

From Curiosity to Contribution

Starting your first research thesis

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Research

Industrial organization and regulation

Oligopoly theory

Applied microeconomics

What is research?

What is research?



Not just assignments or marks



Research =

systematic curiosity



It begins with a question:

“Why does this happen?”

Everyday puzzles are research questions

- ▶ Why do petrol prices sometimes stay flat for months while crude oil prices swing?
- ▶ Why do some firms succeed abroad while others fail?
- ▶ Why do some students do better online than offline?

Research is not about marks. It is about asking meaningful questions.

**What is the one thing
a researcher should
NEVER
have?**

Contentment

Contentment = *"I'm done, this is enough."*

- ▶ If researchers had stopped at first answers, there would be no progress
- ▶ Knowledge grows through curiosity + refinement

But do not confuse this with perfectionism

Stay restless about the **question**.

Finish and share your **drafts**.

A submitted thesis beats a perfect one that never ends.



**How do you
turn a topic
into a question?**

The hardest step: from a topic to a question

Topic: Online education

Narrower: Online classes in Indian colleges after 2020

Question: After classes moved online in 2020, did marks fall more for students without home internet?

A good question names

- ▶ **Who:** which people, firms, places
- ▶ **What:** one outcome you can measure
- ▶ **Compared to what:** before vs. after, group A vs. B

“I want to study inflation” is a topic, not a question.

Next: find out what is already known

1. **Google Scholar:** type the topic in plain words

online education Indian colleges

2. **Scholar Labs:** click **Labs** on Scholar and ask your full question

Did marks fall more for students without home internet when Indian colleges moved online in 2020?

3. **Pick 5–10 papers.** Note what they found, and what they **did not** study. That gap is your contribution.



Scan: try the search

Tips

Filter to *Since 2020*

Look for a *review* paper first

Follow *Cited by*

Citing what you found: two ways

In the sentence: *Author (Year)*

Use for your **closest, most important** papers: the ones you build on or argue with. The paper becomes the subject of your sentence.

“Bettinger et al. (2017) find that taking a college course online instead of in person lowers students’ grades.”

In brackets: *(Author, Year)*

Use for **background and supporting** work, often several papers at once. Your point is the subject; the papers back it up.

“Students tend to learn less in fully online courses than in face-to-face classes (Alpert, Couch and Harmon, 2016; Bettinger et al., 2017).”

Rule of thumb: if the paper is central to *your* story, name it in the sentence.

Both studies are from the US. How many are from Indian colleges? If few, that is your gap.

Where to find data

India

AISHE (colleges)	aishe.gov.in
PLFS, NSS, ASI (MoSPI)	microdata.gov.in
NFHS (health, family)	rchiips.org/nfhs
RBI Database (DBIE)	data.rbi.org.in
Open Govt. Data	data.gov.in
IHDS (household panel)	ihds.umd.edu

Global

World Bank	data.worldbank.org
Our World in Data	ourworldindata.org

Or collect your own

- ▶ A short survey (Google Forms)
- ▶ Field visits and interviews
- ▶ Prices, reviews, or listings from public websites

Live demo: your first regression in 5 minutes

- 1 Open **ChatGPT**: chatgpt.com →
- 2 Paste the box below
- 3 Open **Colab**: colab.research.google.com →
- 4 Paste the code and press **Run**

Copy this into ChatGPT

hypothetical data for 10 students

Write Python code for Google Colab.

X = hours of online classes per week

2, 4, 5, 6, 8, 9, 10, 12, 14, 15

Y = exam marks

42, 47, 55, 50, 58, 63, 60, 68, 71, 77

Plot Y against X, run an OLS regression of Y on X,
and explain the result in simple words.

Rule: AI writes the code; **you read every line.** Never cite a paper you have not opened.

**How do you
find and read
papers?**

Finding and reading papers

Where to find them (legally, for free)

Google Scholar	scholar.google.com
Scholar Labs (AI)	Labs tab on Google Scholar
DU eLibrary	duelibrary.in (DU email)
Indian theses	shodhganga.inflibnet.ac.in
Working papers	ideas.repec.org ssrn.com nber.org
Free legal copies	unpaywall.org
Manage references	zotero.org

Snowball: from one good paper, follow *Cited by* (newer) and its references (older). Stuck? Email the author.

How to read a paper

Abstract → Introduction → Figures & tables → Conclusion → *only then* the middle.

Write 3 lines per paper: question, data/method, finding.

Scholar Labs is experimental and can make mistakes: open and check every paper it suggests.

**How do you
write the
introduction?**

Writing the introduction: a formula that works

Hook

Why should anyone care?
It matters, puzzles, or is debated

Question

What exactly does this paper ask?

Antecedents

Key prior work, and what it leaves open

Value-added

2–3 specific things that are new here

Roadmap

A short guide to the rest of the paper

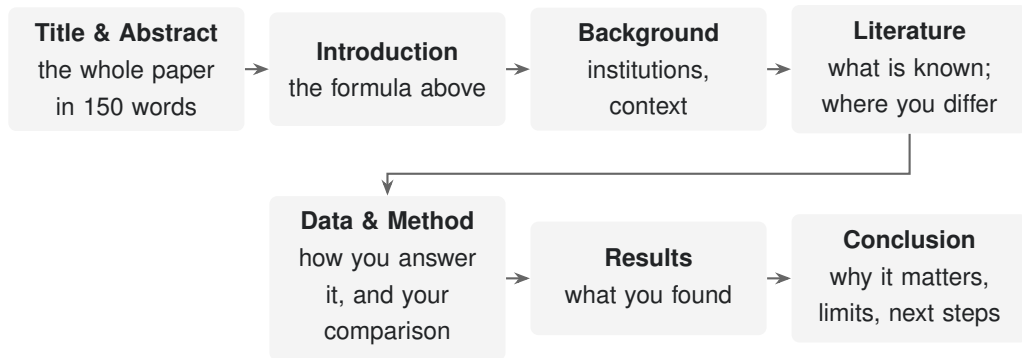
Our example. **Hook:** in 2020, Indian colleges moved to online classes almost overnight.

Question: did students without home internet fall behind?

Adapted from Keith Head's *Introduction Formula*:

blogs.ubc.ca/khead/research/research-advice/formula

The shape of a research paper



A paper tells a story: Why → What → How → What you found → Why it matters

Closing takeaways

- 1. Start with a sharp question:**
who, what, and compared to what.
- 2. Find your gap:**
search Scholar and Scholar Labs, read smart, cite the closest papers in the sentence.
- 3. Start small, start now:**
public data, Colab, and AI as a tutor. Stay curious; finish your drafts.



Research is not about answers. It is about asking better questions.

Thank you!

Questions?

Every research journey begins with a single question.

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Demo notebook:
try the regression yourself
tonight

