



# Using Sound Design for Faculty Development Evaluation & Research

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# The Developer as Scholar

- Each faculty development intervention is a chance for scholarship
  - Evaluation
  - Research
- Types of questions (*Cook, Bordage, Schmidt, 2008*)
  - Description “What was done?”
  - Verification “Did it work?”
  - Clarification “How or why did it work?”

# Goal for Scholar Developers

- Contribute to a
  - Conceptually framed
  - Cumulatively-built
  - Soundly designed and conducted
  - Body of scholarship
- That will enrich
  - Our shared understanding of the processes and outcomes of faculty development
  - And the complex contexts within which these occur





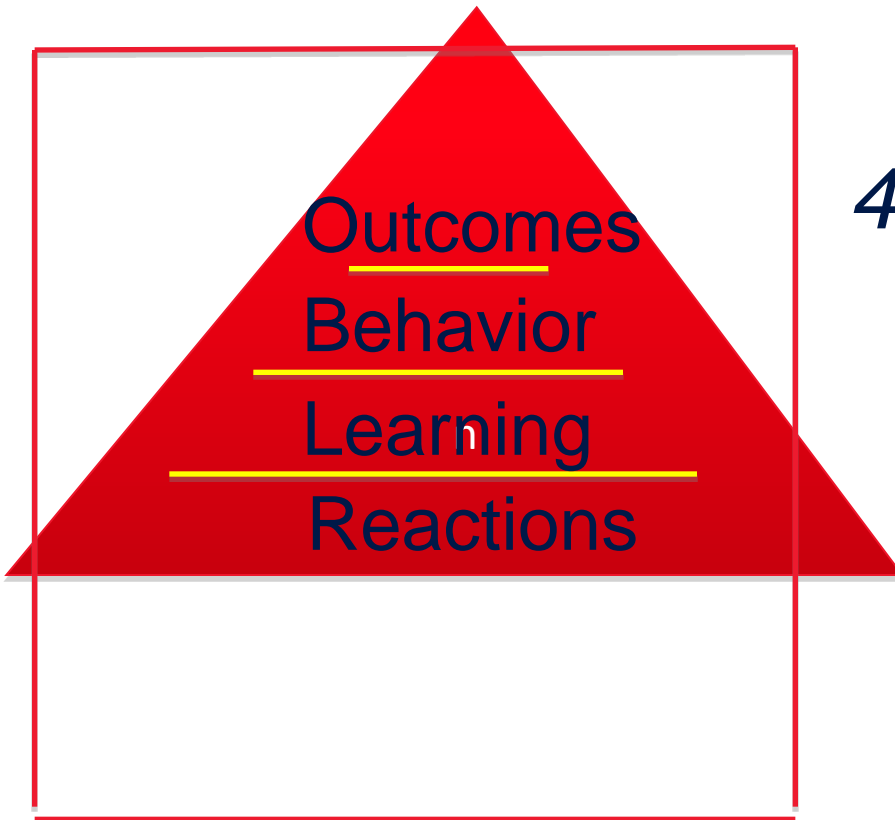
# Barriers to Scholarship

- Tension between implementing and scholarship
- Focus on just getting the evaluation done vs. considering broader findings
- Limited view of legitimate scholarship  
UNDERSTANDING & PROOF (*Reghr, 2010*)
- Lack of funding, time, and publication outlets

# Objectives

- Consider the types of questions we might ask in faculty development studies
- Identify faculty development studies that exemplify sound design features
- Develop a question and a conceptual framework as the first step in the design process.

# Targets for Faculty Development Scholarship



*Kirkpatrick's  
4 Levels of Evaluation,  
(1994)*

# Targets for Faculty Development Scholarship



What are the self-reported benefits for Harvard faculty members of participating in the Harvard Macy Institute Program for Physician Educators ?

*Armstrong & Barsion,  
2006*

# Targets for Faculty Development Scholarship



Did student ratings of teachers who had participated in an 8-hour, intensive workshop on basic instructional skills differ from those teachers who had not participated?

*Notzer & Abramovitz, 2008.*



# Targets for Faculty Development Scholarship



## Outcomes

Behavior

Learning

Reactions

Do students and patients of teachers report higher satisfaction with ambulatory clinical encounters after the teachers have participated in 3 seminars on the “One-Minute Preceptor”?

