

7th Annual Emerging  
African Researcher  
Training Academy  
2026



# Defining Your Research Problem: The Method of Problems vs the Method of Topics

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Date: 27 July 2026

Time: 11:15-12:30 am

*African Research Voices in  
the Age of Artificial  
Intelligence*

# 7th Annual Emerging African Researcher Training Academy 2026



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# Learning Objectives

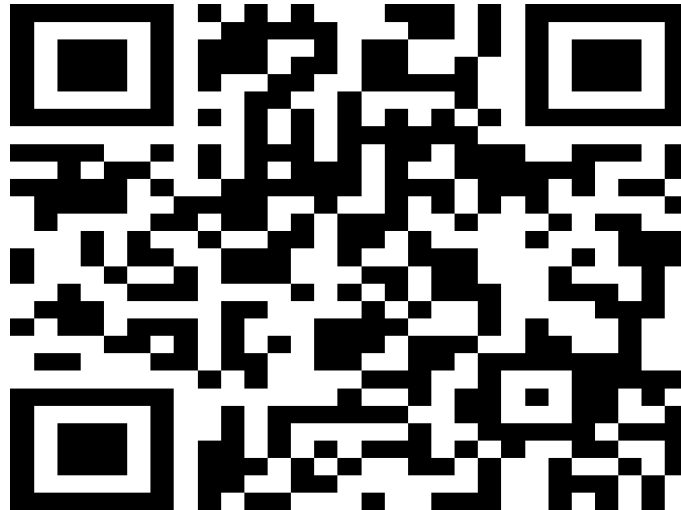
At the end of this module, you should be able to:

- 1 Understand what motivates research, and why defining the research problem is critical to research problem articulation.
- 2 Distinguish between a *research topic*, a *research problem* and a *research question*.
- 3 Learn how to *formulate* your research problem, and how *to generate* the research question you want to explore.
- 4 Test the research question against recognised quality criteria.
- 5 Explore the relevance of a *Global South* perspective in formulating research problem(s).

# What is Research ?

## Slido Exercise

<https://app.sli.do/event/jNvnLQ5FmxgkjSu1grf6zF>



# What is Research ?

What is Research ?



Review answers 99+





# Defining Research

## CAMBRIDGE DICTIONARY

**Noun:** systematic investigation to establish facts; a search for **knowledge**. **Verb:** to study a subject in detail, especially to **discover new information** or reach a new understanding.

## HERDC • 2012

The **creation of new knowledge** and/or the **use of existing knowledge** in a new and creative way, to generate **new concepts, methodologies and understandings**.

## SLESINGER & STEPHENSON - 1933

An **organized and systematic way** of finding answers to questions — following a **definite set of procedures and steps**, always done in order to reach accurate results.

*Encyclopaedia of the Social Sciences, Vol. 09 • MacMillan, p. 78*

## CLARK & HOCKEY • 1998

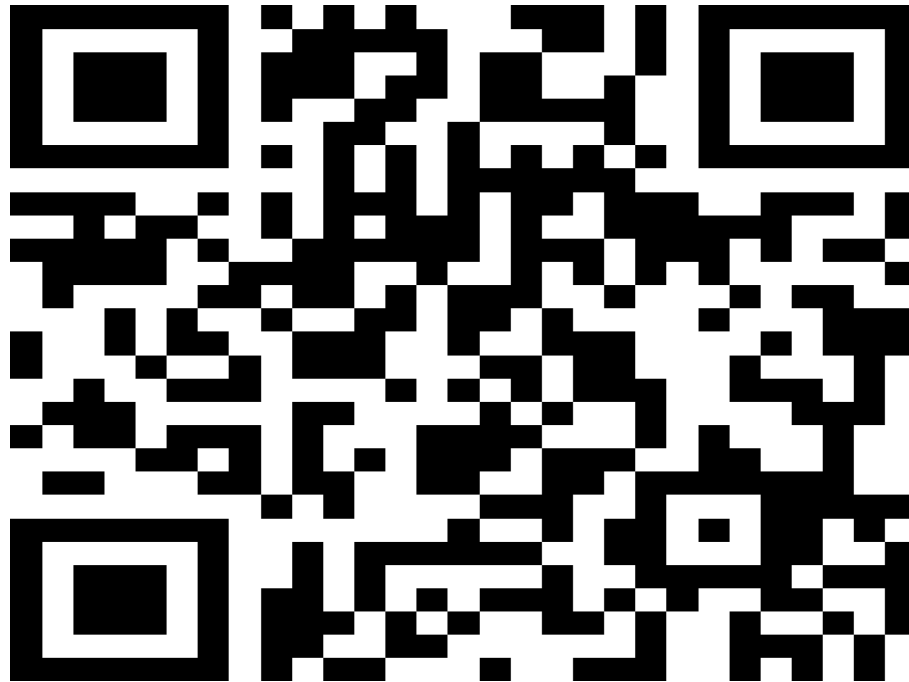
An attempt to increase the sum of what is known — **“a body of knowledge”** — through discovering new facts or relationships by **systematic inquiry**: the research process.



