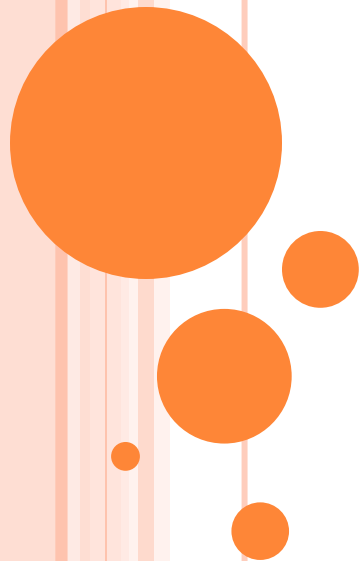


# 质性研究系列讲座之八： 质性研究与定量研究的结合

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# 主要内容

- 混合方法研究的涵义
- 混合方法研究产生的背景
- 定量研究与质性研究
- 何时使用混合方法研究？
- 混合方法研究设计
- 混合研究方法主要特征
- 混合研究方法的步骤
- 混合研究方法的评价



# 混合方法研究 (MIXED METHODS RESEARCH) 的涵义

- A mixed methods research design is a procedure for collecting, analyzing, and “mixing” both quantitative and qualitative research and methods in a single study to understand a research problem (Creswell, 2012) .
- 混和方法研究就是研究者在同一研究中综合调配或混合定量和质性研究的技术、方法、手段、概念或语言的研究类别 (Johnson & Onwuegbuzie, 2004) 。



## 混合方法研究产生的背景：

- 混合方法是在定性和定量方法的论战中产生的。混合方法研究被看作是继定性和定量方法之后的“第三次方法论运动”。
- 混合方法研究作为一种方法论，涉及到指导数据收集和分析的哲学假设，以及在研究过程许多阶段的定性与定量方法的混合。
- 作为一种方法，混合方法研究关注在单个研究或多个研究中收集、分析和混合定性与定量数据。
- 混合方法研究的中心假设是，把定性和定量方法混合起来使用比单一方法能更好地理解 and 解决研究问题。
- 混合方法研究已成为社会科学研究新的研究取向和发展趋势。

蒋逸民（2009）



# 定量研究

- 有明确的研究内容； the research decides what to study;
- 研究问题具体、精确； asks specific, narrow questions,
- 收集定量的数据（研究对象人数多）； collects quantifiable data from participants (a large number of participants);
- 使用统计方法分析数据； analyzes these numbers using statistics;
- 研究态度客观、无偏见； conducts the inquiry in an unbiased, objective manner.
- 哲学基础：后实证主义； Postpositivism –singular reality; objective; deductive
- 通常对研究的变量进行量化，研究问题可测量；  
Generally attempts to quantify variables of interest; questions must be measureable.



## 定量研究的例子：

- What is the relationship between graduate students' level of interaction, measured by the number of 'hits' in the course, and students' grades in an online research methods course?



# QUANTITATIVE METHODOLOGY

- Generally involves collecting numerical data that can be subjected to statistical analysis
- Examples of data collection methodologies
- Performance Tests
- Personality Measures
- Questionnaires (with closed-ended questions or **open-ended but transferred to quandata**)
- Content Analysis
- The data is generally referred to as “hard” data



# 质性研究

- researcher relies on the views of participants;
- asks broad, general questions;
- collects data consisting largely of words (or text) from participants;
- describes and analyzes these words for themes;
- conducts the inquiry in a subjective, biased manner.
- 哲学基础: Constructivism –multiple realities; biased; inductive





## 质性研究的例子：

- “What are the factors that influence a graduate students' experience in an online research methods course?”



# 质性研究方法论

- Generally involves listening to the participants' **voice** and subjecting the data to analytic induction (e.g., finding common themes)
- More Exploratory in nature
- Examples of data collection methods
  - Interviews
  - Open-ended questionnaires
  - Observations
  - Content analysis
  - Focus Groups



# 混合研究方法(MIXED METHODS RESEARCH)

- Utilizes both quantitative and qualitative data collection methodologies.
- Examples
  - Interviews and Questionnaires
  - Performance Tests and Observation
  - Questionnaires and follow up Focus groups
  - Document analysis, Performance Tests, Questionnaire, and Interviews



# 为什么使用混合研究方法?

- Rationale
  - Test findings of first phase
  - Explain results of first phase in more detail
  - Provide a more complete understanding than either quantitative or qualitative alone
- Collecting both quantitative and qualitative data
  - Numeric data
  - Text data



