

Lecture Notes

Chapter 1: The Selection of a Research Approach

The identification of a research approach is an important early step in planning a research project. This chapter begins with definitions of quantitative, qualitative and mixed methods approaches. These three approaches are not rigid, distinct categories. Qualitative and quantitative approaches represent two ends of a spectrum with mixed methods residing somewhere in the middle. The chapter then continues with a discussion of how philosophy, research designs and data collection methods come together to inform the decision about which approach to research should be used.

In planning a research study, the researcher should be aware of the philosophical worldview assumptions that they bring to the study, the research design most closely related to this worldview and the research methods that will be used to best put the approach to practice. Four major worldviews are explored in the chapter: post-positivism, constructivist, pragmatic and transformative. Each indicates how the researcher could potentially view the world and how that worldview influences the choice of research approaches. In deciding which research approach to use, the researcher must consider the research problem. The problem itself can give an indication of which approach might be best. For example quantitative research is best if the problem involves identification of factors that influence an outcome or understanding the best predictors of an outcome. Additionally the personal experiences of the researcher and comfort level with certain approaches will influence the choice of an approach. Finally the researcher must consider the audience when choosing an approach.

The Three Approaches to Research

- Qualitative
 - An approach for understanding the meaning individuals and groups ascribe to a human or social problem
 - Emerging questions
 - Analysis building from particular data to general themes (inductive)
- Quantitative
 - An approach for testing objective theories by examining the relationships among variables (deductive)
 - Numbered data which can be analyzed using statistical procedures
 - Structured written report
- Mixed Methods Approach
 - Collection of both qualitative and quantitative data
 - May involve both philosophical assumptions and theoretical frameworks
 - Assumes a more complete understanding of a research problem than using one of the approaches alone

Three Components Involved in Research

Philosophical Worldviews

Definition: For the purposes of this chapter *worldview* is defined as “a basic set of beliefs that guide action”(Guba, 1990, p.17)

- The Postpositivist Worldview
 - Typically quantitative
 - Cause and effect – drive to assess the causes that influence outcomes
 - Begins with theory and data is collected that either supports or refutes the theory
 - Knowledge is conjectural and anti-foundational. Absolute truth can never be found. Evidence is always refutable.
 - Data, evidence and rational considerations shape knowledge.
 - Research seeks to develop relevant true statements that can explain or describe phenomena
 - Objectivity is essential – researchers must examine methods and conclusions for bias and maintain a standard of reliability and validity in quantitative research
- The Constructivist Worldview
 - Typically qualitative with open ended questions
 - Social constructivists believe that individuals seek understanding of the world in which they live.
 - Researchers generate theory through induction
 - Meaning is constructed through the lens of individual experiences resulting in many varied and complex views.
 - Generation of meaning is social arising out of interaction with a human community
- The Transformative Worldview
 - Answer to criticism that postpositivism does not address issues of power and social justice

- Holds that research inquiry needs to be intertwined with politics and an agenda that confronts social oppression
- Places central importance on the study of lives and experiences of diverse groups.
- Research focuses on inequities based on gender, race, ethnicity, disability, sexual orientation and socioeconomic status and the resulting power inequities
- Links political and social action to these inequities
- The Pragmatic Worldview
 - Arises out of actions, situations and consequences rather than antecedent conditions
 - More concern with applications and solutions to problems.
 - Lends itself to mixed methods
 - Not committed to any one system. Draws from both quantitative and qualitative assumptions.
 - Individual researchers have freedom to choose methods, techniques and procedures that best fit their needs.
 - Researchers look at the what and how to research based on the intended consequences.
 - Research occurs in social, historical, political and other contexts which may include a theoretical lens that is reflective of social justice and political aims.

Research Designs

In addition to deciding whether to use a quantitative, qualitative or mixed methods approach, the researcher also decides on a design to use.

