

THREE COMPONENTS INVOLVED IN A DESIGN

Two important components in each definition are that the approach to research involves philosophical assumptions as well as distinct methods or procedures. **Research design**, which I refer to as the *plan or proposal to conduct research*, involves the intersection of philosophy, strategies of inquiry, and specific methods. A framework that I use to explain the interaction of these three components is seen in Figure 1.1. To reiterate, in planning a study, researchers need to think through the philosophical worldview assumptions that they bring to the study, the strategy of inquiry that is related to this worldview, and the specific methods or procedures of research that translate the approach into practice.

Philosophical Worldviews

Although philosophical ideas remain largely hidden in research (Slife & Williams, 1995), they still influence the practice of research and need to be identified. I suggest that individuals preparing a research proposal or plan make explicit the larger philosophical ideas they espouse. This information will help explain why they chose qualitative, quantitative, or mixed methods

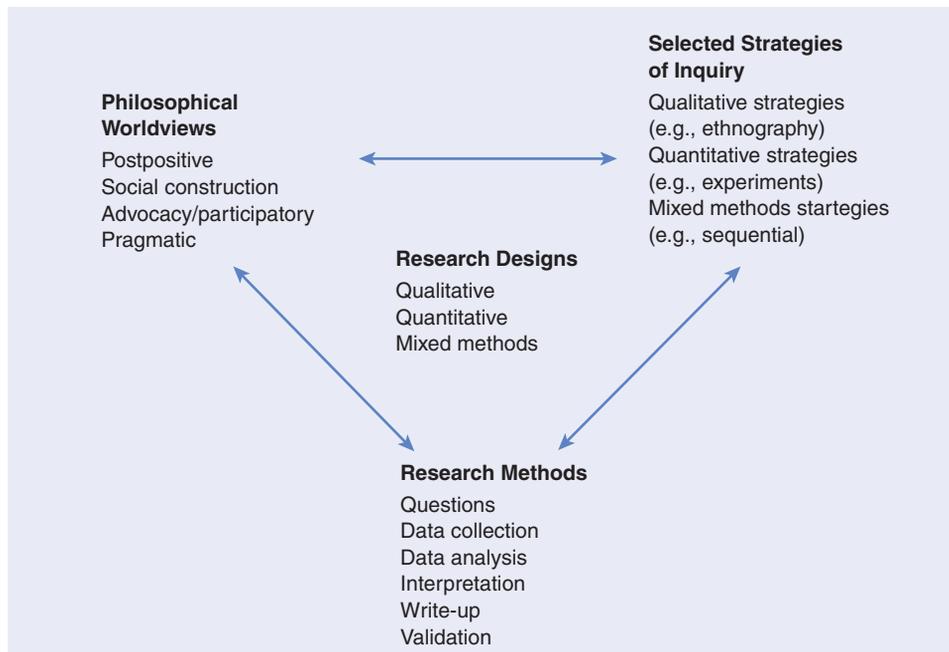


Figure 1.1 A Framework for Design—The Interconnection of Worldviews, Strategies of Inquiry, and Research Methods

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approaches for their research. In writing about worldviews, a proposal might include a section that addresses the following:

- The philosophical worldview proposed in the study
- A definition of basic considerations of that worldview
- How the worldview shaped their approach to research

I have chosen to use the term **worldview** as meaning “a basic set of beliefs that guide action” (Guba, 1990, p. 17). Others have called them *paradigms* (Lincoln & Guba, 2000; Mertens, 1998); *epistemologies* and *ontologies* (Crotty, 1998), or *broadly conceived research methodologies* (Neuman, 2000). I see worldviews as a general orientation about the world and the nature of research that a researcher holds. These worldviews are shaped by the discipline area of the student, the beliefs of advisers and faculty in a student’s area, and past research experiences. The types of beliefs held by individual researchers will often lead to embracing a qualitative, quantitative, or mixed methods approach in their research. Four different worldviews are discussed: postpositivism, constructivism, advocacy/participatory, and pragmatism. The major elements of each position are presented in Table 1.1.

