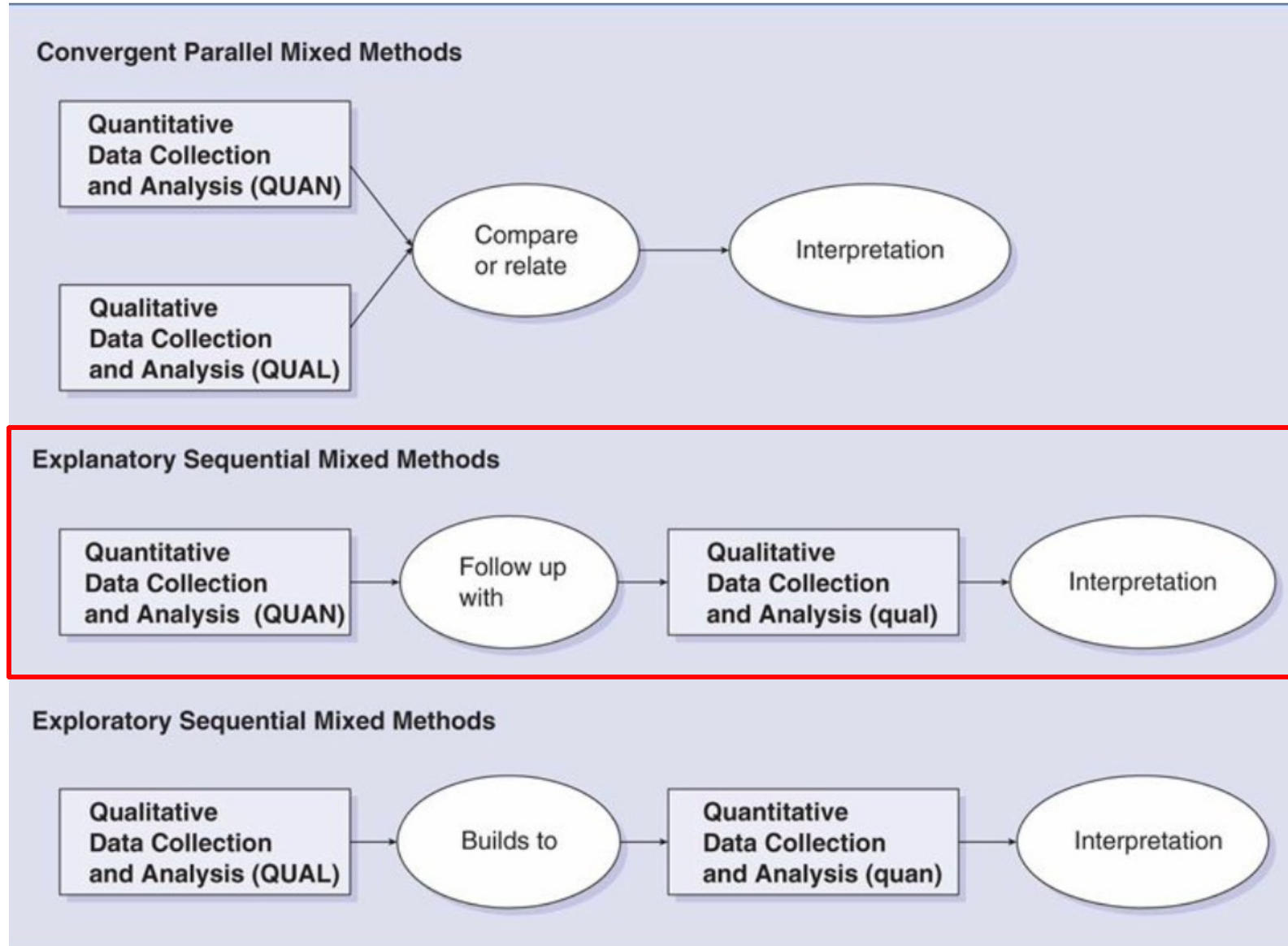


Mixed Methods Procedures (2)

CS 7123, Spring 2025

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Mixed Methods: Three Basic Types



Explanatory Sequential Mixed Methods

- Description of Design
- Data Collection
- Data Analysis
- Interpretation
- Validity

Explanatory Sequential Mixed Methods

- Description of Design
 - Two-phase project: (1) collect quantitative data, analyzes the results, and then (2) use the results to plan (or build onto) the second, qualitative phase.
 - Quantitative results typically inform the types of participants to be purposefully selected for the qualitative phase and the types of questions that will be asked of the participants.
 - Overall intent: have the qualitative data help explain in more detail the quantitative results
 - A typical procedure might involve collecting survey data in the first phase, analyzing the data, and then following up with qualitative interviews to help explain the survey responses.

Explanatory Sequential Mixed Methods

- Description of Design
- Data Collection
 - Quantitative sampling in the first phase with purposeful sampling in the second (qualitative) phase
 - Question: Whether the qualitative sample should be individuals that are in the initial quantitative sample?

