



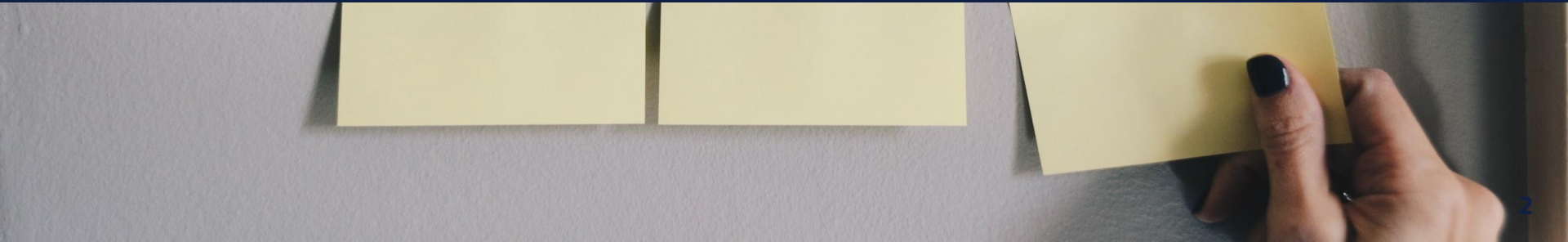
Jo Klein | GIS & Data Visualization Librarian

Megan Carlton | Science Librarian

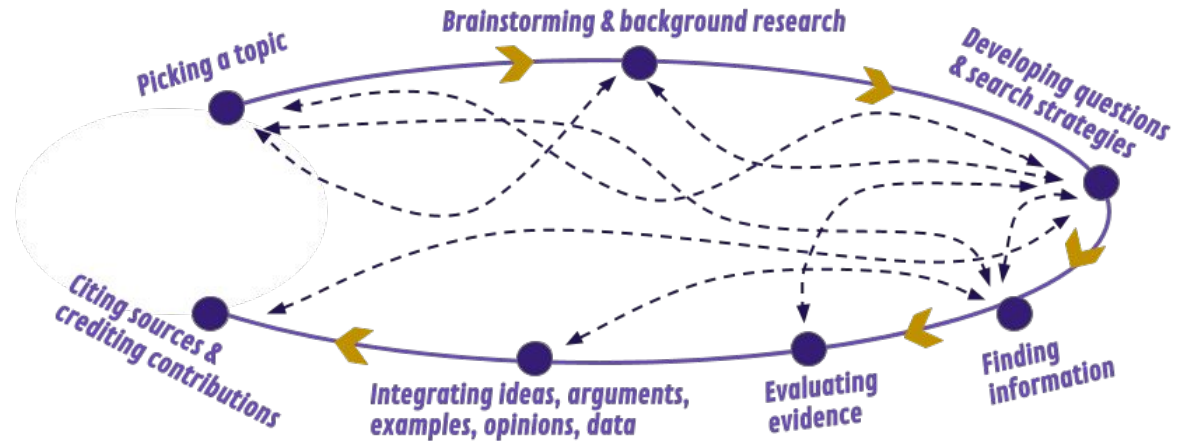
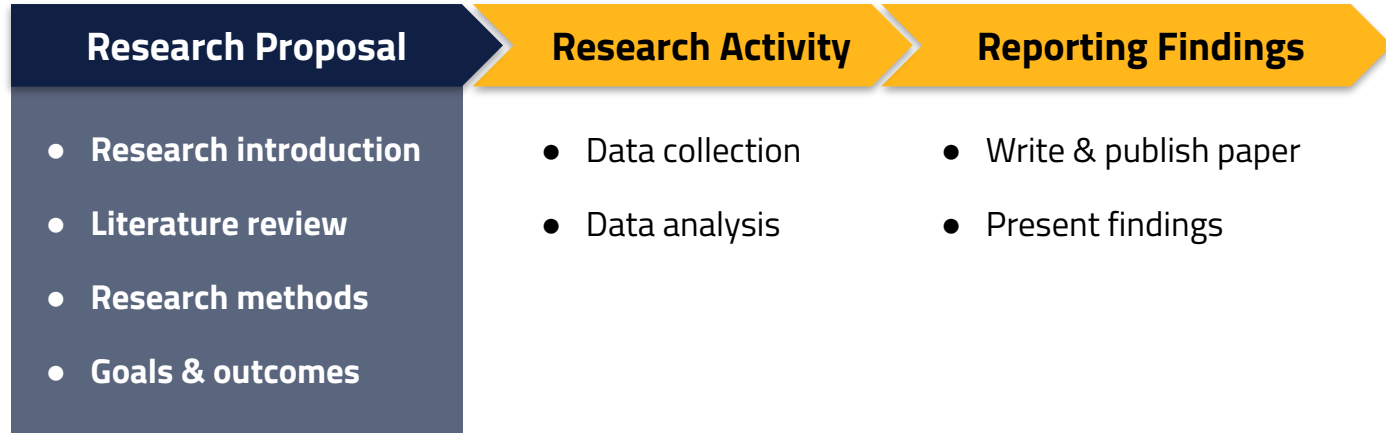
# **Writing for Research: Proposal Writing Strategies**

