

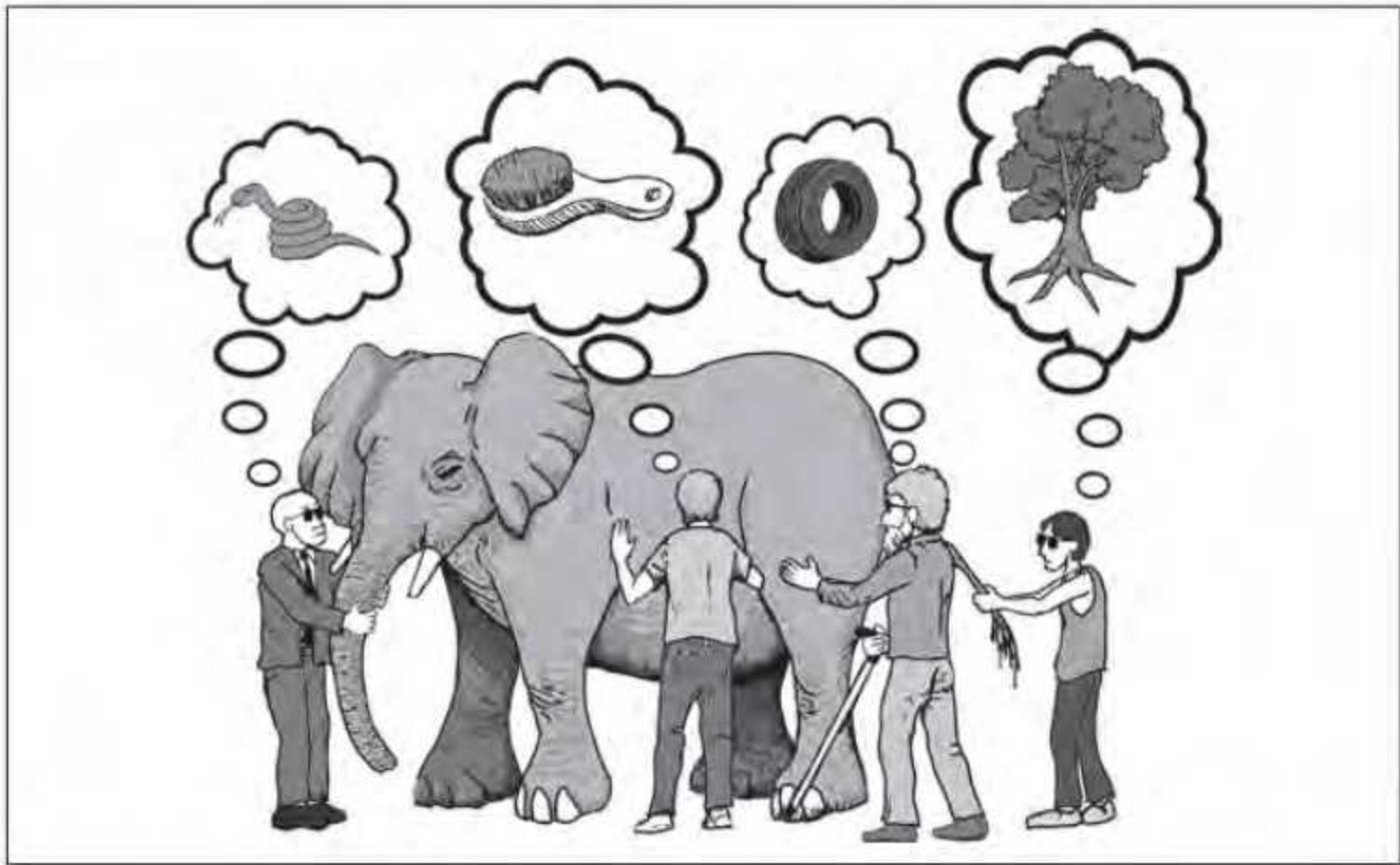
# Mixed Research Methods

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THE WAY I FEEL  
IS HARD TO  
QUANTIFY!