# What motivates you to do Research?

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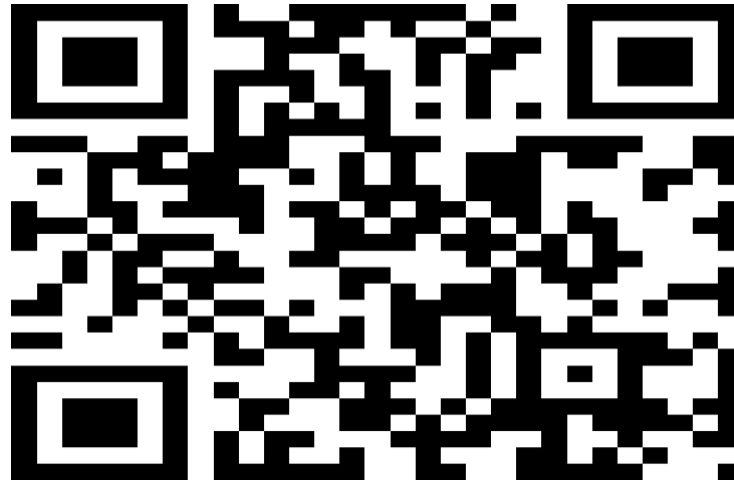


99+



# What problem are you interested in researching?

Slido Exercise:



Link:

<https://app.sli.do/event/5FhhULsQx3PLQF9oEDTKJJ>

# What problem are you interested in researching?



Join at  
**slido.com**  
**#2845 894**

☁ Active poll

112 

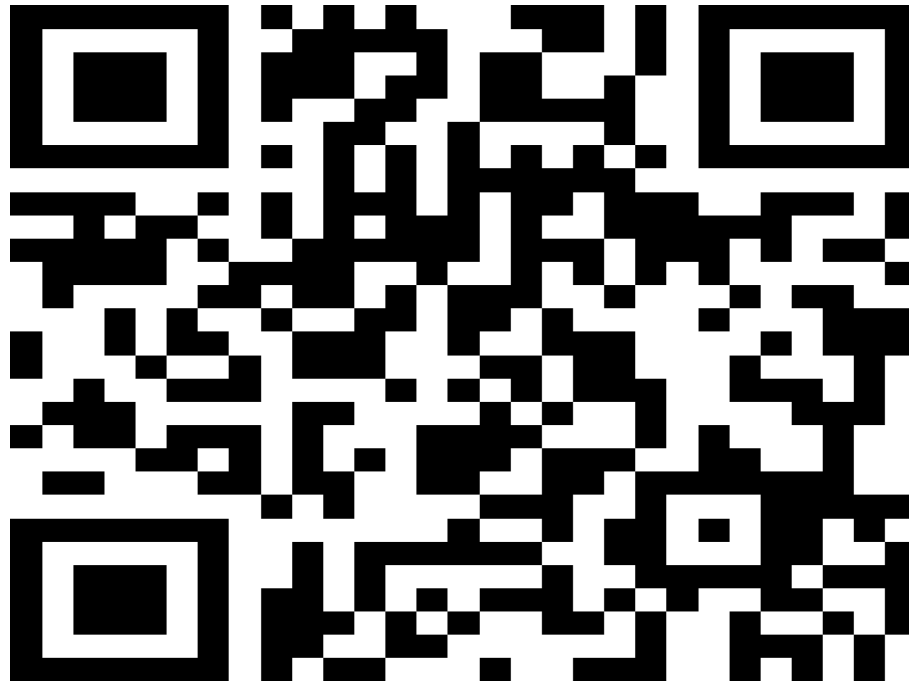
## What problem are you interested in researching?

