu.be/2y0RxCvfWl0?list=PLVHqsnePfULp0lKpPD_f6Y6JRH4i4M00x).

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Additional resources

These additional resources provide more in-depth information about the topics presented in the workshop.

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