HOW HARD -  
ON A SCALE  
OF ONE TO  
TEN?



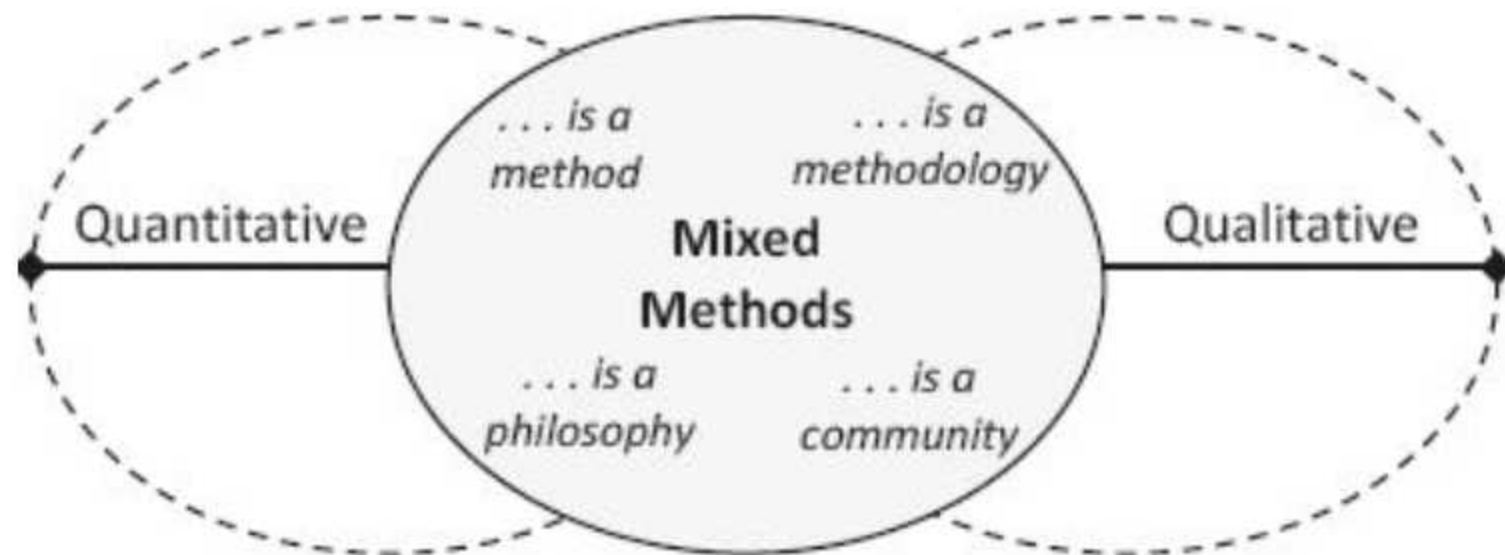


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# What is Mixed Methods Research?

Using both qualitative and quantitative methods to answer a single research question will mean we are able to build a more complete understanding of the topic that's being investigated

Quantitative data will tell you *what* is happening and help you understand magnitude, while qualitative data can tell you *why* something is happening.



