Purpose Statement

Example Qualitative Study

Example Quantitative Study

Example Mixed Methods Study

Draft Your Purpose Statement

Research Questions & Hypotheses

Example Qualitative Study

Example Quantitative Study

Example Mixed Methods Study

Draft/Refine Your Research Questions (& Hypotheses)

Prepared by Karen Spear Ellinwood, PhD, JD, EdS, Director, Instructional Development, Education Scholars Program

Methods Matrix	Qualitative Approaches	Quantitative Approaches	Mixed Methods Approaches
What it *measures*?	*Describes* attitudes, perceptions, opinions, ideas, or experience	Quantifies the measurement of attitudes or behaviors	Measures both
Philosophy	• Seeks to make constructivist knowledge claims, based in participant experience and/or multiple perspectives • Often involves sociocultural, constructivist learning theories	• Seeks to make post-positivist knowledge (cause & effect) claims • Surveys and experiments • Educational philosophy may be based in behaviorist theories of learning	• Seeks to make pragmatic knowledge claims, i.e., consequences of particular practices, problem-centered, pluralistic in its approach

Research Questions & Strategies	• *Divergent (open-ended) research questions*
	• Emergent / Fluid methods
	  • Phenomenology
	  • Grounded theory
	  • Ethnography
	  • Case study
		• ***Convergent (Close-ended) research questions***
		• Pre-determined approaches
			• Involves both divergent and convergent research questions
			• Emergent/Fluid and pre-determined methods
			• Involves some combination of qualitative and quantitative data collection and analysis

Methods	• *Seeks to revise/generate theory*
	• Structured or semi-structured interviews
	• Observation or participant-observation
	• Open-ended questions via surveys or written interviews
	• Image, graphic or textual, discourse or other narrative analysis
		• *Tests or verifies existing theory*
		• Experimental design
		• Numeric data (data that can be quantified)
			• Various designs Integrates the data at different stages of inquiry:
			  • Qualitative and quantitative data and analysis, OR
			  • Qualitative data with qualitative and quantitative analysis

Research Practices	• Discloses positionality of the researcher (potential bias, transparency) • Values participant perspectives • May involve personal values in study • Validates or explains findings • Interprets data to generate ideas for curriculum or reform • Often collaborates with participants or performs member-check	• Research Questions stated as hypotheses, identify variables • Applies standards of reliability and validity • Gathers quantitative data – something measured numerically • Claims to use unbiased approach or is able to measure for bias • Employs statistical procedures	• Employs practices of both qualitative and quantitative studies

Karen Spear Ellinwood, PhD, JD, EdS, Director, Instructional Development, adapted from Creswell (2014)

Conduct a Literature Review

1) Search for peer reviewed articles and books that provide a broad review of the education and/or medical education literature on the theory or topic of study

2) Identify and review research articles that address your topic and address similar research questions

Goal: Familiarize yourself with how experts in the field …

- frame and discuss the issue
- phrase their research questions
- Address these questions, i.e., which research methodologies have they used and why

3) **Search for presentations** at recent medical education conferences that address questions closely related to yours

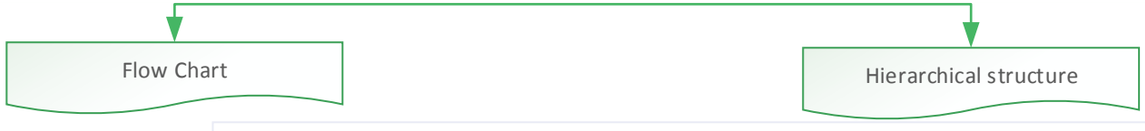
Primary Goal – *Identify a gap in the literature* so that you can

- Craft a study that will address that gap

Secondary Goal – *If there is no appreciable gap, identify how you could build on the studies that have been done.*
Example: applying what's been done to a particular context or with different participant perspectives to add to the understanding or local application of an educational theory or intervention

Create a Literature Map

The map provides a visual summary of your literature review.
Set it up however is most helpful to you. 2 types are:



Reference

- Creswell J. Research Design: Qualitative, Quantitative and Mixed Methods Approaches, 4th Ed. Sage:Los Angeles, CA; 2014.

Notes

Prepared by Karen Spear Ellinwood, PhD, JD, EdS, Director, Instructional Development, Education Scholars Program

Sample of a Literature Review Map
Constructive Feedback in Medical Education

Studies Defining Feedback

Studies or Meta Analyses

- Describe behaviors, conditions or factors that people find "helpful" or "constructive", or not; AND
- Offer statistical analysis of significance of factors

Understand WHAT it is & HOW it has been studied

Qualitative Studies	Quantitative Studies
Mixed Methods Studies	

Specific Feedback Models

- Studies that Describe / Explain / Compare specific models or approaches to Feedback, without regard to educational setting

Feedback Models used in Medical Education

- Which ones
- How are they used
- Which settings
- Identify studies regarding settings/ models similar to the one you propose to study

Outcomes Studies RE: Feedback Model(s)

What are the advantages & Disadvantages with respect to outcomes for learners and Educator perspectives

Single model studies	Comparative model studies

Funds of Knowledge Map
What you know and need to know about local practices to address the specific research question

Study Context & Local Practices

- Which model, if any, do educators use in the local context
- How does the local context differ from contexts already studied?
- What training and/or self-directed learning have educators done locally?
- How are educators evaluated/assessed locally on feedback practices?

The Gap!

- What questions have not been asked or answered?
- What questions have been answered in part, using certain methods but not others, and could benefit from further explanation?
- ????

Questions a Lit Review Might Raise

- Were there any flaws in the methodologies used? Limitations in the studies? How were these addressed?
- How do these studies inform the methods you propose to use in your study?
- How will you address challenges or limitations?
- Which feedback model would you prefer to be used in the setting you propose to study? Why?
- How do you propose educators should apply that model?
- Will you study what's being done in relation to the ideal model?
- Will you design a study that could compare what's being done now with what you think should be done?
- What are the challenges with either design?

Questions a Funds of Knowledge Review Might Raise

- What else do I need to know to design the study effectively?
- Who do I need to involve (educators, participants…)?
- Which setting would yield the most relevant data?
- What timeline would be optimal for gathering data?
- Which methods would best address the research question in the local context?

Prepared by Karen Spear Ellinwood, PhD, JD, EdS, Director, Instructional Development, Education Scholars Program