

FAQ's [Frequently Asked Questions] about Research

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1. WHAT IS RESEARCH?

Research is a careful study of a given subject, field, or problem in a scholarly and often scientific manner. A researcher, like an architect, finds that planning is the essence of his/her art. Structure, conceptualization, practical methodology, and up-front planning are basic requirements to secure an excellent outcome in both fields.

According to Kerlinger (1986, 11): "Scientific research is systematic, controlled, empirical, and critical investigation of hypothetical propositions about the presumed relations among natural phenomena."

2. WHAT ACTIONS ARE ASSOCIATED WITH RESEARCH?

Investigating, analyzing, scrutinizing, observing, exploring, examining, probing, testing and inquiring:

3. WHAT IS THE DIFFERENCE BETWEEN PURE AND APPLIED RESEARCH

Pure research - research for its own sake.

Applied research - pragmatic and usually involves:

- * formulating a problem
- * developing a hypothesis
- * constructing a model to help test the hypothesis
- * performing that test or experiment
- * coming to a conclusion
- * recommendations for application

Scholarly research – can be applied or pure. It is based on theory obtained from published studies in scholarly journals. It demonstrates critical and creative thinking presented in a theoretical framework. Most graduate programs require that students conduct scholarly research and that a minimum of 5 scholarly sources are referenced in the research paper.

4. WHAT IS A RESEARCH DESIGN?

According to L.DeBakey (1978) It is the strategy, plan, and the structure of conducting a research plan.

According to Verhonic (1978) It is the overall framework for collecting data once the problem has concretely been formulated in order to provide a format for the detailed steps in the study. The type of design depends upon the statement of the problem.

5. WHAT TOOLS DOES ONE NEED TO DO RESEARCH?

There are 5 general tools of research: The library and its resources, measurement techniques (including instruments to obtain data), statistics (for quantitative studies), the computer and its software, facility with language and communication.

6. HOW IS STATISTICS RELATED TO RESEARCH?

Statistics is often interwoven in many stages of research after the problem is formulated. Statistics involves data: Collection, Organization, Analysis, Interpretation, and Prediction. Descriptive statistics summarizes data, Inferential statistics attempts to make generalizations for a sample to a population.

7. WHAT ARE THE MAJOR ONTOLOGICAL VIEWS OF RESEARCH?

The Jigsaw Puzzle Approach - [includes: Analytical Sciences, Rational, Positivist, Truth-seeking, Conventional, and Objective]. Here the Researcher hopes to discover another small piece of the (or a) puzzle or theory that explains some phenomenon. The information is then presented in a way that is can be placed somewhere in the uncompleted puzzle. The ultimate goal is to see what the whole picture looks like. Most quantitative methodologies fit this framework. There is a tendency to: isolate variables; attempt to control for outside influences; seek reliability and validity through statistical probabilities; and try to present an explanation of why something is the way it is. Intuitive data is often discounted but is seen as the precursor to "doing the research." According to Kuhn (1970,18), the first pieces of any puzzle are the most difficult, and that as the pieces are added, the pace of discovery quicken, because there exist more area of opportunity for solutions, and the number of voids are simultaneously diminished. If a new piece arises that is valid but does not fit the existing puzzle, then the existing puzzle may have to be abandoned.

The Riddle to be solved - [includes: Phenomenology, Hermeneutic, Natural, Qualitative, Social Construct, and Case Study]. Here the Researcher poses a question and considers a multitude of ways to answer it. Underlying belief is that there can be many different answers to a problem. [e.g. Q: Why did the chicken cross the road? A's: To get to the other side, to get to the shell station, to get away from the sniper.] The researcher examines, in context, several possible answers to the research question from multiple perspectives. Reality is socially constructed through individual or collective definitions of the situation. More concerned with understanding, theory development, and consistency; than with explaining how a phenomenon works. Based on context sensitivity - rejects universal, context-free generalizations. Researcher attempts to describe lived experiences and generate hypothetical propositions through logical abstractions. Most qualitative methodologies fit this framework.

See: Lowenberg, J.S. (1985) Comparative Aims of Qualitative and Quantitative Research Design Facts for further comparisons.

8. WHAT ARE SOME FORMAL RESEARCH METHODOLOGIES?

There is no single form of methodology without flaw and that can provide us with all the answers; that is, there are no universals in searching for universals. The challenge of the researcher is to construct that methodology (or methodologies) which will enable him/her to advance or reinforce theory in a sufficiently sound way as to advance the discipline.

Some common types of research methodologies include:

Historical Research- concerned with the meaning of events

Descriptive Research- concerned with observed data

Experimental Research - concerned with data control

Quasi-experimental Research - randomness cannot be attained in sampling

Correlational Research - nonexperimental, seeking a relationship between variables

Case Study

Action Research

Delphi Research

Phenomenological Research

Evaluative Research

Each type of research has its own *epistemology* (tools and theoretical constructs used to derive, elicit, and analyze data).

Suggested Reading List: (* A primer on research)

Goldstein , Martin, and I. Goldstein, *How We Know*. New York: De Capo Press, 1985.

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Triola, Mario F, *Elementary Statistics*, 8th ed. Menlo Park, CA: Benjamin Cummings, 2001.