

RESEARCH METHODS

IDENTIFYING AND FORMULATING RESEARCH GAPS

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Why Research Gaps Matter

A research study should not begin simply because:

- The topic is interesting
- The researcher likes the subject
- Data are available
- Nobody nearby has studied it
- A supervisor suggested it

THE STANDARD

A defensible study must address an identifiable problem in existing knowledge.

The Central Research Question

Before conducting a study, the researcher must be able to answer one question:

What is missing, uncertain, contradictory, inadequate or unresolved in the existing body of knowledge?

That unresolved issue is the foundation of the research gap.

What Is a Research Gap?

A research gap is a meaningful limitation, absence, contradiction or unresolved issue in existing knowledge that provides a justified opportunity for further investigation.

A gap may involve:

Missing evidence

An overlooked population

A new context

Conflicting findings

Weak methodology

An incomplete theory

An untested intervention

A policy or implementation problem

What a Research Gap Is Not

A research gap is not automatically created because:

- You found few papers
- You searched only one database
- The study has not been conducted in your town
- You disagree with previous authors
- Previous studies are old
- You simply want to use another method

RULE

A gap must be demonstrated through the literature.

The Gap Hunter's Mindset

A genuine gap emerges after a rigorous search ; not from failing to find a paper quickly.

FROM

"I cannot find a study."

TO

"My review shows a consistent and meaningful limitation in what is currently known."

SHIFT YOUR MINDSET

Absence of a search result is not the same as absence of knowledge.

From Searcher to Architect

A researcher does more than locate articles. The researcher must:



KEY IDEA

Research is an argument about contribution.

The “So What?” Test

Finding a missing topic is not enough. Ask: why does filling this gap matter?

Solving a practical problem

Testing a theory

Improving a method

Correcting misleading evidence

Extending knowledge

Improving policy or practice

WHY IT MATTERS

The significance test separates a trivial absence from a worthwhile gap.

Weak versus Strong Gap Statements

WEAK

"No study has examined employee motivation in Company X."

STRONGER

"Existing studies of employee motivation are concentrated in large private firms and provide limited evidence from public organizations operating under highly centralized personnel systems. It therefore remains unclear whether established motivation–performance relationships apply in this institutional context."

Three Tests for a Strong Research Gap

A strong gap must satisfy all three tests:

1

Evidence test

Can it be demonstrated from the literature?

2

Significance test

Does it matter theoretically or practically?

3

Researchability test

Can it be addressed through a feasible study?

Fail any one test and the gap is not yet defensible.

01

WHERE RESEARCH GAPS COME FROM

Sources, synthesis and the gap matrix

Follow: Dr Abenet Yohannes, Ph.D. for more contents

Sources of Research Gaps

Research gaps are commonly identified from:

Systematic literature reviews

Recent review articles

Meta-analyses

Contradictory studies

Limitations sections

Future-research recommendations

New technologies

New policies

New populations

New contexts

Unexplained findings

Repeated calls for extension

The Literature Review as a Gap-Finding Tool

NOT THIS

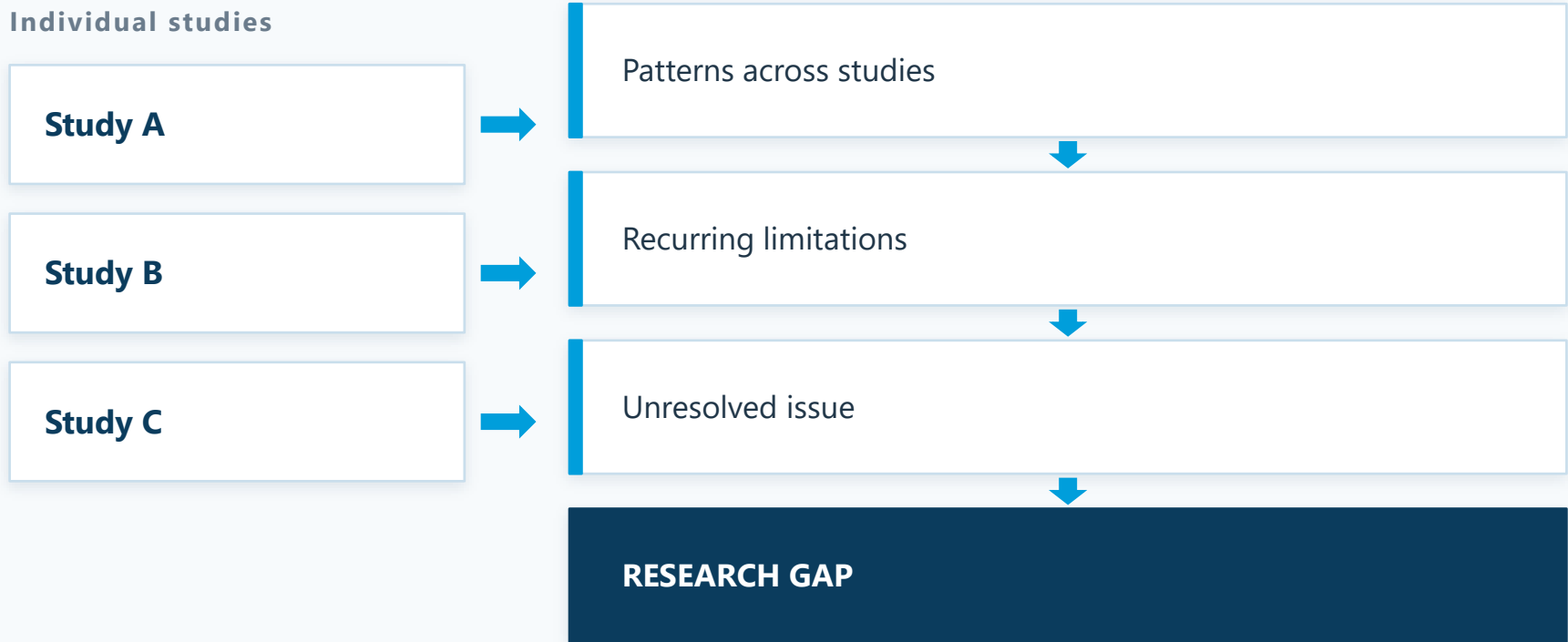
- Author A said this.
- Author B said that.
- Author C said something else.

BUT SYNTHESIS — ASK:

- What patterns appear?
- Where do findings agree?
- Where do they disagree?
- Which populations dominate?
- Which methods dominate?
- Which variables remain unexplored?
- What assumptions remain untested?

Gap Identification as Synthesis

Individual studies



A Practical Gap Matrix

Record each study in a matrix so patterns emerge from evidence rather than memory.

Study	Population	Context	Method	Variables	Main findings	Limitation
Study 1						
Study 2						
Study 3						
Study 4						
Study 5						

The matrix helps you identify recurring patterns rather than relying on memory.

02

MAJOR FAMILIES OF RESEARCH GAPS

Organising 20 gap types into five teachable families

Follow: Dr Abenet Yohannes, Ph.D. for more contents

The 20 Gap Types - Organised for Teaching

Twenty gap types are commonly described. For teaching, we group them into five practical families.

1**Missing knowledge**

Knowledge,
population,
geographic, temporal,
contextual

2**Conflict and conceptual confusion**

Evidence, practical-knowledge,
conceptual, semantic

3**Method and theory**

Methodological,
empirical, theoretical,
analytical, disciplinary

4**Solution and application**

Intervention,
efficiency,
implementation,
policy

5**Measurement and scope**

Longitudinal,
interaction

The families are a teaching device - real gaps often combine several types.

Category 1 - Missing Knowledge

1

**Knowledge
gap**

2

**Population
gap**

3

**Geographic
gap**

4

Temporal gap

5

**Contextual
gap**

CORE QUESTION

What important evidence is missing?

GAP

1

KNOWLEDGE GAP

Knowledge Gap

DEFINITION

A knowledge gap occurs when a relevant topic, relationship or phenomenon has not been adequately investigated.

This is a genuine “void” in the literature — and it is rarer than most researchers assume.

Absolute knowledge gaps are rare

Most topics have some prior evidence somewhere.

Verification is essential

Search widely before claiming a void exists.