# 混合研究方法主要特征

## **Priority:**

- Equal weight
- QUAN carries more weight than qual
- QUAL carries more weight than quan

## **Sequence:**

- Collect both quantitative and qualitative data at the same time
- Collect quantitative data first, followed by qualitative data
- Collect qualitative data first, followed by quantitative data



## 何时使用混合方法研究？

- When both quantitative and qualitative data, together, provide a better understanding of your research problem than either type by itself.
- When one type of research (qualitative or quantitative) is not enough to address the research problem or answer the research questions.
- 哲学基础：Pragmatism –practicality; multiple view points; biased and unbiased; subjective and objective



## 何时使用混合方法研究（续）？

- To incorporate a qualitative component into an otherwise quantitative study
- To build from one phase of a study to another
- Explore qualitatively then develop an instrument
- Follow-up a quantitative study qualitatively to obtain more detailed information



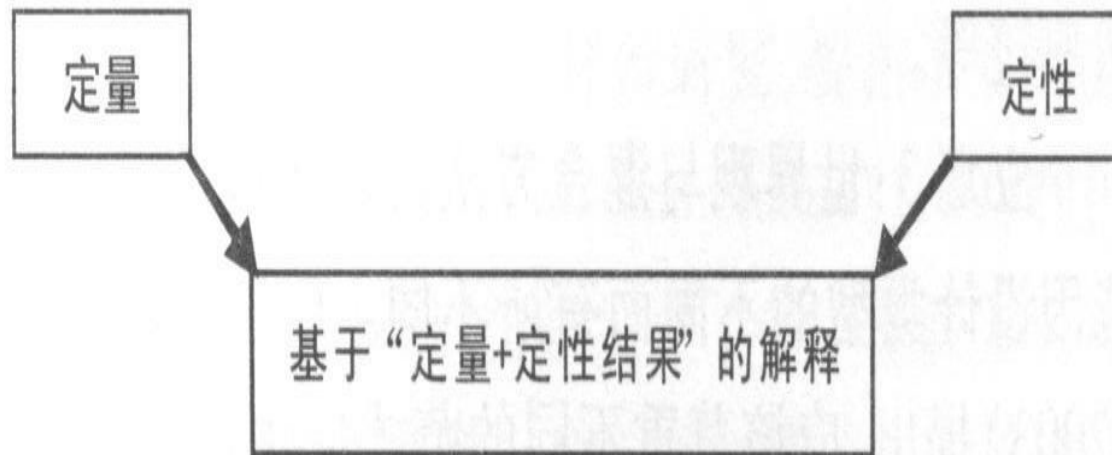
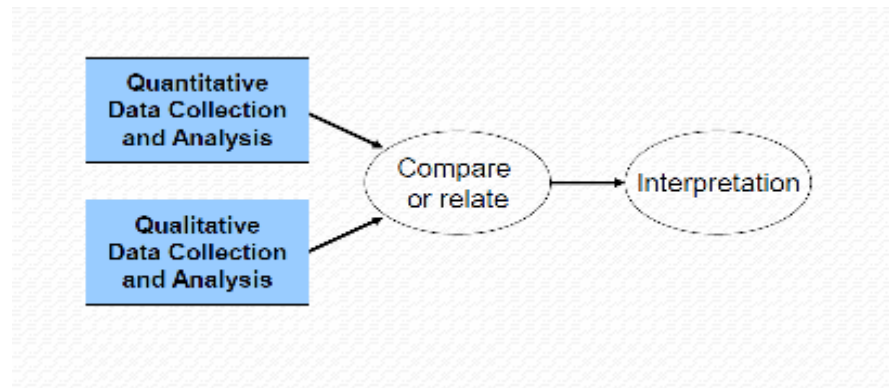
## 四种主要的混合方法研究设计

- 汇合式设计（convergent design）
- 嵌入式设计（embedded design）
- 解释性设计（explanatory design）
- 探索性设计（exploratory design）





# 汇合式设计 (CONVERGENT DESIGN)



# 汇合式设计

- 又称为“三角互证设计”
- 研究目的是为了更好地理解所要研究的问题而获得关于同一个主题不同的、但相辅相成的数据 (Morse, 1991: 122)。
- 这种设计既可以将定量统计结果与定性发现进行直接比较, 又可以用定性数据来验证或推广定量结果。
- 汇合式设计是一个阶段的研究设计, 在该设计中研究者同时、同等地使用定量和定性方法。
- 研究者在分析中将定量和定性数据合起来进行解释或者通过转换数据来整合这两种数据。



