



Participant Manual

Date Last Edited:
July 2013

Class Date:

Developing and Writing Structured Survey Questions

Why This Course is Important

This course is on developing and writing structured survey questions to collect data. At GAO, we do not separate data collection from everything else we know about planning and engagement design. This type of data collection needs to be carefully planned and fully integrated with the rest of what we are doing on an engagement.

Our data collection needs to make sense in terms of answering our researchable question, using the appropriate information we have collected, and leading us to the types of statements we expect to be able to make in our product.

Questions to Ask the Learner after Class

- How can you ensure that bias is eliminated from the questions you develop?
- What are some of the common ways to ensure the questions are easy to comprehend?
- If you have worked on a survey recently or in a past engagement, how do you think the questions could have been improved to apply the concepts learned in this class?

THINKING CRITICALLY

Developing and Writing Structured Survey Questions

The Knowledge and Skills This Course Covers

This 2 hour course focuses on three key objectives:

- What questions should be asked?
- How can I write questions that elicit high quality responses?
- How can I choose the best type of question to use?

Unit 1: Deciding What to Ask

In this section, participants review the data typically obtained in GAO surveys, such as information on activities and behaviors, attitudes and opinions, quantitative information, and factual conditions. They will also become familiar with things to consider when asking for these types of data. Through interactive discussion, participants will also learn a strategy for going from the researchable questions to a set of potential survey questions and learn a set of diagnostic questions to refine the survey questions.

Unit 2: Writing Questions That Elicit High Quality Responses

Participants explore the nature of high quality survey questions. For example, they learn that high quality questions are easy to comprehend and can be consistently interpreted. In addition, they learn to ask for information that is available and to minimize respondent burden. Lastly, participants discuss how to ensure the questions are unbiased so that the answers will be reliable.

Unit 3: Choosing the Best Type of Question to Use

In this section, participants learn when to use open-ended and closed-ended questions. For example, open-ended questions can be used to obtain background, be follow-up to a closed-ended question, or used for exploratory work to develop a better understanding of an issue. Participants also learn a variety of types of closed-ended questions and when to use them. Closed-ended survey questions are generally stand-alone questions with answer choices (such as yes/no, multiple choice, ratings, and rankings).

Registrar Information

Developing and Writing Structured Survey Questions (COAN912)	This course is about developing and writing structured survey questions to collect data. Participants will learn a variety of types of structured questions and when to use them.
Who Should Enroll	All GAO staff
Prerequisite	None
Advanced Preparation	None
Recommended Related Courses	None
Course Objectives	This 2 hour course focuses on three key objectives: <ul style="list-style-type: none">• What questions should be asked?• How can I write questions that elicit high quality responses?• How can I choose the best type of question to use?
Competencies	Thinking Critically
Instructional Method	Classroom
Length	2 Hours
CPE Credits	2 (1 government-related)
Course Manager	Linda Hawkins, (202) 512-3094
Course Evaluation	The first business day after the class ends, participants will receive an electronic evaluation. The first question on the evaluation asks whether or not the participant attended and completed the entire course. Marking “yes” and going on to complete the course evaluation will automatically update training records to reflect completion data and CPE credit. Note: Participants must attend and participate in the entire class to be eligible for CPE credit.

