# Strategies & Techniques of Quality Research

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#### **QUALITY RESEARCH**

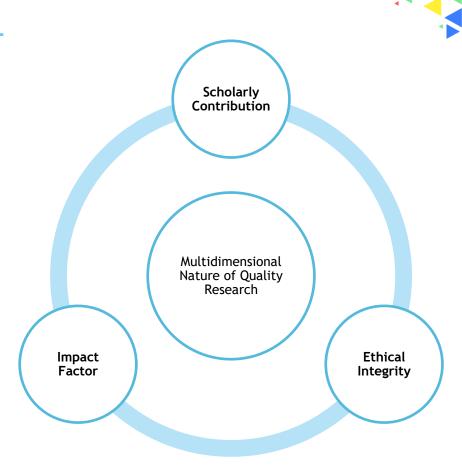
 Historically, quality research was defined primarily by the rigor of methodology and reproducibility.

Now, research is not just about methodical rigor (validity, reliability), but also about its significance in contributing to the advancement of knowledge, practical application, and societal impact.

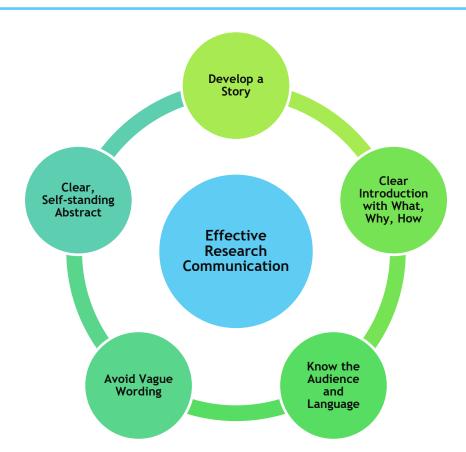


## NATURE OF QUALITY RESEARCH

- Scholarly Contribution: How it pushes the boundaries of existing knowledge.
- Ethical Integrity: The transparency in methods, data handling, and interpretation.
- Impact Factor: The real-world or societal contribution of the research.



# **EVOLVING A QUALITY RESEARCH**



#### **Step 1: Effective Communication**



#### **CRAFTING A STORY**

- Can I explain the story of my paper in 2 min in nonacademic language?
  - 2 Is my story focused, straightforward, and not complicated?
    - Is my story about a theory or practice, not about a sample or method?
  - If I have a story on method or sample, do I explain why this matters theoretically?
  - 5 Did I present the paper before submitting it?
- Do figures and diagrams add substantively to descriptions and explanations in the text?



#### WRITING A CLEAR INTRODUCTION

- 1 Is my introduction in the range of 500 to 750 words?
  - Can I explain in one sentence why the topic matters to non-academics?
    - Is my story about a theory or practice, not about a sample or method?
  - Does first paragraph identify the topic, explain why it matters & describe what is already known?
    - Does the first and final sentence of each paragraph make sense?



#### **KNOWING YOUR AUDIENCE**



- Do I stay within the recommended word length of the journal?
  - 2 Did I check the latest editorials in the journal?
  - Can I write down three names of scholars that I would like to read the article?
  - Did I check relevant forthcoming articles published on the website already?
  - Do I refer to articles published in the journal to which I am submitting?
- Did I read the journal's style guide and prepare my manuscript accordingly?



#### **AVOIDING VAGUE WORDING**



#### "YES!" answer to these questions

1 Am I explicit about what is novel in my paper?

5

- Did I perform a search in the journal to which I am submitting using the key terms in my manuscript?
- Is each sentence in the entire manuscript no longer than two lines?
- Are figures and diagrams comprehensible without reference to the written text?



Do I limit the number of abbreviations and acronyms in my article?

#### WRITING A CLEAR ABSTRACT



#### "YES!" answer to these questions

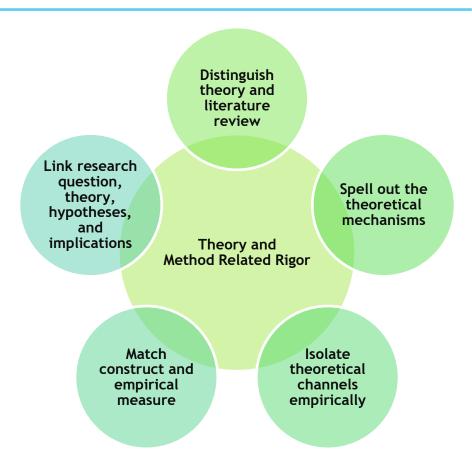
Does the abstract tell the story in the manuscript?