Exploratory work fits best

Little prior knowledge favours qualitative designs.

Example of a Knowledge Gap

EXISTING KNOWLEDGE

- Financial literacy
- SME access to finance
- Business performance

POSSIBLE GAP

Little evidence exists on how digital financial literacy influences the adoption of AI-enabled financial tools among microenterprises.

The gap is specific: a named relationship, a named population.

How to Address a Knowledge Gap

Confirm the absence through a rigorous literature review



Conduct exploratory research



Develop concepts or propositions



Generate a new framework or evidence base

Where prior knowledge is genuinely thin, exploratory qualitative approaches are usually appropriate.

GAP

2

POPULATION GAP

Population Gap

DEFINITION

A population gap exists when research has focused heavily on particular groups while other relevant populations remain underrepresented.

Over-represented in much of the literature:

Mostly men

**Mostly
university
students**

**Mostly urban
populations**

**Mostly large
companies**

**Mostly higher-
income
participants**

CAUTION

Findings from one demographic should never be assumed universally applicable.

Population Gap Example

EXISTING STUDIES FOCUS ON

- Large firms
- Head-office employees
- Urban professionals

MISSING POPULATION

Frontline employees working in remote humanitarian operations.

RESEARCH QUESTION

Do the established drivers of employee engagement apply to frontline humanitarian staff operating in remote locations?

GAP

3

GEOGRAPHIC GAP

Geographic Gap

DEFINITION

A geographic gap exists when a phenomenon has been investigated extensively in one region but insufficiently in another.

Changing the country is not enough

A new map location is not, by itself, a contribution.

Explain the theoretical relevance

Show why the new setting may alter the relationship being studied.

Geography earns its place only when it changes what we should expect to find.

Weak Geographic Gap

"Many studies were conducted in Europe, but none in Ethiopia."

WHY THIS FAILS

The statement records a location difference but gives no reason why the location should change the findings.

Strong Geographic Gap

"Existing evidence comes predominantly from high-income economies with mature credit markets. Ethiopia differs substantially in financial infrastructure, informality and SME access to formal finance. These contextual differences may alter the relationship between financial-management practices and business performance."

Names the contrast

Mature vs. developing credit markets

Explains the mechanism

Infrastructure, informality, access

Predicts a difference

The relationship itself may change

GAP

4

TEMPORAL GAP

Temporal Gap

DEFINITION

A temporal gap exists when existing evidence may no longer reflect present conditions.

Two major drivers:

01

Technological change

New tools reshape how work and behaviour actually happen.

02

Socioeconomic or institutional shifts

New laws, markets and norms change the environment being studied.

Temporal Gap Example

STUDIES BEFORE 2020 EXAMINED

Employee productivity under conventional office-based work.

WHAT HAS CHANGED SINCE

- COVID-19
- Remote work
- Hybrid teams
- AI-enabled collaboration

RESEARCH QUESTION

How has hybrid work changed the relationship between supervisory control and employee productivity?

Temporal Gap - A Warning

CAUTION

Old research is not automatically obsolete. Age alone is not a gap.

Before claiming a temporal gap, ask:

- Has the environment materially changed?
- Has the technology changed?
- Have laws or regulations changed?
- Has behaviour changed?
- Have the underlying relationships potentially changed?

GAP

5

CONTEXTUAL GAP

Contextual Gap

DEFINITION

A contextual gap occurs when an established relationship or theory has not been tested under a meaningfully different institutional or operational setting.

GEOGRAPHIC GAP

Concerns where the study took place.

CONTEXTUAL GAP

Concerns the environment in which the theory operates — rules, constraints, incentives and conditions.

Contextual Gap Example

PERFORMS WELL IN

A project-management framework applied in stable commercial organizations.

BUT WILL IT WORK IN

Humanitarian programmes operating under emergency procurement, donor restrictions and rapidly changing implementation conditions?

WHY THIS COUNTS

This tests the boundary conditions of the existing theory.

