


# Formulating a Research Question

A photograph of a lighthouse on a cliff at night. The lighthouse is illuminated from within, casting a bright glow. Two powerful beams of light emanate from the top of the tower, cutting through the dark, cloudy sky. The lighthouse is situated on a dark, rocky cliffside. In the background, the ocean is visible, with some waves breaking against the shore. The overall scene is dramatic and atmospheric.

A good research question is really like a lighthouse, it's essential to guide your research paper it pinpoints exactly what you want to find out and gives your work a clear purpose and focus.

Photograph by Mark Wallace

# What is a research question?

A **research problem/area** is

- A general field of inquiry
- the broad topic that has 'troubling' or 'perplexing' aspects that might be 'solved' through the collection of appropriate information or evidence



A **research question** is a *concise* statement that describes *exactly* what issues the research intends to gather/generate information about



# Research Problem/Area

## Step 1, choose a broad topic.

Go with a topic that sparks your interest because you'll be spending a lot of time with it.

You need something significant and it must be important to you, but that importance needs to resonate with readers and the community who will engage in this research.

For me it might be: Sustainability, Education or Music,

## Research Problem/area

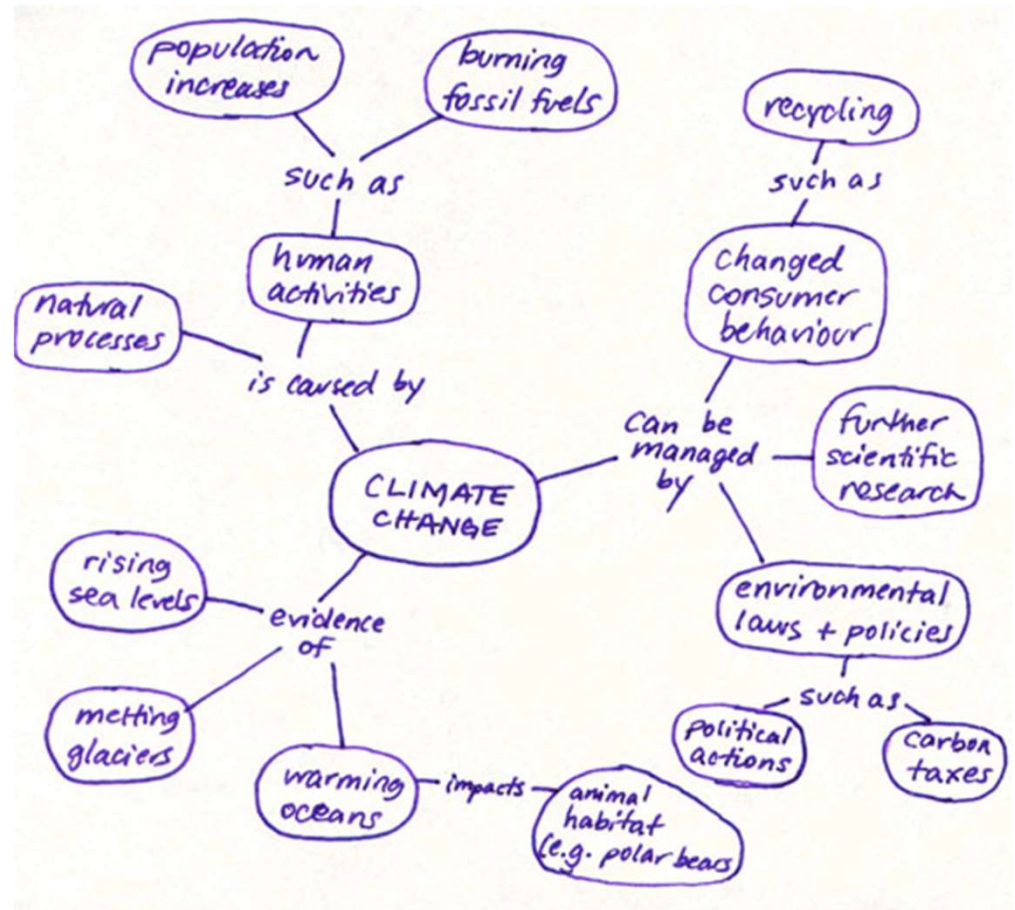
Step 2, do some preliminary reading about the topic.

