Research Question: 6 Characteristics of a Good Research Question

- ask about the relationship between two or more variables,
- be stated clearly and in the form of a question,
- be testable (i.e. possible to collect data to answer the question),
- not pose an ethical or moral problem for implementation,
- be specific and restricted in scope (You aim is not to solve the world’s problems), clear and concise, and
- identify exactly what is to be solved

Quantitative Approach: Good or Bad?

- Will there be a significant decrease in the depression scores of adults involved in group therapy as opposed to adults involved in individual therapy?
- Are college freshman in public universities indifferent in their academic achievement compared to college freshman in private institutions?
- Will there be an increase in reading achievement among first grade students taught using the new language approach as opposed to the basal approach?
Research Question: An Essential Step to Writing Clear and Focused Questions

- What is the effectiveness of parent education for parents with problem children?
  
  Use operational definitions to revise the question

Operational definition - defines the concept or variable in terms of the operation or process used to measure or observe the concept or variable; overt representative behavior or measurement of the concept

Effectiveness = increased ability to use logical consequences (as opposed to punishment) as measured by the Parent Behavior Rating Scale

Problem child = child who has been diagnosed with ADHD

Operational definition allow researchers to move from general ideas and constructs to measurable events. (Heppner et al., 1999, p. 39)

Is the difference in the number of times that parents use natural, logical consequences (as opposed to punishment) with their child who has been diagnosed with ADHD who participate in the STEP parenting program as opposed to parents who participate in a parent support group?
Research Question: Operational Definition

<table>
<thead>
<tr>
<th>Construct or Variable</th>
<th>Constitutive Definition</th>
<th>Operational Definition</th>
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</thead>
<tbody>
<tr>
<td>Height</td>
<td>Distance from the base to the top of something.</td>
<td>Height measured in inches to the nearest inch.</td>
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<tr>
<td>Attitude</td>
<td>An individual's state of mind toward a person, idea, etc.</td>
<td>Score provided on an attitude scale.</td>
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<tr>
<td>Morality</td>
<td>Ability to discern good from bad behavior.</td>
<td>Score on Kohlberg's Defining Issues Test.</td>
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<tr>
<td>Scholastic Aptitude</td>
<td>An inclination for learning academic subjects.</td>
<td>Results of the math and verbal sections of the Differential Aptitude Test.</td>
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<td>Family Size</td>
<td>Number of siblings an individual has.</td>
<td>Number of siblings reported by the study participant.</td>
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<tr>
<td>Prejudice</td>
<td>Irrational, preconceived dislike for particular groups, races, or religions.</td>
<td>Score on a Social Distance Scale.</td>
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Research Questions: Terminology

Although not all researchers would agree as they use terminology interchangeably, some researchers suggest that the terms used imply the research design and statistical analysis that will be used in the study. Thus, it is important for you to be precise in terminology.

- "relationship" – implies that you are looking for a simple relationship between variables.
- "difference" - implies that you intend to compare two or more groups.
- "effect" - implies that you intend to determine if one variable caused and effect on another variable.

Research Question: Directional or Non-Directional

- Directional
  - Increase, decrease, better
  - Should only be used if based on the literature. If prediction is wrong, significant findings can be missed.
- Non-directional
  - Difference, effect, indifference
Quantitative Research Question: Application

Develop Your Research Question(s).
2-5 is a good number.

Remember that your question should never be able to be answered with a "yes" or "no."

Research Question: Application

Is there a difference between online students' perceived sense of community or inquiry (e.g., social presence, cognitive presence, and teacher presence) who use only asynchronous CMC systems for online discussion and who use a combination of both asynchronous and synchronous CMC systems for online discussion?