03

CONFLICT AND CONCEPTUAL CONFUSION

Where existing knowledge disagrees or becomes unclear

Follow: Dr Abenet Yohannes, Ph.D. for more contents

Category 2 - Conflict and Confusion

6**Evidence gap****7****Practical-
knowledge gap****8****Conceptual gap****9****Semantic gap****CORE QUESTION****Where does existing knowledge disagree or become unclear?**

GAP

6

EVIDENCE GAP

Evidence Gap

DEFINITION

An evidence gap occurs when credible studies reach contradictory conclusions.

Study A

Finds a positive relationship

Study B

Finds no relationship

Study C

Finds a negative relationship

THE RESEARCHER'S TASK

Do not simply “pick a side” — investigate why the results differ.

How to Investigate Conflicting Evidence

Potential explanations for inconsistent findings include:

**Different
populations**

**Different
measurement
instruments**

Different contexts

**Different sample
sizes**

**Different analytical
models**

**Different time
periods**

Moderator variables

Evidence-Gap Research Question

RESEARCH QUESTION

Why do empirical studies report inconsistent effects of remote work on employee productivity?

Possible moderators to test:

Job type

Management style

**Digital
infrastructure**

**Employee
autonomy**

GAP

7

PRACTICAL-KNOWLEDGE GAP

Practical-Knowledge Gap

Also called: Theory–Practice Gap

Also called: Knowing–Doing Gap

DEFINITION

It occurs when established knowledge recommends one practice, but actual organizations or professionals behave differently.

RESEARCH FOCUS

Explain the behaviour gap — not merely restate the recommended practice.

Practical-Knowledge Example

THEORY

Organizations should maintain effective internal controls.

PRACTICE — SMALL ORGANIZATIONS BYPASS

- Segregation of duties
- Authorization procedures
- Reconciliations
- Procurement controls

RESEARCH QUESTION

What organizational barriers prevent SMEs from implementing recommended internal-control practices?

GAP

8

CONCEPTUAL GAP

Conceptual Gap

DEFINITION

A conceptual gap occurs when researchers use the same concept inconsistently.

A classic illustration: different authors define “burnout” in different ways.

Definition drifts

Each study frames the concept slightly differently.

Boundaries blur

The concept overlaps with neighbouring constructs.

Comparison breaks down

Studies stop measuring the same thing.

Why Conceptual Gaps Matter

If researchers cannot agree on the meaning of a concept:

01

**Measurement
becomes
inconsistent**

02

**Studies become
difficult to compare**

03

**Findings may appear
contradictory**

04

**Theory
development
becomes weak**

Conceptual Gap - Research Strategy

Concept analysis

**Construct
clarification**

**Scale-development
research**

**Systematic
definition review**

GOAL

Develop a clearer conceptual and operational definition that other researchers can apply consistently.

GAP

9

SEMANTIC GAP

Semantic Gap

DEFINITION

A semantic gap occurs when different disciplines use the same term differently.

Terms such as “stress” and “protocol” carry very different meanings across fields.

CONCEPTUAL GAP

Inconsistent use of a concept within a field.

SEMANTIC GAP

The same word meaning different things across disciplines.

Semantic Gap Example - “Risk”

Finance

Probability of financial loss

Project management

Uncertain event affecting objectives

Public health

Probability of disease or harm

RESEARCH OPPORTUNITY

Develop an integrated framework that reconciles definitions across disciplines.

04

METHOD AND THEORY GAPS

Limits created by how we study and how we explain

Follow: Dr Abenet Yohannes, Ph.D. for more contents

Category 3 - Method and Theory

10

Methodological
gap

11

Empirical gap

12

Theoretical gap

13

Analytical gap

14

Disciplinary
gap

CORE QUESTION

Is the evidence limited by how researchers studied or explained the phenomenon?

GAP

10

METHODOLOGICAL GAP

Methodological Gap

DEFINITION

A methodological gap occurs when a field depends heavily on one research design or method, potentially creating systematic blind spots.

Typical methodological shifts:

Surveys → Interviews

**Cross-sectional →
Longitudinal**

Laboratory → Field studies

Methodological Gap Example

EXISTING RESEARCH

Mostly quantitative questionnaires showing that leadership style is associated with employee commitment.

THE GAP

Survey results identify the relationship but do not explain how leadership behaviour influences commitment.