## 何时使用汇合式设计?

- Need to collect both types of data in one visit to the field
- Both types of data have equal value for understanding the research problem
- Have quantitative and qualitative research skills
- Can manage extensive data collection activities individually or with a team



## 汇合式设计的优点和缺点：

- **Strengths:**

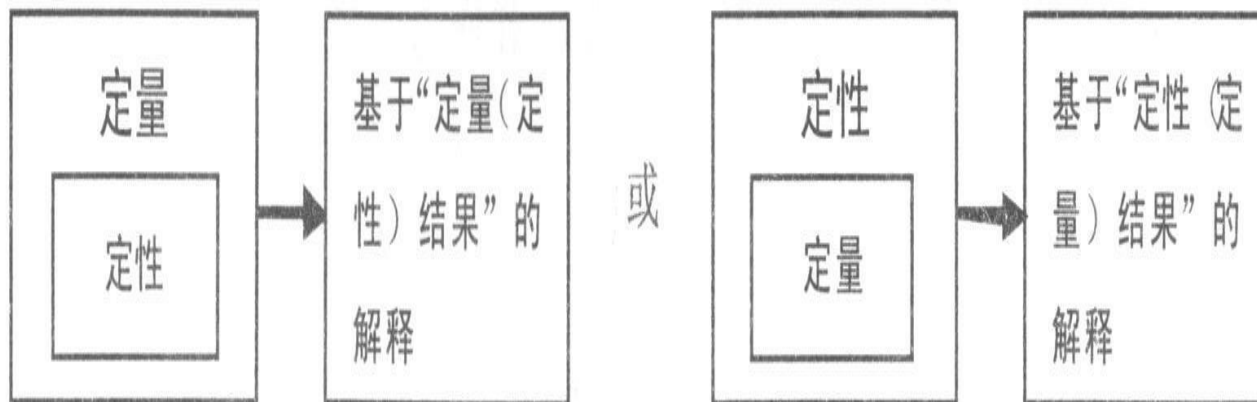
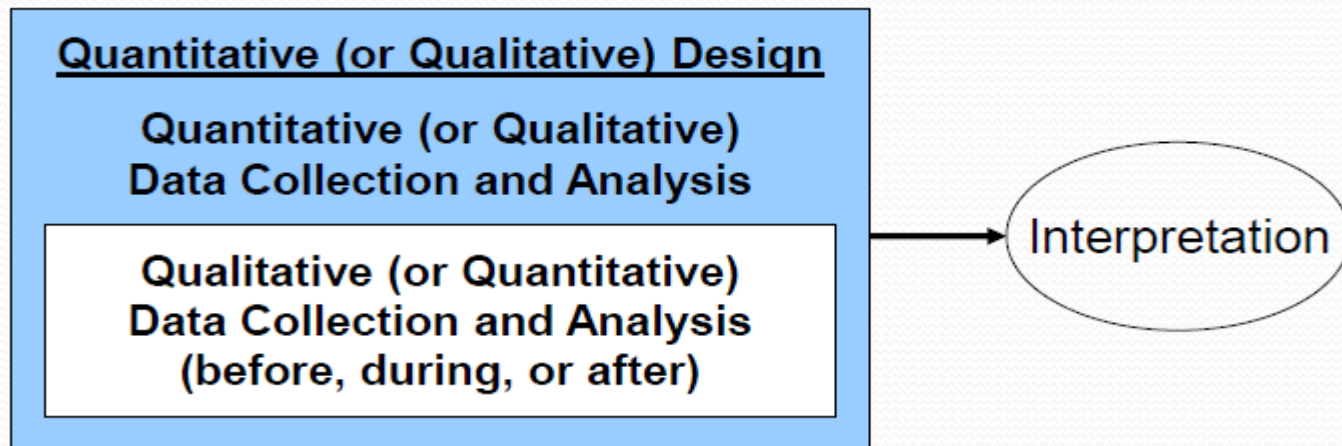
- **Efficient:** 可以同时在同一研究阶段收集两种数据,因而是一种高效的设计。