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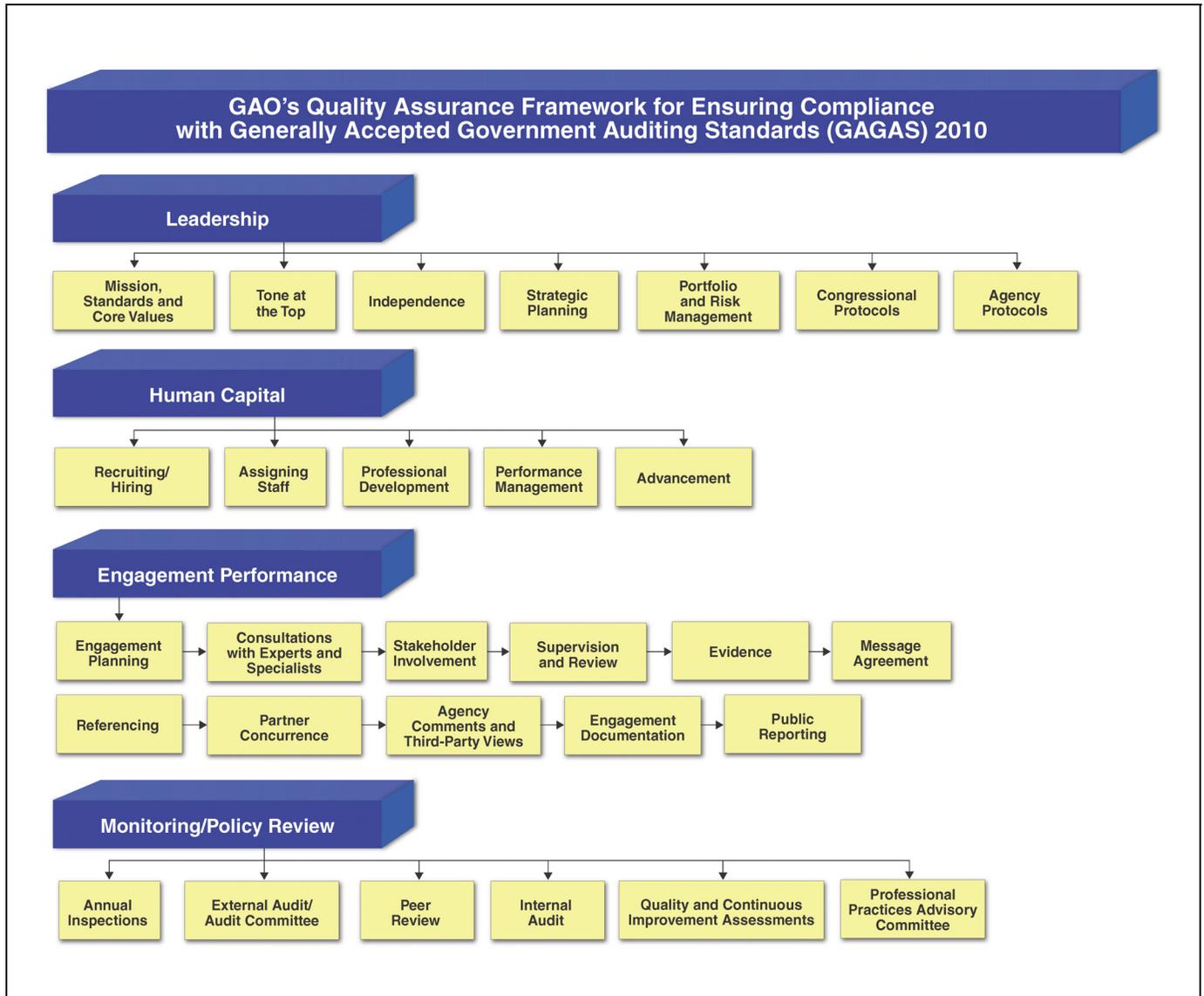
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Agenda

9:00	—	9:10	Introduction
9:10	—	9:30	Deciding What to Ask
9:30	—	10:00	Writing Questions That Elicit High Quality Responses
10:00		11:00	Deciding What Type of Questions to Ask

Agenda

Quality Assurance Framework

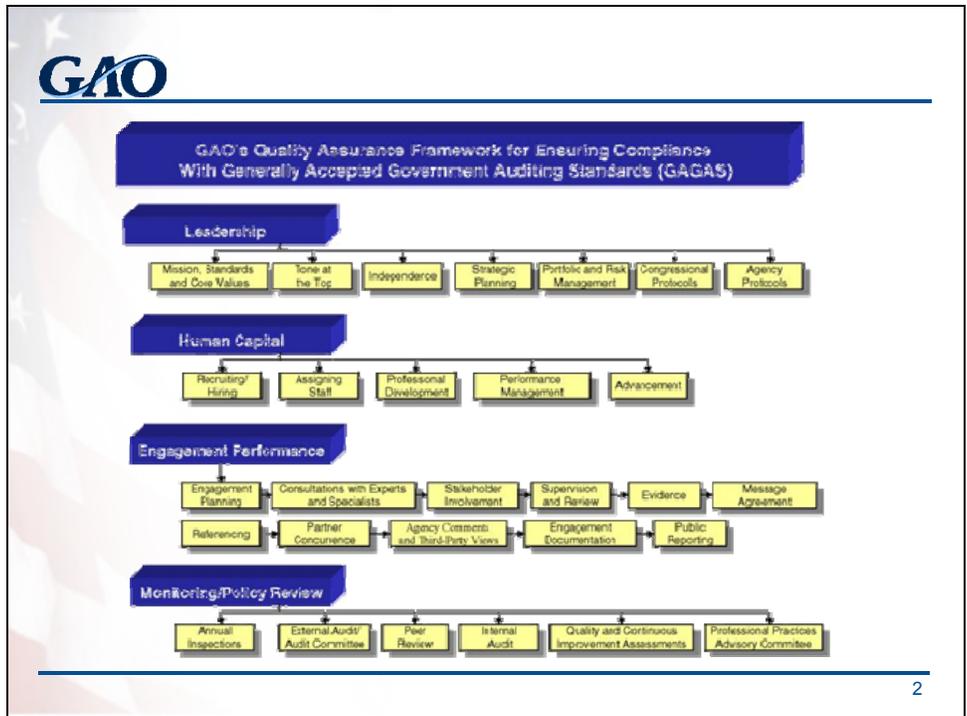




DEVELOPING AND WRITING STRUCTURED SURVEY QUESTIONS

GAO Training Course
Applied Research and Methods (ARM)
Center for Design, Methods, and Analysis (CDMA)