[illegible]



# Framing the Distinction: Research Topic, Research Problem & Research Question

Slide link: <https://app.sli.do/event/jNvnLQ5FmxgkjSu1grf6zF>





# Method of Problems versus Method of Topics (Edlin, 2011)

**I don't know what  
my topic should  
be?**

**A colleague says "I am really  
interested in youth  
unemployment"**

**My Lecturer says  
my focus area is  
vague or too  
broad**

**I want to do  
research  
on poverty**

***Yes but .....***

***What is the problem?***

***What are you curious about?***

***What puzzling question needs to be  
explored?***



# Topic, Problem or Question?

## Framing the distinction between three related concepts — an example

### RESEARCH TOPIC

The **general area of knowledge** that interests you.

#### EXAMPLE

**Youth unemployment**

### RESEARCH PROBLEM

The **focus of attention** within a topic — a specific issue or knowledge gap that needs explanation.

#### EXAMPLE

Many graduates remain unemployed despite holding qualifications, and the reasons are not fully understood.

### RESEARCH QUESTION

What you **specifically want to answer**. It states exactly what you are looking for.

#### EXAMPLE

*What factors influence the employment outcomes of South African university graduates within two years of graduation?*

One topic — *youth unemployment* — becomes sharper as you move from **topic** → **problem** → **question**.



# Research Topic

According to Eidlin (2011), a **research topic** is:

- A **broad subject area** or field of interest.
- The general area that a researcher wants to study.
- A starting point for research, but **not sufficient on its own** because it does not specify what needs to be investigated or explained.
- 

Eidlin argues that topics often lead students to produce descriptive reports rather than analytical research. He calls this the "**method of topics**," where students gather information about a subject without identifying a specific problem or question.



# What is a Research Problem?

A research problem is a **“specific issue or knowledge gap that requires explanation; research should be organised around problems rather than topics.”**(Edlin,2011)

***A research problem is the starting point of research***, it precedes and justifies the research question.

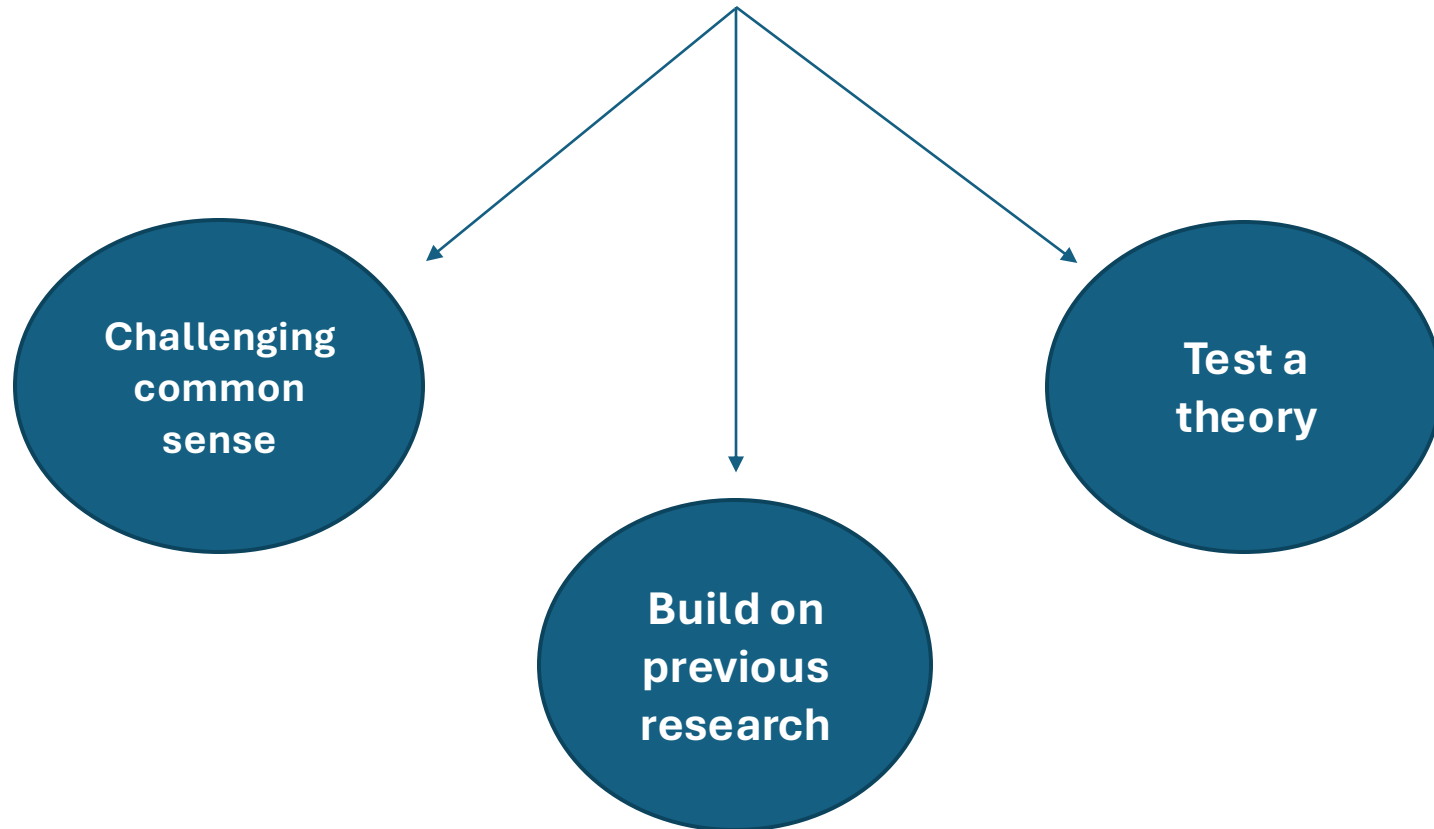
It encourages analytical thinking by asking *why, how, or what* explains a phenomenon, rather than merely describing it.