- **Challenges:**

- 需要付出很多努力
- 需要良好的专业素养
- 汇合两种截然不同的数据难度较大
- 需处理两种数据结果不一致的棘手问题



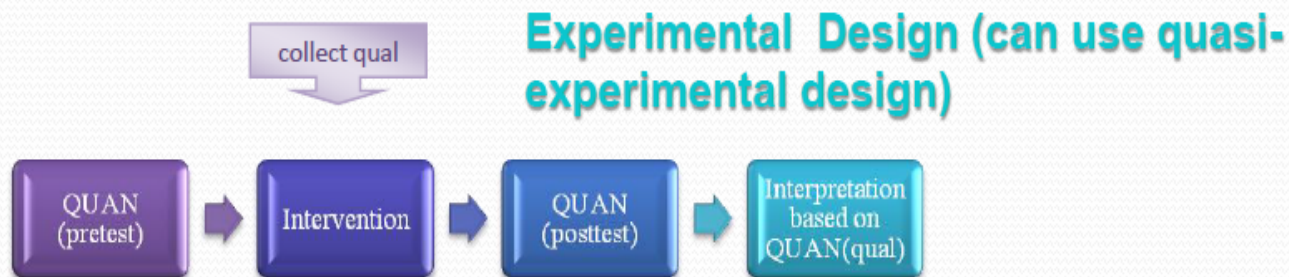
# 嵌入式设计 (EMBEDDED DESIGN)



## 嵌入式设计

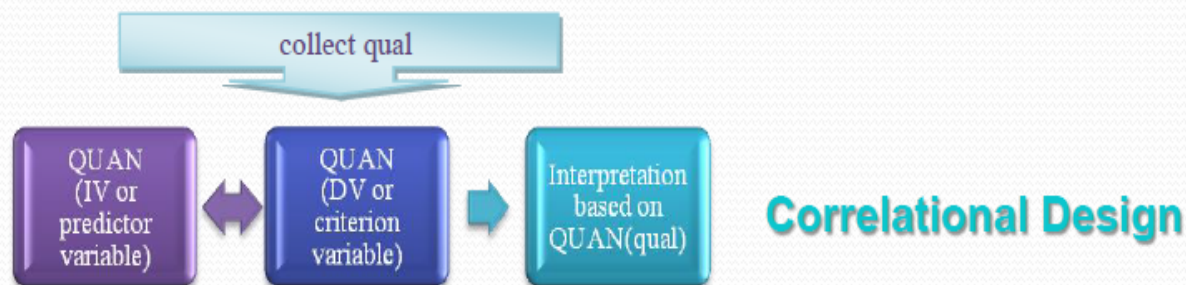
- 嵌入式设计是以一种数据为主, 另一种数据为辅的混合方法设计。这种设计的前提是单一数据是不充分的, 要用不同的数据来回答不同的问题。
- 在一个大规模的定量或定性研究中, 当研究者需要用定量和定性数据来回答研究问题时, 就可使用嵌入式设计。当研究者需要在定量设计中使用定性数据时, 这种设计也特别有用。
- 例如, 为了研发某种治疗手段、检验有关变量的干预过程、跟踪实验结果, 研究者往往在实验研究中使用定性数据。





**QUAN designs to be used within an Embedded Approach**

Correlational	Experimental
Explanatory design	Between-subjects -pre- and posttest design
Predictive design	Within-subjects -cross-over design -factorial design



## 何时使用嵌入式设计：

- Have expertise with the primary design
- Are comfortable with the primary orientation
- Have little prior experience with the supplemental method
- Resources limit placing equal priority on both methods
- Need for a secondary data set emerges





## 嵌入式设计的常见形式：

- Embedded experiment
- Embedded correlational
- Embedded instrument development and validation
- Mixed methods case study
- Mixed methods narrative research
- Mixed methods ethnography