## When to Conduct a Mixed Methods Study?

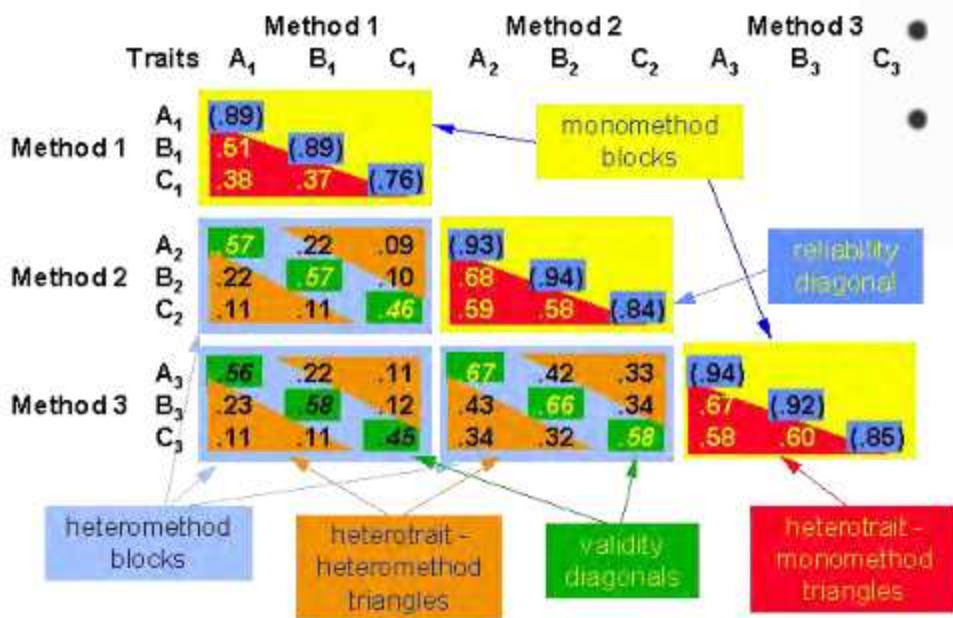
- When you have both qualitative and quantitative data and together they are stronger
- When you wish to build on the strengths of both types of data
  - Quantitative: "outcomes of study"
  - Qualitative: "the process" (p. 537)
- When one type of research is not enough
- When you wish to provide alternative perspectives in a study



# The Development of Mixed Methods Research

## 1959: Campbell & Fiske

- Developed the Multitrait-Multimethod (MTMM) Matrix
- Charts multiple variables across multiple methods to determine how closely variables are related



## 1973: Sieber

- Suggested combination of case studies with surveys, integrating quantitative & qualitative data

## 1979: Jick

- Introduced "triangulation"



# The Development of Mixed Methods Research

## Debate among researchers:

- Can qualitative and quantitative data actually be combined?
- Differing “world views”
- Quantitative - objective collection of data
- Qualitative - viewing data through one’s own lens

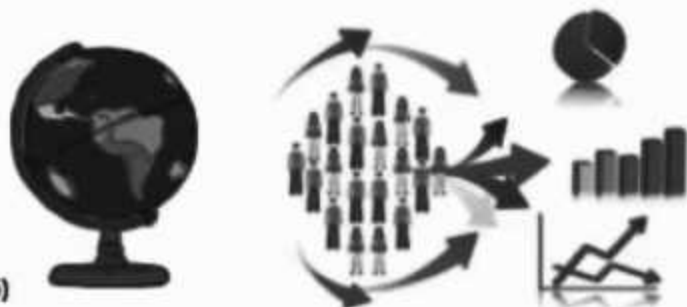
## Over time, interest in creating procedures and purposes for mixed methods increased

- Collecting quantitative and qualitative data in *two separate phases* would allow data from one source to complement and enhance the other

## Past 5-7 years has been “Reflective Period” with three major themes:

- Current assessment or mapping of the field
- Emergence of constructive criticisms and reassessments that have challenged the nature of mixed methods research
- Expansion to many disciplines and countries in the world

(Creswell, 2015)



# Identifying a Mixed Methods Design

## FIRST, ASK....

- Is there evidence in the title? (i.e. “integrated,” “triangulated,” “combined,” or other words to signify that both quantitative and qualitative data has been collected.)
- Is there evidence in the data collection section?
- Is there evidence in the purpose statement or research questions?

## NEXT, DETERMINE...

- **Intent.** What is the intent for combining the quantitative & qualitative data?
- **Timing.** What is the sequence of collecting the quantitative & qualitative data?
- **Emphasis.** What priority or weight does the researcher give to quantitative & qualitative data collection?