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Course Objectives

The objectives of the course are to help participants improve their ability to:

- **decide what to ask (Unit 1 - 15 minutes)**
- **write questions that elicit high quality responses (Unit 2 - 40 minutes)**
- **choose the most appropriate type of question to use (Unit 3 - 45 minutes)**

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Unit 1: Deciding What to Ask

Unit 1 Objectives

- Review the types of data typically obtained in GAO surveys
- Learn a strategy for going from the researchable question to a set of potential survey questions
- Understand key considerations when deciding what to ask in a survey.

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Types of Data Typically Obtained in GAO Surveys

- **Activities and Behaviors**

Example: Does your state have a list of approved reading programs for adoption by all of its schools?

- **Attitudes and Opinions**

Example: In your opinion, are the transportation needs for the nonmetropolitan areas of your region a high, medium or low priority?

- **Quantitative Information**

Example: How many full-time equivalents did your school district report to your state for the quarter ending December 2010?

- **Factual Conditions**

Example: In what phase of the acquisition process is your program currently?

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Developing Potential Survey Questions

1. **Determine which portions of the researchable question(s) will be addressed using the survey.**
2. **Break down those portions of the researchable question(s) to a set of topic areas.**
3. **Develop questions that address topic areas with increasing levels of specificity.**
4. **Pretest, evaluate and refine the survey questions.**
5. **Consider how the survey responses will allow you to answer the researchable questions in the report.**

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An Example of Developing Survey Questions from a Researchable Question

Researchable Question: “How effective is the Department of Veterans Affairs (VA) outreach to veterans and service members applying for education benefits, especially for those individuals with disabilities?”

Increased specificity (focus on VA Web site): “How well or poorly did VA’s Web site describe the range of education benefits currently available for veterans and service members?”

More specific (focus on one aspect of VA Web site): “How helpful, if at all, was the Frequently Asked Questions (FAQ) section of VA’s Web site in terms of answering your specific questions on VA education benefits?”

Possible Message: “One of VA’s main outreach channels is their Web site. Most service members and veterans surveyed indicated that VA’s Web site was an effective outreach mechanism. However, the Web site was seen to be lacking fundamental educational benefit information veterans expect to be readily available.”

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Considerations for the Survey

- Will the potential survey respondents have the information of interest to you?
- Are there any alternative sources of data available that could be used instead of the survey, or as corroborating evidence with data collected from the survey?
- Will the respondents find any of the questions to be sensitive (e.g., politically, institutionally, or personally) that might cause them to be resistant to provide information?

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Unit 2: Writing Questions That Elicit High Quality Responses

Unit 2 objectives

- Improve comprehension: Questions should be written so that respondents can easily and consistently interpret them.
- Consider availability of information: Questions should be written so that respondents have the information needed to answer them.
- Minimize burden: Questions should not be overly burdensome for the respondent.
- Avoid question bias: Question wording should not bias answers.

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Goal 1: Question Comprehension

Survey questions should be structurally simple.

- Use short, simple sentences (25 words or less is college level)
- Avoid “double-barreled” questions, that is, questions that ask about more than one issue, yet allow for only one answer. For example, “How satisfied or dissatisfied are you with your pay and working conditions?”
- Limit use of prefixes and suffixes
- Avoid using too many prepositions (to, by, for, in, etc.)
- State in question form not as a command
- Use terms consistently

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Goal 1: Question Comprehension

Survey questions and instructions should be clear and specific.

- Use words commonly known to the respondent population
- Minimize use of ambiguous terms
- Define terms and concepts
- Specify acronyms when first used
- Specify time period covered by question (e.g., last federal fiscal year, last seven days, calendar year 2010, etc.)
- Specify what information should be considered when answering a question

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Goal 1: Question Comprehension

Survey questions should include aids to comprehension.

- Group questions with similar topics under headings (e.g., Background, Program Participation, Challenges)
- Use consistent instructions for how to respond (e.g., Check one, If none, enter "0", Check one in each row.)
- Use similar response option patterns and scales

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Goal 2: Availability of Information

Survey questions should be directed to appropriate respondents.

- Is the designated respondent the best person to ask? (Does this person have subject matter knowledge and authority to answer questions?)
- Does the respondent have access to information needed to answer the questions? (This may be access to official records such as computer files or information on the behaviors or activities of others – e.g., program participants, co-workers, etc.)

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Goal 2: Availability of Information

Survey questions should ask for information that is available and ask for it in the appropriate format.

