Purpose Statement

Draft Your Purpose Statement

Example Qualitative Study

Example Quantitative Study

Example Mixed Methods Study

Research Questions & Hypotheses

Draft/Refine Your Research Questions (& Hypotheses)

Example Qualitative Study

Example Quantitative Study

Example Mixed Methods Study

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

- **Philosophy**
  - Seeks to make constructivist knowledge claims, based in participant experience and/or multiple perspectives
  - Often involves sociocultural, constructivist learning theories

- **Research Questions & Strategies**
  - **Divergent (open-ended) research questions**
  - Emergent / Fluid methods
  - Phenomenology
  - Grounded theory
  - Ethnography
  - Case study

- **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

- **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

## Quantitative Approaches

- **Philosophy**
  - Seeks to make post-positivist knowledge (cause & effect) claims
  - Surveys and experiments
  - Educational philosophy may be based in behaviorist theories of learning

- **Research Questions & Strategies**
  - **Convergent (Close-ended) research questions**
  - Pre-determined approaches

- **Methods**
  - Tests or verifies existing theory
  - Experimental design
  - Numeric data (data that can be quantified)

- **Research Practices**
  - 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

## Mixed Methods Approaches

- **Philosophy**
  - Seeks to make pragmatic knowledge claims, i.e., consequences of particular practices, problem-centered, pluralistic in its approach

- **Research Questions & Strategies**
  - 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**
  - 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**
  - Employs practices of both qualitative and quantitative studies

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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:

- Flow Chart
- Hierarchical structure

Reference

Notes
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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

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?

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?

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?

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?
- ???

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