***“Good research begins with a problem to be solved rather than a topic to be discussed.”***



# Finding your Research Problem

Three ways to generate ideas for a research problem





# Generating ideas from common sense

**Question everything  
even old sayings**  
**e.g. “all SA young men  
are abusers”**

- When is it not true?
- Why is it true?

Attack a common  
problem?

**• Ask questions about  
a phenomena?**

**e.g. why are fewer  
women compared to  
men studying maths  
at school”**

- Who? When? How?  
Why?
- What are its effects?  
(short term, long  
term, good, bad)

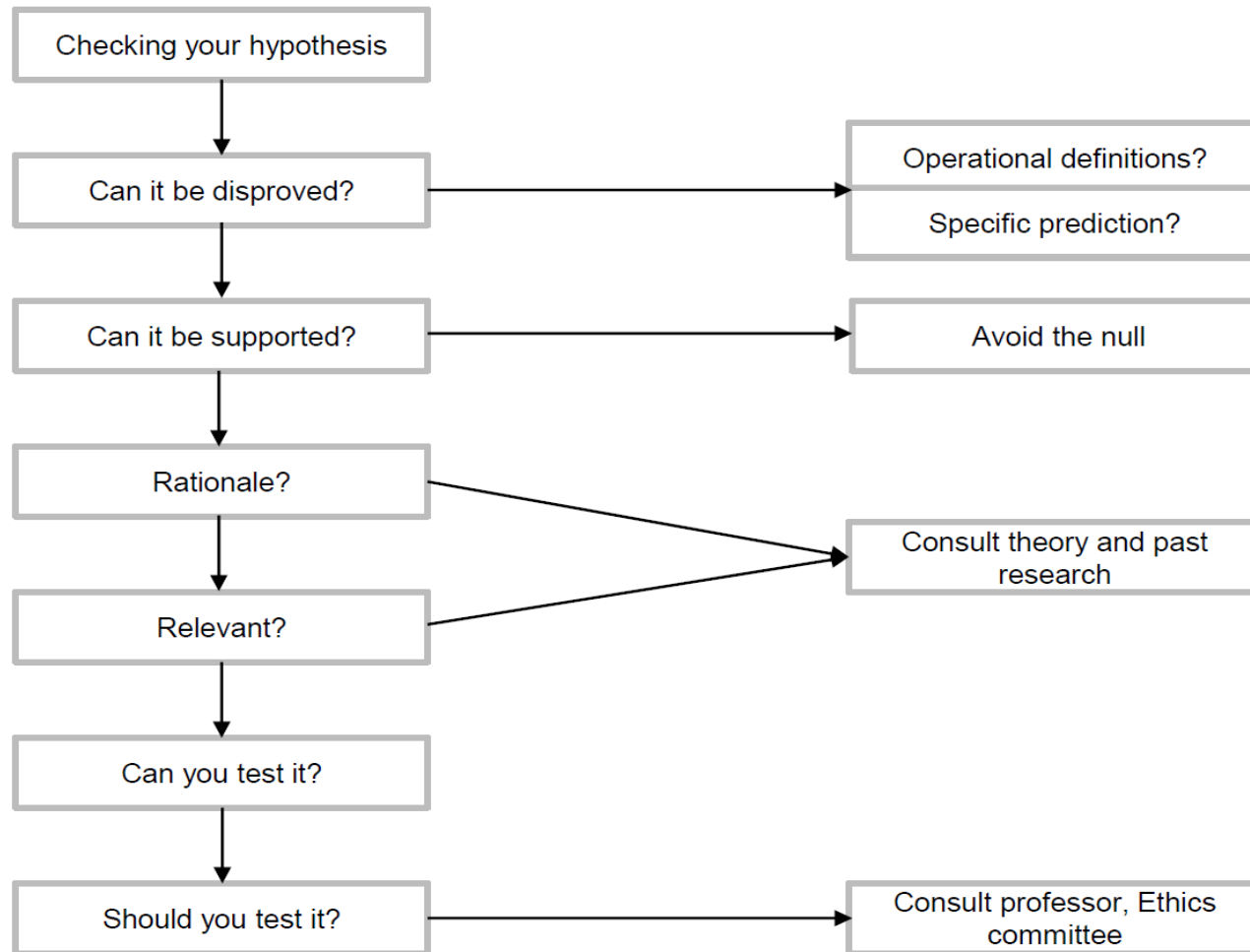


# Generating ideas from previous studies

- Repeat a study
- Respond to a research question or problem identified in a study
- Improve the studies external validity (generalizability)
- Improve studies internal validity (extent to which results reflect the “**Truth**” in respect of the study population)
- Identify a research gap
- Look for practical applications of the research
- Try and reconcile studies with conflicting findings.



# Test a theory





# What is a Research Question ?

Creswell (2018) frames the research question as the central mechanism through which a study's purpose is narrowed and operationalised — in qualitative work, researchers *pose "a central question and associated sub-questions"*

Bryman (2007) describes the research question as holding *"an important status as the linchpin of the research process"* — a crucial early step that provides a point of orientation for an investigation, helping to link the researcher's literature review to the kinds of data that will be collected, and conventionally guiding decisions about research design and method.



# Research Questions?

- ☐ **What** do you want to study?
- ☐ **Who** is the focus of your study?
- ☐ **Why** do you want to study this area?
- ☐ **When** is the timeframe of the study (Reference period)?
- ☐ **Where** is the study being conducted?
- ☐ **HOW** will you conduct the study?

# Types of Research Question





# Types of Research Question

In research the problem is framed as a research question.

It may be — with examples on a single theme, *graduate employment*:

- **Exploratory** — to learn more about a little-known subject  
