

Turning your teaching into scholarship: a 5-step approach

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Disclosures & Caveats



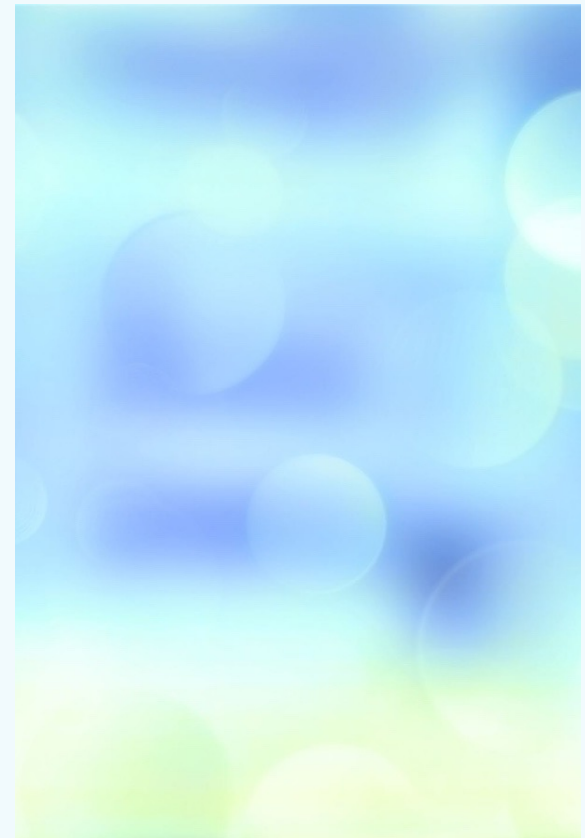
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5 STEP APPROACH

EDITORIAL

Translate Your Education Work Into Scholarship: A 5-Step Approach

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Frameworks for Study Design/Methods

Boyer

Education scholarship
paper types

Epidemiology terms

Education research
terms

Education scholarship approaches



CURRICULUM
DEVELOPMENT



SURVEY



NEEDS
ASSESSMENT



EDUCATIONAL
INNOVATION



QUALITY
IMPROVEMENT
WRITE-UP



LITERATURE
REVIEW



QUALITATIVE
RESEARCH



QUANTITATIVE
RESEARCH

Fundamentals of randomized designs: AMEE Guide No. 128

Tanya Horsley, Eugene Custers & Martin G. Tolsgaard

To cite this article: Tanya Horsley, Eugene Custers & Martin G. Tolsgaard (2019): Fundamentals of randomized designs: AMEE Guide No. 128, Medical Teacher, DOI: 10.1080/0142159X.2019.1681389

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Quantitative and qualitative methods in medical education research: AMEE Guide No 90: Part I

Mohsen Tavakol & John Sandars

To cite this article: Mohsen Tavakol & John Sandars (2014) Quantitative and qualitative methods in medical education research: AMEE Guide No 90: Part I, Medical Teacher, 36:9, 746-756, DOI: 10.3109/0142159X.2014.915298

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Quantitative and qualitative methods in medical education research: AMEE Guide No 90: Part II

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Handouts

Education Research Resources

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A Suggested Roadmap for Completing MedEd Scholarship

Identify an education topic of interest or an education problem you would like to investigate.



Perform a literature search. This will help you: 1) identify what is currently known about the topic, 2) observe what methods have been used to investigate similar questions, 3) identify or compose a conceptual framework.



Identify a mentor(s) with expertise in the area you plan to investigate.

Step 1: Research Problem

Start with a research *problem*

Current issues, controversies,
concerns

Sources

Experience

Literature

Theories

External
sources



Refining your problem

- Pressing
- Relevant
- You care about it
- Synergy with your teaching
- Solving it matters

Chat exercise

What are the top problems facing you as an educator in your field?