POSSIBLE STUDY

Qualitative interviews, or a mixed-methods design combining measurement with mechanism.

Methodological Gap - Caution

CAUTION

Changing methods alone does not automatically create contribution.

What limitation of the existing method will the new method overcome?

Answer this before proposing a design change.

Quantitative, Qualitative and Mixed

Quantitative

Breadth
Measurement
Statistical patterns

Qualitative

Depth
Meaning
Mechanisms

Mixed methods

Combines both — where the integration is genuinely justified

Method choice follows the research question — never the other way round.

GAP

11

EMPIRICAL GAP

Empirical Gap

DEFINITION

An empirical gap exists when a theoretical proposition exists but has not been adequately tested using real-world data.

FROM

"We think."

TO

"We have evidence."

The contribution is the test, not the idea.

Empirical Gap Example

THEORY -Entrepreneurial orientation should improve SME performance



GAP -The relationship has not been tested among informal microenterprises in fragile markets



STUDY - Operationalize the variables and test the relationship empirically

GAP

12

THEORETICAL GAP

Theoretical Gap

DEFINITION

A theoretical gap exists when current theories explain only part of a phenomenon.

CLASSIC ILLUSTRATION

Classical rational-actor assumptions cannot explain all observed economic behaviour — which is precisely how behavioural economics emerged.

Partial explanation

Unexplained variance

Opportunity to extend theory

Theoretical Gap Example

CURRENT MODELS EXPLAIN PERFORMANCE THROUGH

- Skills
- Motivation
- Rewards

POTENTIAL MISSING VARIABLES

- Psychological resilience
- Organizational support
- Burnout
- Adaptive leadership

THE LIMITATION

These models may inadequately explain performance in highly stressful humanitarian environments.

How to Identify a Theoretical Gap

Look for these signals in the literature:

Unexplained findings

Weak predictive power

Variables omitted from models

Boundary conditions

Inconsistent theory application

Repeated calls for theoretical extension

GAP

13

ANALYTICAL GAP

Analytical Gap

DEFINITION

An analytical gap occurs when data already exist but previous analyses have not investigated important relationships or patterns.

The data are already there

Existing datasets, surveys, administrative records.

The analysis was shallow

Only simple descriptive or bivariate treatment.

Secondary analysis fills it

More sophisticated modelling of existing data.

Analytical Gap - From Simple to Sophisticated

Previous analysis	Potential new analysis
Mean comparison	Subgroup analysis
Correlation	Mediation
Main effects	Interaction effects
Cross-sectional summary	Time-series analysis
Overall effect	Heterogeneity analysis
The contribution comes from the question the new analysis can answer.	

Analytical Gap Example

EXISTING ANALYSIS ASKS

Does financial literacy influence SME performance?

A DEEPER ANALYSIS ASKS

Does access to finance mediate the relationship between financial literacy and SME performance?

Same data. Better question. Real contribution.

GAP

14

DISCIPLINARY GAP

Disciplinary Gap

DEFINITION

A disciplinary gap occurs when a problem is studied predominantly through one academic lens.

Obesity, for example, may be understood as:

Biological

Metabolism and genetics

Psychological

Behaviour and motivation

Environmental

Food systems and urban design

Each discipline sees only part of the problem.

Disciplinary Gap Example

Climate-related business risk may be studied through:

Finance

Economics

**Environmental
science**

**Risk
management**

Public policy

RESEARCH OPPORTUNITY

Develop an interdisciplinary model that integrates these perspectives into one framework.

05

SOLUTION AND APPLICATION GAPS

We understand the problem ; but do we know what works?

Follow: Dr Abenet Yohannes, Ph.D. for more contents

Category 4 - Solution and Application

15**Intervention gap****16****Efficiency gap****17****Implementation
gap****18****Policy gap****CORE QUESTION****We understand the problem - but do we know what actually works?**

GAP

15

INTERVENTION GAP

Intervention Gap

DEFINITION

An intervention gap exists when substantial research describes a problem but limited evidence identifies effective solutions.

ABUNDANT RESEARCH

Describing the problem.

SCARCE RESEARCH

Testing how to fix it.

Intervention Gap Example

EXISTING RESEARCH SHOWS

SMEs have weak financial-recordkeeping systems.