Your Research Intro assignment is due February 14th

**Q: What have you already  
done for this assignment?**



# What to expect for the research process

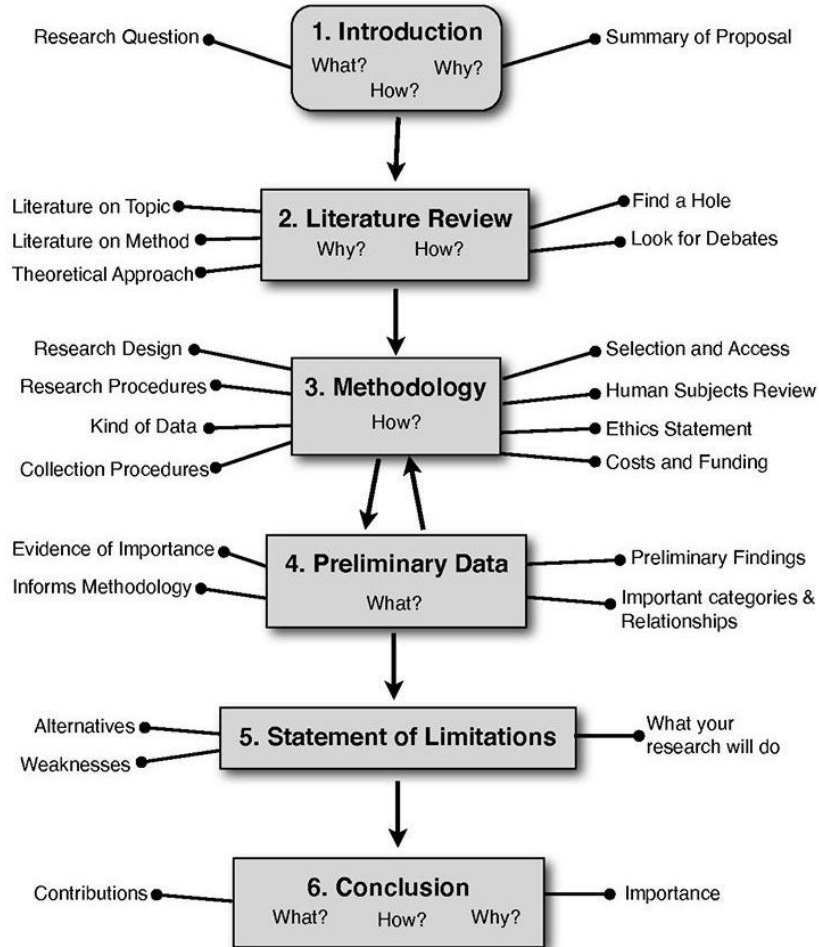


# Research Proposals: Why?

## **We write research proposals to...**

- Focus thinking
- Get feedback
- Obtain formal approval
- Apply for funding
- Assist project planning and management
- Document how a project was carried out