- Do the questions ask for information at the appropriate level of detail? (Questions should match how information is maintained by the organization – e.g., federal fiscal year, monthly, quarterly, etc.)
- Do the questions allow for respondents to provide estimates in cases where actual responses may be difficult or time consuming to provide?
- Do the questions clearly define or delineate timeframes or other qualifiers (e.g., types of program participants to include) to assist the respondent in providing an answer?

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Goal 3: Respondent Burden

Survey questions should minimize **time** burden.

Time burden includes the time required to:

- comprehend the question
- decide whether to answer the question or not
- consult with others for needed information, if needed
- check records or computer files, if needed
- formulate a response using the response options given in the question
- complete all the questions on the survey

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Goal 3: Respondent Burden

Survey questions should minimize **psychological** burden.

Psychological burden can be a factor when:

- questions ask about topics where certain behaviors or attitudes may be not be socially acceptable (e.g., race, sex, political views, etc.)
- responses may be perceived as placing the respondent at risk (e.g., questions about supervisory management skills)
- respondents are not confident that their responses will be kept confidential or anonymous
- survey questions may be perceived as being irrelevant to the purpose of the study (e.g., race, age, income, education level), or unimportant

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Goal 3: Respondent Burden

Fatigue from burden can create problems.

One major consequence of excessive burden is that respondents can get fatigued. This can result in:

- Fewer respondents complete individual survey questions (i.e., item nonresponse).
- More respondents provide estimates of numeric responses, making the data less reliable.
- More respondents provide abbreviated responses (e.g., shorter, less thought out, or less detailed open-ended responses).
- Fewer respondents complete the survey questionnaire.

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Goal 4: Question Bias

Question wording should not bias answers.

The way the question is asked can lead respondents to give inaccurate or inadequate answers.

- Question stem should be balanced – e.g., How satisfied or dissatisfied are you with ...?
- Question should indicate that none or a lack of some attribute is a valid response option – e.g., How many times, if any, have you ...?
- If a question refers to a point of view on an issue, both sides should be presented – e.g., Do you feel that climate change is a problem, or do you feel that it is not a problem?

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Goal 4: Question Bias

Response structure should not cause biased answers.

The way the response categories are presented can lead respondents to give inaccurate or inadequate answers.

- Primacy (tendency to check the first items in a list) and recency (tendency to check the last or most recent items read or heard in a list) – Can cause bias depending on the type of question (especially “check all that apply” questions) and the survey mode
- Acquiescence (the tendency to want to agree rather than disagree) – In agree/disagree questions, this can cause bias.

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Goal 4: Question Bias

Question wording should avoid social bias.

Social bias is caused by the respondent wanting to provide answers that are socially desirable, maintain the status quo, or make a good impression. The more sensitive the question, the greater the potential for social bias. The extent to which social bias may occur is also dependent on the survey mode.

- Interviews (in-person or telephone) – Higher level of social bias due to interaction with interviewer
- Self-administered surveys (mail or web) – Lower level of social bias

Consider:

- Writing questions so that the socially appropriate or socially inappropriate answers are not obvious
- Using a different survey mode
- Obtaining data from non-survey sources (e.g., agency records)

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Unit 2: Class Exercise

Point out potential problems with the following questions.

1. Please provide the number of participants in your work training program.
2. How many middle schools are located in your neighborhood?
3. Did TANF program participants take part in any of the following activities last year?
4. In your school district, how many students at the high school level (grades 9-12) participated in music appreciation programs during school years 2006, 2007, 2008, 2009, and 2010?

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Unit 2: Class Exercise

Point out the problems with the following questions.

5. In the last 12 months, how many times did you visit your doctor to treat the following medical problems? (Provide list of problems in a matrix.)
6. How satisfied were you with the assistance your office received from DOL to develop your state's workers compensation program?
7. Over the last several years, GAO has been ranked as one of the ten best places to work – in your opinion, how would you rate GAO as a place to work – excellent, good, fair, or poor?
8. Do you agree or disagree with the following statement? – My supervisor encourages staff within my work unit to work as a team.

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Unit 3: Choosing the best type of question to use

Unit 3 Objectives

Learn when to use open- and closed-ended questions

Learn about a variety of both open- and closed-ended question types

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Open-Ended Questions Types

There are two types of open-ended questions:

- Narrative (Less specific or more specific)
 - Fill-in-the-blank (e.g., enter number, date, title, or short answer)
-

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Open-Ended Narrative Questions

When to Use

- Exploratory work (e.g., develop better understanding of an issue prior to developing closed-ended questions)
- Follow-up to a closed-ended question
- Summary questions (either at end of questionnaire or section of questionnaire)
- Answer options are not apparent or known to the engagement team and survey designer
- Too many possible options to list (e.g., countries)

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Open-Ended Narrative Questions

Pros and Cons

Pros:

- Easy to write this type of question
- Allow respondents to answer in their own words
- Provide quotations for the report
- Can be analyzed using content analysis methods

Cons:

- Respondent burden from memory recall or entering text
- Diverse responses complicate analysis
- Aggregated results are less precise
- Time consuming to classify & quantify responses

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Open-Ended Fill-in-the-Blank Questions

Examples

Respondent enters a number or short answer. Examples:

- Number of years in the job:

How many years have you served as a Federal Reserve Bank Head Office director?