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- Be flexible
- Choose a topic that will enable you to read and understand the literature

# Research problem/area - Selecting a topic

- Make a list of key words
- Brainstorm for ideas



# Where is your attention drawn?

Ask yourself:

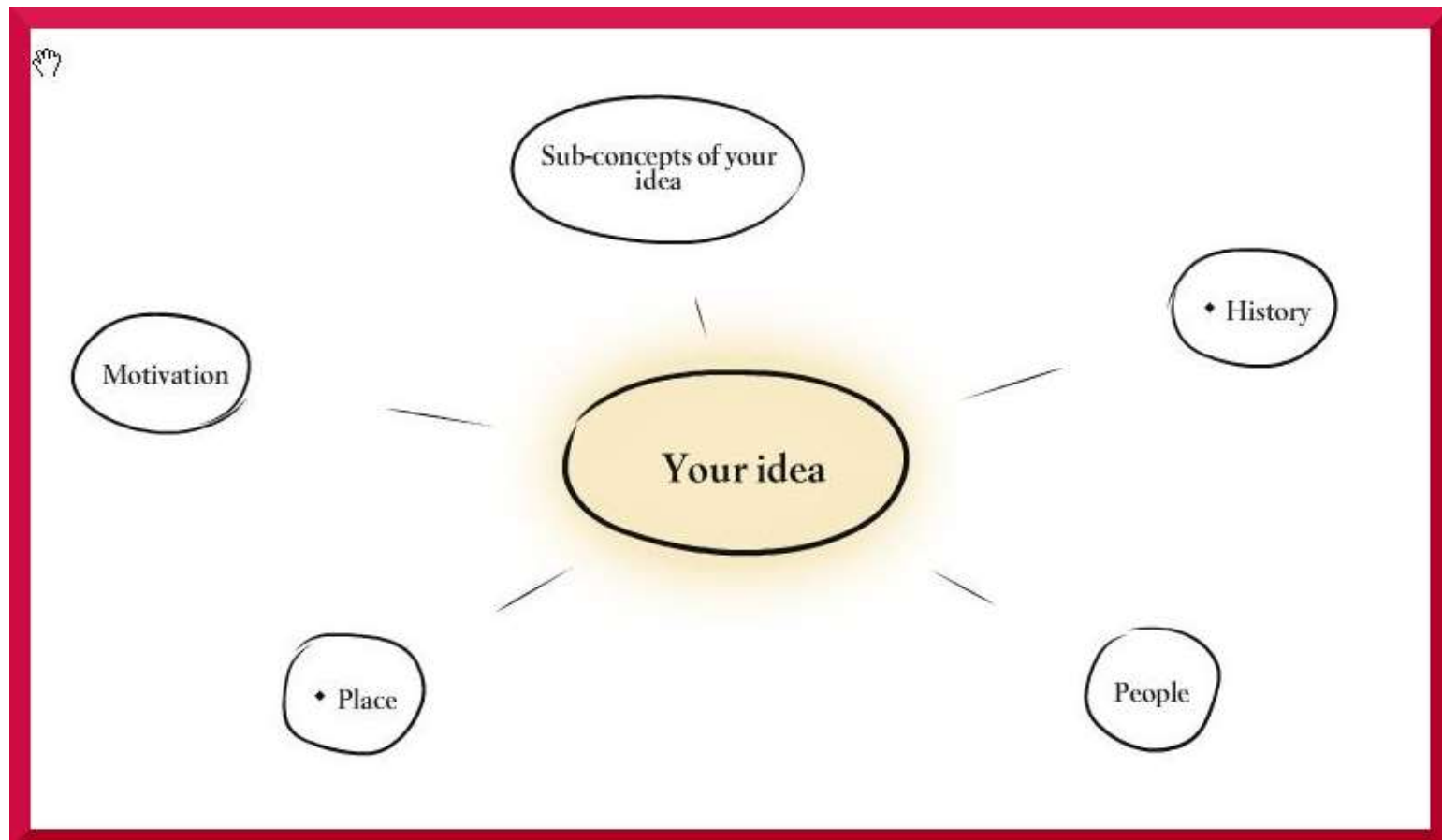
- What could I try to accomplish with this idea?
- How interested am I in this idea?
- How much time do I have?
- What information and resources are available?