A lens for your problem: Conceptual Framework

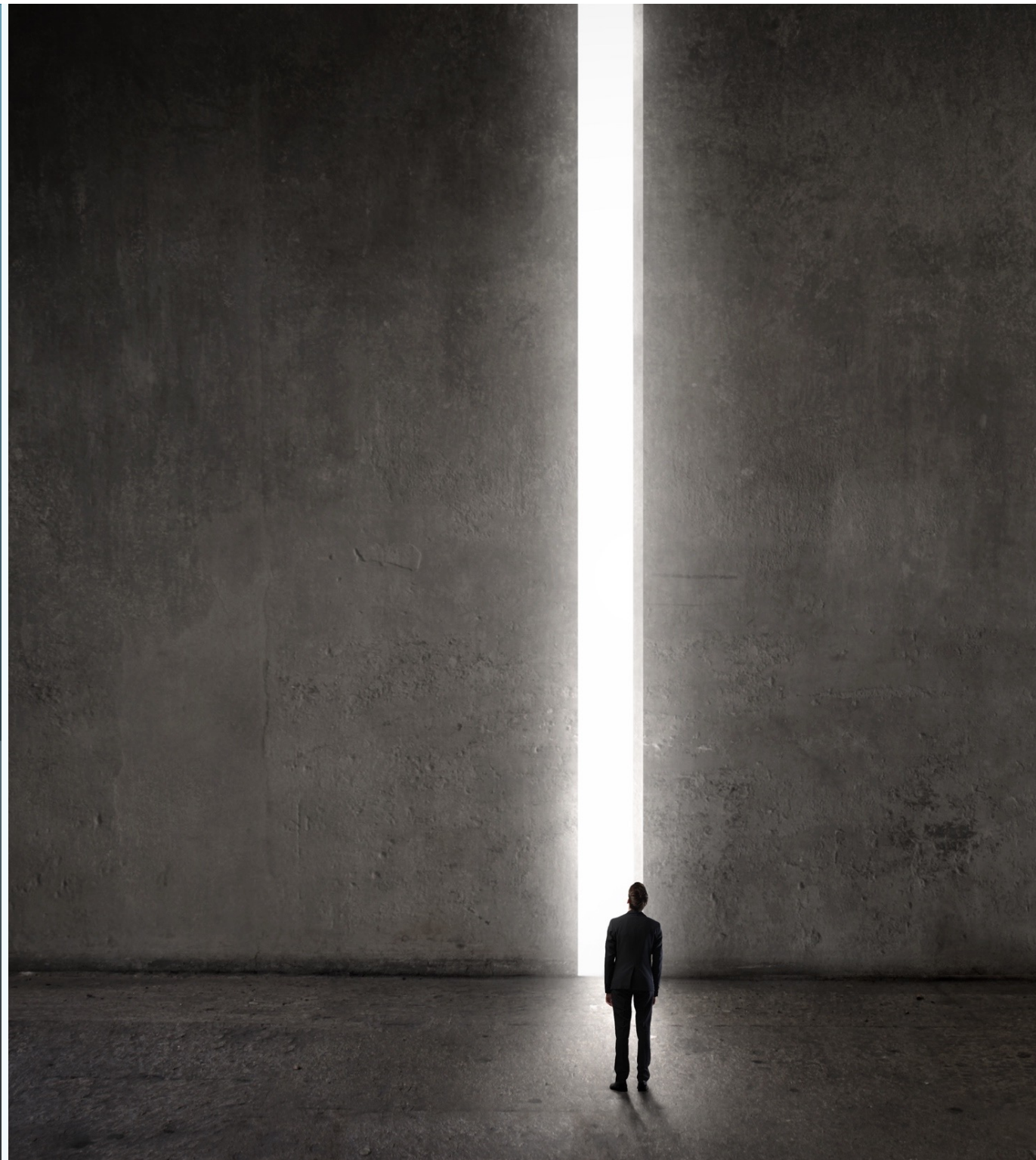
- A theory, model, or approach for how things work
- Helps establish the question's importance
- Allows others to build on and adopt findings
- Helps you select outcomes and interpret results



Step 2:
Define your
audience



Step 3:
Identify the
gap



Frame your problem

- Polish your problem-gap-hook before you start

Perspect Med Educ (2015) 4:252–253
DOI 10.1007/s40037-015-0211-y

THE WRITER'S CRAFT

Joining a conversation: the problem/gap/hook heuristic

Lorelei Lingard

Problem: Identify a problem that people are talking about

Gap: What is the gap in the current knowledge or thinking about the problem?

