



# CONVERGENCE OF QUALITATIVE & QUANTITATIVE RESEARCH APPROACH

Prof Erhabor S. IDEMUDIA  
Professor of Research (Social Science Cluster)

## Research Rational and Meaning

- Man has been described as “meaning-making” organisms (LEFRANCOIS, 1990). This is because human beings look for order and purpose in our lives. We want to know why the world works in as it does and why people behave the way they do. We are constantly striving to make sense of what is going on around us.
- Research is the basis for trying to understand:
  - ✓ this order,
  - ✓ purpose,
  - ✓ this meaning-making behaviour.
- This is because research is usually built on the concept of relations. It is an attempt to investigate the situation of things, the state of affairs in a given circumstances. It is a process of attempting to investigate (based on a prior knowledge)
- If there is a relationship-why and how much exists between two or more variables or factors in an acceptable scientific manner.

## Research: Forms.....

- **Research can be in a form of mini-dissertation for an undergraduate degree, or a full dissertation for a Masters degree or a full fledged thesis for a PhD degree, or even a small or an extended independent study for an organization.**
- **The quality of a good research is anchored on its research question.**
- **Research question specifies what you want to study and helps you focus on your study.**
- **Research question helps you focus on how you will collect your data**
- **Therefore, it must be:**
  - **Concise**
  - **Clear**
  - **operationalizable**
  - **Open ended**
  - **elegant.**
  - **Timely,**
  - **Theoretically rich**
  - **Self-explanatory**
  - **Helps you understand your design/approach etc.**

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Research: significance.....

- **Research is a process in which you engage in a small set of logical steps**
- **Research adds to our knowledge**
- **Research improves practice**
- **Research informs policy debates**

# Types of Research...& Choices

- ❑ **There are three main accepted research approaches in the behavioural sciences:**
  - **Quantitative**
  - **Qualitative**
  - **Mixed Methods**
  
- ❑ **The choice of an approach depends on several factors some of which include:**
  - **Researcher's orientation**
  - **Interest**
  - **Type of knowledge sought**
  - **Personal experiences etc.**
  
- ❑ **How to choose an approach**
  - **Match your approach to your research problem**
  - **Your research approach needs to fit the audience(s) for the research report**
  - **Relate your approach to your personal experience and training**

## **Many ways to kill a rat....**

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- **Just as there are many ways to kill a rat, so there are many ways in which a researcher approaches the task of investigation.**
- **Our decision can be based on the following:**
  - **Are we testing a theory? Hypothetico-Deductive research! (Surveys- Descriptive and Correlational; Experimental and Quasi-Experimental**
  - **Is the research purely investigative in which a theory would be developed? (Inductive) -Ethnography? Phenomenology? Grounded Theory? Evaluation Research?**
  - **Is the research looking ahead (prospective) or looking backward (retrospective)?**
  - **Is it an after event (*Ex post facto*)?**
  - **Is it historical or Action research or feminist research?**

## Clarifying some confusing concepts...

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- **What is the difference between ‘Methodology’ and ‘Methods’?**
  - **“Methodology is the philosophy of methods” (Clough & Nutbrown, 2012: 31)**
  - **This definition implies that methodology is the purpose of the study, while methods are the tools by which the purpose is achieved.**
  
- **What is the difference between ‘Mixed Methods’ and ‘Triangulation’?**
  - **In Mixed method, both methods have ‘equal status’ but in Triangulation, one is used to check the other, (Harding, J., 2013)**

# MIXED METHODS: The Convergence

## When to Mix .....The Convergence

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### You Mix:

- **When you have both qualitative and quantitative data**
- **When you seek to build on the strengths of both methods-  
Having a “powerful Mix” (Miles & Huberman, 1994, P42)**
- **When either approach is not enough to address the  
research question(s)**
- **When there is need to promote an alternative perspective  
in your study**