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## **BASIC DESIGNS:**

- The convergent design
- The explanatory sequential design
- The exploratory sequential design

## **ADVANCED DESIGNS:**

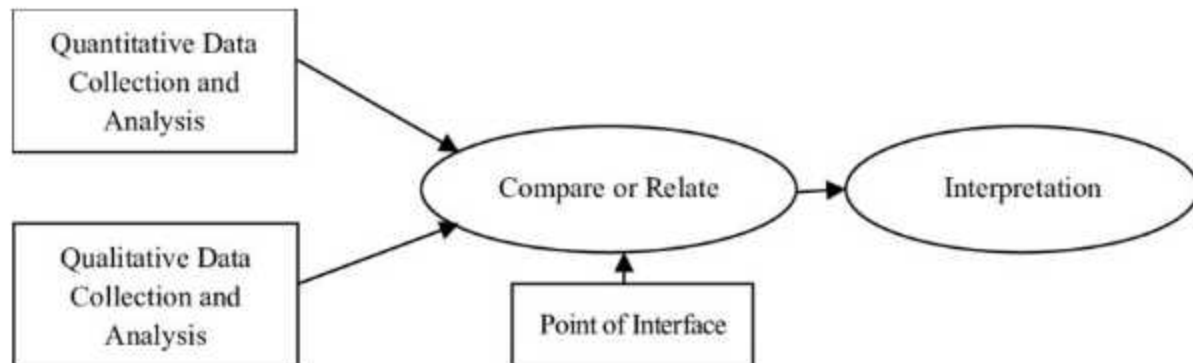
- The experimental design
- The social justice design
- The multistage evaluation design

**WHAT ARE THE 6 TYPES OF MIXED  
METHODS DESIGNS?**

# 1. The Convergent Design

**Purpose:** Collect quantitative and qualitative simultaneously in order to compare results and analyze any discrepancies.

- Use the two as a “check” for the other
- EQUAL priority given to qualitative and quantitative
- Strength: combines the best attributes of each
- Weakness/Difficulty: can be challenging to determine the source of any discrepancy



## 2. The Explanatory Sequential Design

The most popular form of mixed methods approach in educational research

Also referred to as a “two-phase model”

- Intent: to explain quantitative results with qualitative data
- Priority: quantitative data collection and analysis
- Quantitative data is collected first
- Qualitative data used to refine results from quantitative data

**Example of study: *A mixed methods sequential explanatory study of the impact of chronic pain on family resistance (West, 2012).***

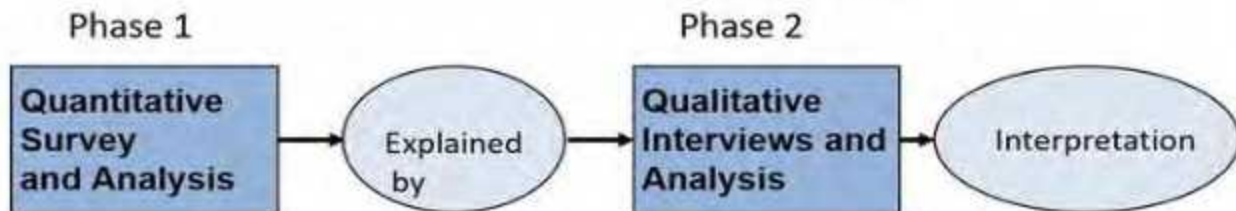
- First, *quantitative* information gathered: survey to family members
- Second, *qualitative* information gathered to support qualitative: interviews

### 3. The Exploratory Sequential Design

Opposite approach to the explanatory sequential design

**Used often to explore a phenomenon, identify themes, and/or design an instrument & test it**

- Intent: use qualitative data to determine variables and questions that inform quantitative data collection
- Priority: qualitative data emphasized over quantitative
- Two phases: first to gather qualitative data from small group, then follow up with quantitative data collection from large group
- Allows researcher to explore a problem before identifying variables, but is very time-consuming





## 4. The Experimental Design

**Purpose:** To conduct research with one form of data collection (usually quantitative) and use an additional form of research (usually qualitative) in order to address additional questions within the data.