Hook: Convince the reader that this gap is important and that it matters.





Traditional
format

Feedback is crucial to medical
education

Little is known about what
incoming residents know about
feedback

We sought to address this gap by
surveying incoming residents
regarding their perceptions
about feedback

Problem- Gap-Hook format

Evidence suggests self-directed feedback increases feedback receptivity, but few residents direct their own feedback

Little is known about motivators for feedback-seeking behavior in residents

Understanding motivators and inhibitors of feedback seeking behaviors is crucial in order to develop and implement feedback processes that have the potential to optimize performance.

Step 4:
Select an
approach



Step 4: Scholarship approach



NEED TO CREATE A
CURRICULUM



WANT TO
UNDERSTAND
PERCEPTIONS



UNDERSTAND A
LEARNING GAP



PILOT AN
INTERVENTION



APPROACH A PROBLEM
THROUGH A QI LENS



SUMMARIZE WHAT IS
KNOWN IN THE
LITERATURE



UNDERSTAND A
PHENOMENON

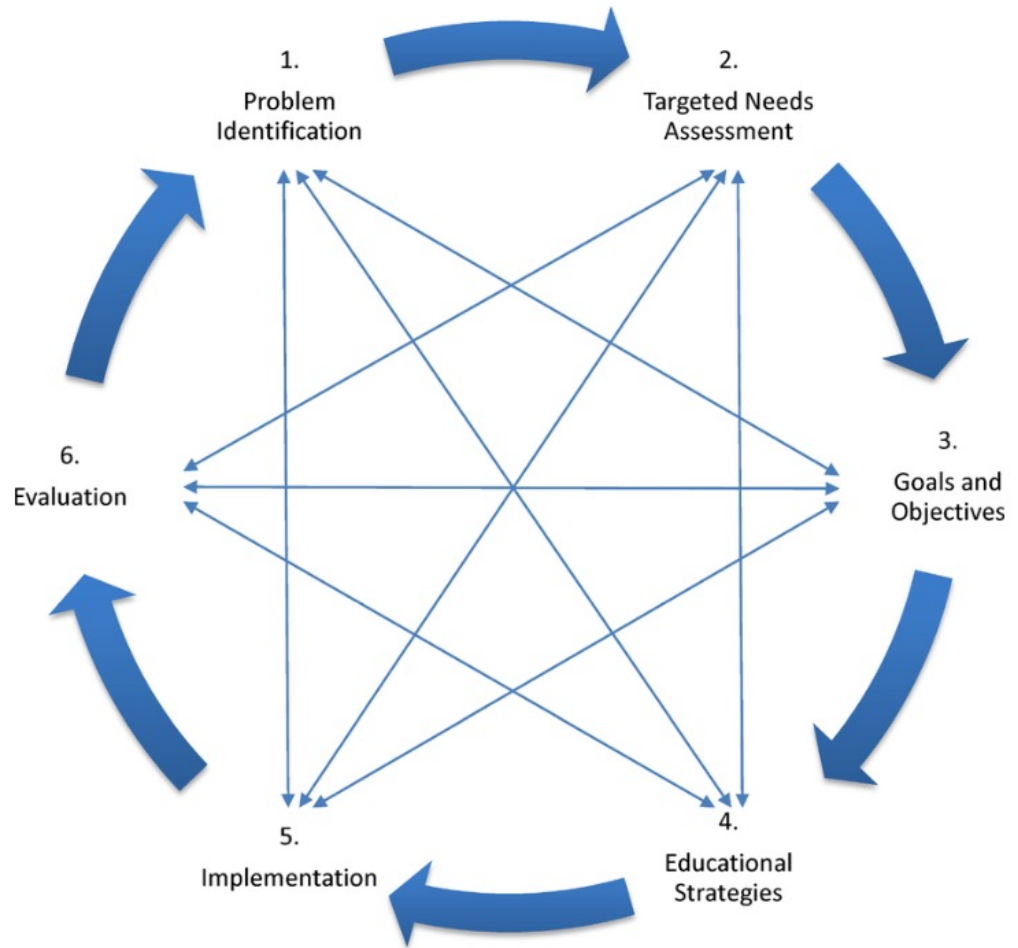


MEASURE THE IMPACT
OF AN INTERVENTION

Let the gap drive scholarship approach

Gap or Need to Be Addressed	Scholarship Approach
Measure perceptions	Survey study
Develop or implement an education intervention	Innovation report
Design and implement an education quality improvement project in which GME trainees and/or faculty are essential	Quality improvement report
Develop and test a new instrument	Validity evidence article
Summarize what is known from the literature: literature synthesis	Review
Understand a phenomenon through lived experiences (through words, observations, documents, etc)	Qualitative research
Measure the impact of an intervention, test a hypothesis, evaluate associations between exposure and outcome	Quantitative research
Evaluate a program using methods that inform practice outside of the program and/or institution	Program evaluation
Describe a learning gap	Needs assessment
Create or modify a curriculum	Curriculum development
Understand best practices when literature is not conclusive, and expert opinion exists	Consensus group method

Curriculum development



Curriculum-focused research

Evaluate
curriculum

Compare 2 ISD
approaches
(concurrent)

Compare 2 ISD
approaches
(historical)

Lessons learned
from iterative
revision

New
understanding
about topic

