

# **Someone Help, My Methods Are All Mixed Up**

**EDP 612 Week 11**

**Dr. Abhik Roy (& numerous pieces stolen from Dr. Reagan Curtis)**



# Shameless plug

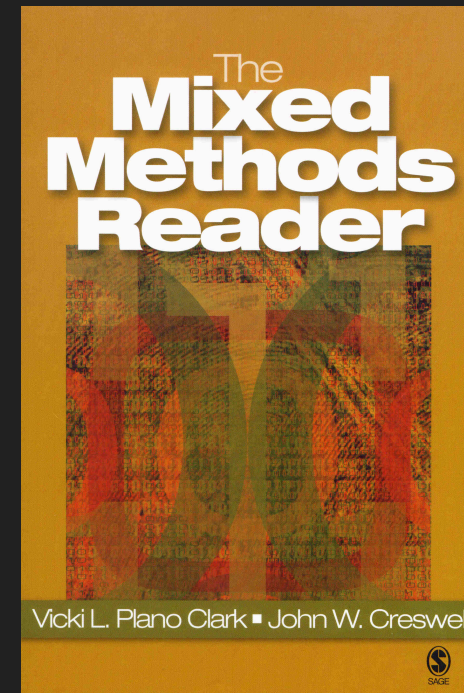
## EDP 618 Mixing Research Methodologies

Summer II Online CRN 51971 with Dr. Reagan Curtis

Fall Face-to-face CRN 87727 with me

This course is designed to allow you to acquire an understanding of the choices available for and processes involved in conducting mixed methodological research and evaluation. We will work together to identify potential research questions and/or evaluation foci you are interested in and for which mixed methodological approaches could usefully be applied. We will read and discuss both examples of mixed methodological research and writers discussing important issues to think about when doing mixed methods work.

Here's the book we use for EDP 618, and much of what we will discuss today is in there >>>>



# Plan for this PowerPoint



- General qualitative (vs. quantitative) orientation
- General mixed methodological orientation
- Matching research questions to appropriate methodologies
- Mixed methodologies and models
- Logistic constraints and considerations



# Remember? Contrasting Paradigms



## Positivist

- Reality is single, tangible, fragmentable , and measureable
- Knower and known are independent – objectivity
- Time- and context-free generalizations are possible – Big “T” Truth, *etic* preference
- There are real causes, precedent to or simultaneous with effects
- Inquiry is value-free

## Naturalist

- Realities are multiple, socially constructed, and holistic
- Knower and known are interactive, inseparable
- Only time- and context-bound generalizations are possible – truths are *idiographic*,

# Activating prior knowledge

## Pair-Share Activity

- Step 1: Find a partner
- Step 2: Discuss your current understanding of what Mixed Methods Research entails and why anyone would want to do it.

*If you finish this before others, also discuss how Mixed Methods Research does or does not seem useful for your own interests.*

- Step 3: Co-write a single sentence definition of Mixed Methods Research and decide which partner will read it to the class.
- Step 4: Read aloud and discuss similarities / differences across definitions.

# Differing Standards Across Research Tradition

Introduction  
to Research



**Pair-Share:** What do you know about philosophical foundations, especially epistemologies, related to qualitative and quantitative research traditions?

**Whole class:** How do you see these fitting together (or not) in mixed methodological research?

Looking for more depth? Lincoln & Guba's (1985) view  
[www.socialresearchmethods.net/kb/qualval.php](http://www.socialresearchmethods.net/kb/qualval.php)

More details; some dissension  
<http://scholar.lib.vt.edu/ejournals/JTE/v9n1/hoepfl.html>

# Triangulation

By **data source** - multiple data collection points

By **researcher** – multiple researchers

By **theory** – multiple researchers with different theoretical perspectives

By **method** – multiple methods

Looking for more detail? Look over Luttrell (2005)



By **verification** – member checking, inquiry audit

By **examination of subjectivity** – researcher journaling, inquiry audit

# A working definition of MMR



Mixed methodological approaches use paradigms, data sources, and/or analytic procedures from both quantitative and qualitative studies in various combinations.