- Quantitative Designs
 - Research strategies associated with quantitative research came out of a mainly postpositivist worldview. Amongst the experimental methods employed are the true experiments, quasi-experiments and single subject experiments. Non-experimental methods include causal comparative in which the investigator compares two or more groups in terms of a cause that has already happened and correlational in which investigators used statistics to describe and measure the association between two or more variables.
 - Survey Research provides a numeric description of trends, attitudes or opinions of a population by studying a sample.
 - Cross sectional and longitudinal studies using questionnaires or structured interview for data collection.
 - Experimental Research seeks to determine if a specific treatment influences an outcome.
 - True experiments utilize random assignment of participants to treatment conditions
 - Quasi-experiments (including single subject designs) do not use random assignment.
- Qualitative Designs
 - Qualitative research approaches have historic origins in anthropology, sociology, the humanities and evaluation.
 - Narrative research

- The researcher studies the lives of individuals by asking for stories about their lives. These stories are often retold by the researcher in a narrative chronology
- Phenomenological research
 - The researcher describes the lived experiences of individuals about a phenomenon as described by the participants. This culminates in a work that describes the essence of several individuals who have experienced the phenomenon.
- Grounded theory
 - The researcher derives an abstract theory of a process, action or interaction grounded in the views of the participants.
- Ethnography
 - This is a design coming from anthropology and sociology in which the researcher studies shared patterns of behaviors, language and actions of an existing cultural group in the natural setting over time
- Case studies
 - The researcher develops an in depth analysis of a case involving one or more individuals. Detailed information is collected using a number of methods.
- Mixed Methods Designs
 - Combines quantitative and qualitative methods to build on the strengths of each method
 - Convergent parallel mixed methods
 - The researcher collects both quantitative and qualitative data at about the same time and integrates the information when interpreting the results
 - Explanatory sequential mixed methods
 - The researcher conducts quantitative research, analyzes the results and explains the results in more detail with qualitative research. The initial quantitative phase is followed by the qualitative phase.
 - Exploratory sequential mixed methods
 - Reverse of the explanatory sequential design. The researcher begins with qualitative research to explore the views of the participants. The data is then analyzed with the information used to then build an instrument to use in the quantitative research phase.
 - Advanced mixed methods strategies
 - Transformative mixed methods uses a theoretical lens drawn from social justice or power.
 - An embedded mixed method involves convergent or sequential use of data. The qualitative or quantitative data is embedded in the larger design.
 - Multiphase mixed methods uses concurrent or sequential strategies over time.

Research Methods

- Includes forms of data collection, analysis and interpretation.
 - Instruments or tests or behavioral observation checklists may be used to collect data

- Observation without predetermined questions or conducting an interview in which the participant is allowed to speak freely may be some of the other less structured methods for collecting data
- Data to be analyzed may be numerical or text.

Research Approaches as Worldviews, Designs, and Methods

The worldviews, the designs and the methods all contribute to a research approach that can be quantitative, qualitative or mixed.

- Scenarios that can illustrate how the three elements can combine into a research design
 - Quantitative approach: Postpositivist worldview, experimental design, pretest and posttest measures of attitudes
 - Qualitative approach: Constructivist worldview, ethnographic design, and observation of behavior
 - Qualitative approach: transformative worldview, narrative design, and open-ended interviewing
 - Mixed methods approach; Pragmatic worldview, collection of quantitative and qualitative data sequentially

Criteria for Selecting a Research Approach

- The research problem or questions – an issue or concern that needs to be addressed
 - Void in the literature, inconsistent results in the literature, a need to address issues of marginalized participants
 - Quantitative research is best if the problem:
 - Identification of factors that influence an outcome
 - The utility of an intervention
 - Understanding the best predictors of an outcome
 - Qualitative research is best if the researcher does not know the important variables to examine
 - Mixed methods design is useful when the quantitative or qualitative method by itself will not adequately provide an understanding
- Personal Experiences
 - The researcher's training and personal experiences can influence the choice of an approach
 - Researchers who are more comfortable with systematic procedures may be more comfortable with quantitative methods
 - Qualitative research provides more flexibility and creativity
- Audience
 - Researchers write for audiences that will accept their research