*Salerno, O'Malley, et al  
2002.*

# New Targets for Faculty Development Scholarship

*O'Sullivan & Irby,  
2011*



# New Targets for Faculty Development Scholarship

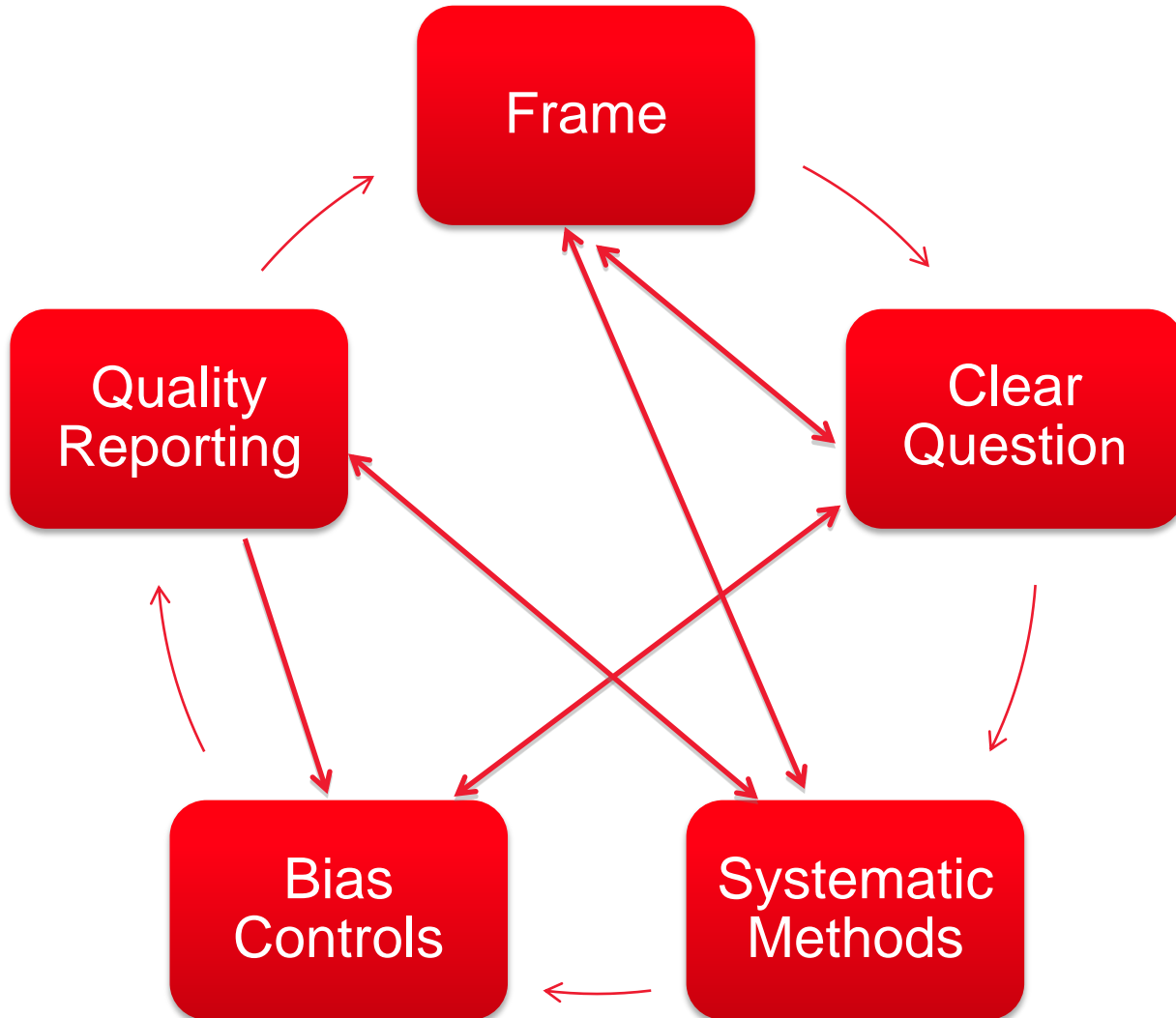
*O'Sullivan & Irby,  
2011*



What factors are associated with successful implementation of a local faculty development program after a team attended a national faculty development program?

*Houston et al,  
2004*

# Features of Sound Design



# Reflects a Conceptual Framework

(Cook, Beckman & Bordage, 2007)

- A theory, an approach, or a model for how things work that situates a **study within an existing context**
  - Defines the question
  - Reflects the literature
  - Informs the methods



*"I still say it's only a theory."*

# Answers a Clear Question



- **Description: “What was done?”**  
participants’ feel that the program prepared them to teach new quality improvement content ? *Peters et al, 2002*
- **Verification: “Did it work?”** Do  
participants in a teaching humanism program demonstrate more humanistic qualities upon completion of the program than matched controls? *Branch et al, 2009*
- **Clarification: “How or why does it work?”** What  
factors are associated with successful implementation of a local faculty development program? *Houston et al, 2004*