Explanatory Sequential Mixed Methods

- Description of Design
- Data Collection
- Data Analysis
 - Quantitative and the qualitative databases are analyzed separately
 - Quantitative results can not only inform the sampling procedure, but it can also point toward the types of qualitative questions to ask participants in the second phase.

Explanatory Sequential Mixed Methods

- Description of Design
- Data Collection
- Data Analysis
- Interpretation
 - This interpretation follows the form of first reporting the quantitative results and then the qualitative results.
 - Should explain how the qualitative results help to expand or explain the quantitative results

Explanatory Sequential Mixed Methods

- Description of Design
- Data Collection
- Data Analysis
- Interpretation
- Validity
 - establishing both quantitative validity (e.g., construct) and qualitative validity (e.g., triangulation)
 - Potential threats to validity
 - The researcher may also contribute to invalidate results by drawing on different samples for each phase of the study
 - Inadequate sample size

Explanatory Sequential Mixed Methods: Example

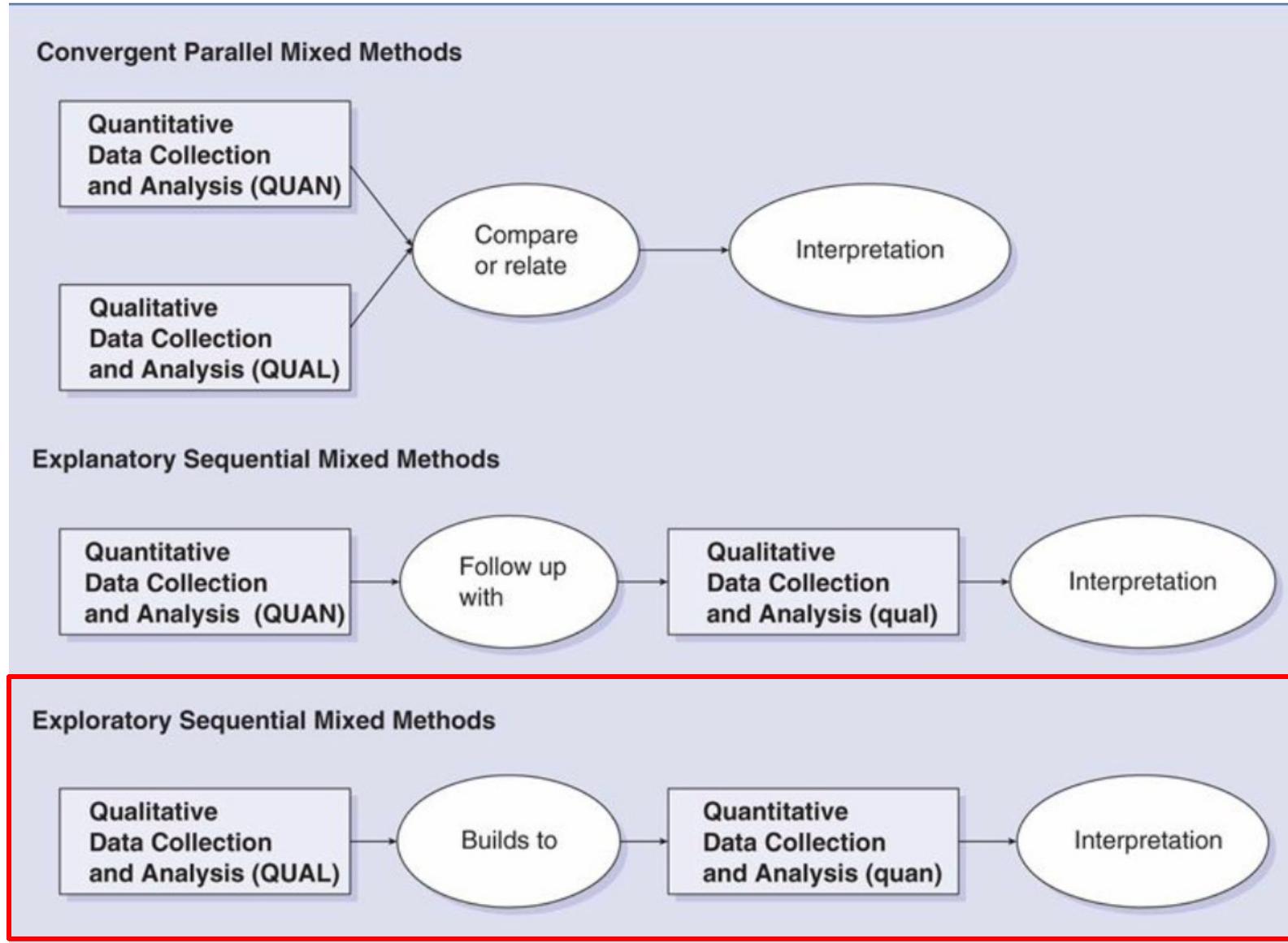
Example 10.2 *An Explanatory Sequential Mixed Methods Design*

