PLS 506
Mark T. Imperial, Ph.D.

Lecture Notes:
Defining Problems

- **Defining Problems**
  - Focusing on problems is important
    - Problem solving is a critical task of managers, planners, and policy analysts
      - Decisionmakers are often unclear about what they want and the job of a good analyst is to clarify matters
      - Defining problems is one way that analysts can influence decision making (see argument and persuasion readings)
    - Problems are the raw material of policy
      - Understanding how they are defined, organized, compared, and ranked is vital to understanding how policy is made, implemented/administered, or evaluated
    - All too often the way people understand issues/problems overwhelms, discourages, and confuses them
    - Verifying that a problem does exist and redefining vaguely stated problems are a key step in the policy analysis process
      - The task of the analyst is to move from a general problem concept to specific measures of the problem so that alternatives can be devised and evaluated
  - *Problem definition* is a medium through which we discover what we realistically want and how we may go about obtaining it
    - We don't discover a problem "out there" - we make a choice about how we want to formulate a problem
    - Ralph Waldo Emerson noted that we see what our experience has prepared us to see
  - A *problem* requires a cognitive judgment that the situation is alterable
    - Problems are situations
    - Discrepancy between "what is" and "what ought to be"
    - Not a problem if you can't do anything about it
  - Your perspective on a problem is likely to depend on your education, background, training, experiences, etc.
    - This background is also likely to lead you to favor certain policy options. For example, water quality problems may be viewed by:
      - Economists in terms of market failures/incentives/externalities
      - Engineers may see the problem in terms of poor planning and design, technical design flaws, etc.
      - Biologist may focus on impacts to wildlife
      - Educator may view the problem in terms of poor public education
    - Political scientist/public administrator may view it as an institutional design problem
    - Planner may view as a growth management problem
  - Big difference between defining policy problems in objective versus subjective terms
    - Most, if not all, policy problems are socially constructed

  - Nature and causes of environmental problems are often defined in ways that yield political advantage for one group over another
  - Selective perception/strategically define problems to lead to predefined policy problems
  - Different goals, policies, objectives, and solutions often imply different definitions (interpretations) of a problem or even different problems
- **Defining a problem is one way that evaluators can influence a program evaluation**
  - We don't discover problems "out there" - we make choices about how we formulate or "frame" problems
  - Problems can be framed in many ways so pay close attention to how you and your client "frame" the problem
    - Try to avoid framing the problem in ways that are overly subjective or biased
    - A good problem statement will stimulate a wide range of viewpoints
    - How will you work with your client to frame the problem?
    - How will you ensure that your problem definition is consistent with that of your client or the audience for your analysis?
  - The discrepancy between "what is" and "what ought to be" that is at the heart of a good problem statement is what the program is trying to accomplish. That ends up being what you examine in the program evaluation
- **Advice for formulating a good problem statement**
  - The statement should identify the discrepancy between the current situation and the one that is desirable.
    - You should be able to define the problem in one sentence
    - You must be able to operationalize and define the terms used in the problem statement
  - The problem should be of significance to your client
    - Are you working at the right scale?
    - Avoid being overly broad and over generalizing a situation
    - Avoid being too narrow so that the problem is of limited social importance
  - What are the boundaries of the problem?
    - What is included and excluded for consideration?
    - Does the problem statement identify the unit of analysis?
    - Who is it a "problem for?
    - Will your analysis only focus on some subset of the larger problem? If so why?
  - Do not define the problem in terms of the absence of a specific solution.
    - There are typically numerous potential solutions for any given problem.
    - If there are no solutions then there is no problem because the situation is not alterable
  - How will you know when the problem is solved?
    - Problem statements imply formulating goals or objectives for an acceptable solution.
    - In order to judge the effectiveness of a potential solution you need to know how much they can affect the problem

- **Can you verify and analyze the problem?**
  - Is there data or evidence to support your argument that something is a problem?
    - What is the trend? Is it getting better or worse?
    - Is it a crisis or severe? Why?
    - Is it a novel problem or one experienced in many places?
    - Is it a simple or complex problem?
    - What are the causes of the problem?
    - Whom does it affect? Does it affect some more than others?
    - Are solutions available? Is there data pertaining to whether the solutions work?
  - Do you have more than one source of evidence?
    - Is the data qualitative or quantitative?
    - Are there multiple sources of data?
  - If you plan to collect data to analyze the problem, do you have time to both collect and analyze these data?
  - Does the scale of your data match the scale suggested by your problem statement?

What makes a good research question?

- **While the problem statement helps you understand the outcome the program is trying to achieve, you then need to formulate more specific research questions**
  - The research questions are based on the program logic/logic model
  - The research questions specify what the objectives of the program evaluation are
  - The research questions help identify the concepts, variables, and measures that will be at the heart of data collection efforts.
- **How do you develop a workable research question?**
  - What is known about the subject or issue?
    - You need to know what is and is not known about the literature in your area
    - How do other researchers frame their questions, operationalize variables, measure variables, and answer their questions.
    - How will you ensure you don't ask a question that has already been answered?
    - A good research question builds on what we already know and what we can find out
    - When answered it typically leads to other important questions
  - It should end in a "?"
    - The main research question is usually very specific but also open ended?
    - It should ask about one set of relationships
    - Don't have compound questions that are really multiple questions
    - What is the unit of analysis? Is it clear what you are asking about?
    - It is often answered by proposing one or more hypotheses
  - It should be something that is interest to you as well as your client.
    - Who is the audience for the answer?
    - Why do they want the answer?
    - Why is the answer important?
  - A research question isn't about what *should be* it is about what *is*

    - It is answered by looking to the real world and examining things as they *are*, not what *could be* or *should be*
    - The answer to the question then leads to a discussion of how to make the current situation more desirable
  - It should neither be too broad or too narrow
    - The amount of literature related to the question can be one indicator?
    - How many variables are needed to understand and answer the question?
    - Is the underlying process complex with multiple causal pathways?
    - Sometimes you can break the research question down into its main components and focus on one component of the problem or subset of causal relationships.
  - It should be a question that is relatively easy to answer with existing data sources or through the collection of new data
    - Can you really answer the question as it is written?
    - Can you operationalize the terms and measure them?
    - Is there data to answer the question?
    - How much data is required to answer the question?
    - Will I be able to get access to these data?
    - Is there a manageable set of answers to the question?
    - Do you have the time and resources to answer it?
- **If you are having trouble formulating your research question, you should consider tweaking it by thinking about**
  - Broadening or narrowing your focus
  - Modifying the time period
  - Modifying the population or unit of analysis
  - Modifying the geographic location of the study
  - Modifying the point of view (e.g., political, economic, social, legal, etc.) or focusing on a component of a larger question