Notice that there is a lot of detail NOT specified in this definition: *Which paradigms, which data, which analyses, and how might they be combined?*

# Pragmatism side-steps paradigm wars

Inquiries designed to understand **workability** of potential **lines of Action** or basis for claims of warranted assertions

**lines of Action** - *George Herbert Mead*

**workability** - both William James and John Dewey

**warranted assertions** (John Dewey)

Rather than focus on nature of reality or the possibility of objective truth, focus on

Looking for more depth? Read Morgan (2007) from the very first issue of the *Journal of Mixed Methods Research*

*What are the likely consequences of believing or acting on*

*\_\_\_\_\_ ,  
and combine elements of qualitative and quantitative approaches to achieve stronger foundations for action.*



# Purposes for mixing

## Greene, Caracelli, & Graham (1989)

*A critical source for understanding the multiplicity of purposes mixed methods research is suited to address. Provides a “language” (actually one of several) for thinking about and describing mixed methods components in your evaluation, your research (dissertation?), and in sources your review.*



## Bryman (2006)

*A combination of some elements derived from the ideas that mixed methods research reflects a tendency for the rationales for using multi-strategy research not to be thought through sufficiently and that multi-strategy research provides such a wealth of data that researchers discover uses of the ensuing findings that they had not anticipated.*



## Purpose

Greene, Caracelli, and Graham (1989)<sup>1</sup>

- **Triangulation** seeks convergence, corroboration, and correspondence of results from the different methods.
- **Complementarity** seeks elaboration, enhancement, illustration, and clarification of the results from one method with the results from the other method.
- **Development** seeks to use the results from one method to help develop or inform the other method, where development is broadly construed to include sampling and implementation, as well as measurement decisions.
- **Initiation** seeks the discovery of paradox and contradiction, new perspectives of frameworks, the recasting of questions or results from one method with questions or results from the other method.
- **Expansion** seeks to extend the breadth and range of inquiry by using different methods for different inquiry components.

## Reason

Bryman (2006)<sup>2</sup>

- **Triangulation or greater validity** refers to the traditional view that quantitative and qualitative research might be combined to triangulate findings in order that they may be mutually corroborated.
- **Offset** refers to the suggestion that the research methods associated with both quantitative and qualitative research have their own strengths and weaknesses so that combining them allows the researcher to offset their weaknesses to draw on the strengths of both.
- **Completeness** refers to the notion that the researcher can bring together a more comprehensive account of the area of inquiry in which he or she is interested if both quantitative and qualitative research are employed.
- **Process** refers to when quantitative research provides an account of structures in social life but qualitative research provides sense of process.
- **Different research questions** refers to the argument that quantitative and qualitative research can each answer different research questions.
- **Explanation** refers to when one is used to help explain findings generated by the other.
- **Unexpected results** refers to the suggestion that quantitative and qualitative research can be fruitfully combined when one generates surprising results that can be understood by employing the other.
- **Instrument development** refers to contexts in which qualitative research is employed to develop questionnaire and scale items—for example, so that better wording or more comprehensive closed answers can be generated.
- **Sampling** refers to situations in which one approach is used to facilitate the sampling of respondents or cases.
- **Credibility** refers to suggestions that employing both approaches enhances the integrity of findings.
- **Context** refers to cases in which the combination is rationalized in terms of qualitative research providing contextual understanding coupled with either generalizable, externally valid findings or broad relationships among variables uncovered through a survey.

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## Reason

Bryman (2006)<sup>2</sup>

- **Illustration** refers to the use of qualitative data to illustrate quantitative findings, often referred to as putting “meat on the bones” of “dry” quantitative findings.
- **Utility or improving the usefulness of findings** refers to a suggestion, which is more likely to be prominent among articles with an applied focus, that combining the two approaches will be more useful to practitioners and others.
- **Confirm and discover** refers to using qualitative data to generate hypotheses and using quantitative research to test them within a single project.
- **Diversity of views** includes two slightly different rationales—namely, combining researchers’ and participants’ perspectives through quantitative and qualitative research respectively and uncovering relationships between variables through quantitative research while also revealing meanings among research participants through qualitative research.
- **Enhancement or building upon quantitative and qualitative findings** entails a reference to making more of or augmenting either quantitative or qualitative findings by gathering data using a qualitative or quantitative research approach.



