

## Comparing Qualitative and Quantitative Approaches

- The emphasis of quantitative research is upon facts that are the product of direct and indirect observations, upon concepts, and their indicators, hypothesis testing based sample survey and upon statistical analysis of the data.
- In contrast, Qualitative research forms of investigation tend to be based on a recognition of the significance of the subjective, experiential 'lifeworld' of human beings. Such reflection is the province of phenomenology.
  - It examines social phenomena in their natural settings and emphasizes verbal descriptions and explanations of human behavior (Jackson, 1995: 13-18).
  - The task of the qualitative researcher is to capture what people say and do as a product of how they interpret the complexity of their world, to understand events from the view points of the participants.

- Much of the rationale for the qualitative approach rests in the criterion of meaning (how people make sense of their lives, experiences, and their structures of the world).
- Eisner (1979) argues that there can be little meaning, impact or quality in an event isolated from the context in which it is found.
- Qualitative research has made educators realize that reality should never be taken for granted, given that attention must be paid to the multiple realities and socially constructed meanings that exist within every social context

## Debates

- The epistemological underpinnings of the quantitative motif hold that there exist definable and quantifiable social facts (Rist, 1979:18).
- However, qualitative researchers argue that reality cannot be subsumed within numerical classification. Qualitative researchers place stress the validity of multiple meaning structures and holistic analysis, as opposed to the criterion of reliability and statistical compartmentalization of quantitative research.

- Indeed, human behavior is significantly influenced by the setting in which it occurs; thus one must study that behavior in situations (the physical setting).
  - e.g., schedules, space, pay, and rewards and the internalized notions of norms, traditions, roles, and values are crucial contextual variables. Research must be conducted in the setting where all the contextual variables are operating.

- At the heart of the conflict between these approaches is the fundamental disagreement about the simplification of reality that provides the posture of scientific method. It is precisely this fragmentation or compartmentalized style of evaluation which qualitatively-oriented researchers argue leads to distortions of reality and, as a consequence, necessitates a holistic or contextual model of research.

- Eisner (1979) explains that essentially qualitative approaches are concerned with process rather than consequences, with organic wholeness rather than independent variables and with meanings rather than behavioral statistics

- The main vehicles of quantitative research are social surveys, experimental designs and structured observations.
- While qualitative research is mostly closely associated with participant observation, unstructured interviewing, field research etc.

### Fundamental Differences

- Type of Questions asked
- Kinds of evidence considered appropriate for analyzing the problem under study
- The Methods used to collect and process this evidence.

Qualitative	Quantitative
<ul style="list-style-type: none"> <li>The aim is a complete, detailed description.</li> </ul>	<ul style="list-style-type: none"> <li>The aim is to classify features, count them, and construct statistical models in an attempt to explain what is observed.</li> </ul>
<ul style="list-style-type: none"> <li>Researcher may only know roughly in advance what he/she is looking for.</li> </ul>	<ul style="list-style-type: none"> <li>Researcher knows clearly in advance what he/she is looking for.</li> </ul>

<ul style="list-style-type: none"> <li>The design emerges as the study unfolds.</li> </ul>	<ul style="list-style-type: none"> <li>All aspects of the study are carefully designed before data is collected.</li> </ul>
<ul style="list-style-type: none"> <li>Researcher is the data gathering instrument.</li> </ul>	<ul style="list-style-type: none"> <li>Researcher uses tools, such as questionnaires or equipment to collect numerical data.</li> </ul>

<ul style="list-style-type: none"> <li>Data is in the form of words, pictures or objects.</li> </ul>	<ul style="list-style-type: none"> <li>Data is in the form of numbers and statistics.</li> </ul>
<ul style="list-style-type: none"> <li>Subjective - individuals' interpretation of events is important, e.g., uses participant observation, in-depth interviews etc.</li> </ul>	<ul style="list-style-type: none"> <li>Objective - seeks precise measurement &amp; analysis of target concepts, e.g., uses surveys, questionnaires etc.</li> </ul>
<ul style="list-style-type: none"> <li>Qualitative data is more rich, time consuming, and less able to be generalized.</li> </ul>	<ul style="list-style-type: none"> <li>Quantitative data is more efficient, able to test hypotheses, but may miss contextual detail.</li> </ul>

<ul style="list-style-type: none"> <li>• Researcher tends to become subjectively immersed in the subject matter.</li> </ul>	<ul style="list-style-type: none"> <li>• Researcher tends to remain objectively separated from the subject matter.</li> </ul>
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## Strengths and Weaknesses

- ### Strengths of Quantitative Approach
- Firstly, its strengths that lie in precision and control.
    - Precision can be achieved thru quantitative and reliable measurement) and while control can be achieved thru the sampling design.
  - Secondly, is that experimentation leads to statements about causation, since the systematic manipulation of a variable can be shown to have a direct causal effect on another when other variables have been eliminated or controlled.
  - Lastly, hypotheses are tested thru a deductive approach and the use of quantitative data permits statistical analysis.

- ### Weaknesses of Quantitative Approach
- Firstly, many researchers are concerned that the quantitative approach denigrate (belittle) human individuality and ability to think.
    - Its mechanistic ethos tends to exclude notions of freedom, choice and moral responsibility. Thus, quantification becomes an end in itself rather than a humane endeavor seeking to explore human condition.
  - Then, it leads to an assumption that facts are true and the same for all people all times.
    - Quantitative research often produces banal (predictable or boring?) and trivial findings of little consequences due to the restriction on and the controlling variables.
      - Artificial situation?

- ### Weaknesses of Quantitative Approach
- Finally, quantitative approach cannot be totally objective, since subjectively it is involved in the very choice of a problem as worthy of investigation and in the interpretation of the results.

- ### Strengths of Qualitative Approach
- Firstly, its (Qualitative approach) mode of inquiry characterized by methodological eclecticism (hypothesis-free orientation and an implicit acceptance of the natural scheme of things which may discover unexpected and very striking things.
    - Lazarsfeld (1969) states that qualitative investigation is like the nets of deep-sea explorers, they may pull up unexpected and striking things for us to gaze on.
  - Secondly, Qualitative method approach can reveal subtleties.
    - Because of the need for researcher to maintain close association with both participants and activities within the setting, researcher gains an insiders' views of the field. This proximity to the field often allows the evaluator to see the qualities of educational interaction too often missed by quantitative researcher.

### Strengths of Qualitative Approach

- Finally, since qualitative reports are not presented as statistical summations, but rather in a more descriptive, narrative style, this type of research might be of particular benefit to the practitioner.
  - E.g. many ordinary teachers could turn to quantitative reports due to their lack knowledge of sophisticated measurement techniques .

### Weaknesses of Qualitative Approach

- The problem of adequate validity and reliability. **Since procedure is de-emphasized in qualitative research, replication and other tests of reliability become more difficult.**
  - It is difficult to apply conventional standard of reliability and validity due its subjective nature and its origin in a single context.
  - Context, situations, events, conditions and interactions cannot be replicated to any extent nor can generalizations be made to a wider context than the one studied with any confidence.
  - Basically, the richness, individuality and subjective nature of a participant's perspective and understanding is not amenable to the usual scientific criteria.

### Weaknesses of Qualitative Approach

- Major limitation is the time required for data collection.
  - There is a critical need for a researcher to spend a considerable amount of time in a research setting to examine holistically and aggregately the interactions, reactions and activities.

### Conclusion

- In general, evaluators agree that qualitative and quantitative data and methods have different strengths, weaknesses, and requirements that affect decisions about which methodologies are appropriate for which purposes.
- Combining the two approaches?