Understand
experience of
curriculum



JGME Literature Review Series

This series provides an overview of 8 influential approaches to knowledge synthesis: Systematic Reviews, Realist Reviews, Narrative Reviews, Scoping Reviews, State-of-the-Art, Critical Reviews, Meta-ethnographic Reviews, and Integrative Reviews. For each literature review, 2 articles are provided: (1) an overview of the review type with background information on philosophical foundations, purposes, and expected products for readers and researchers, and (2) a short article with steps that outline the "nuts and bolts" of this type of review.

Introduction to the JGME Literature Review Series

Anna MacLeod, PhD; Robin Parker, MLIS; Lara Varpio, PhD

Literature Reviews: Key Considerations and Tips From Knowledge Synthesis Librarians

Robin Parker, MLIS; Lindsey Sikora, MSt

Systematic Reviews in Medical Education

Lauren A. Maggio, PhD; Anita Samuel, PhD; Elizabeth Stellrecht, MLS

A Reader's Guide to Medical Education Systematic Reviews

Elizabeth Stellrecht, MLS; Anita Samuel, PhD; Lauren A. Maggio, PhD

Understanding Realist Reviews for Medical Education

Rola Ajjawi, PhD; Fiona Kent, PhD

Realist Reviews: A Brief How-To

Fiona Kent, PhD; Rola Ajjawi, PhD

Narrative Reviews: Flexible, Rigorous, and Practical

Javeed Sukhera, MD, PhD, FRCPC

Qualitative and Quantitative Methods



Quantitative: *how much?*

Will ratings of residents by students improve for residents who undergo a new teaching rotation?



Qualitative: *why?*

Why do residents report the same amount of stress when working fewer hours?

Selecting
outcomes:

*Meaningful,
congruent with
rationale &
objectives*



Behaviors,
Performance

Skills, Attitudes

Knowledge

Satisfaction,
Confidence

A word about quality

Timely, relevant

Interesting

Well-written

Rigorous methods

Responsible result interpretation

Scoring tools

Internal vs External Validity

- **Internal Validity:** How well was the study designed and run so that one can conclude that the dependent variable (outcome) was produced by the independent variable (predictor variable)?

Think Methodologically Sound

- **External Validity:** Are the study results applicable to other groups?

Think Generalizability



Step 5: Select a target venue

Questions



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