# 5 Mixed Methods Approaches



**Triangulation** - single phenomenon

**Complementarity** - overlapping phenomena

**Development** - one method informs the next

**Initiation** - seeking paradox / contradiction

**Expansion** - study more w/ different methods for different phenomena

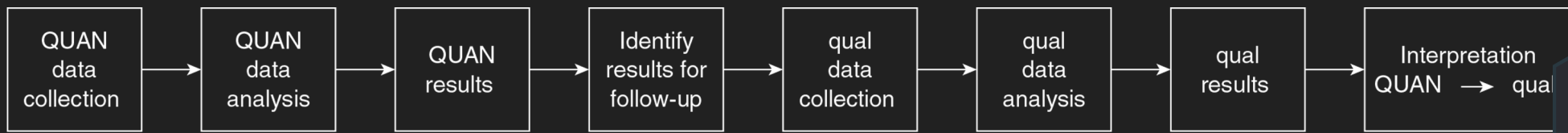
<i>Implementation</i>	<i>Priority</i>	<i>Integration</i>	<i>Theoretical Perspective</i>
No Sequence Concurrent	Equal	At Data Collection	Explicit
		At Data Analysis	
Sequential— Qualitative first	Qualitative	At Data Interpretation	
		With Some Combination	
Sequential— Quantitative first	Quantitative		

# Sequential Explanatory Example

Way, Stauber, Nakkula, and London (1994) began with quantitative measures of depression and substance use from one suburban and one inner city high schools ( $n = 164$  and  $242$ ).

Authors identified a puzzling finding: Substance use predicted depression at the suburban high school, but not at inner city high school.

Thematic analysis of 19 qualitative interviews (selected based on quantitative CDI data) allowed authors to describe different meanings of substance use across the two schools.



**Procedures**

- Sample students from two high schools
- Administer: *Children's Depression Inventory (CDI)* and *Substance Use Scales*

**Procedures**

- Means analyses
- Correlation and multiple regression analyses

**Procedures**

- Summarize findings by major variables

**Procedures**

- Identify major quantitative finding as context for qualitative study
- Generate research questions
- Identify participants

**Procedures**

- Select sample of students who scored in top 10% on the *CDI*
- Develop data base of semistructured interviews

**Procedures**

- Thematic content analysis
- Within and across school comparisons

**Procedures**

- Describe themes with sample quotes

**Procedures**

- Synthesize two sets of findings in one discussion section

**Products**

- Suburban ( $n = 164$ ) and urban ( $n = 242$ ) samples
- Numeric data

**Products**

- Means and  $p$  values
- Correlation,  $R^2$  and  $p$  values

**Products**

- Summary tables
- Description of results

**Products**

- Noteworthy finding stated
- Two research questions to follow-up finding
- Qualitative research plan

**Products**

- Suburban ( $n = 19$ )
- Interview documents

**Products**

- Three thematic differences in the meaning of substance use between schools

**Products**

- Description of themes

**Products**

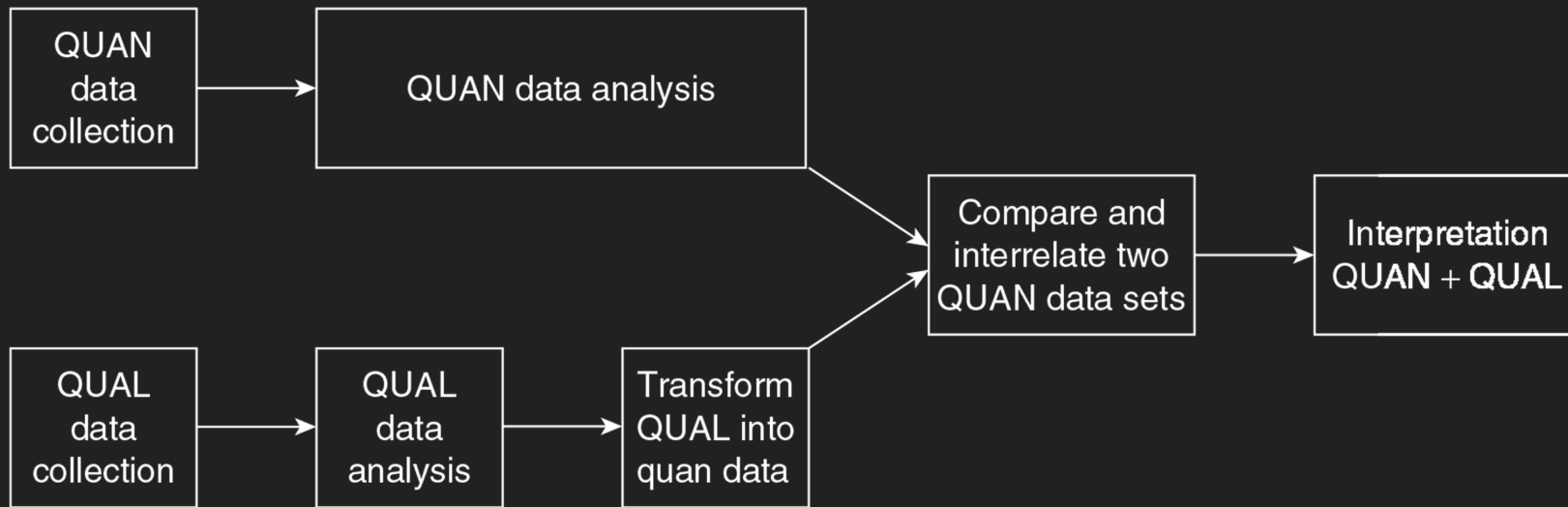
- Discussion of how qualitative results explain quantitative results