BUT FEW STUDIES TEST

- Accounting training
- Digital bookkeeping tools
- Mentorship
- Financial-management coaching

RESEARCH QUESTION

Which intervention most effectively improves financial-recordkeeping quality among small enterprises?

GAP

16

EFFICIENCY GAP

Efficiency Gap

An efficiency gap exists when a solution works, but is:

Too costly

Too slow

Too complex

**Too resource-
intensive**

Unsustainable

THE QUESTION

Not whether the solution works, but whether it can work better.

Efficiency Gap - The Logic

CURRENT SOLUTION — EFFECTIVE, BUT

- Expensive
- Slow
- Difficult to run

RESEARCH CONTRIBUTION — OPTIMIZE ON

- Cost
- Time
- Energy
- Labour
- Sustainability
- Accuracy

Define the efficiency measure before you claim an improvement.

Efficiency Gap Example

CURRENT MONITORING REQUIRES

Three days of manual data cleaning every month.

RESEARCH MAY TEST

Automated validation rules that achieve the same data quality in two hours.

Same outcome, far lower cost - that is the contribution.

GAP

17

IMPLEMENTATION GAP

Implementation Gap

DEFINITION

An implementation gap occurs when a solution works under controlled conditions but performs poorly in routine practice.

Possible barriers:

Cost

Training

Infrastructure

Behaviour

Organizational resistance

Cultural compatibility

Implementation Gap Example

TECHNICALLY EFFECTIVE

A digital financial-management system works well as designed.

YET SMES DO NOT ADOPT IT

- Limited digital skills
- Weak internet access
- Subscription costs
- Resistance to formal recordkeeping

RESEARCH QUESTION

What factors determine successful adoption of digital accounting systems among SMEs?

GAP

18

POLICY GAP

Policy Gap

A policy gap occurs when research or technological change advances faster than:

Regulations

Laws

**Institutional
policies**

**Governance
frameworks**

**Ethical
standards**

THE CONSEQUENCE

Practice runs ahead of the rules designed to govern it.

Policy Gap Example - AI Governance

AI IS INCREASINGLY USED IN

- Recruitment
- Credit decisions
- Employee monitoring
- Academic assessment

BUT POLICY MAY NOT ADDRESS

- Bias
- Privacy
- Transparency
- Accountability

RESEARCH CONTRIBUTION

Develop or evaluate appropriate governance mechanisms.

06

MEASUREMENT AND SCOPE GAPS

Dynamics across time and between variables

Follow: Dr Abenet Yohannes, Ph.D. for more contents

Category 5 - Measurement and Scope

19**Longitudinal gap**

How relationships develop over time

20**Interaction gap**

How variables work in combination

CORE QUESTION

Are we missing important dynamics across time or between variables?

GAP

19

LONGITUDINAL GAP

Longitudinal Gap

DEFINITION

A longitudinal gap exists when research primarily provides short-term snapshots and little is known about how relationships develop over time.

CROSS-SECTIONAL

A snapshot - one moment in time.

LONGITUDINAL

A sequence - change observed over time.

Longitudinal Gap Example

CROSS-SECTIONAL STUDIES FIND

Entrepreneurship training is associated with business confidence.

But do the effects persist after:

6 months?

12 months?

3 years?

Answering this requires follow-up over time.

Why Longitudinal Research Matters

Change

Sustainability

Development

Delayed
effects

Temporal
order

IMPORTANT CAUTION

Longitudinal evidence can strengthen causal inference, but time alone does not automatically establish causality.

GAP
20

INTERACTION GAP

Interaction Gap

DEFINITION

An interaction gap occurs when individual effects of variables are known, but their combined effect remains unclear.

Effect of A

may depend on

Level of B

This is the logic of moderation — the effect is conditional.

Interaction Gap Example

EXISTING EVIDENCE SHOWS

- Financial literacy influences performance.
- Access to finance influences performance.

NEW QUESTION

Does financial literacy improve performance more strongly when SMEs have greater access to finance?

This tests an interaction or moderation effect.