Years

- Dollar amount:

In FY 2010, what were the program's total obligations (federal amount only)?

\$

- Name of supplier, contractor, or agency

What was the name of the contractor who administered XYZ program during FY 2009?

Contractor:

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Open-Ended Fill-in-the-Blank Questions

Pros and Cons

Pros:

- May provide exact answers
- Efficient format for analysis

Cons:

- Responses may differ in level of precision
- Written responses may have to be edited or coded for analysis
- Providing specific answers may be burdensome compared to selecting a categorical range (e.g., Less than 1 year, 1-2 years, etc.)
- Forcing too high a level of precision may result in non-response or misreporting.

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Closed-Ended Questions

- Specific and focused
 - Limited number of response options
-
-

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Closed-Ended Questions

Advantages:

- Provides precise testimonial evidence for the report
- Easier and less burdensome for the respondent
- Easier and quicker to analyze

Considerations:

- Requires a good grasp of the issue area
 - Must be able to create answer options that are comprehensive and mutually exclusive
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Closed-Ended Questions

Types of Structured Survey Questions

- Yes/No
- Multiple Choice (Check one/Check all that apply)
- Rating
- Ranking

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Closed-Ended Questions

Yes/No

- Determine if a condition exists (e.g., Did you go to training on the new computer system?)
- Screen for subsequent questions

Considerations:

- Not appropriate for content that is complex, or not dichotomous in nature
- No depth of information such as intensity (e.g., level of satisfaction)

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Closed-Ended Questions

Yes/No

Exercise

- Are you a GAO employee?
- Do you commute to work on Metro?
- Do you like your job?
- Did you have your mid-year performance discussion with your supervisor?
- If GAO offered an early retirement and you were eligible, would you consider retiring?

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Closed-Ended Questions

Multiple Choice

- “Check one” or “Check all that apply”
- Respondent is given a range of answer choices and must pick either one or more than one
- Consider using a question matrix instead of a “Check all that apply” question

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Closed-Ended Questions

Multiple Choice (*Check all that apply.*)

Example A

Which of the following offices are involved in approving a procurement request? (*Check all that apply.*)

- a. Budget.....
- b. Procurement.....
- c. Financial Management.....
- d. Resource Management.....

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Closed-Ended Questions

Multiple Choice (*Check one.*)

Example B

Are each of the following offices involved or not involved in approving a procurement request? (*Check one.*)

	Involved	Not involved
a. Budget.....	<input type="checkbox"/>	<input type="checkbox"/>
b. Procurement.....	<input type="checkbox"/>	<input type="checkbox"/>
c. Financial Management.....	<input type="checkbox"/>	<input type="checkbox"/>
d. Resource Management	<input type="checkbox"/>	<input type="checkbox"/>

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Closed-Ended Questions

Rating Scales

- Survey respondent can choose one response from an ordered range of response options
- Response choices can address:
 - Strength or intensity of an attitude or opinion (e.g., very satisfied to very dissatisfied)
 - There are two types of attitude or opinion scales – unipolar and bipolar.
 - Quantitative amounts and frequencies (e.g., income ranges, dates, number ranges, etc.)

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Closed-Ended Questions

Bipolar Rating Scales

Bipolar rating scales:

- Have two opposing poles

Example:

Very satisfied

Generally satisfied

Neither satisfied nor dissatisfied

Generally dissatisfied

Very dissatisfied

- 5- or 7-point scale may be optimal. But GAO surveys most often use 5-point scales.

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Closed-Ended Questions

Unipolar Rating Scales

Unipolar rating scales:

- Have a single pole ranging from one extreme to another

Example:

Extremely effective
Very effective
Moderately effective
Somewhat effective
Not at all effective

- 5-point scales may be optimal for unipolar scales, and frequently used at GAO.

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Closed-Ended Questions

Quantitative Rating Scales

- Rating questions can include ranges by amounts and frequencies. They can be unipolar or bipolar.