# Parts of a research proposal

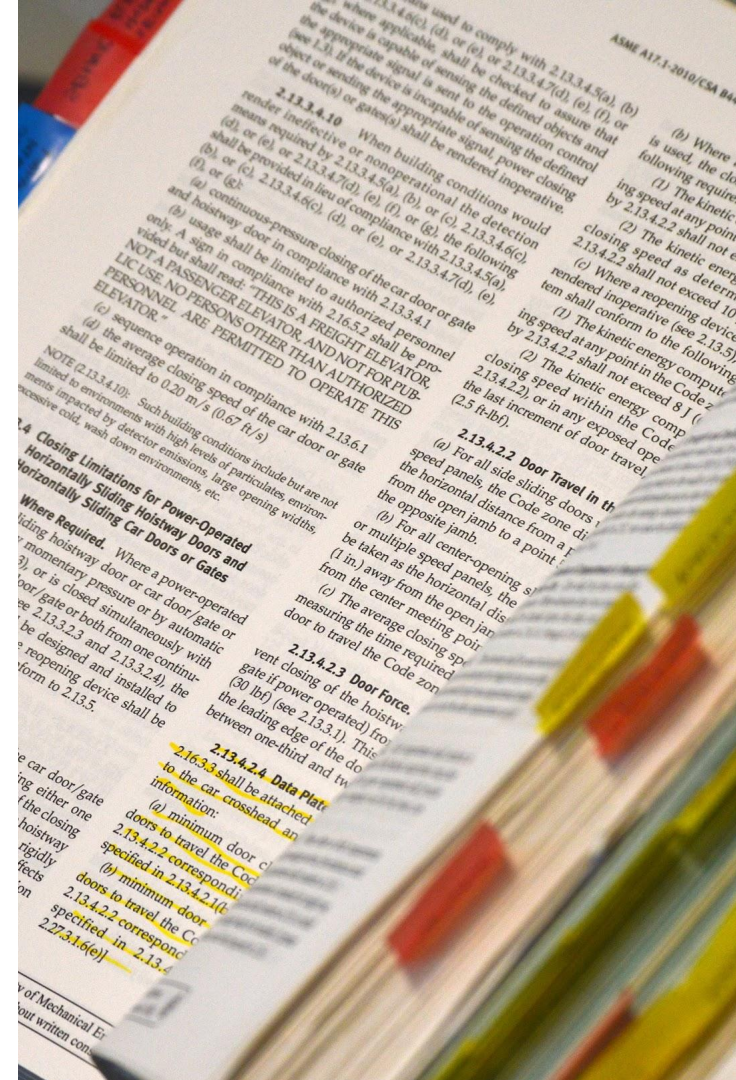


1. Research Introduction
2. Literature Review
3. Research Goal & Method
4. Conclusion



# Research Introduction

- Problem statement
- Background & analysis of the problem
- Justification for doing said research: why is it important?
- What you assume to find
- Research questions you'll answer\*



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**How many articles are  
you trying to find to  
support your research?**

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# Scholarship as Conversation

- sustained discourse within a community of scholars, researchers, or professionals
- new insights and discoveries occurring over time as a result of competing perspectives and interpretations.

# Health effects of coffee: a 200 year-old story

1800s  
–causes  
blindness

1970s –  
Increases  
risk of  
heart  
attacks

2007 –  
Decreases  
risk of liver  
cancer

2012 –  
Lowers  
risk of  
heart  
failure

2018 –  
Cancer risk  
from  
chemical  
exposure

1916  
–stunts  
your  
growth

2001 –  
Increase  
risk of  
urinary  
tract  
cancer

2011 –  
Reduces  
risk of  
stroke


2013 –  
Lowers  
risk of  
heart  
disease

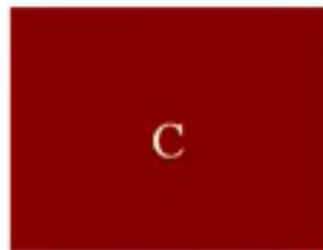
"What does the literature show us?"