07

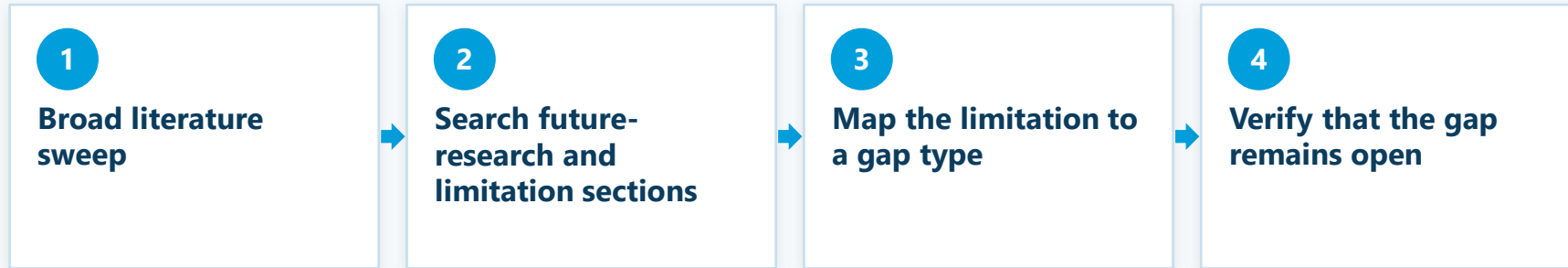
HOW TO FIND A REAL RESEARCH GAP

A four-step search strategy

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The Four-Step Search Strategy

A disciplined process for moving from a broad topic to a verified gap:



Each step narrows the field - and each step must be documented.

Step 1 - Broad Literature Sweep

START WITH RECENT

- Systematic reviews
- Meta-analyses
- Scoping reviews
- High-quality review articles

SEARCH COMBINATIONS SUCH AS

- "topic" systematic review
- "topic" meta-analysis
- "topic" literature review

PURPOSE

Understand the state of the field before narrowing the gap.

Step 2 - Hunt for Research Signals

Look for phrases that flag unfinished business:

“Future research should...”

“Little is known about...”

“Evidence remains limited...”

“Findings are inconsistent...”

“This study was limited to...”

“Further investigation is required...”

CAUTION

These are useful clues — not automatic gaps.

Step 3 - Classify the Gap

"STUDIES INVOLVE ONLY UNIVERSITY STUDENTS."

Classification: POPULATION GAP

"STUDIES REPORT INCONSISTENT EFFECTS."

Classification: EVIDENCE GAP

WHY CLASSIFY

Classification tells the researcher which research design is appropriate.

Step 4 - Verify the Gap

Before claiming novelty:

Search recent databases again

Use synonyms

Search alternative terminology

Check recent theses

Review citations of major papers

Search “cited by” literature

RULE

Never claim “no research exists” without extensive evidence.

08

CONVERTING A GAP INTO A STUDY

From literature pattern to research question

Follow: Dr Abenet Yohannes, Ph.D. for more contents

From Literature to Research Question

LITERATURE PATTERN - Most studies examine large businesses



GAP - Limited evidence on SMEs



SIGNIFICANCE - SMEs operate under different financial and managerial constraints



RESEARCH QUESTION - How do financial-management practices influence SME performance?



METHOD - Quantitative, qualitative or mixed, depending on the objective

Final Exercise - Build Your Gap Matrix

Select a topic of interest and prepare a Research Gap Matrix using at least 10 recent studies.

Study	Population	Location	Method	Variables	Main finding	Limitation
1						
2						
3						
...						
10						

Complete the matrix before attempting to name your gap.

Exercise Tasks 1–4

1**Identify the pattern**

What does the literature consistently show?

2**Identify the limitation**

What remains missing, contradictory, untested, poorly explained or methodologically weak?

3**Classify the gap**

Which of the 20 gap types best describes the limitation?

4**Apply the “So What?” test**

Why does the gap matter theoretically or practically?

Exercise Tasks 5–6 - The Gap Statement

TASK 5 — FORMULATE THE GAP STATEMENT

Existing research has established _____. However, most studies have focused on _____, leaving limited evidence regarding _____. This limitation is important because _____. Therefore, the present study will investigate _____.