Frameworks	Quantitative	Qualitative
<b>General Framework</b>	<ul style="list-style-type: none"> <li>• Seeks to confirm hypotheses about phenomena</li> <li>• Instruments use more rigid style of eliciting and categorizing responses</li> <li>• Use highly structured methods such as questionnaires</li> </ul>	<ul style="list-style-type: none"> <li>• Seeks to explore phenomena</li> <li>• Instruments use more flexible style of eliciting and categorizing responses to questions</li> <li>• Use semi-structured methods as in-depth interviews, focus groups and participants</li> </ul>
<b>Analytical Objectives</b>	<ul style="list-style-type: none"> <li>• Quantifies variation</li> <li>• Predict causal relationships</li> <li>• Describes characteristics of a population</li> </ul>	<ul style="list-style-type: none"> <li>• Describes variation</li> <li>• Describes and explains relationship</li> <li>• Describes individual experiences</li> </ul>
<b>Question Format</b>	<ul style="list-style-type: none"> <li>• Closed ended</li> </ul>	<ul style="list-style-type: none"> <li>• Open ended</li> </ul>
<b>Data Format</b>	<ul style="list-style-type: none"> <li>• Numerical (Obtained by assigning numerical values to responses)</li> </ul>	<ul style="list-style-type: none"> <li>• Textual (obtained from audiotapes, videotapes and field notes)</li> </ul>
<b>Flexibility in study design</b>	<ul style="list-style-type: none"> <li>• Study design is stable from start to the end</li> <li>• Participant's responses do not affect how and which questions researchers ask next</li> <li>• Study design is subject to statistical assumption and conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Study is flexible (the addition, exclusion of wording of a participant's interview)</li> <li>• Participants responses affect how and which questions researchers ask next</li> <li>• Study design is iterative, i.e. data collection and research questions are adjusted according to what is learned.</li> </ul>

## Features: Qual/Quant methods

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### ***Qualitative***

1. The aim is a complete, detailed description. Social context is comprehensively described.
2. Researcher only know roughly in advance what she is looking for
3. The design emerges as the study unfolds. Approaches a research problem with an open mind & unstructured manner.

### ***Quantitative***

1. The aim is classifying features, count them, constructing statistical models to explain what is observed.
2. Researcher knows in advance what she is looking for as indicated by hypothesis
3. Researcher clearly knows what they are looking for

# Features: Qual/Quant methods

## ***Qualitative***

1. Researcher is an important data gathering instrument
2. Data is in the form of words, pictures or objects
3. The data is “richer” time consuming, and less generalizable
4. Researcher only know roughly in advance what she is looking for

## ***Quantitative***

1. Researcher uses tools (questionnaires/equipment to gather numerical data)
2. Data is in the form of numbers & statistics
3. The data is more efficient, able to test hypothesis, and may miss contextual detail.
4. Researcher tends to remain objectively separated from the subject matter.

## Similarities...

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- **Both are concerned with data reduction**
- **Both are concerned with answering research questions**
- **Both are concerned with relating data analysis to the research literature**
- **Both approaches are concerned with variation**
- **Both treat frequency as a springboard for analysis**
- **Both seek to ensure that deliberate distortion does not occur**
- **Both argue for the importance of transparency**
- **Both addresses the question of error**
- **Research methods should be appropriate to the research questions**

