Hello. I’m pleased to be working with you today. I own Carole Buncher and Associates: The Competency Company (CBA), a small, emerging, Washington, DC-based training and consulting firm. CBA specializes in delivering a wide variety of training, primarily to the audit community, including audit report writing, public speaking, supervision, interviewing, and auditing standards.

For 23 years prior to establishing CBA, I led analyses of federal programs and policies for the U.S. Government Accountability Office (GAO).

During my GAO tenure, I was actively involved in designing and delivering audit training, both internal and external to GAO.

Delivering training that is fun and results focused is my passion. I look forward to sharing my expertise with you and facilitating your learning and performance improvement experience.

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Learning Objectives

• Describe frequently used data collection methods and the advantages and disadvantages of each
• Conduct effective unstructured interviews
• Understand the features of effective questionnaire designs
• Be familiar with a variety of data analysis methods
WHY IS THIS TRAINING IMPORTANT?

Discuss with a neighbor(s)

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Module 1.
DATA COLLECTION METHODOLOGIES
What Are Some Methods We Use to Collect Evidence?

- Reviewing records
- Administering surveys
- Conducting interviews
- Observing people, things, processes
Two Types of Data

- Secondary
- Primary
Secondary Data

- Organization charts
- Procedures manuals
- Policies
- Memos
- Mission statements
- Previous studies
- Financial statements
- Spreadsheets
PRIMARY Data Collection Methodologies

- Unstructured Interviews
- Questionnaires and Surveys
- Physical Observation
Module 2.

Unstructured Interviews
Three Stages

1. Preparation
2. Conducting
3. Post-Interview
Stage 1 - Preparation

• Do homework
  • Subject matter
  • Interviewee—attitudes and personality
  • Prior working relationships
• Become conversant—time saver
• Prepare questions (linked to objectives)
• Schedule interview and begin establishing trust and rapport
• Prepare back-up plan—consider what-ifs
• Be prepared!
Stage 2 - Conducting

- Small talk
  - Continue establishing rapport/trust
  - Baseline for normal communications
- Introductions
- Background on audit
- Purpose of this interview
- How much time
- Questions before we begin?
- Ask questions linked to interview objectives
- End

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Stage 3 - Post-Interview Activities

• Write up within 3 days
• Collaborate with other interviewers
• Share write up with other interviewers
• Follow up on documents and referrals
A Dynamic Questioning Technique

The Funnel

- Ask an open-ended question linked to each interview objective
- Paraphrase
- Ask follow-up questions
- Summarize
- Transition to next line of questioning
- Repeat funnel
Module 3.

Structured Interviews: Questionnaires
Anatomy of a Questionnaire

• A cover letter
• An opening section
  – Survey objective
  – How respondent was selected
  – How the responses will add value
  – How anonymity will be handled
• How to return the completed survey (if not face to face)
• The questions
• Thank you
Best Practices for Developing a Questionnaire

1. Keep the language simple.
2. Keep the questions short.
3. Keep the number of questions to a minimum.
4. Do not ask leading questions.
5. Allow for all possible answers.
6. Formulate your questions to minimize confusion.
Types of questions

Open ended
Advantage: Easier to write and provides answer in respondent’s own words; can lead to quotes for a report
Disadvantage: Analysis nightmare; Time consuming to read, classify and quantify responses; may not be able to summarize
Analysis Approach: Content analysis (look for key words, patterns, or pick examples)

Closed ended
Advantage: Less respondent burden and quicker to analyze
Disadvantage: Takes more time to develop; limited exploratory analyses
Analysis approach: Many statistical options

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Open-ended question

Limit open-ended questions.

Example: “What additional comments do you have?”
Closed-Ended Question Formats

– Dichotomous questions
– Nominal questions
– Ordinal questions
– Interval questions
Dichotomous questions

Two possible responses, e.g.,

– My gender is:  ___Male   ___Female

– I have used the new software at least once in the past 5 days:  ___yes   ___no
Nominal questions

Number next to each response has no meaning or value other than to facilitate coding, e.g.,

I am a:
1. Policy analyst
2. Budget analyst
3. Program analyst
Ordinal questions

• Ranking (not rating)

• Example: Using the numbers 1 through 4, please rank the following benefits in your order of importance, from most important (1) to least important (4):

  ___ 401K plan
  ___ short-term disability
  ___ health insurance
  ___ tuition reimbursement
Interval questions

• Measure on a scale, e.g., 1-5 rating (Likert scale)

• Example: “Because of the supervision training, I am better able to delegate work.”
  1. Strongly agree
  2. Agree
  3. Neutral
  4. Agree
  5. Strongly disagree
What is a pretest?

• Purpose: to refine questionnaire before it is administered.
• We go where the respondents are.
• Techniques:
  • Observation: Look for excessive time, not following skip patterns, body language—followed by probing questions.
  • Respondents “Think Aloud”, i.e., stream of consciousness; some respondents find this difficult.
Why pretest? (1 of 2)

- I never did a pretest in more than 20 years of survey design where I had regrets.
- Purpose
  - Get a preview of the respondent’s reaction to the survey
  - See a “real” respondent complete the survey (for web surveys this includes usability testing)
  - Interview the respondent about the questions and responses
  - Time the length of time to complete the survey
  - See if the information is readily accessible
  - See if skip patterns flow correctly
  - Ensure that the wording/language is clear and understandable
  - Discuss how to improve the response rate
  - Missing any questions
  - Read the survey yourself!
Why pretest? (2)

• How many pretests?
  – At least 3

• When to stop pretesting?
  – No new information is gained
Module 4.

Data Analysis
Two Types of Data

1. Qualitative, e.g., unstructured interviews; open-ended questions on questionnaires

2. Quantitative, e.g., closed-ended questions on questionnaires; spreadsheets
Steps for Analyzing QUALITATIVE Data

• Read through the data.
• Organize the comments into categories, e.g., concerns, strengths, recommendations, etc.
• Look for results, e.g., all of the management representatives had similar concerns.
Mean (or Mean Average)

• Most frequently used
• How to calculate: add all values in a data set and divide by the total number of values in the data set
• Influenced by outliers
Median

• Middle value of a set of numbers
• How to calculate: Find the middle number of numbers placed in ascending or descending order
• Less influenced by outliers
• If odd number of values, take the middle number.
• If even number of values, take the two middle numbers, and, if different, divide by two.
Mode

• Most frequently occurring data value
• Can be more than one mode
• How to calculate: count number of occurrences
• Limited applications. One example, if 70 percent of respondents were male, mode would be “male”.

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Range

• Difference between the highest and lowest values
• Example:
  – Highest value = 300
  – Lowest value = 100
  – Range = 200 (or from 100-300)
How To Choose?

• Ideal world = all the same and no need to decide
• If not, don’t use “mean average” if don’t want to include outlier influence
• Can report all four (M,M,M,R), and let reader decide
• Audit objective will help determine which is most appropriate
Determine the mean, median, mode, and range for the following data set.

3 4 4 4 4 5 6 7 7 9 17

Mean: 
Median: 
Mode: 
Range: 

What have you learned this morning?
Thank you!

Use your newly honed data collection and analysis skills, and you will shine!