# 嵌入式设计的优缺点：

- **Strengths:**

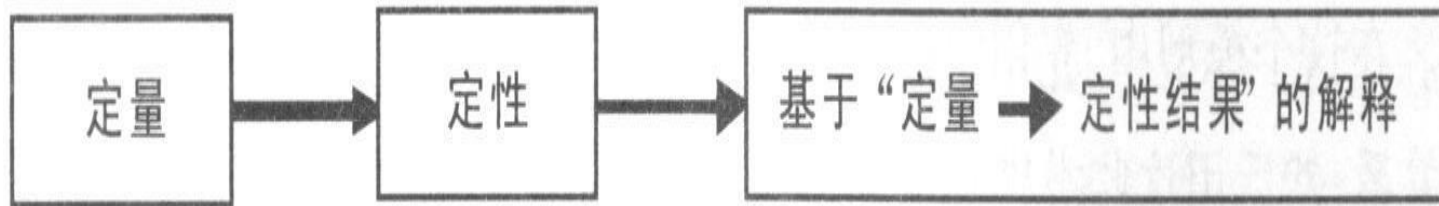
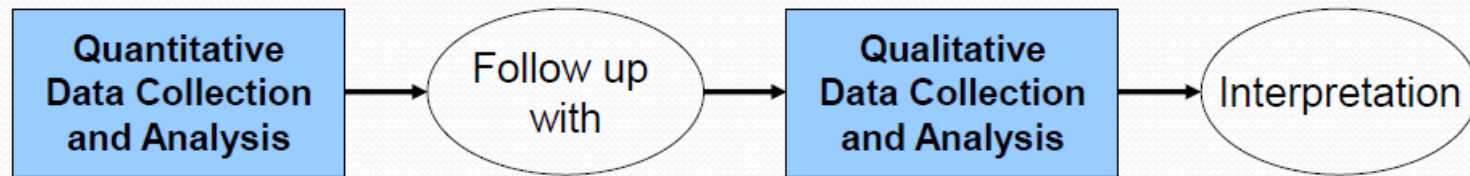
- May require less time and fewer resources
- Improve the larger design with supplemental data
- May be able to publish results separately
- 嵌入式设计在收集大量定量或定性数据时,不需要花费太多的时间和资源,因为其中的一种数据是辅助性的,这种数据的数量要比另一种数据少得多。

- **Challenges:**

- Need expertise in primary design and mixed methods
- Must specify purpose for collecting the supplemental data
- Must decide when to collect supplemental data
- Results are difficult to integrate
- Must consider treatment bias if qualitative data collected during experiment
- 研究者必须详细说明在定量研究中收集定性数据的目的。如果用两种方法回答不同的研究问题,就很难对所获得的结果进行整合。



# 解释性设计 (EXPLANATORY DESIGN)



# 解释性设计

- 又称为解释性顺序设计(The Explanatory Sequential Design), 是一种两阶段的混合方法设计。
- 总体目标:
  - 1、用定性数据来进一步解释初步的定量结果
  - 2、采用定量结果来为下一步的目的性抽样选择最佳研究对象。
- 始于收集和分析定量数据, 然后再收集和分析定性数据。由于该研究从定量阶段开始, 因此调查者更重视定量方法.
- Connects the phases by using the quantitative results to shape the qualitative research questions, sampling, and data collection



## 何时使用解释性设计：

- Researcher and research problem are quantitatively oriented
- Know important variables and instruments are available
- Participants available for second data collection
- Have time to conduct two phases
- Have limited resources and need to collect and analyze one data type at a time
- New questions emerge from quantitative results



## 解释性设计的优缺点：

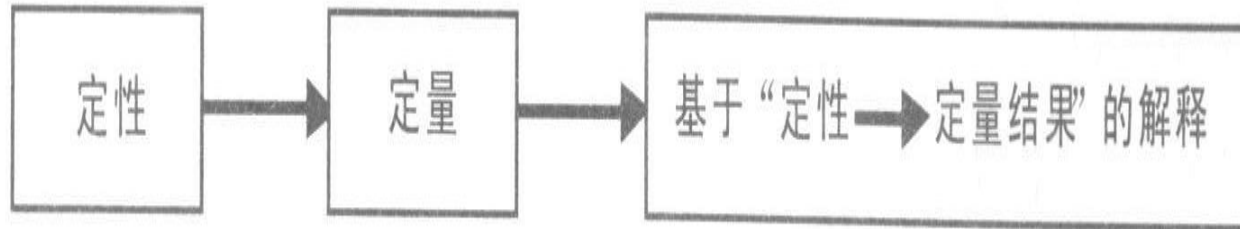
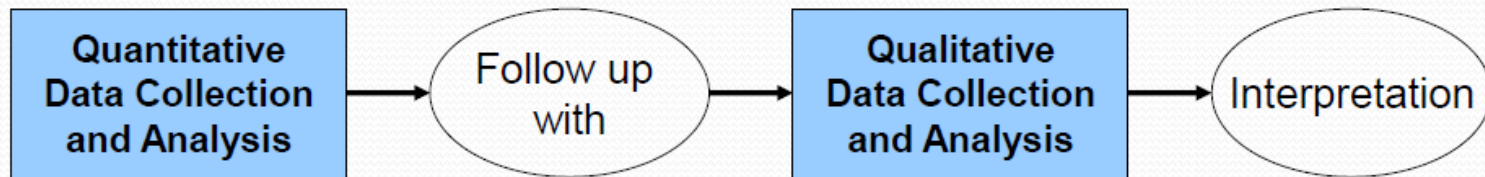
- 优点：