The Postpositivist Worldview

The postpositivist assumptions have represented the traditional form of research, and these assumptions hold true more for quantitative research than qualitative research. This worldview is sometimes called the *scientific method* or *doing science research*. It is also called *positivist/postpositivist research*, *empirical science*, and *postpositivism*. This last term is called postpositivism because it represents the thinking after positivism, challenging

Table 1.1 Four Worldviews

| Postpositivism | Constructivism |
|---|---|
| <ul style="list-style-type: none"> • Determination • Reductionism • Empirical observation and measurement • Theory verification | <ul style="list-style-type: none"> • Understanding • Multiple participant meanings • Social and historical construction • Theory generation |
| Advocacy/Participatory | Pragmatism |
| <ul style="list-style-type: none"> • Political • Empowerment Issue-oriented • Collaborative • Change-oriented | <ul style="list-style-type: none"> • Consequences of actions • Problem-centered • Pluralistic • Real-world practice oriented |

the traditional notion of the absolute truth of knowledge (Phillips & Burbules, 2000) and recognizing that we cannot be “positive” about our claims of knowledge when studying the behavior and actions of humans. The postpositivist tradition comes from 19th-century writers, such as Comte, Mill, Durkheim, Newton, and Locke (Smith, 1983), and it has been most recently articulated by writers such as Phillips and Burbules (2000).

Postpositivists hold a deterministic philosophy in which causes probably determine effects or outcomes. Thus, the problems studied by postpositivists reflect the need to identify and assess the causes that influence outcomes, such as found in experiments. It is also reductionistic in that the intent is to reduce the ideas into a small, discrete set of ideas to test, such as the variables that comprise hypotheses and research questions. The knowledge that develops through a postpositivist lens is based on careful observation and measurement of the objective reality that exists “out there” in the world. Thus, developing numeric measures of observations and studying the behavior of individuals becomes paramount for a postpositivist. Finally, there are laws or theories that govern the world, and these need to be tested or verified and refined so that we can understand the world. Thus, in the scientific method, the accepted approach to research by postpositivists, an individual begins with a theory, collects data that either supports or refutes the theory, and then makes necessary revisions before additional tests are made.

In reading Phillips and Burbules (2000), you can gain a sense of the key assumptions of this position, such as,

1. Knowledge is conjectural (and antifoundational)—absolute truth can never be found. Thus, evidence established in research is always imperfect and fallible. It is for this reason that researchers state that they do not prove a hypothesis; instead, they indicate a failure to reject the hypothesis.
2. Research is the process of making claims and then refining or abandoning some of them for other claims more strongly warranted. Most quantitative research, for example, starts with the test of a theory.
3. Data, evidence, and rational considerations shape knowledge. In practice, the researcher collects information on instruments based on measures completed by the participants or by observations recorded by the researcher.
4. Research seeks to develop relevant, true statements, ones that can serve to explain the situation of concern or that describe the causal relationships of interest. In quantitative studies, researchers advance the relationship among variables and pose this in terms of questions or hypotheses.
5. Being objective is an essential aspect of competent inquiry; researchers must examine methods and conclusions for bias. For example, standard of validity and reliability are important in quantitative research.

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The Social Constructivist Worldview