# Answers a Clear Question



- **Description: “What was done?”**
- **Verification: “Did it work?”**
- **Clarification: “How or why does it work?”**

# Uses Systematic Methods

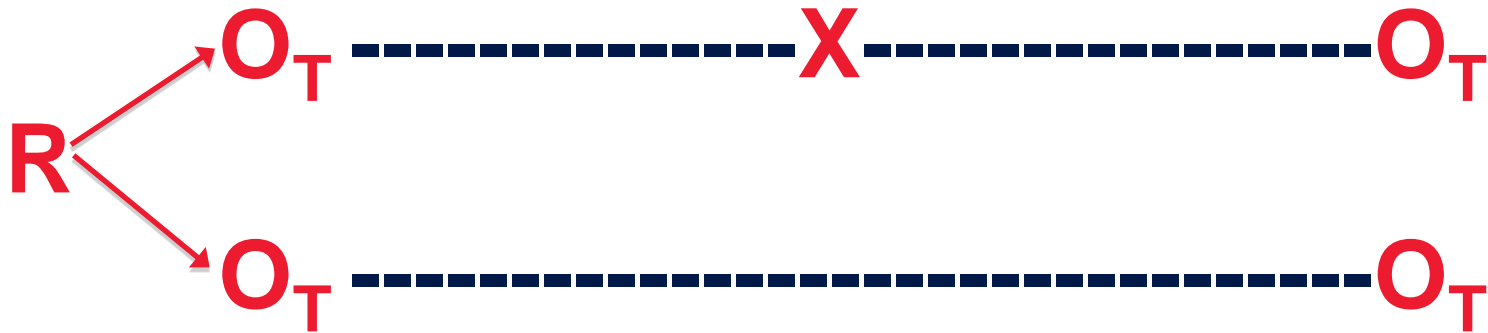
- Experimental
- Quasi-experimental
- Observational
- Qualitative
- Mixed methods





# Experimental

- Furney et al, Teaching the One Minute Preceptor: A Randomized Controlled Trial. *J Gen Intern Med*, 2001.



# Quasi-experimental

- Hewson, et al. What's the Use of Faculty Development? Program Evaluation Using **Retrospective Self-Assessments** and Independent Performance Ratings, *Teaching and Learning in Medicine*, 2001



# Observational

- Houston et al, Outcomes of a National Faculty Development Program in Teaching Skills. *Journal of General Internal Medicine*, 2004.



*Cohort with repeated measures*

# Qualitative

- Martimianakis, et al, Understanding the Challenges of Integrating Scientists and Clinical Teachers in Psychiatry Education: Findings from an Innovative Faculty Development Program, *Academic Psychiatrist*, 2009.

**O<sub>s</sub>**    ~~X~~--*field notes*--~~X~~--*curricular materials*    **O<sub>s</sub>**  
          --*reflective diary*--~~X~~

# Mixed Methods

- Andreatta et al, Short-term Outcomes and Long-term Impact of a Programme in Medical Education for Medical Students. *Medical Education*, 2009.





# Controls for Bias

## Threats

- External events
- Subject maturation
- Testing effects
- Instrumentation
- Selection of subjects
- Loss of subjects
- Investigator bias
- Response shift bias (McKinley, 2011)

## Controls

- Randomization
- Comparison groups
- Retrospective pre/post test
- Use of multiple measures (triangulation)

# Uses Quality Guidelines in Reporting Results

Guideline	Study Design
MERQI	Experimental, quasi, and observational
m-NOS	Case control and cohort studies
TREND	Quasi-experimental
CONSORT	RCTs
SQUIRE	Quality improvement

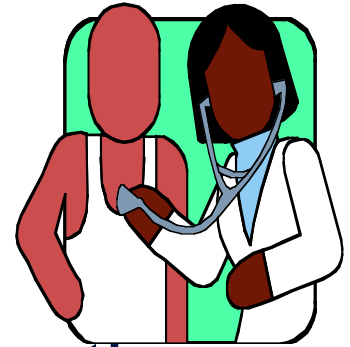
# Sound Design for the Future

*(BEME No. 8, 2006)*

- Use more mixed methods
- Study process, context, & environmental variables
- Develop measures that move beyond self-report
- Select validated instruments (PsycTESTS)
- Compare different faculty development approaches
- Link multiple studies around a common theme
- Consider cultural and organizational outcomes



# Diagnosing the “Ascholar” Syndrome



- Procrastinates in making an evaluation or research plan whenever possible
- Is immobilized when facing data collection logistics
- Demonstrates signs of anxiety when faced with evaluation & research results
- Collects data that remain in the desk drawer