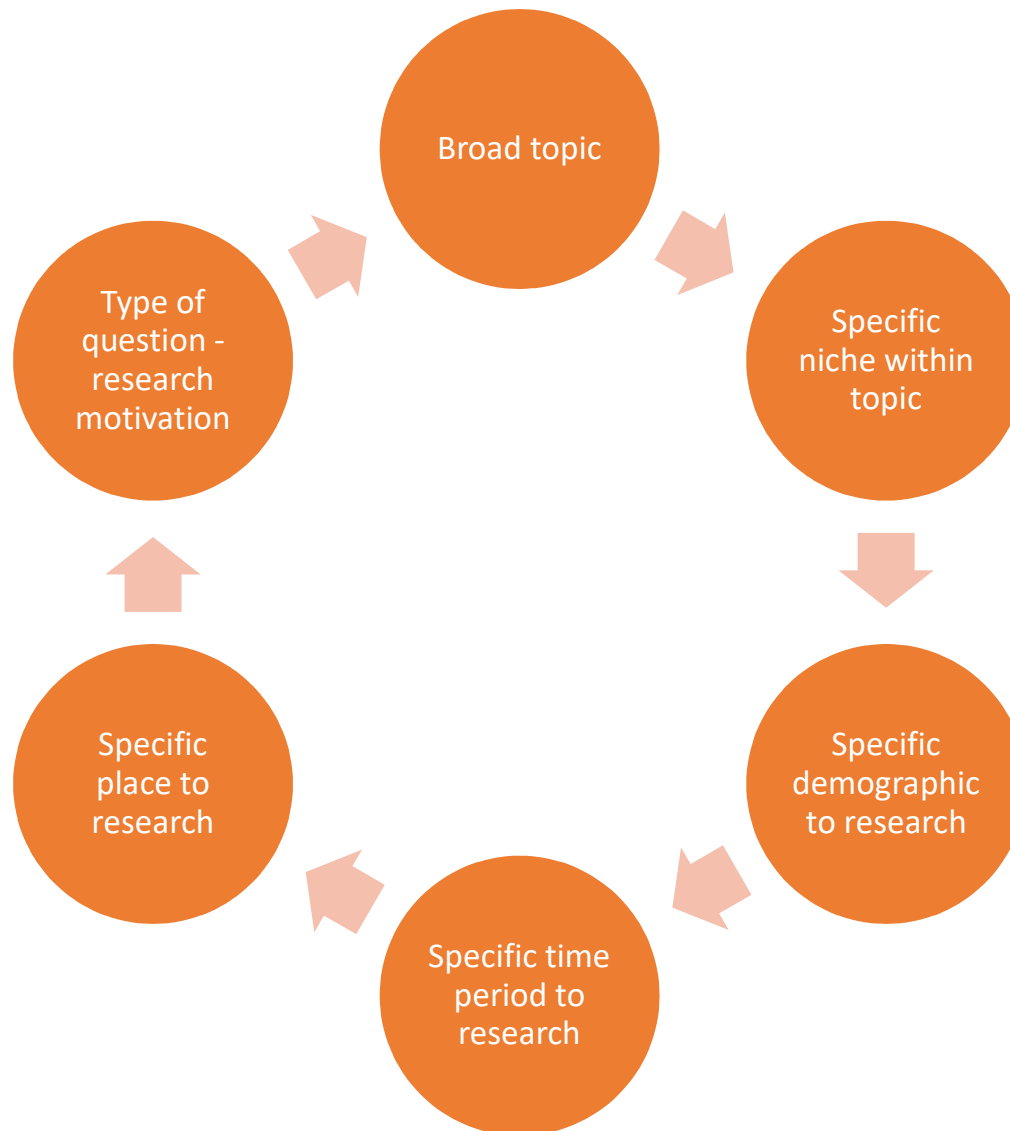
# Before you start - Can you map your idea onto the 6 thinking hats?

- 1) Can you control it? Is it SMART?
- 2) Could it generate something new?
- 3) Does it engage with you?
- 4) Could it generate something valuable? Who to?
- 5) How risky is it? Is it ethical?
- 6) Is there sufficient literature? Could you generate sufficient data?