# Quantitative & Qualitative...at a glance



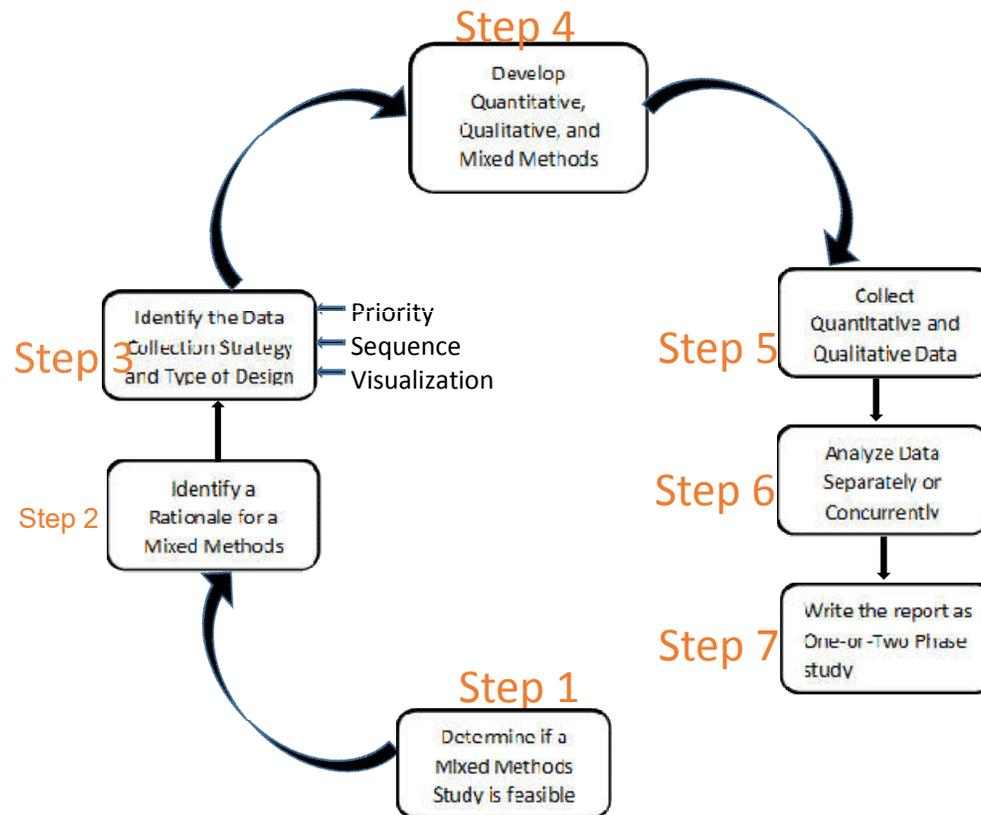
## Quantitative

- Numbers
- Point of view of researcher
- Researcher distant
- Theory testing
- Static
- Structured
- Generalization
- Hard, reliable data
- Behaviour
- Artificial settings

## Qualitative

- Words
- Point of view of participants
- Researcher close
- Theory emergent
- Process
- Unstructured
- Contextual understanding
- Rich, deep data
- Meaning
- Natural settings

# Steps in the process of conducting a Mixed Methods Study



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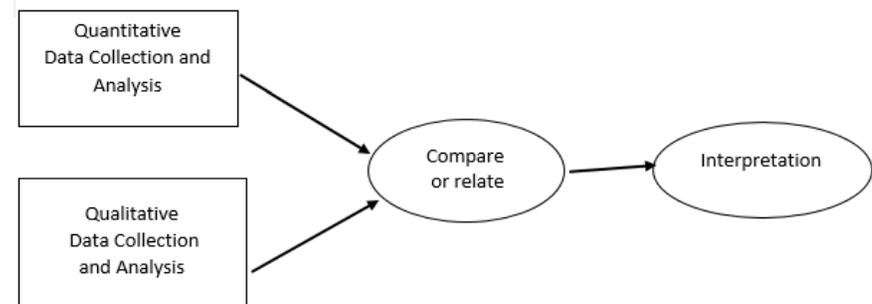
# MIXED METHOD DESIGNS

- ✓ **Research designs provide answers to research questions**
- ✓ **Research designs helps to control the experimental, extraneous and error variances.**
- ✓ **Research Design is like a Master (house) plan, a blue print**