In 2007, Banyard and Williams conducted an explanatory sequential mixed methods study examining how women recover from childhood sexual abuse. The quantitative component of the study

consisted of structured interviews (with 136 girls in 1990 and a subset of 61 girls in 1997) looking at resilience, correlates of resilience, over time across 7 years of early adulthood. The qualitative aspect consisted of interviews with a subset of 21 girls about their life events, coping, recovery, and resilience. The intent of the mixed methods study was to use the qualitative interviews to “explore and make sense” of the quantitative findings (p. 277). Here was the purpose statement:

Multiple methods are used to examine aspects of resilience and recovery in the lives of female survivors of child sexual abuse (CSA) across 7 years of early adulthood. First quantitative changes in measures of resilience over time were examined. To what extent did women stay the same, increase, or decrease in functioning in a variety of sphere across 7 years during early adulthood? Next, the role of re-traumatization as an impediment to ongoing resilience and correlates of growth or increased well-being over time were examined. Finally, because resilient processes in adulthood have not been the focus of much research and require further description, qualitative data from a subset of participants was used to examine survivors’ own narratives about recovery and healing to learn about key aspects of resilience in women’s own words. (p. 278)

Mixed Methods: Three Basic Types



Exploratory Sequential Mixed Methods

- Description of Design
- Data Collection
- Data Analysis
- Interpretation
- Validity

Exploratory Sequential Mixed Methods

- Description of Design
 - A qualitative phase followed by a quantitative phase (the second data builds on the results of the initial data)
 - Overall intent: develop better measurements with specific samples of populations and to see if data from a few individuals (in qualitative phase) can be generalized to a large sample of a population (in quantitative phase)
 - Example: first collect focus group data, analyze the results, develop an instrument based on the results, and then administer it to a sample of a population

Exploratory Sequential Mixed Methods

- Description of Design
- Data Collection
 - Initial qualitative data collection followed by the second quantitative data collection
 - Qualitative data analysis can be used to develop an instrument with good psychometric properties (i.e., validity, reliability)
 - Analyze the qualitative data to develop new variables, to identify the types of scales that might exist in current instruments or to form categories of information that will be explored further in a quantitative phase
 - Question: Whether the sample for the qualitative phase is the same for the quantitative phase?

Exploratory Sequential Mixed Methods

- Description of Design
- Data Collection
- Data Analysis
 - Quantitative and the qualitative databases are analyzed separately
 - A qualitative case study can yield different cases that become the focus on important variables in the second quantitative phase.

Exploratory Sequential Mixed Methods

- Description of Design
- Data Collection
- Data Analysis
- Interpretation
 - first report the qualitative findings, the use of the qualitative results (e.g., the development of an instrument, the development of new quantitative measures), and then the quantitative results of the final phase of the study.
 - It does not make sense to compare the two databases, because they are typically drawn from different samples
 - The intent is to determine if the qualitative themes can be generalized to a larger sample.

Exploratory Sequential Mixed Methods

- Description of Design
- Data Collection
- Data Analysis
- Interpretation
- Validity
 - establishing both quantitative validity (e.g., construct) and qualitative validity (e.g., triangulation)
 - Potential threats to validity
 - researcher may not use appropriate steps to develop a good psychometric instrument.
 - ?

Exploratory Sequential Mixed Methods: Example

Example 10.3 *An Exploratory Sequential Mixed Methods Design*

A good example of an exploratory sequential study with an experimental test outcome is found in Betancourt et al. (2011). This study used mixed methods research to adapt and evaluate a family strengthening intervention in Rwanda. The investigators sought to examine the mental health problems facing HIV-affected children in Rwanda. They first began with an exploratory, qualitative first phase of interviews with children and their caregivers. From a qualitative thematic analysis of the data, they then performed an extensive review of the literature to locate standardized measures that matched their qualitative findings. They found some measures and added some new ones to develop a survey instrument. This instrument went through several refinements following rigorous procedures of instrument-scale development (e.g., backward and forward translations, a discussion

of items, reliability and validity) to develop good construct validity for the measures. These measures (e.g., family communication, good parenting, and others) then became the pretest and posttest assessments in an experimental (intervention) study. For the intervention in the study, the researchers were led to a strengths-based, family-based prevention program that was hypothesized to be related to the measures. The final step in the mixed methods process was to use the validated measures within a program that featured the prevention program. At various points in this study, the researchers also collaborated with stakeholders to help to develop good measures. Thus, this study illustrated a good, complex mixed methods project with an initial qualitative phase, an instrument development phase, and an experimental phase. It shows how an initial exploration qualitatively can be used to support a later quantitative testing phase. They stated the purpose of the study as follows:

In the multi-step process used in this mental health services research, we aimed to (1) carefully unpack locally-relevant indicators of mental health problems and protective resources using qualitative methods; (2) apply qualitative findings to the adaptation of mental health measures and the development of a locally-informed intervention; (3) validate the selected mental health measures; and (4) apply the measures to rigorous evaluation research on the effectiveness of the intervention chosen through the mixed methods process. (p. 34)

**In-Class Activity on
Explanatory Sequential Mixed Methods
and
Exploratory Sequential Mixed Methods**