Does the abstract give the topic, research question, theoretical approach, empirical settings, findings, and contribution?

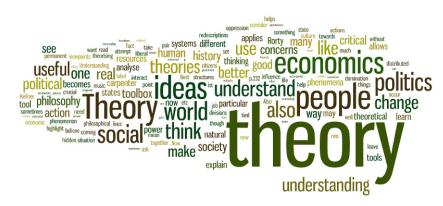
Did I ask colleagues to read my abstract without them knowing the entire paper?



# **EVOLVING A QUALITY RESEARCH**



# Step 2: Theory and Method Related Rigor



#### DISTINGUISHING LITERATURE REVIEW AND THEORY



#### "YES!" answer to these questions

Does the literature review clearly frame my research question in terms of prior research?

Is my literature review focused on work relevant to my specific research question, the key constructs, and chosen theoretical lens?

Do I identify a specific theory, define key constructs, and delineate relevant premises/assumptions?

4

Do all references used in the text refer to the statement made in that particular sentence?



#### SPELLING OUT THEORETICAL MECHANISMS



- Do I rely on a well-defined theoretical model?
  - 2 Do I present a compelling logic, to support my hypotheses?
    - 3 Do I rule out alternative explanations for the findings I report?
  - 4 Do my hypotheses have a counterfactual?
  - Do I avoid hypotheses that include more than one relationship?
- Do I minimize the use of quotations to make my argument?



#### ISOLATING THEORETICAL CHANNELS EMPIRICALLY



#### "YES!" answer to these questions

1 Are my hypotheses predicated on a theoretical argument?

2 Do my hypotheses constitute tests of theoretical relationships?

If I test for moderating/interaction effects, do I discuss the economic effect size of the total effect?

Do I address endogeneity?

3

4



#### MATCHING CONSTRUCT & EMPIRICAL MEASURE



- Do I discuss how methods and measures are suitable?
  - 2 Do I describe how I arrive at my sample?
    - Do I explicitly explain adapting existing measures to my study context?
    - Do I write down the names of the variables in full in the tables and figures?
  - If I use AI tools to collect my data, am I transparent on the process and coding?
- Do I include references to the data sources in the paper?



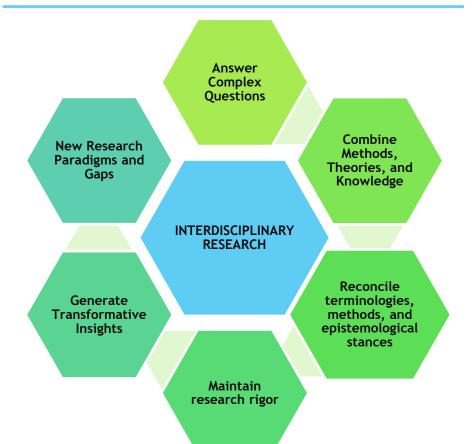
## LINKING QUESTION-THEORY-HYPOTHESES



- Do I explain novelty in a consistent manner in the abstract, introduction, and discussion sections?
  - 2 Do I identify theoretical implications of my findings?
  - Do I identify practical implications of my findings, i.e., specific, actionable options?
  - If I read the practical implications independent of the rest of the manuscript, are they meaningful?
    - Do I clearly describe what I can explain and what I cannot explain of my study?



#### **MULTI-DISCIPLINARY RESEARCH**





## **TECHNOLOGY IN RESEARCH QUALITY**





Al and machine learning are used to analyze vast amounts of data



Quality depends on data cleaning and processing of large/big data sets



Modern research technologies, like IoT and remote sensing, raise new ethical dilemmas (GDPR, consent, data sovereignty)

