Tools and Techniques for Program Design & Evaluation

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Presentation will focus on:

- Tips for developing a solid program design and robust program evaluations
- Factors and tradeoffs to consider when selecting a data collection method
- Managing client relationships
- Key ingredients of a message driven, client-focused report
GAO’s Business Environment

- Research and investigative arm of Congress

- Our work helps improve the performance and accountability of federal agencies

- Our work is fact-based, nonpartisan, non-ideological, balanced, and fair

- Work is done within a highly political landscape

- Results-oriented
Program Evaluation: Managing Client Relationships

- Know your client
- Develop constructive working relationships
- Manage expectations—no surprises!

This all starts with a good program design!
Tensions & Tradeoffs in Evaluation Design

Available Resources

Efficient Data Processing

Minimize Burden

Client Needs

Researcher’s Need for Information
Three Key Types of Evaluations

- Oversight
- Insight
- Foresight/re-examination
Types of Research Questions

- Descriptive
- Normative/Comparative
- Impact
- Prospective
Developing Robust Research Questions

How would you strengthen the following research questions?

- How does FAA monitor airplane safety?
- How effective are boot camps for juvenile offenders?
- How do cable TV companies set their rates?
- How safe is it to fly on commuter airplanes?
Effectively addressing the research questions: The Evaluation Tool Kit

- Quantitative methods
  - Sample surveys (mail, web, email, phone, fax)
  - Analysis of available data
  - Field experiments

- Qualitative Methods
  - Personal interviews (phone, in-person)
  - Field observations
  - Small group methods
    - Focus groups
    - Expert panel
## Factors to Consider When Selecting an Evaluation Technique

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<tbody>
<tr>
<td>1. Time</td>
<td>How much time is available to develop the questionnaire and collect the data?</td>
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<td>2. Resources and Costs</td>
<td>How much money is available? What is the expertise of staff?</td>
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<td>3. Sensitivity of survey data</td>
<td>How sensitive are the data being collected and how reluctant may respondents be to provide data?</td>
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<td>4. Population characteristics</td>
<td>What are the characteristics of the target population? (e.g., do they have Internet access, do they have low literacy levels, language, etc.)</td>
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<td>5. Population/sample size</td>
<td>What is the survey population or sample size?</td>
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<tr>
<td>6. Survey formatting</td>
<td>Does the questionnaire require complex formatting features such as double or triple level matrices?</td>
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Factors to Consider When Selecting an Evaluation Technique (cont’d.)

<table>
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<tr>
<th>Factor</th>
<th>Consideration</th>
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<tbody>
<tr>
<td>7. Technical/complex nature of data being</td>
<td>Are respondents required to do complex or time consuming analyses or computation tasks?</td>
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<td>collected</td>
<td></td>
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<td>8. Number &amp; location of respondents for a</td>
<td>Does the survey require that multiple respondents (possibly at different locations) answer specific questions or sections of a single questionnaire?</td>
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<td>single survey response</td>
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<td>9. Complexity/number of questionnaire skip</td>
<td>Does the survey require numerous or complex skip patterns?</td>
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<tr>
<td>patterns</td>
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<td>10. Need to generalize</td>
<td>Does the technique need to project to a larger population?</td>
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<td>11. Requests to submit supplementary</td>
<td>Are survey respondents asked to send documents to support or elaborate on</td>
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<tr>
<td>documentation</td>
<td>questionnaire responses?</td>
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<td>12. Type of research question</td>
<td>Is the research question descriptive? Normative? Cause/effect?</td>
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Client-Requested Deliverables

- Identify ways to improve community engagement strategies for the TRI program

- Analyze trends in reporting in the past decade
## “Design Matrix” Helps Align Research Objectives With Methodology

<table>
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<tr>
<th>Researchable Question(s)</th>
<th>Information Required and Source(s)</th>
<th>Scope and Methodology</th>
<th>Limitations</th>
<th>What This Analysis Will Likely Allow GAO to Say</th>
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<tr>
<td>What question(s) is the team trying to answer? Identify key researchable questions. Ensure each question is specific, objective, neutral, measurable, and doable. Ensure key terms are defined. Each major evaluation question should be addressed in a separate row on this table. Include the appropriate codes from the attachment to the design matrix.</td>
<td>What information does the team need to address the question? Where will they get it? Identify documents or types of information that the team must have. Identify plans to address internal controls and compliance. Identify plans to collect documents that establish the “criteria” to be used to evaluate the condition of the issue. Identify plans to follow up on known significant findings and open recommendations that team found in obtaining background information. Identify sources of the required information, such as databases, studies, subject area experts, program officials, models, etc.</td>
<td>How will the team answer each question? Describe strategies for collecting the required information or data, such as random sampling, case studies, DCIs, focus groups, questionnaires, benchmarking to best practices, use of existing data bases, etc. Describe the planned scope of each strategy, including the timeframe, locations to visit, and sample sizes. Describe the analytical techniques to be used, such as regression analysis, cost benefit analysis, sensitivity analysis, modeling, descriptive analysis, content analysis, case study summaries, etc.</td>
<td>What are the engagement’s design’s limitations and how will it affect the product? Cite any limitations as a result of the information required or the scope and methodology, such as: --Questionable data quality and/or reliability. --Inability to access certain types of data or obtain data covering a certain time frame. --Security classification restrictions. --Inability to generalize or extrapolate findings to the universe. Be sure to address how these limitations will affect the product.</td>
<td>What are the expected results of the work? Describe what you can likely say. Draw on preliminary results for illustrative purposes, if helpful. Ensure that the proposed answer addresses the question in column one.</td>
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Audience Participation Time

Mini Design Meeting:
Project on Community Engagement Strategies for EPA’s TRI Program
Managing the Message Development Process

- Think about potential message from the beginning—what’s your Twitter story?
- Merge engagement with writing tasks
- Consider Elements of a Finding
  - Criteria
  - Condition
  - Cause
  - Effect
Mind Maps Can Help You Stay on Message
Drafting Message-Driven, Client Focused Reports

- Is there a hook in the first few sentences that explains the magnitude of the issue and makes the reader want to keep reading?

- Are the objectives neutrally worded—free from bias or tone that implies a judgment about the program or agency of focus?

- Does the report convey all the important things the team did to answer the objectives as well as the limitations?

- Does the background contain that information (and only that information) a lay reader would need to know to understand the issue?

- Does the header (short answers to your research questions) convey a message?
Drafting Message-Driven, Client Focused Reports (cont’d.)

- Are the arguments presented in the findings section logical?

- When a deficiency is discussed, does the report mention relevant criteria—guidance, best practices, prior reports—that illustrate how things “should” be?

- Is it clear there is a problem when a deficiency is pointed out? Is there a “bad effect”? Is this supported with evidence?

- Is there a clear, convincing discussion of how changing something (recommendation) could address the problem, fill a void, or significantly improve the situation (effect statement)?

- Is the effect real or potential? (If the effect is potential, check to make sure the effect isn’t overstated).
Drafting Message-Driven, Client Focused Reports (cont’d.)

- Is there adequate “contextual sophistication”—e.g., have things like the political environment and competing resource needs been taken into consideration? Are things overly simplified?

- Does the conclusions section tie the report together, bringing in needed context to understand why action is warranted?

- Are each of the deficiencies addressed in the conclusions section either in the order they were introduced in the report, or in another logical way?

- Does the conclusions section do a good job of setting up each recommendation?

- Are the recommendations doable—if you were an agency official, would you be able to easily envision how to operationalize each of the recommendations?
Questions?