## Mixed method Designs:

### ❑ Convergent (Parallel or Concurrent design)

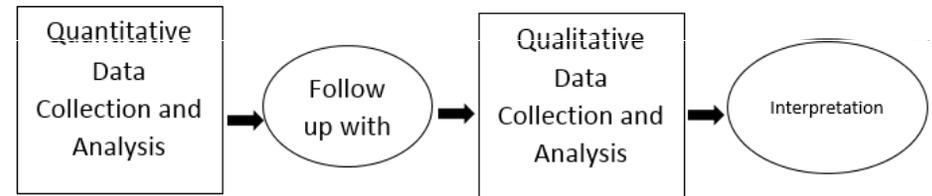
- Gives equal priority to both approaches
- Collects both data simultaneously or concurrently
- Compares both results to determine if the two databases yields similar or different results



## Mixed method Designs:

### ❑ The Explanatory Sequential Design (or Two-Phased Model-)

- The Researcher places a priority on quantitative (QUAN), collection and analyses, then a small qualitative (qual) component typically follows.
- Both data are collected sequentially in two phases.
- Researcher collects quantitative data first in the sequence, followed by the secondary qualitative data collection.
- Research uses the qualitative data to refine the results from the quantitative data.



## Mixed method Designs:

### ❑ The Exploratory Sequential Model

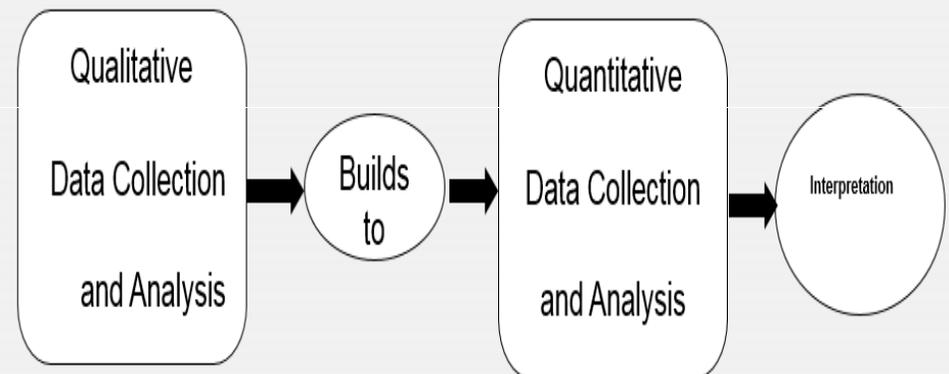
❑ First, qualitative data is collected to explain, followed by quantitative to explain the relationship found in the qualitative data

➤ Emphasis is on Qualitative data (QUAL) more than the quantitative data (quan)

➤ There is a sequence to data collection that involves first collecting qualitative data followed by quantitative