*e.g. “What challenges do rural graduates face when searching for their first job?”*
- **Predictive** — to find out the future outcomes of an action  
*e.g. “Will completing a paid internship increase a graduate’s chance of permanent employment?”*
- **Interpretive** — how people make sense of a shared experience  
*e.g. “How do unemployed graduates make sense of repeated job rejection?”*
- **Descriptive** — describes when, how and where something occurred  
*e.g. “What proportion of graduates are employed within two years of completing their degree?”*
- **Comparative** — differences between one group and another  
*e.g. “How do employment rates differ between commerce and humanities graduates?”*
- **Relational** — trends and interactions between variables  
*e.g. “What is the relationship between field of study and time taken to find a first job?”*

# Quality Gate

*Assessing the Strength and Quality of your Research Question*

- *FINER*
- *PICOT*



# FINER Criteria for a Good Research Question

-  **F – Feasible:** adequate number of participants, adequate technical expertise, affordable in time and money, manageable in scope
-  **I – Interesting:** the answer intrigues the investigator, peers and the wider community
-  **N – Novel:** confirms, refutes or extends previous findings.
-  **E – Ethical:** amenable to a study that an ethics/institutional review board will approve
-  **R – Relevant:** to scientific knowledge, to policy and practice, and to future research

*Source: Farrugia, Petrisor, Farrokhyar & Bhandari (2010), Canadian Journal of Surgery, 53(4), 278–281; criteria originally from Hulley et al., Designing Clinical Research.*



# PICOT Criteria for Framing a Research Question

-  **P – Population:** Which specific population or group are you interested in?
-  **I – Intervention:** What is the intervention or exposure being studied? (for intervention studies)
-  **C – Comparison:** What is the main alternative against which the intervention is compared?
-  **O – Outcome:** What do you intend to accomplish, measure, improve or affect?
-  **T – Time:** What is the reference period for the study, and what follow-up period is appropriate for assessing the outcome?