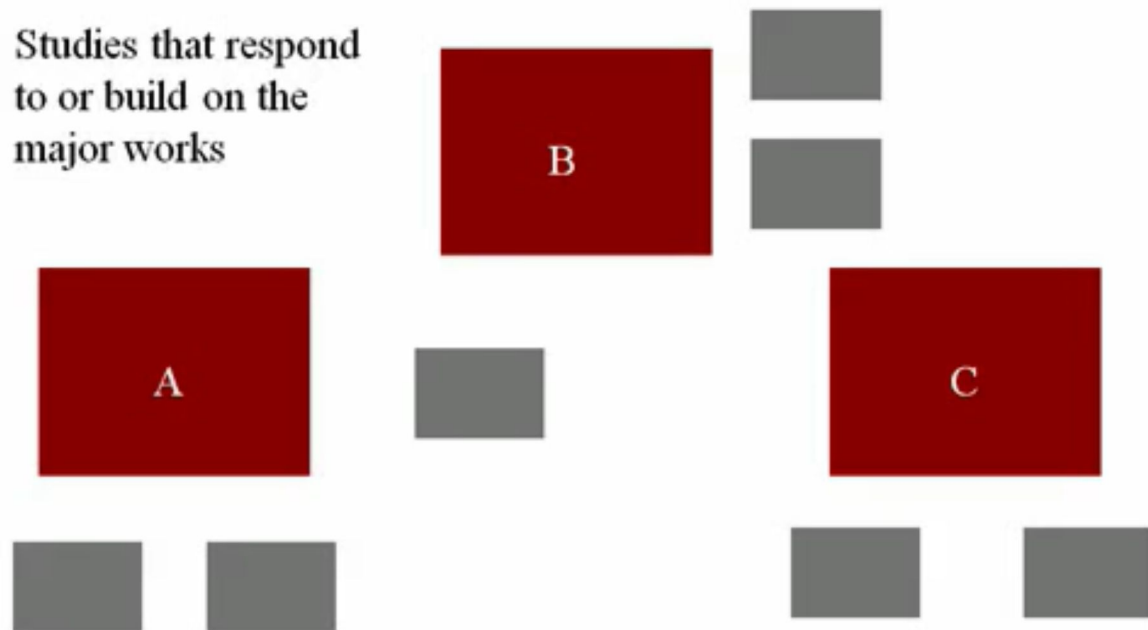
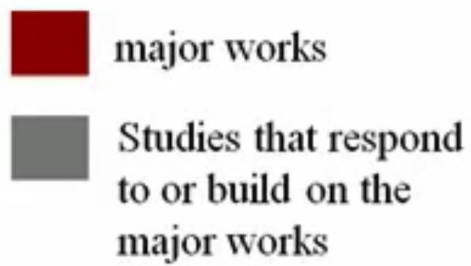
"Connect your ideas to the literature."

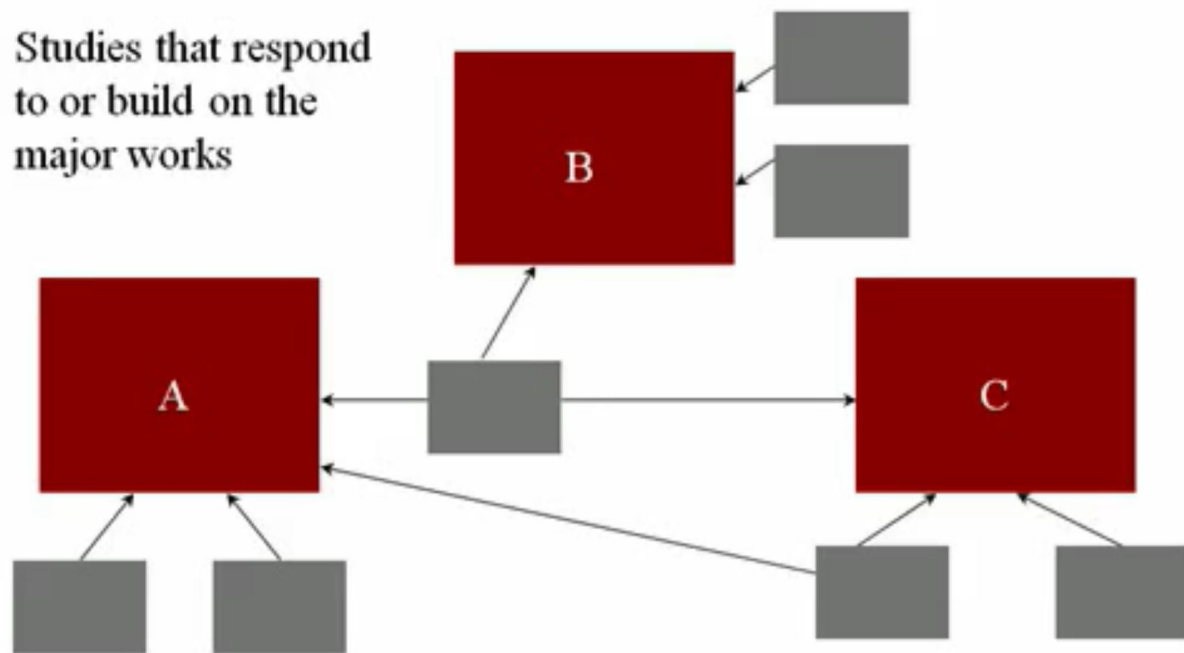
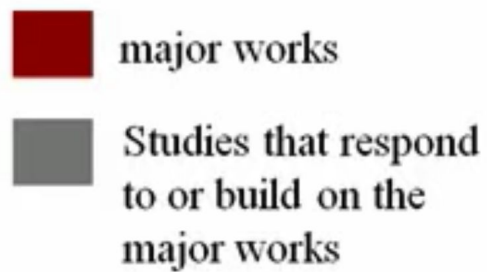
"Survey the literature on the topic."



 major works







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# **Where does your research fit?**

How to know what to study.