Others hold a different worldview. Social constructivism (often combined with interpretivism; see Mertens, 1998) is such a perspective, and it is typically seen as an approach to qualitative research. The ideas came from Mannheim and from works such as Berger and Luekmann's (1967) *The Social Construction of Reality* and Lincoln and Guba's (1985) *Naturalistic Inquiry*. More recent writers who have summarized this position are Lincoln and Guba (2000), Schwandt (2007), Neuman (2000), and Crotty (1998), among others. **Social constructivists** hold assumptions that individuals seek understanding of the world in which they live and work. Individuals develop subjective meanings of their experiences—meanings directed toward certain objects or things. These meanings are varied and multiple, leading the researcher to look for the complexity of views rather than narrowing meanings into a few categories or ideas. The goal of the research is to rely as much as possible on the participants' views of the situation being studied. The questions become broad and general so that the participants can construct the meaning of a situation, typically forged in discussions or interactions with other persons. The more open-ended the questioning, the better, as the researcher listens carefully to what people say or do in their life settings. Often these subjective meanings are negotiated socially and historically. They are not simply imprinted on individuals but are formed through interaction with others (hence social constructivism) and through historical and cultural norms that operate in individuals' lives. Thus, constructivist researchers often address the processes of interaction among individuals. They also focus on the specific contexts in which people live and work, in order to understand the historical and cultural settings of the participants. Researchers recognize that their own backgrounds shape their interpretation, and they position themselves in the research to acknowledge how their interpretation flows from their personal, cultural, and historical experiences. The researcher's intent is to make sense of (or interpret) the meanings others have about the world. Rather than starting with a theory (as in postpositivism), inquirers generate or inductively develop a theory or pattern of meaning.

For example, in discussing constructivism, Crotty (1998) identified several assumptions:

1. Meanings are constructed by human beings as they engage with the world they are interpreting. Qualitative researchers tend to use open-ended questions so that the participants can share their views.
2. Humans engage with their world and make sense of it based on their historical and social perspectives—we are all born into a world of meaning bestowed upon us by our culture. Thus, qualitative researchers seek to understand the context or setting of the participants through visiting this context and gathering information personally. They also interpret what

they find, an interpretation shaped by the researcher's own experiences and background.

3. The basic generation of meaning is always social, arising in and out of interaction with a human community. The process of qualitative research is largely inductive, with the inquirer generating meaning from the data collected in the field.

The Advocacy and Participatory Worldview

Another group of researchers holds to the philosophical assumptions of the advocacy/participatory approach. This position arose during the 1980s and 1990s from individuals who felt that the postpostivist assumptions imposed structural laws and theories that did not fit marginalized individuals in our society or issues of social justice that needed to be addressed. This worldview is typically seen with qualitative research, but it can be a foundation for quantitative research as well. Historically, some of the advocacy/participatory (or emancipatory) writers have drawn on the works of Marx, Adorno, Marcuse, Habermas, and Freire (Neuman, 2000). Fay (1987), Heron and Reason (1997), and Kemmis and Wilkinson (1998) are more recent writers to read for this perspective. In the main, these inquirers felt that the constructivist stance did not go far enough in advocating for an action agenda to help marginalized peoples. An **advocacy/participatory worldview** holds that research inquiry needs to be intertwined with politics and a political agenda. Thus, the research contains an action agenda for reform that may change the lives of the participants, the institutions in which individuals work or live, and the researcher's life. Moreover, specific issues need to be addressed that speak to important social issues of the day, issues such as empowerment, inequality, oppression, domination, suppression, and alienation. The researcher often begins with one of these issues as the focal point of the study. This research also assumes that the inquirer will proceed collaboratively so as to not further marginalize the participants as a result of the inquiry. In this sense, the participants may help design questions, collect data, analyze information, or reap the rewards of the research. Advocacy research provides a voice for these participants, raising their consciousness or advancing an agenda for change to improve their lives. It becomes a united voice for reform and change.

This philosophical worldview focuses on the needs of groups and individuals in our society that may be marginalized or disenfranchised. Therefore, theoretical perspectives may be integrated with the philosophical assumptions that construct a picture of the issues being examined, the people to be studied, and the changes that are needed, such as feminist perspectives, racialized discourses, critical theory, queer theory, and disability theory—theoretical lens to be discussed more in Chapter 3.

