Research Proposal & Data Collection

AIR POLLUTION CAUSES 1000 PREMATURE DEATHS IN TORONTO ANNUALLY. OUR GOVERNMENTS COLLECT $4 BILLION IN FUEL TAXES EACH YEAR. SO WHY IS THERE NO FEDERAL OR PROVINCIAL FUNDING FOR THE FREE TTC ON ALL SMOG DAYS?

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851-6360 CO.
Elements of a Research Project

• Problem/issue/question
• Techniques, methods
• Data
Problem, Issue, Question

- Research problem/issue/question
- provides intellectual strategy for the investigation.
- Questions are very powerful
Technique, Methods

• A technique or set of techniques with which you conduct the investigation.
Data

• A body of data which provides the information necessary to sustain the investigation
Techniques-focussed Proposal

• Object is to devise a research technique
• Find data, research problem to test the technique.
• Example:
  – Simple techniques a housebuyer could use to establish solar capture potential of residential properties.
Data-focused Proposal

- Object is to investigate some data
- Find appropriate techniques and research questions
- Example:
  - The City of Toronto’s data release programme: which sorts of data is the public actually finding useful?
Problem-focussed Proposal

• Object is to investigate a research question
• Need to find suitable data and appropriate techniques.
• Example:
  – Is there a connection between socio-economic status of a neighbourhood and its tree cover?
We have not succeeded in answering all of your questions. In fact, we have not completely answered any of them. The answers we have, however, do serve to raise a whole new set of questions about problems we had not thought of previously. In some ways we are as confused as you are, but we believe our confusion is on a higher plane and about more important matters.
Sample research question:

• Is there a connection between socio-economic status of a neighbourhood and its tree cover?

• Suggests subsidiary questions
Subsidiary question:

- Does it vary according to the type of housing, date of construction?
- Does it vary according to ethnicity?
- Does it vary according to household wealth?
Subsidiary question:

• How can we find suitable data on the date of construction, household wealth, ethnicity?
Subsidiary question:

• How do we go about testing the data and answering/investigating the question?
What the Research Question Does

- Provides key to research
- Suggests a stem of subsidiary questions
- Suggests types of data required
- Suggests types of investigative techniques
- Suggests objectives for literature search and review
Types of Question

- Degrees of closure/openness
Closed Questions

• Very limited in scope and immediate significance
• Provoke a simple and limited answer
  – Which you can almost control
• Eg: How much does Canadian Tire charge for light bulbs?
Open Questions

• Questions where the objective is broad, and not well-defined
• Powerful, but often elusive
• Interesting questions
• EG: How important is electricity to Toronto?
Open/Closed Questions

• Closed questions seem easier to answer
  – But are less powerful, useful than open questions
• Open questions may be unanswerable, but you have fun trying
• You need to consider what kinds of questions to ask
Your Research projects

• Have to be somewhat limited in scope
  – Available time, skill, experience, research methods, data limited

• Closed questions seem easier, safer, suited to the limitations you face
  – But closed questions are usually less important.
Open and Closed

• There should be a balance of open and closed questions

• Example:
  – How do different newspapers cover crime issues? (closed) and then use this to discuss the open question of how Toronto thinks about crime.
Thesis Statements

- Do help clarify the purpose of an essay
- Provide no real help with essay execution
  - Offers no research questions
- Thesis statements encourage students to jump to conclusions
- Please try the question-focused approach
Research Proposal

- 2 pages approx. outlining proposal
- “Starter” bibliography of relevant sources
- 1 paragraph (approx.) review of 2 relevant sources
- Include sample questionnaire, if relevant
- Due Jan 26