RESEARCH PROBLEM
FORMULATION

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Objectives:

1. To appreciate the challenges faced by researchers when formulating a researchable problem
2. To learn the difference between a researchable problem and one that is not
3. To apply the principles learned by formulating an actual research problem
Formulating the research problem is, in itself, a BIG problem.
Problem formulation involves

- “moving to and from different levels of abstraction and generality” (Punch 2000)
- “a progressive sharpening of concepts and a progressive narrowing of scope” (Selltiz 1976)
The research TOPIC must be grounded on some already known fact which is used to introduce the topic and from which the research problem comes from.
Topics may arise from:

1. A concern with some social problem
2. An interest in some general theme or pattern of behavior
3. Some body of theory
4. Some personal inclination or interest

(Selltiz 1976)
Sources to use in selecting a topic:

1. Printed sources
2. On-going research projects
3. Available data sets
Intensify your knowledge & familiarize yourself about what is known on your topic

1. Consult the library
2. Read written records/documents
3. Talk to “informed others”
Topic
Problem
(more general)

Research
(more specific)
Moving from topic to problem involves:

1. Specifying the purpose of the research:
   a. Exploration
   b. Description
   c. Explanation
Moving from topic to problem involves:

1. Narrowing down the scope of the topic and identifying the geographic and temporal scope of the problem
Moving from topic to problem involves:

1. Operationalizing the concepts to be used such that they are directly observable:

   Concept (+ its dimensions)
   ↓
   Variables
   ↓
   Indicators
Concepts are embedded in research questions, but they are typically too general and abstract.

Formulate the problem by specifying the indicators of the concepts. Variables/indicators provide the link between concepts and data.
Example of Conceptualization

Millennium Development Goals

- Aims to end extreme poverty by 2015
- It has 8 goals, 18 targets & 48 indicators

Research Question: How has the Philippines progressed in terms of achieving the MDG?
## Poverty (MDG)

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Some Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td>Proportion of pop below $1 a day</td>
</tr>
<tr>
<td>Hunger</td>
<td>Proportion of pop below min dietary energy consumption</td>
</tr>
<tr>
<td>Education</td>
<td>Net enrolment ratio in elementary</td>
</tr>
<tr>
<td>Gender equality</td>
<td>Ratio of literate women to men 15-24</td>
</tr>
<tr>
<td>Child mortality</td>
<td>Infant mortality rate</td>
</tr>
<tr>
<td>Access to water</td>
<td>Proportion of pop w/ sustainable access to an improved water source</td>
</tr>
<tr>
<td>Access to sanitation</td>
<td>Proportion of pop with access to improved sanitation</td>
</tr>
</tbody>
</table>

### Some Indicators

- **Proportion of pop below $1 a day**
- **Proportion of pop below min dietary energy consumption**
- **Net enrolment ratio in elementary**
- **Ratio of literate women to men 15-24**
- **Infant mortality rate**
- **Proportion of pop w/ sustainable access to an improved water source**
- **Proportion of pop with access to improved sanitation**
“Development expands human freedoms & capacities.”

Two concepts are used in this proposition:

1. Development
2. Human freedom & capacities

Let us look at one way of conceptualizing these concepts.
Human development

- Capacity to be and capacity to do to live a full and creative life
“Development expands human freedoms & capacities.”

Human development

A long & healthy life
- Life expectancy at birth

Knowledge
- Adult literacy rate
- Gross enrollment ratio

A decent standard of living
- GDP per capita
“Development expands human freedoms & capacities.”

- Human freedom & capacities
  - Political freedom
  - Economic freedom
  - Cultural freedom
Some concepts in IP research

- Indigenous
- Cultural identity
- Ethnicity
- Ways of life
- Land rights
By translating concepts into variables and indicators, you will come up with a problem statement that:

a. Points to identifiable variables and relationships—it expresses or asks a question about the relationship between 2 or more variables

Development human freedom & capacities
• Suggests observations that offer answers to the problem—the variables should be observable or at least potentially observable. Well-developed and well-stated questions indicate what data will be necessary to answer it.

• Clearly identifies the research’s **unit of analysis**, or the entities about whom or which the researcher gathers information.
Moving from topic to problem involves:

- Optional: Formulating the hypotheses to be tested. Hypotheses are tentative answers to research questions. They are *expected* but *unconfirmed* relationships between 2 or more variables.
Hypotheses are stated in such a way that they are amenable to testing.

- Avoid normative statements (e.g., We should all go to church every Sunday.)
- Hypothesis must speculate on the form/direction of the relationship
  - “Happiness and income are related” is not testable
  - “The higher a person’s income, the happier he is” is testable
Hypotheses are stated in such a way that they are amenable to testing.

- Hypotheses can only have probabilistic, not exact, confirmation. Use phrases like “in general”, “more likely to”, “tends to”, etc.
- Avoid double-barreled hypotheses (e.g., the higher the population density in a city, the higher the rates of illiteracy and drug addiction)
- It should be consistent with most known facts.
To sum up, the problem statement should explicitly state
What relationship between what variables about what units of analysis do I want to study?
In making your final choice, consider your topic’s

1. Feasibility
2. Relevance
3. Ethical issues
References