Lets break it down into important component parts





# Research Question Generator

Scope	Your answer	Example
Topic		Climate Change

# Research Problem/area

## Step 3, Narrow down to a specific niche.

- Ensure that the topic is manageable and that material is available. If you don't have enough prior research to draw from, there will be no foundation from which you can explore your question
- Make sure the research is within a feasible scope instead of something too broad to achieve in a given timeframe.
- Be aware of overused ideas when deciding a topic as you need to identify an original research problem.
- Be aware that selecting a good topic may not be easy. It must be narrow and focused enough to be interesting, yet broad enough to find adequate information.

## Making the research question original

The intention of research is to add to knowledge; how do you make your research original?

- Geographically
- Socially
- Temporally
- Contextually
- Methodologically



## Research Problem/area

Step 3, Narrow down to a specific niche.

Ask yourself **who is impacted** by your topic. Which population? People, animals, the environment? Consider gender, age, or profession.

# Research Question Generator

Scope	Your answer	Example
Topic		Climate Change
Who		University students

# Research Problem/area

## Step 4, Identify a research problem.

**What aspect** of your topic are you interested in? Is there a theme or category that you'd like to focus on? The causes? The effects or implications? The solutions?

Example: Plant based diet



# Research Question Generator

Scope	Your answer	Example
Topic		Climate change
Who		University students
What		Plant based diet

# Research Problem/Area

## Step 4, Identify a research problem.

Ask yourself **when**. Are you interested in the current situation? In the past? Are you interested in a specific event? Looking to the future?

Example: In 2023

# Research Question Generator

Scope	Your answer	Example
Topic		Climate change
Who		University students
What		Plant based diet
When		2023

## Research Problem/area

### Step 4, Identify a research problem.

Ask yourself **where**. Consider countries, regions, states, types of places like workplace, schools, online.

Example: UCM

# Research Question Generator

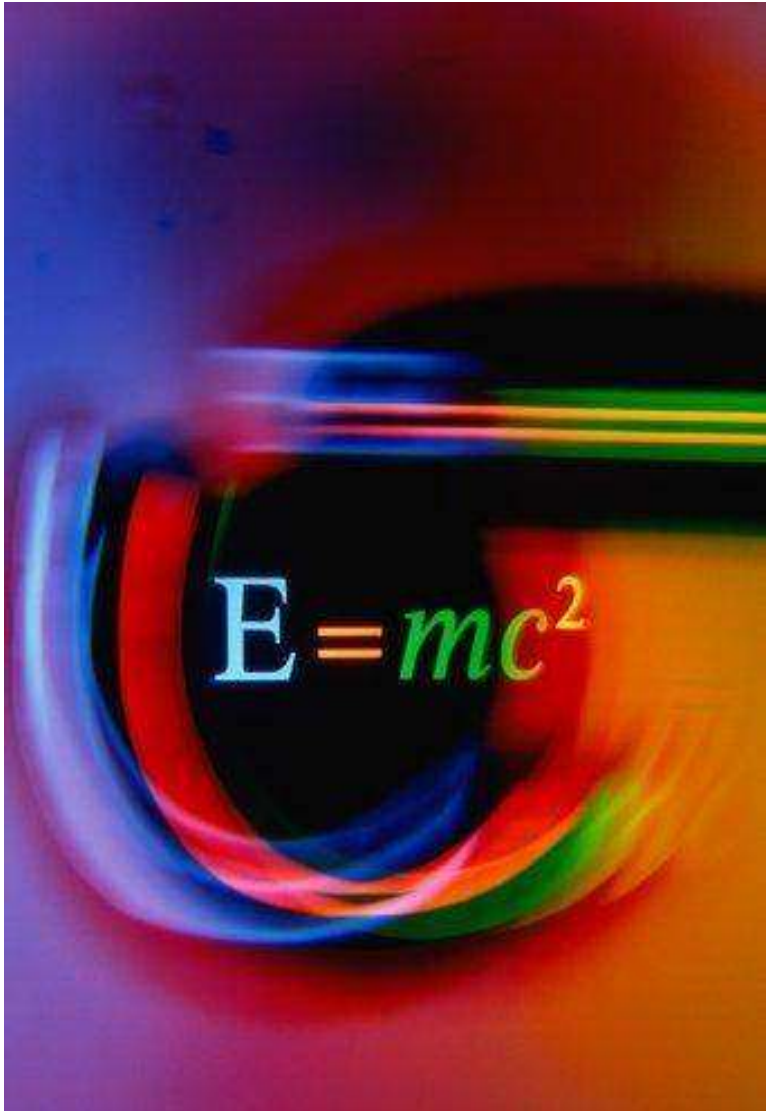
Scope	Your answer	Example
Topic		Climate change
Who		University students
What		Plant based diet
When		2023
Where		UCM