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Although these are diverse groups and my explanations here are generalizations, it is helpful to view the summary by Kemmis and Wilkinson (1998) of key features of the advocacy or participatory forms of inquiry:

1. Participatory action is recursive or dialectical and focused on bringing about change in practices. Thus, at the end of advocacy/participatory studies, researchers advance an action agenda for change.
2. This form of inquiry is focused on helping individuals free themselves from constraints found in the media, in language, in work procedures, and in the relationships of power in educational settings. Advocacy/participatory studies often begin with an important issue or stance about the problems in society, such as the need for empowerment.
3. It is emancipatory in that it helps unshackle people from the constraints of irrational and unjust structures that limit self-development and self-determination. The advocacy/participatory studies aim to create a political debate and discussion so that change will occur.
4. It is practical and collaborative because it is inquiry completed *with* others rather than *on* or *to* others. In this spirit, advocacy/participatory authors engage the participants as active collaborators in their inquiries.

The Pragmatic Worldview

Another position about worldviews comes from the pragmatists. Pragmatism derives from the work of Peirce, James, Mead, and Dewey (Cherryholmes, 1992). Recent writers include Rorty (1990), Murphy (1990), Patton (1990), and Cherryholmes (1992). There are many forms of this philosophy, but for many, **pragmatism** as a worldview arises out of actions, situations, and consequences rather than antecedent conditions (as in postpositivism). There is a concern with applications—what works—and solutions to problems (Patton, 1990). Instead of focusing on methods, researchers emphasize the research problem and use all approaches available to understand the problem (see Rossman & Wilson, 1985). As a philosophical underpinning for mixed methods studies, Tashakkori and Teddlie (1998), Morgan (2007), and Patton (1990) convey its importance for focusing attention on the research problem in social science research and then using pluralistic approaches to derive knowledge about the problem. Using Cherryholmes (1992), Morgan (2007), and my own views, pragmatism provides a philosophical basis for research:

- Pragmatism is not committed to any one system of philosophy and reality. This applies to mixed methods research in that inquirers draw liberally from both quantitative and qualitative assumptions when they engage in their research.

- Individual researchers have a freedom of choice. In this way, researchers are free to choose the methods, techniques, and procedures of research that best meet their needs and purposes.
- Pragmatists do not see the world as an absolute unity. In a similar way, mixed methods researchers look to many approaches for collecting and analyzing data rather than subscribing to only one way (e.g., quantitative or qualitative).
- Truth is what works at the time. It is not based in a duality between reality independent of the mind or within the mind. Thus, in mixed methods research, investigators use both quantitative and qualitative data because they work to provide the best understanding of a research problem.
- The pragmatist researchers look to the *what* and *how* to research, based on the intended consequences—where they want to go with it. Mixed methods researchers need to establish a purpose for their mixing, a rationale for the reasons why quantitative and qualitative data need to be mixed in the first place.
- Pragmatists agree that research always occurs in social, historical, political, and other contexts. In this way, mixed methods studies may include a postmodern turn, a theoretical lens that is reflective of social justice and political aims.
- Pragmatists have believed in an external world independent of the mind as well as that lodged in the mind. But they believe that we need to stop asking questions about reality and the laws of nature (Cherryholmes, 1992). “They would simply like to change the subject” (Rorty, 1983, p. xiv).
- Thus, for the mixed methods researcher, pragmatism opens the door to multiple methods, different worldviews, and different assumptions, as well as different forms of data collection and analysis.

Strategies of Inquiry

The researcher not only selects a qualitative, quantitative, or mixed methods study to conduct, the inquirer also decides on a type of study within these three choices. **Strategies of inquiry** are types of qualitative, quantitative, and mixed methods designs or models that provide specific direction for procedures in a research design. Others have called them *approaches to inquiry* (Creswell, 2007) or *research methodologies* (Mertens, 1998). The strategies available to the researcher have grown over the years as computer technology has pushed forward our data analysis and ability to analyze complex models and as individuals have articulated new procedures for conducting social science research. Select types will be emphasized in Chapters 8, 9, and 10, strategies frequently used in the social sciences. Here I introduce those that are discussed later and that are cited in examples throughout the book. An overview of these strategies is shown in Table 1.2.