Examples:

Time: More than once a week, Weekly, More than once a month, Monthly

Amount: Increased, Remained the same, and Decreased

Percentages: None (0%), Less than 5%, Between 5 and 10%, More than 10%

Increased over 5%, Increased less than 5%, No increase or decrease (0%), Decrease less than 5%, Decrease more than 5%

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Closed-Ended Questions

Quantitative Rating Scales

Reported Daily Television Viewed (2 different rating scales)

Example A:

Up to ½ hour	7.4%
½ to 1 hour	17.7%
1 to 1½ hours	26.3%
1½ to 2 hours	14.7%
2 to 2½ hours	17.7%
More than 2½ hours	16.2%

Example B:

Up to 2½ hours	62.3%
2½ to 3 hours	23.4%
3 to 3½ hours	7.8%
3½ to 4 hours	4.7%
4 to 4½ hours	1.6%
More than 4½ hours	0.0%

Up to 2½ hours **84.0%**

Up to 2 ½ hours **62.3%**

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Closed-Ended Questions

Pros and Cons: Rating

Pros:

- Easy to write and answer this kind of question
- Responses can be quantified
- Intensity of response can be captured

Cons:

- Range of categories can bias results:
 - A skewed range of categories may yield a concentrated distribution of responses that yield little information
 - May push respondents toward positive or middle/average responses because respondents may not want to appear overly negative on an issue or want to avoid “extreme” responses
- May lose precision on quantitative questions compared with fill-in-the-blank questions

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Closed-Ended Questions

Exercise on Rating Questions

Exercise

Convert this open-ended question into a closed-ended one:

What do you think about the work environment here?

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Closed-Ended Questions

Rating Question in Matrix Table Format

How satisfied or dissatisfied are you with each of the following aspects of your job?

	Very satisfied	Generally satisfied	As satisfied as dissatisfied	Generally dissatisfied	Very dissatisfied
a. Opportunities to make meaningful contributions to jobs..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Opportunities to increase analytical skills.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Access to your supervisor.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Closed-Ended Questions

Ranking

Respondent asked to order response options with respect to a particular characteristic such as:

- Importance
- Priority

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Closed-Ended Questions

Example of a Ranking Question

Considering the following aspects of your job, how would you rank the three most important aspects? *[Rank the top three. Enter 1 for the most important, 2 for the next most important, and 3 for the next most important.]*

	Importance [1 st -3 rd]
a. Job assignments.....	_____
b. Quality of management	_____
c. Opportunity for advancement.....	_____
d. Work-life balance	_____
e. Workload	_____

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Closed-Ended Questions

Pros and Cons: Ranking

Pros:

- Reveals respondents' views of the priority of each response option relative to the other options

Cons:

- Generally takes respondents longer to answer ranking than rating questions because they are more analytically difficult
- Does not measure the amount of difference between ranked items
- May result in the loss of responses due to:
 - Incorrect responses such as giving same rank to different items (1,1,1), or incorrectly ranking items (1.5)
 - Skipping items or the entire question because it is too challenging or time consuming (e.g., too many items to rank)

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Closed-Ended Questions

Summary

- Discussed the four types of close-ended questions:
 - Yes/No
 - Multiple choice
 - Rating
 - Ranking
- The options measure intensity of opinion differently
- Compared with open-ended text questions, closed-ended questions are:
 - Usually easier and less burdensome for the respondent
 - Usually easier and quicker to analyze responses

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Summary

We covered the following course topics:

- deciding what to ask
- writing questions that elicit high quality responses
- choosing the best type of question to use

We do not cover how to organize and put all the questions together to make a draft survey ready to pretest. There is a substantial research literature on this topic as well. A survey specialist will be able to provide guidance on this next step.

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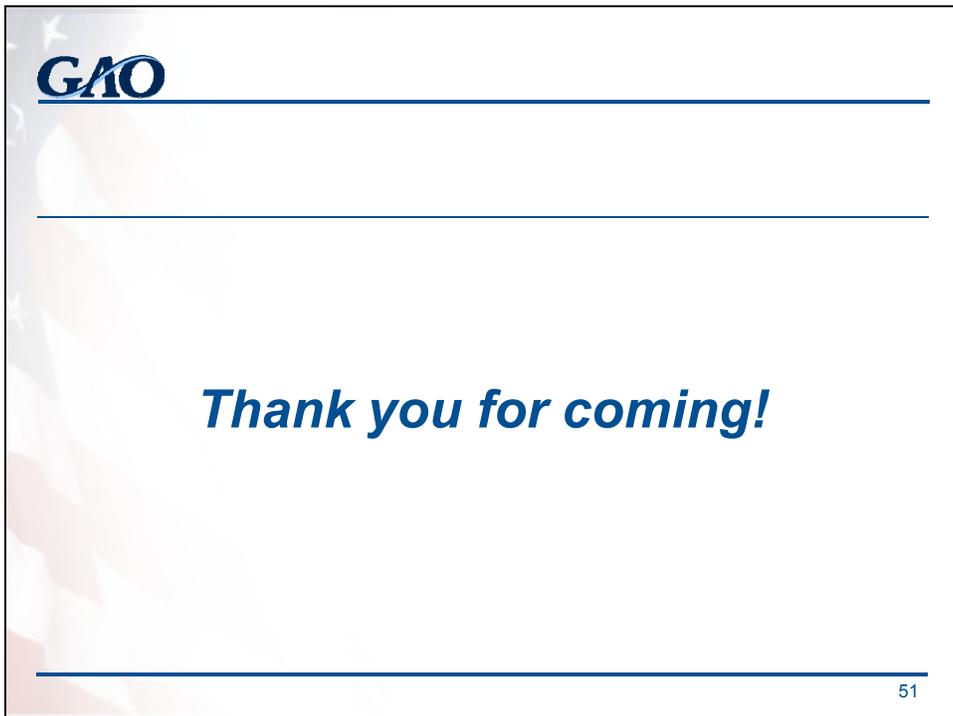