- Appealing to quantitative researchers
- Straightforward to implement two phases
- Final report can be written in two phases
- Lends itself to emergent approaches
- 解释性设计的步骤清晰明了，便于操作，非常适合于单个研究者研究，也适用于多阶段调查以及单独的混合方法研究。由于它通常从定量开始，因此对定量研究者更有吸引力。

- 缺点：

- Two phases require lengthy time to implement
- Need to decide what results to follow up
- Must decide criteria for selecting participants
- Need to contact participants for a second round of data collection
- 实施两个阶段的调查很费时间，很难合理安排定性阶段的时间。研究者需要决定是否在两个阶段使用相同的参与者。

# 探索性设计 (EXPLORATORY DESIGN)



# 探索性设计

- 又称为探索性顺序设计（explorative sequential design）
- 该设计的意图是定性方法能有助于拓展和深化定量方法（Greene et al., 1989）
- Collects and analyzes qualitative data first followed by quantitative data
- Analyzes the qualitative data and uses results to build to the subsequent quantitative phase
- Connects the phases by using the qualitative results to shape the quantitative phase by specifying research questions and variables, developing an instrument, and/or generating a typology





## 何时使用探索性顺序设计：

- 当缺乏现成的问卷、变量或概念框架时,就可以使用探究性设计。由于该设计是从定性研究开始的,最适合用来探索某种社会现象 ( Cresw e l,l P iano C lark, et a.l , 2003) ,比如将结果推广到其他人群、检验分类是否恰当、测量某个现象的流行情况等。
- 该设计始于定性方法,用来探索某个社会现象,然后再构建定量阶段。研究者用定性结果来探索和发展研究主题,为定量研究确定关键变量,并在此基础上制订调查问卷。由于该设计始于定性方法,因此往往把重点放在定性数据上。
- Researcher and research problem are qualitatively oriented
- Important variables not known and instruments not available
- Have time to conduct two phases
- Have limited resources and need to collect and analyze one data type at a time
- New questions have emerged from qualitative results



## 探究性设计的目的：

- To first explore because variables, theories, hypotheses not known
- To develop an instrument or typology that is not available
- To assess whether qualitative themes generalize to a population