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# Gap Statements

A gap is something that remains to be done or learned in an area of research; it's a gap in the knowledge of the scientists in the field of research of your study.

## Identify the gap

"... The relationship between the four damping factors, i.e. internal friction, support loss, airflow force in free space, and squeeze force, has not yet been clarified, so it is not obvious which one is dominant in actual microsystems."

## Identify the gap

...has/have not been...  
(studied/reported/elucidated)  
...is required/needed...  
...the key question is/remains...  
...it is important to address...

## Fill the gap

Some phrases you can use to indicate your gap  
“fill:”

“We therefore analyzed...”

“In this study, we investigated...”

“Therefore, the goals of this study are...”

“In this paper, we report...”

## Identify the 'gap' and the 'fill'

Though ideally expected to be chemically very stable due to the poor reactivity of the basal aromatic plane from which SWNTs are built, the question of whether all the chemicals which are now currently proposed in the literature as purifying, suspending, or grafting agents for SWNTs actually have a limited effect on the SWNT integrity has to be addressed. In this paper, we report the investigation of the effects of some commonly used chemical treatments on SWNT structure by means of high resolution transmission microscopy (HRTEM). We also report the effect on purified SWNTs of an organic solvent, dimethylformamide, used to tentatively prepare SWNT suspension.

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Milly's work recognized the importance of storage capacity of the root zone in controlling evapotranspiration and has the potential for assessing the catchment-scale response of vegetation changes. However, the practical application of this model is limited because of the complex numerical solutions required. The purpose of this paper is to quantify the long-term impact of vegetation changes on mean annual evapotranspiration at catchment scales based on data and parameters that are easily measurable at a regional scale.



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## **If it's hard to find these statements, think about:**

- What concept are the authors trying to better understand? (This might point to a gap statement.)
- What did the authors try to accomplish in the paper, in summary? (This might point to a fill.)

# Literature Review

- Gather data & evidence to address research questions
- Your “synthesis” of current literature & where your research fits

## Writing a Lit Review workshops:

- March 10th, 4-5pm
- March 19th, 3-4pm

**SYNTHESIS ALLOWS YOU TO...**



Make your  
own point(s)

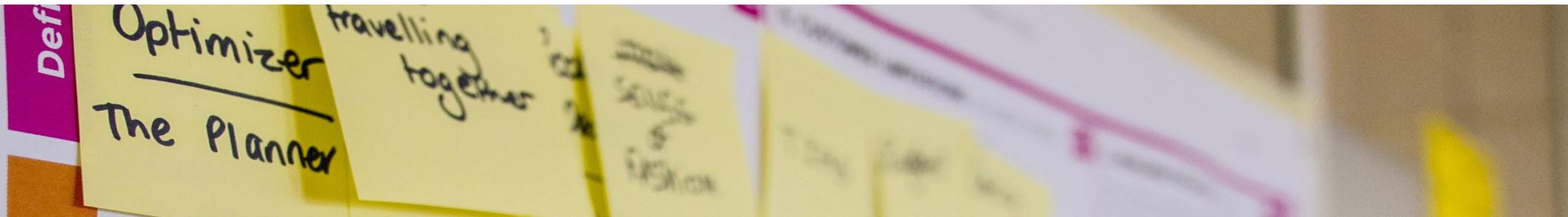


Add to the  
scholarly conversation

[Video: Synthesis for Literature Reviews](#)

# Research Goal & Method

- Description of research design:
  - How you will collect and analyze data
  - How you will test your hypothesis
- Timeline for research activities\*
- Research goals & outcomes: What do you expect to happen in your research?



# Conclusion

- For the McNair program: pull ideas together and relate research to your personal goals as a McNair Scholar and researcher in your discipline.
- Summarize introduction and background
- Restating importance & contributions to the discipline

# Resources

- **Talk to your library mentor!**
- Thomas, D. R. & Hodges, I. D. (2010). Preparing and writing a research proposal. In *Designing and managing your research project: Core skills for social and health research* (pp. 48-63). SAGE Publications Ltd, <https://www-doi-org.libproxy.uncg.edu/10.4135/9781446289044>



Any questions?

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