TASK 6 — FORMULATE THE RESEARCH QUESTION

Ensure the question directly addresses the identified gap — no wider, no narrower.

09

CHAPTER SUMMARY

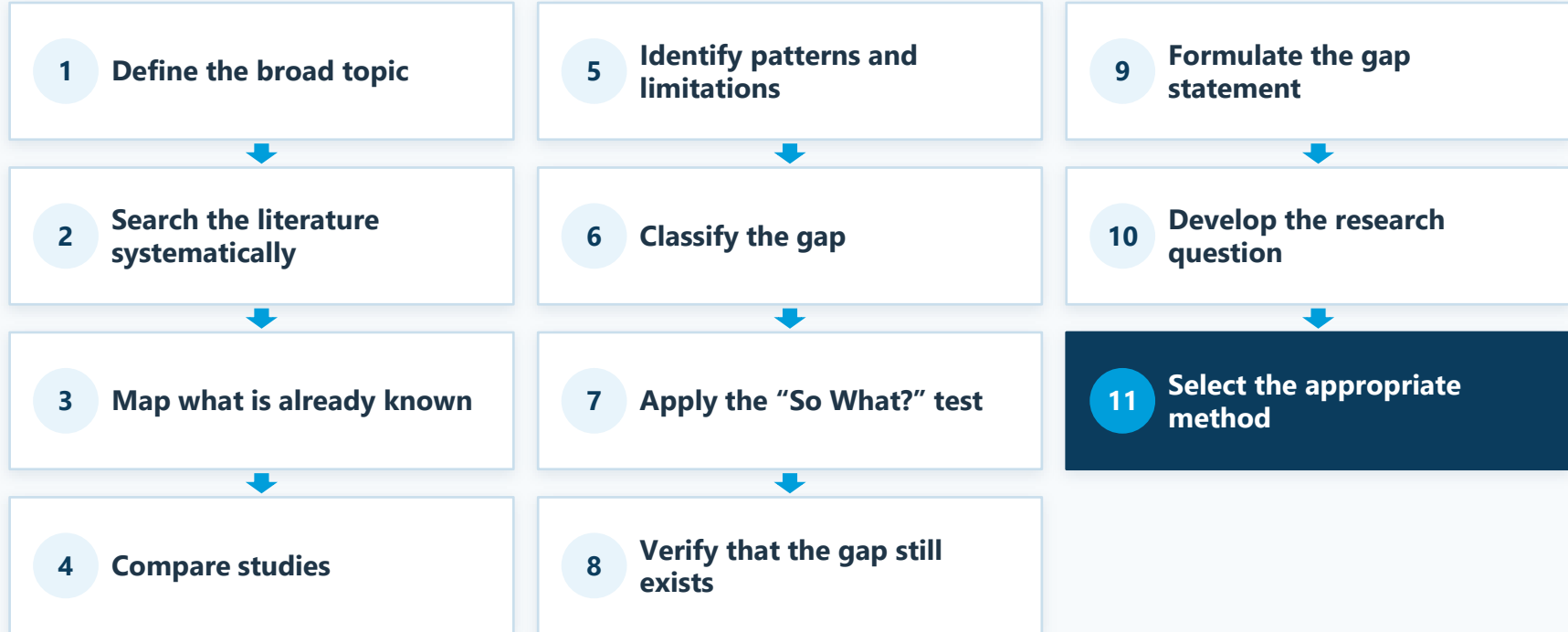
What makes a research gap defensible

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A Defensible Research Gap

- Emerges from systematic engagement with existing literature.
- Is not simply the absence of a study in one location.
- Must be significant as well as identifiable.
- May involve missing populations, contexts or evidence.
- May emerge from contradictory findings.
- May involve methodological, theoretical or analytical limitations.
- May concern interventions, implementation or policy.
- May involve insufficient longitudinal or interaction analysis.
- Should lead logically to the research problem, objectives and methodology.

The Research-Gap Development Process



Key Message

A strong research gap is not something the researcher invents. It is a defensible conclusion reached after critically synthesizing what the literature already knows ; and showing clearly what it still needs to know.

THANK YOU

Questions and Discussion

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