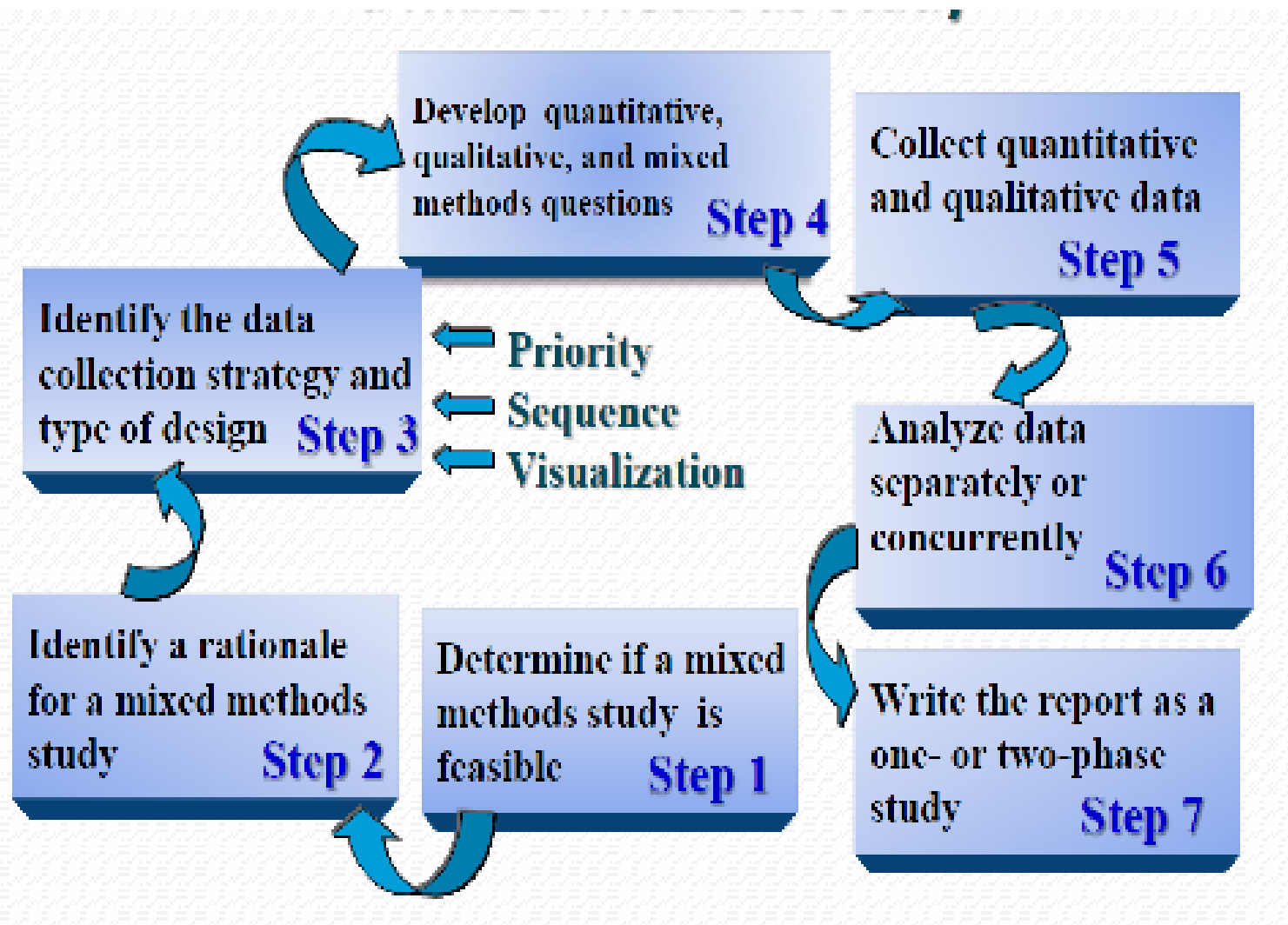


## 探究性设计的优缺点：

- 优点：
- 特别适合于多阶段研究, 对该设计的描述、实施和报告相对简单。
- Straightforward to design, implement, and report
- Quantitative component can make the qualitative approach more acceptable to quantitative-biased audiences
- Researcher produces a product, such as an instrument
- Lends itself to emergent approaches
- 挑战：
- 需要用大量的时间来实施两个阶段的数据收集和分析, 同时还要决定是否在两个阶段使用相同的受访者。
- Two phases require lengthy time to implement
- Deciding the qualitative findings to use for quantitative phase
- Procedures for developing a valid and reliable instrument



## 混合方法研究的步骤：



# FOUR CHALLENGES IN MIXED METHODS RESEARCH ( COLLINS, ONWUEGBUZIE & JIAO, 2007)

- The challenge of representation
- The challenge of legitimation or validity
- The challenge of integration
- The challenge of the challenge of politics



# 1. THE CHALLENGE OF REPRESENTATION:

- With respect to quantitative research, the majority of studies utilize sample sizes that are too small to detect statistically significant differences or relationships and utilize nonrandom samples that prevent effect-size estimates from being generalized to the underlying population (Onwuegbuzie, Jiao, & Bostick 2004).
- In qualitative research, the challenge of representation refers to the difficulties researchers encounter in capturing lived experiences via their social texts (Denzin & Lincoln, 2005).



# 1. THE CHALLENGE OF REPRESENTATION:

- In mixed methods research, the challenge of representation often is intensified because both the qualitative and quantitative components of studies bring to the study their own unique challenges.
- In mixed methods studies, the challenge of representation refers to the difficulty in capturing (i.e., representing) the lived experience using text in general and words and numbers in particular.



## 2. THE CHALLENGE OF LEGITIMATION OR VALIDITY

- With respect to quantitative research, the importance of legitimation, or what is more commonly referred to as “validity,” has been long acknowledged and is well documented in the literature.
- With respect to the qualitative research paradigm, the issue of legitimation has been more controversial.





## 2. THE CHALLENGE OF LEGITIMATION OR VALIDITY

- The challenge of legitimation is greater in mixed methods studies than in monomethod studies.
- The challenge of legitimation refers to the difficulty in obtaining findings and/or making inferences that are credible, trustworthy, dependable, transferable, and/or confirmable (Onwuegbuzie & Johnson, 2006).