➤ Data usually in two phases

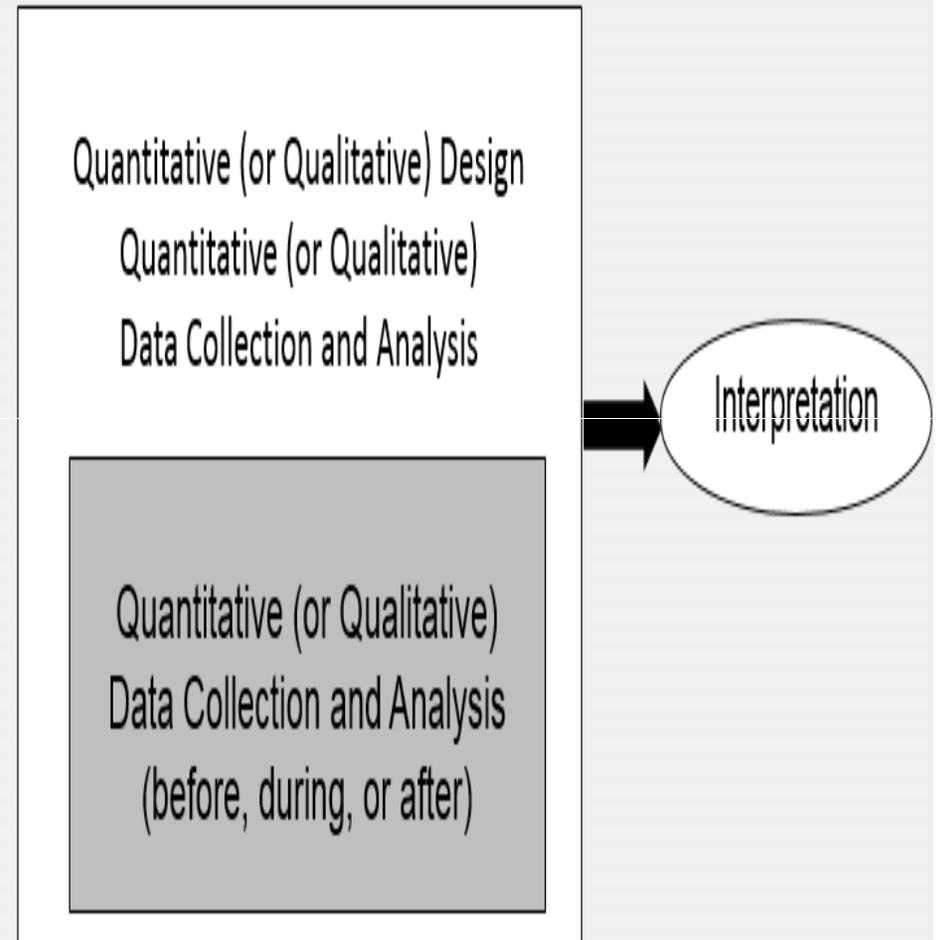
➤ Uses quantitative data to build on or explain the qualitative findings



## Mixed method Designs:

### ❑ The Embedded Design

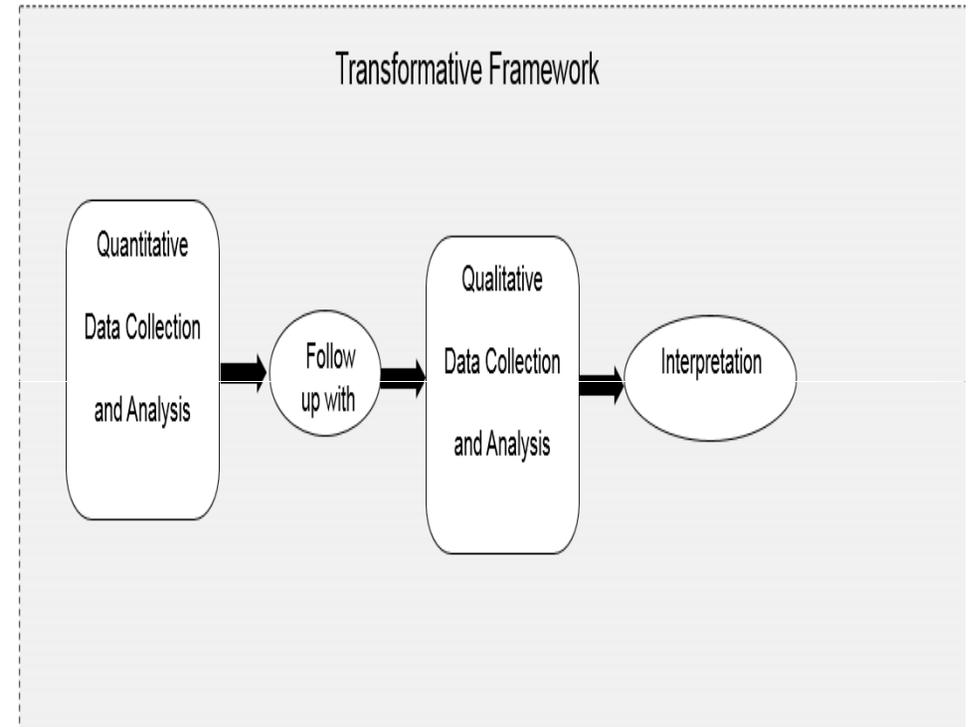
- Gives priority to the major form of data collection (e.g. often QUAN) and secondary status to the supportive form (e.g. often qual) of data collection
- Data is collected simultaneously or sequentially
- The secondary data form is used to augment or provide additional source of information not provided by the primary source of data. E.g., the qualitative data is used to understand the 'process participants are going through, while the quantitative data assesses the impact of the treatment outcomes.