Summary Exercise

Write one or more survey questions, to be asked in a survey of GAO staff, to help address this research question:

“How are usage levels of schedule flexibilities (such as teleworking, maxiflex or part-time schedules) by GAO employees likely to change over the next 12 months?”

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The slide features a background of a stylized American flag with stars and stripes. In the top left corner, the GAO logo is displayed in a bold, blue, sans-serif font. Two horizontal blue lines are positioned below the logo. The central text, "Thank you for coming!", is written in a bold, italicized, blue, sans-serif font. A third horizontal blue line is located at the bottom of the slide, just above the page number.

GAO

Thank you for coming!

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Appendix 1 Types of Closed-Ended Questions

Yes/No Question

1. Do any schools in your district currently provide free meals (breakfast or lunch or both) to students who qualify for reduced-price meals?

Yes

No..... → *Skip to question 5*

Multiple Choice Question: Check One

2. Approximately what percentage, if any, of the goods or services that this establishment provides is sold to local residents of American Samoa? (*Check only ONE box.*)

None...

Less than 20 percent.....

20 to 39 percent.....

40 to 59 percent

60 to 79 percent

More than 80 percent

Don't know

Multiple choice: Check All That Apply

3. Which types of care does this facility routinely provide? (*Check all that apply.*)

Comprehensive well-child care (examination, screening)..

Acute illness care

Follow-up visits

After-hours telephone coverage.....

WIC programs or services

Other → Please specify: _____

None of the above

Matrix Question Alternative to “Check all that Apply” format

4. In the past 12 months, has your wildlife refuge provided, or has it not provided, each of the following visitor services?

	Provided ▼	Not Provided ▼
a. Wildlife observation	<input type="checkbox"/>	<input type="checkbox"/>
b. Wildlife photography.....	<input type="checkbox"/>	<input type="checkbox"/>
c. Environmental education.....	<input type="checkbox"/>	<input type="checkbox"/>
d. Environmental interpretation.....	<input type="checkbox"/>	<input type="checkbox"/>

Rating Question: Bipolar Scale

5. In your opinion, how much easier or harder is it to meet this year’s regional transportation planning funding requirements compared to last year’s?

- Much easier
- Easier
- Neither easier nor harder
- Harder
- Much Harder.....
-
- Don’t know / No opinion.....

Rating Question: Uni-Directional Scale

6. **How familiar, if at all, are you with OMB’s “Memorandum 10-26” plan to reform the federal classification process established by the Classification Act of 1949?**

- Extremely familiar.....
- Very familiar
- Moderately familiar
- Somewhat familiar
- Not at all familiar

Ranking Question

7. **Which of the following are the top 3 most frequent reasons why provisional ballots were not counted?** *(Enter 1 for the most frequent reason, 2 for the next most frequent reason, and 3 for the third most frequent reason.)*

- | | Most
Frequent
[1 st -3 rd] |
|--|---|
| a. Voters did not meet residency requirements..... | <input type="text"/> |
| b. No evidence that individuals had registered..... | <input type="text"/> |
| c. Voters did not provide identification..... | <input type="text"/> |
| d. Voters did not sign a sworn statement of eligibility..... | <input type="text"/> |
| e. Registration applications were received after deadline..... | <input type="text"/> |

Fill-in-the-blank Questions (numeric, date, short answer)

8. How many service delivery sites staffed full time did your program have in operation at any time during each of the following fiscal years? (Enter numbers, or check "Don't know.")

Fiscal year	Number of sites ▼	Don't know ▼
2011	<input style="width: 100px; height: 20px;" type="text"/>	<input type="checkbox"/>
2012	<input style="width: 100px; height: 20px;" type="text"/>	<input type="checkbox"/>

9. In what month and year did the host country receive the final equipment delivery for this project? (Type in 2-digit month and 4-digit year. Please estimate if necessary.)

	/				
M		Y	Y	Y	Y

10. What was the total dollar amount of Recovery Act funds expended for the WIA Youth Program in your state, as of August 15, 2009? (Enter a numeric, whole dollar amount, in thousands. Enter "0" if none.)

\$ _____ , 000

Rating Question Matrix: Uni-Directional Scale

11. If your firm had to choose a new auditor of record, how important, if at all, would each of the following auditor characteristics be to your decision?