### 3. THE CHALLENGE OF INTEGRATION

This challenge compels mixed methods researchers to ask questions such as the following:

- Is it appropriate to triangulate, expand, compare, or consolidate quantitative data originating from a large, random sample with qualitative data arising from a small, purposive sample? How much weight should researchers and/or consumers place on qualitative data compared to quantitative data?



## 4. THE CHALLENGE OF POLITICS

- This challenge refers to the tensions that come to the fore as a result of combining qualitative and quantitative approaches.
- These tensions include any conflicts that occur when different investigators are used for the qualitative and quantitative components of an investigation, as well as the contradictions and paradoxes that come to the fore when qualitative and quantitative data are compared and contrasted.



## 4. THE CHALLENGE OF POLITICS

- The challenge of politics also pertains to the difficulty in persuading the consumers of mixed methods research, including stakeholders and policy makers, to value the findings stemming from both the qualitative and quantitative phases of a study.



- 因此，重要的问题不是基于不同范式的方法是不是可以同时使用于同一项研究，而是研究者是否对自己在方法上的选择和使用有所意识，并且在研究结果中真诚地、详细地报道自己的方法选择原则和使用方式，
- 如果这两种方法产生的结果相互之间有冲突，研究者不应过早地解决这些冲突，而是应该让不同的方法发展出自己对研究现象的结果表述，然后再试图在两者之间做出必要的妥协。
- 只有通过不同范式之间和不同方法之间平等的对话，才能真正使研究者和被研究者获得解放，也才能在“视域的融合”中找到新的生长点和新的生成境界。

（陈向明，2006）



## 混合研究设计的具体例子：

- Light, G. et al. (2009). Assessing the impact of a year-long faculty development program on faculty approaches to teaching. *International Journal of Teaching and Learning in Higher Education*, 20(2), 168-181.
- **Research purpose:** Determine if the Faculty Development Program (FDP) impacts teaching style of pre-tenure faculty.



# RESEARCH QUESTIONS

- **Quantitative:**

- What effect did the FDP have on teachers' approaches to teaching?

- **Qualitative:**

- Central question –How did the teachers' teaching strategies change in response to the FDP?

- Sub-What steps did the teachers take to implement the change?

- **Mixed Method:**

- How do the qualitative (qual) findings explain (expand on) the quantitative (quan) results?



# RESEARCH DESIGN

- The mixed method design employed was an explanatory approach with an quasi-experimental design. The quantitative method was quasi-experimental between-subjects approach utilizing a pre-and posttest control group design. Qualitative data was collected at two time points post intervention.





## 混合方法研究报告的格式:

- **Chapter 1: Introduction**
- Statement of the Problem.
- The topic.
- The research problem.
- Background and justification (philosophical view points).
- Deficiencies in the evidence.
- Audience.
- Definition of Terms.



# CHAPTER 2: LITERATURE REVIEW

- Lit Review should include relevant headings and subheadings. Following the lit review the purpose statement then research questions should be presented.
- Purpose Statement -(a) the overall content aim, (b) the type of mixed method design, (c) the forms of data collection that will be used (very general), (d) the data collection site(s), and (e) the reason for collecting both forms of data (see Creswell, 2007).
- Research Questions: 3 kinds of questions
  - Quantitative
  - Qualitative
  - Mixed Methods



# CHAPTER 3: METHODOLOGY

- Participants: both quantitative and qualitative.
- Instruments
- Procedures
- Design
- Quantitative data.
- Qualitative data.
- Data analysis.
- Limitations



# CHAPTER 4: RESULTS

- results presented in sequence and relative to each research question
- includes relevant tables and figures
- appropriate use of statistical or qualitative language to present data



# CHAPTER 5: DISCUSSION

- introductory paragraphs provide overview of the study
- results are elaborated and interpreted in sequence and relative to each research question
- conclusions and summaries regarding the findings are offered
- findings are linked to relevant research
- implications of findings are discussed
- limitations are indicated
- recommendations for future research are offered



## 一些好的学术杂志：

- 发表质性研究论文的杂志：
- <http://www.slu.edu/organizations/qrc/QRjournals.html>
- 发表混合方法研究论文的杂志：  
*Journal of Mixed Methods Research*,  
*Field Methods*,
- *Quality and Quantity*,
- *International Journal of Multiple Research Approaches* (on-line),  
*International Journal of Social Research Methodology*



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