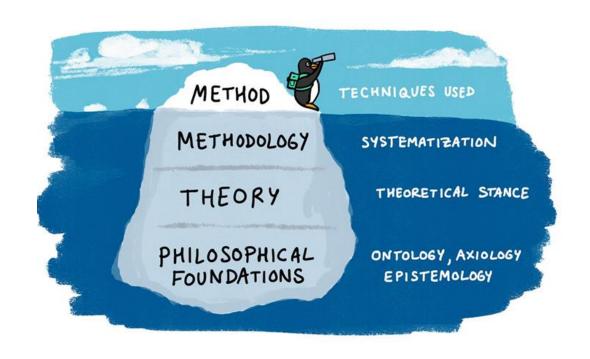
## STRATEGIES FOR QUALITY RESEARCH

- Start with a Clear Research Question
   Focused, specific, and researchable question drives the study's direction.
- Conduct a Comprehensive Literature Review
   Identify gaps in current research and build on existing knowledge.
- Choose the Right Study Design Select quantitative, qualitative, or mixed-methods based on the research goals.
- Comprehensive Research Proposal/Plan
   Develop a robust research proposal or plan for the research.
- **Ethical Research Design**Address consent, confidentiality, and the protection of participants' rights.



## EPISTEMOLOGY IN SHAPING RESEARCH QUALITY

How do we know what we know?



#### **METHODOLOGICAL INNOVATION**



Digital and Computational Methods

> Big Data Analytics

Machine Learning and Al

Simulation and Modeling Mixed Methods and Methodological Pluralism

> Integration of Qualitative and Quantitative Data

Methodological Pluralism Participatory and Collaborative Research Methods

> Participatory Action Research (PAR)

Citizen Science

Collaborative Networks and Crowdsourcing Adaptive and Flexible Research Designs

Emergent Research Designs

Longitudinal and Real-Time Data Collection Reflexive and Critical Methodologies

Critical Realism

Feminist and Postcolonial Methodologies

Decolonizing Methodologies Innovative Data Collection Tools and Techniques

> Digital Ethnography

Virtual Reality (VR) and Augmented Reality (AR)

Eye-Tracking and Neuroimaging

#### CRITICAL REFLECTION IN RESEARCH DESIGN



# Collaborative Research

Critically reflect on own biases and how they influence their research design

#### Reflexivity and Bias

Researchers'
cultural,
personal, and
institutional
backgrounds

# Self-awareness in Research

Shift towards collaborative research teams can also dilute individual biases

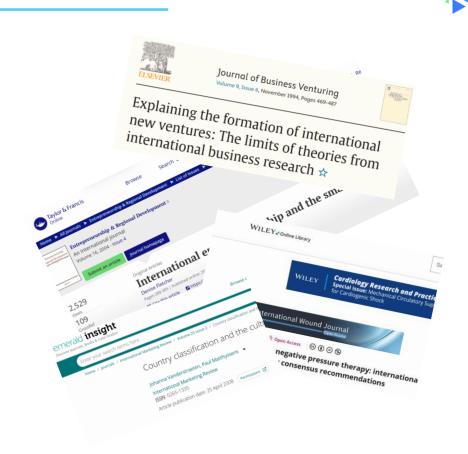
#### PEER REVIEW AND SCHOLARLY PUBLISHING

#### **Open Science and Open Access Publishing:**

Open access, quality and dissemination of research (e.g., accessibility vs. predatory journals)

**Post-Publication Peer Review:** Postpublication reviews offer more rigorous scrutiny and community-driven insights into research quality

**Bias in Traditional Peer Review:** Gender, nationality, and institutional affiliation bias; double-blind reviews



#### RESEARCH IMPACT AND CONTRIBUTION



**Beyond Citation Metrics:** Alternative metrics (altmetrics) for evaluating the impact of research, such as social media mentions, policy changes, and real-world application.

#### **Community Engagement and Research:**

Working with communities can enhance research relevance and contribute to greater societal impact.

Long-term Research Impact: Measure and evaluate the long-term societal and environmental impact of research, beyond just the immediate academic circle.

#### Philip Kotler

Northwestern University · Kellogg School of Management



#### Skills and Expertise

Marketing Management · Strategic Marketing · Marketing Strategy

Follow 407 Publications · 92616 Citations

#### John J Hopfield

Princeton University · Princeton NeuroScience Institute



#### Skills and Expertise

Neurobiology

Follow 233 Publications · 74853 Citations

#### CONCLUSION



Collaborative and Interdisciplinary study



# **THANK YOU**

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