# Concurrent Triangulation Example

Idler, Hudson, and Leventhal (1999), working with 159 elderly African Americans, collected quantitative measures (health ratings, demographics, and medical history) and conducted qualitative interviews about the meanings of their ratings .

They initially analyzed the two data sets separately, but after coding the qualitative responses, they transformed qualitative codes into quantitative scores.

Next, they statistically analyzed the quantified qualitative results to determine if initially qualitative responses were related to quantitative ratings.



**Sampling**

- Snowball nonrandom

**QUAN Measures**

- Self-related health demographics, medical history

**QUAN Analysis**

- Self-related health demographics, medical history

**Combined Analysis  
QUAL + QUAN**

- Statistically compare quantitative groups in terms of scores from quantified qualitative results

**Procedures  
QUAL + QUAN**

- Discuss and interpret significant differences in the quantified data
- Evaluate procedures and methods

**QUAL Data**

- Ethnographic interviews

**QUAL Analysis**

- Ethnographic interviews

**Transform QUAL Data**

- Develop theoretical model of response

**Products**

- Sample (n = 159)
- Scores and CASES software file
- Tape recordings

**Products**

- QUAN: Table 16.1 & Figure 16.1
- QUAL : Six figures

**Products**

- Quantified scores
- Table 16.2 with codes, categories and scores

**Products**

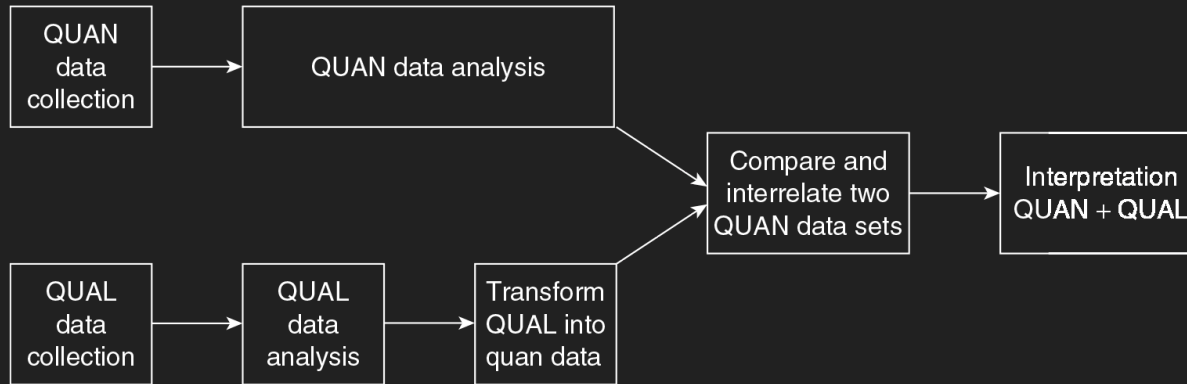
- Table 16.3
- F and p values

**Products**

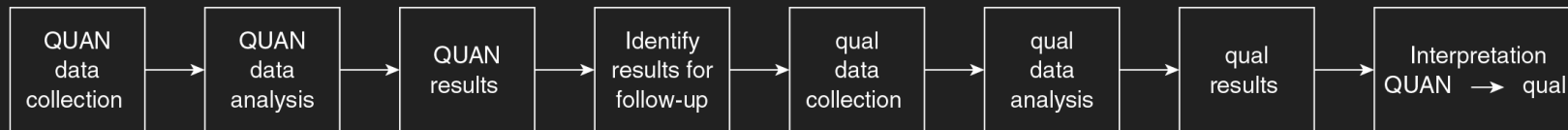
- Discussion and limitations

# What structural differences do you see?

## Sequential Explanatory



## Concurrent Triangulation



# Something



Parting Shot: Truly mixed designs optimize potentials for synergy across the entire lifespan of the study, while many designs are only superficially mixed or mixed in name only.

Feel free to contact either [me](#) or [Dr. Curtis](#) to discuss a MMR idea or if you just have a question about it



# That's It!

Any questions?



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