Keep this flexible if you do not have a supervisor  
yet!

## Research Problem/area

Step 5, Write your research question.

Pull the elements together to create your focused research question or statement.



“The formulation of the problem is often more essential than its solution”

Albert Einstein



Research questions are only difficult to write because they can be difficult to conceptualize.

A research question needs to be clear and concise, so your audience can easily follow the path of the argument and research.

## You are looking to identify ...



You are seeking to add knowledge to what is already known about a subject

# Developing a research question

Concise, specific, and simple.

Identify the **key / core concepts** of your topic area

Ask .....

who, why, what, where, when and how  
(quantitative)

to what extent..? How do ...?; what are ...?  
(qualitative)

Need to balance *succinctness* with *relevance*

Qualitative studies often have a statement rather than a question

This needs to be *scoped* and *focused*

Feasibility?



## Dangers to avoid in a research question

**Too big:** time, experience, resources, where do you start, omissions are clearly evident!

**Multiple questions:** unclear, ambiguous, too big, un-researchable

**Too trivial:** subjective, but try the “so what?” test

# Types of questions

- Quantitative research questions are objective and numerical.
- Qualitative research questions are subjective and non-numerical.

# Quantitative Questions - Relational

- A **relational question** looks at how two or more variables relate to one another.
- It will almost always start with how or what.

‘What is the relationship between climate change and plant based diet choices in students at the University College Isle of Man in 2023?’

# Quantitative Questions - Causal

- A causal question asks whether a variable causes or affects a separate variable.
- This will almost always start with the word what.

‘What difference has climate change made to plant based diet choices in students at UCM in 2023?’

# Quantitative Questions - Descriptive

- A descriptive question is designed to highlight something which exists.
- It will almost always start with how or what.

‘How many UCM students who choose plant based diets at UCM in 2023 are concerned about climate change?’



# Qualitative Questions - Exploratory

- Questions that are designed to understand more about a topic are exploratory questions. The objective of asking an exploratory question is to learn more about a topic without attributing bias or preconceived notions to it.

‘What is the effect climate change has had on UCM students’ attitudes to plant based diets in 2023?’

# Qualitative Questions - Predictive

If you're wondering about the future outcome of an action, you'll use predictive questions. These types of questions use past information to predict reactions to hypothetical events.

‘Are students at UCM in 2023 more likely to be concerned about climate change if they have a plant based diet?’

# Qualitative Questions - Interpretative

Interpretive research studies people in their natural settings. They interpret how a group makes sense of shared experiences and attribute meaning to various phenomena. These studies gather feedback on a group's behaviour without affecting the outcome.

‘To what extent, in 2023, have students at UCM exhibited increased awareness of plant based eating in response to climate change’.

Now you have your question – Check  
Can you map your question onto the 6 thinking  
hats?

- 1) Can you control it? Is it SMART?
- 2) Could it generate something new?
- 3) Does it engage with you?
- 4) Could it generate something valuable?
- 5) How risky is it? Is it ethical?
- 6) Is there sufficient literature? Could you generate sufficient data?

# Remember the 5 steps

1. Choose a broad topic you are interested in
2. Do some preliminary reading about the topic, write key words, mindmap and brainstorm
3. Narrow down to a specific niche
4. Identify a research problem (topic, who, what, when, where)
5. Write your research question using one of these research options:
  - Quantitative (Relational, causal, descriptive )
  - Qualitative (exploratory, predictive, interpretative)

**Be Concise, Specific, and Simple.**

**A clear focus and purpose gives a clear path.  
Enjoy the research journey  
Thank you**