Source: Farrugia, Petrisor, Farrokhyar & Bhandari (2010), *Canadian Journal of Surgery*, 53(4), 278–281



# Ethical Use of AI in Research

## Using AI as a Research Companion

- As AI becomes increasingly integrated into research, the **practical** and **responsible** use of it as a **research companion** that supports thinking, reflection, and exploration is important.
- Although we discuss the **use of AI in identifying relevant literature to assist you in defining a research problem**, the ethical and responsible use of AI in research will be discussed in greater detail in the module on Day 5.

### A useful analogy:

*Think of AI as a GPS, not the driver. It can suggest possible routes, highlight obstacles, and provide directions, but the researcher decides where to go, evaluates the journey, and remains responsible for the destination.*



# Practical Use of AI in Research

## Prompting your “GPS”

- **Demonstrating how to prompt Sci-Space and ChatGPT to source relevant literature to help you identify the research problem you are interested in exploring.**

The demonstration shows that combining AI’s assistance in exploring existing debates, comparing different perspectives, and identifying research gaps with the researcher’s critical engagement with literature, understanding of the context, and interpretation of why that identified problem matters evokes a better scholarly judgement



# Why deliberate attention to Global South in framing Research is needed?

- "Most of what is received as knowledge about Africa is still produced in the North — and the African-authored share of leading journals has been shrinking, not growing. Reclaiming how we define research problems is a matter of epistemic justice." (Crawford et al, 2021).
- **Why worry:** The share of articles by Africa-based authors in the top Africanist journals actually *fell* from around 25% in the early 1990s to 15% by 2013 (in Crawford et al, 2021).
- A focus on Global South in research calls for moving beyond people as mere research subjects toward seeing them as collaborators and co-designers of research agendas.
- Engaged research strengthens Global South framing by shifting the power to *define the research problem* to those who live its realities — turning communities from research subjects into co-designers of the questions that matter. E.g. EJP engaged research study in Khayaletsha



# Developing your research questions

- ***What*** research interest do you have? Write your thoughts.

*At this stage, keep your ideas broad and general.*



- ***Why*** are you interested in the above subject or topic?



- *Now develop it as a research problem using the guidelines above.*



*Based on your research problem, identify your central research question*



# References & Resources

- Bryman, A. (2007). *The Research Question in Social Research: What is its Role?* *International Journal of Social Research Methodology*, 10(1), 5–20. <https://doi.org/10.1080/13645570600655282> SciEPub
- Cambridge Dictionary n.d., *research*, Cambridge University Press, viewed 27 July 2026, <https://dictionary.cambridge.org/dictionary/english/research>.
- Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (5th ed.). Thousand Oaks, CA: SAGE Publications.
- Edlin, F. (2011). The Method of Problems versus the Method of Topics. *PS: Political Science and Politics*, 44(4), 758–761. <http://www.jstor.org/stable/41319964>
- Farrugia, P., Petrisor, B.A., Farrokhyar, F., & Bhandari, M. (2010). Practical tips for surgical research: Research questions, hypotheses and objectives. *Canadian Journal of Surgery*, 53(4), 278–281.
- Department of Industry, Innovation, Science, Research and Tertiary Education (DIISRTE) 2012, *Higher Education Research Data Collection: Specifications for the Collection of 2011 Data*, Commonwealth of Australia, Canberra.
- Keikelame, M.J. & Swartz, L. (2019). Decolonising Research Methodologies: Lessons from a Qualitative Research Project, Cape Town, South Africa. *Global Health Action*, 12(1): 1561175. DOI: 10.1080/16549716.2018.1561175
- Lipowski, E. E. (2008). Developing great research questions. *American Journal of Health-System Pharmacy*, 65(17), 1667-1670. <https://doi.org/10.2146/ajhp070276>
- Macleod Clark, J. and Hockey, L. (1989) *Further Research for Nursing*. London: Scutari Press. ISBN 1-871364-14-0
- Pardede, P. (2018). "Identifying and Formulating the Research Problem." *Research in ELT*
- <https://libguides.kean.edu/c.php?g=1252755&p=9181538> – Developing Research Questions
- <https://conjointly.com/kb/problem-formulation/> - Problem Formulation
- <https://libguides.usc.edu/writingguide/introduction/researchproblem> - Defining the Research Problem
- Slesinger, D. and Stephenson, M. (1930) 'Research', in E.R.A. Seligman and A. Johnson (eds.) *Encyclopaedia of the Social Sciences*, Vol. IX. New York: The Macmillan Company, p. 330.

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Thank you

Any questions?

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