## Mixed method Designs:

### ❑ Transformative Design

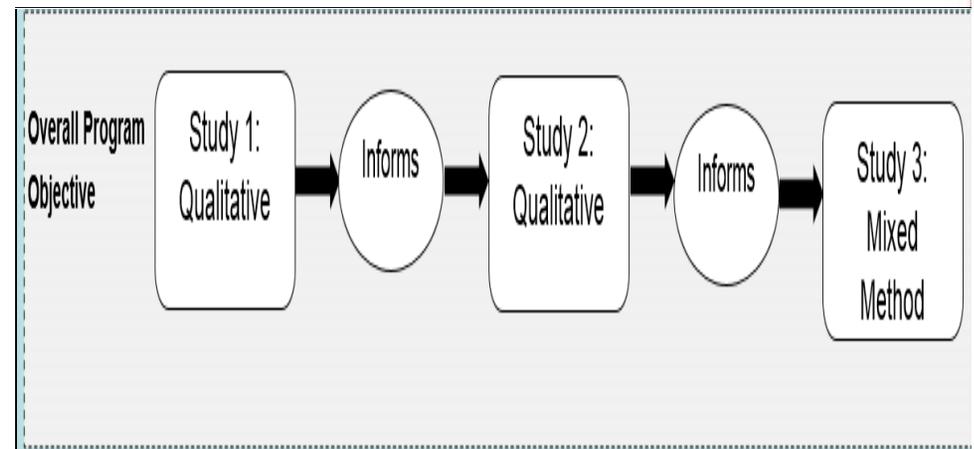
- A bit more complex
- Intention is to use one of the four designs (convergent, explanatory, exploratory and embedded) and encase within a transformative framework or lens (Creswell & Plano, 2011)
- For details see Creswell & Plano, (2011)



## Mixed method Designs:

### ❑ **Multiphasic Design**

- Also another complex design that builds on the basic convergent, explanatory, exploratory, and embedded designs.
- A study is examined through different phases to address incremental research questions
- Popular in large scale health and evaluation research
- Strength of the design lies in the use of multiple projects to best understand an overall programme objective



## Key characteristics in Mixed Methods

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- **Provide a rational for the design**
- **Include collecting qualitative and quantitative data**
- **Consider priority**
- **Consider Sequence**
- **Match the data analysis to a design**
- **Diagram the procedure**

## Conclusions...Tips

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- **In mixed method presentations:**
- **Discuss your design as a distinct design**
- **In your design, identify the advantages**
- **Explain your design in detail and reason for your choice**
- **Recognize that mix method is a challenging business. Therefore, you must weigh your options in terms of available resources (Financial costs, energy, time, knowledge, etc.)**
- **Use priority and sequence to keep you decide what mixed method design is appropriate for your study**
- **Use diagram to best help you present your procedure in your design**

## Conclusions...

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- **Some authors (Spicer 2012) have argued that quantitative and qualitative approaches are different in methodologies and as such cannot be combined within one research.**
- **Other researchers (Moses and Knutsen, 2007) have argued that such conclusions are unhelpful.**
- **Word of advice: It is better to view both methods as different points on a continuum rather than two end points in a dichotomy.**

## Conclusion...

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- **Mixed method (QUANTITATIVE or QUALITATIVE) is NOT a WAR of the sexes.**





THANK YOU