- **Secondary research may be added at the beginning, middle or end of an original study.**
- **The secondary is meant to address different questions**
- **The two can be conducted sequentially or concurrently**
- **Strength:** combines the strengths of both
- **Weakness/Difficulty:** can be hard to connect the two findings, the secondary could influence the original
- **Example: cancer pill**
  - **Quan:** Did it work?
  - **Qual:** How did you experience it?



## 5. The Social Justice Design

Purpose: The intent of a Social Justice Design is to “transform society and address injustices that exist for certain populations” (p. 549)



- AKA: Transformative Design or Participatory Design
- Uses convergent, explanatory or exploratory
- Views all research through a social justice lense
- Concludes with a call to action for those researched

Strength: Values-Based

Weakness/Difficulty: Still learning how to use this form of design



## 6. The Multistage Evaluation Design

**Purpose:** Utilized when the impact of a program, or project, is sought out. This design builds on the basics of the previous designs and adds to them multiple stages, or projects, that collect over time

### **Stages:**

1. Needs assessment
2. Development of theory or conceptualization
3. Design of an instrument
4. Test of a program

### **Challenges:**

- Finding a research team
- Ensuring stages link together
- Ensuring all studies provide insight

Frequently implemented within large-scale health research and in program evaluation



# Key Characteristics of Mixed Methods Designs

## Five Main Characteristics:

1. **Collect and Analyze Qualitative and Quantitative Data:** *Creswell notes that "the combination of both approaches can offset the weakness of either approach used by itself" (Heyvaert et al., 2017, p. 9)*
2. **Use Rigorous Methods**
3. **Integration (Combining the Databases)**
4. **Use Specific Mixed Methods Design**
5. **Frame the study with theory and philosophy**

## Contributing Characteristics:

- a. **Consider priority and sequence:** *"emphasis on approaches" and "temporal orientation" (Hesse-Biber, 2010)*
- b. **Diagram and Procedures**

# Potential Ethical Issues



*Data from Qualitative and Quantitative studies have ethical issues to individually consider, combining the two creates all new issues.*

**Convergent Design:** size of data sets may be different or differently valued

**Explanatory Design:** may not have clear link & participant permission may not be given

**Experimental Design:** control group does not benefit & results may be influenced

**Social Justice Design:** may further marginalize

**Multi-Stage Design:** participants needs may come second to literature

# The Steps in Conducting a Mixed Methods Study?

## **Step 1:** Determine if the Mixed Methods Study is Feasible

- Skills, time, working knowledge, and audience

## **Step 2:** Identify a Rationale for Mixing Methods

- What is your intent?

## **Step 3:** Identify a Data Collection Strategy

- Specific forms of data
- Priority given to quantitative and qualitative data
- Sequence of collecting data



#### **Step 4:** Develop Quantitative, Qualitative, and Mixed Methods Questions

- Pose both quantitative and qualitative questions, if you can identify both
  - Exploratory questions
  - Analytic-variable questions
- Consider a mixed methods question

#### **Step 5:** Collect Quantitative and Qualitative Data

- Rigorous and lengthy; requires strong organizational skills

#### **Step 6:** Analyze Data

- Separately, Concurrently, or Both

#### **Step 7:** Write the Report

- Either as a One- or Two-Phase Study or a Multiple Stage Study

## Evaluating Mixed Method Study



- Uses the words- “Mixed Method” in the study
- Consists of both qualitative and quantitative data
- Report displays an integration of the qualitative and quantitative data
- Researcher has clearly specified the type of mixed method design
- Researcher cites mixed method literature to document the use of mixed methods.