	Extremely important ▼	Very important ▼	Moderately important ▼	Slightly important ▼	Not at all important ▼
a. Audit fees.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Geographic presence.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Industry specialization.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix 2**Resources**

GAO Reports Using Surveys

- GAO-10-937, University Research: Policies for the Reimbursement of Indirect Costs Need to Be Updated. *ASM survey of higher education institutions performing basic DOD research, on their administrative cost rates.*
- GAO-10-147, Defense Critical Infrastructure: Actions Needed to Improve the Identification and Management of Electrical Power Risks and Vulnerabilities to DOD Critical Assets. *Three DCM questionnaires sent to managers of critical DOD installations on asset characteristics, disruption experiences, and coordination efforts.*
- GAO-10-10, Workplace Safety And Health: Enhancing OSHA's Records Audit Process Could Improve the Accuracy of Worker Injury and Illness Data. *EWIS survey of occupational health practitioners' opinions of safety incentive programs and their experiences with injured workers and their employers.*
- GAO-08-817 & GAO-08-818SP, Defined Benefit Pensions: Plan Freezes Affect Millions of Participants and May Pose Retirement Income Challenges. *Two EWIS questionnaires sent to pension plan sponsors on recent events and reactions to policy changes. Includes content analysis of open-ended comments on challenges facing plans.*
- GAO-10-808, Financial Management Systems: Experience with Prior Migration and Modernization Efforts Provides Lessons Learned for New Approach. *FMA survey of the characteristics of existing and planned financial management systems, and agency expectations and decisions on changing them.*
- GAO-10-326 & GAO-10-373SP, Native American Housing: Tribes Generally View Block Grant Program as Effective, but Tracking of Infrastructure Plans and Investments Needs Improvement. *FMCI questionnaire capturing detailed description of tribes' use of housing funds and opinions on housing grant programs.*

- GAO-09-17, VA Health Care: Improved Staffing Methods and Greater Availability of Alternate and Flexible Work Schedules Could Enhance the Recruitment and Retention of Inpatient Nurses. *HC survey on the views of VA medical center nurse executives regarding nurse staffing, salaries, recruitment and retention.*
- GAO-08-935, US Asylum System: Agencies Have Taken Actions to Help Ensure Quality in the Asylum Adjudication Process, but Challenges Remain. *Three HSJ surveys of asylum officers, supervisory officers, and immigration judges on their views of training, caseloads, and assessing credibility of cases.*
- GAO-10-333, American Samoa and Commonwealth of the Northern Mariana Islands: Wages, Employment, Employer Actions, Earnings, and Worker Views Since Minimum Wage Increases Began. *IAT questionnaire collecting wage data from employers, changes in benefits and other actions, and views on future wage changes.*
- GAO-08-874 & GAO-08-1147SP, Elections: States, Territories, and the District Are Taking a Range of Important Steps to Manage Their Varied Voting System Environments. *50-state survey by IT Team on 2006 voting system testing, policies and legal processes.*
- GAO-10-279 & GAO-10-280SP, Food and Drug Administration: Opportunities Exist to Better Address Management Challenges. *Joint NRE/HC survey of FDA managers on performance measurement and results-oriented management; questionnaire based on previous GPRA surveys of federal manager.*
- GAO-11-77 & GAO-11-78SP, Statewide Transportation Planning: Opportunities Exist to Transition to Performance-Based Planning and Federal Oversight. *Questionnaires sent to state transportation departments and regional planning organizations in a PI engagement on transportation planning, oversight, and federal/local consultation.*

- GAO-11-137, *Federal Work/Life Programs: Agencies Generally Satisfied with OPM Assistance, but More Tracking and Information Sharing Needed*. *SI surveys of federal agency Chief Human Capital Officers and work/life managers on perceptions of OPM's assistance, guidance, and information sharing, as well as how their agencies track, evaluate, and modify their own work/life programs.*

Survey-Related Texts

- Dillman, Don A. *Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method*. New York: Wiley, 2009. Call number: HM538.D55 2009.

An advanced but practical book about questionnaire development and survey administration.

- Fowler, Floyd J., Jr. *Improving Survey Questions: Design and Evaluation*. Thousand Oaks: Sage Publications, 1995. Call number: HN29.F678.

A good basic introduction to questionnaire development.

- Sudman, Seymour and Norman M. Bradburn. *Asking Questions: A Practical Guide to Questionnaire Design*. San Francisco: Josey-Bass, 1982. Call number: H62 .S92.

Another good summary of question design.

Questionnaire-Related Guidance on the GAO Intranet

- Engagement methodology guidance on surveys and interviews:
http://intranet.gao.gov/arm/about_us/methodology_guidance_tools_and_resources/surveys_and_interviews
- See in particular *Developing and Using Questionnaires Update*:
<http://dm.gao.gov/?library=GAOHQ&doc=5287221>

