What is a research question?

Fundamentals of Academic Writing
Research

• Systematic investigation to establish facts and reach conclusions
Research question

• Helps determine appropriate methods
• Helps define valuable data
• Gives a goal to work toward, and makes the conclusion sensible and worthwhile
Life, the Universe, and Everything

• The ultimate answer to life, the universe, and everything is: 42.

Without a question, it is difficult to make sense of what you find.
Texas Sharp-shooter Fallacy
Texas Sharp-shooter Fallacy

• Unless you define the question \textit{from the beginning}, you may not be doing research.

\textbf{Research}

• Systematic investigation to establish facts and reach conclusions
Research question

• Identify some phenomena, event, or area that interests you.

• Ask one or more specific questions:
  – What
  – Why
  – How
  – When
  – etc.

• (Yes/no questions tend to be less interesting, but they are also possible.)
Research question

• A topic (without a specific question) leaves you with too much to study or write about.
  – “Juvenile crime”

• Asking a question provides focus.
  – How does skipping school relate to juvenile crime?
  – What factors in the home predict juvenile crime?
  – How do rates of juvenile crime differ in cities versus rural areas?
Research question

• Questions can be too broad.
  – Why do some teenagers commit crimes?

• Questions can be too narrow.
  – How many crimes were committed in Nagoya in 2013?

• A good question should be specific but not trivial to answer.
  – How do school attendance rates correlate with rates of juvenile crime?
Two uses (at least)

• While researching
  – A well-defined question can guide data collection, theory selection, methods of analysis, etc.

• While writing
  – A well-defined question helps create the thesis statement and structure the paper.
Research question

• **Literature review** can help focus the question.
  – Survey what is already known
  – Identify key theories, methods, or findings
  – Look for gaps in current research

• (Literature review can also help you find theories to test, or methods that have been successful in the past.)
Research question

• Identify some phenomena, event, or area that interests you.

• Ask a specific question that you can answer.

• Make sure the question is not too simple (trivial) or too difficult (impractical, non-factual) to answer.
  
  – Some questions cannot be answered factually. "Is AKB48 as good as Morning Musume?"
Research question

• There is no one right way to turn an interest into a research question.
• But here are some things to keep in mind.
  – Relevance
  – Manageability
  – Originality
  – Interest
  – Clarity
  – Position in your field
Relevance

• Make your research question relevant to people in your field.
  – Your professor
  – Your colleagues
  – Other researchers
  – Other fields?
  – Future employers?
  – Industry/Government?

• Will an answer to your question fill a gap in knowledge? Will it change understanding? Will it affect practices?
Interest

• Make your research question interesting to other people and to you.

• It can take several weeks to several years to research, write, and publish. Stay interested.

• Avoid common traps:
  – Fads. A question many people are doing now. Those trends change; will you stay interested?
  – Convenience. A project to fit a grant application or professor’s request might not keep your interest.
Manageability

• The question should be one you can answer.
  – Limits on time. When will you graduate/publish?
  – Limits on access. Can you access the equipment, field sites, documents, etc. you need to study?
  – Limits on resources. Do you need money, lab, etc.?
  – Ethical limitations. What potential negative effects will the research have on people or the world?
  – Limits on ability. Do you have (or can you learn) the skills necessary to answer the question?
Clarity

• A complicated question might hide unclear thinking or gaps in your own understanding.

• A vague question can lead to muddled data and unclear or improper analysis.

• State your research question in one sentence (or one main question plus several specific sub-components).
Originality

• Your research should be a (reasonably) original contribution to your field.
• Research that simply replicates previous findings is unlikely to be published.
• Your question should show your imagination and/or particular interests.
• (A question based on previous research is fine, but it should differ in at least one dimension.)
Position in the field

• Originality is important, but so is fitting with other research.

• How is your question similar to other research? How is it different?

• (Your paper should cite and respond to other work in your field. Writing the literature review is a major focus of my Developing Academic Writing course.)
Research question

• Identify some phenomena, event, or area that interests you.
• Ask a specific question that you can answer.
• Make sure the question is
  – Relevant
  – Manageable
  – Original
  – Interesting
  – Clear
  – Positioned in your field
Group work

- With your group, discuss your interest and suggest possible research questions.
- Try to fill in the following information

<table>
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<tr>
<th>Research question (clarity &amp; originality)</th>
<th>Justification (relevance, interest &amp; position)</th>
<th>Practical issues (manageable)</th>
<th>Ethical issues (manageable)</th>
<th>Data sources and methods</th>
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