



The Use of Theory

In *quantitative research*, the hypotheses and research questions are often based on theories that the researcher seeks to test. In *qualitative research*, the use of theory is much more varied. Thus, this book introduces the use of theory at this time in the design process because theory provides an explanation for the variables in questions and hypotheses in quantitative research. In contrast, in a quantitative dissertation, an entire section of a research proposal might be devoted to explicating the theory for the study. Alternatively, in a qualitative study, the inquirer may generate a theory during a study and place it at the end of a project, such as in grounded theory. In other qualitative studies, it comes at the beginning and provides a lens that shapes what is looked at and the questions asked, such as in ethnographies or in advocacy research. In *mixed methods research*, researchers may both test theories and generate them. Moreover, mixed methods research may contain a theoretical lens, such as a focus on feminist, racial, or class issues, that guides the entire study.

The chapter begins by focusing on theory-use in a quantitative study. It reviews a definition of a theory, the placement of it in a quantitative study, and the alternative forms it might assume in a written plan. Procedures in identifying a theory are next presented followed by a "script" of a "theoretical perspective" section of a quantitative research proposal. Then the discussion moves to use of theory in a qualitative study. Qualitative inquirers use different terms, such as theories, patterns, and naturalistic generalizations, to describe the understandings developed in their studies. Sometimes these understandings occur at the beginning of a study; at other times, they appear at the end. Examples illustrate the alternatives available to qualitative researchers. Finally, the chapter turns to the use of theories in mixed methods research and the use of theory in a type of strategy of inquiry—the transformative strategy—that emerged recently in the literature.

QUANTITATIVE THEORY-USE

Definition of a Theory

In *quantitative* research, some historical precedent exists for viewing a theory as a scientific prediction or explanation (see G. Thomas, 1997, for different ways of conceptualizing theories and how they might constrain thought). For example, the definition of a theory, such as the one by Kerlinger (1979), is still valid today. A theory is “a set of interrelated constructs (variables), definitions, and propositions that presents a systematic view of phenomena by specifying relations among variables, with the purpose of explaining natural phenomena” (p. 64).

In this definition, a theory is an interrelated set of constructs (or variables) formed into propositions, or hypotheses, that specify the relationship among variables (typically in terms of magnitude or direction). The systematic view might be an argument, a discussion, or a rationale, and it helps to explain (or predict) phenomena that occur in the world. Labovitz and Hagedorn (1971) add to this definition the idea of a *theoretical rationale*, which they define as “specifying how and why the variables and relational statements are interrelated” (p. 17). Why would an independent variable, X, influence or affect a dependent variable, Y? The theory would provide the explanation for this expectation or prediction. A discussion about this theory, then, would appear in a section of a proposal titled a *theory-base*, a *theoretical rationale*, or a *theoretical perspective*. I prefer the term *theoretical perspective* because it has been popularly used as a required section for a proposal for research when one submits an application to present a research paper at the American Educational Research Association conference.

The metaphor of a rainbow can help to visualize how a theory operates. Assume that the rainbow *bridges* the independent and dependent variables (or constructs) in a study. This rainbow, then, ties together the variables and provides an overarching explanation for *how* and *why* one would expect the independent variable to explain or predict the dependent variable.

Theories develop when researchers test a prediction many times. Recall that investigators combine independent, mediating, and dependent variables based on different forms of measures into hypotheses or research questions. These hypotheses or questions provide information about the type of relationship (positive, negative, or unknown) and its magnitude (e.g., high or low). The hypothesis might be written, “The greater the centralization of power in leaders, the greater the disenfranchisement of the followers.” When researchers test hypotheses such as

this over and over in different settings and with different populations (e.g., the Boy Scouts, a Presbyterian church, the Rotary Club, and a group of high school students), a theory emerges and someone gives it a name (e.g., a theory of attribution). Thus, theory develops as explanation to advance knowledge in particular fields (G. Thomas, 1997).

Another aspect of theories is that they vary in their breadth of coverage. Neuman (2000) reviews theories at three levels: micro-level, meso-level, and macro-level. Micro-level theories provide explanations limited to small slices of time, space, or numbers of people, such as Goffman's theory of "face work" that explains how people engage in rituals during face-to-face interactions. Meso-level theories link the micro and macro levels. These are theories of organizations, social movement, or communities, such as Collins's theory of control in organizations. Macro-level theories explain larger aggregates, such as social institutions, cultural systems, and whole societies. Lenski's macro-level theory of social stratification, for example, explains how the amount of surplus a society produces increases with the development of the society.

Theories are found in the social science disciplines of psychology, sociology, anthropology, education, and economics, as well as within many subfields. To locate and read about these theories requires searching literature databases (e.g., *Psychological Abstracts*, *Sociological Abstracts*) or reviewing guides to the literature about theories (e.g., see Webb, Beals, & White, 1986).

Form of Theories

Researchers state their theories in several ways, such as a series of hypotheses, "if . . . then" logic statements, or visual models. First, some researchers state theories in the form of interconnected hypotheses. For example, Hopkins (1964) conveyed his theory of influence processes as a series of 15 hypotheses (slightly altered to remove all the male-specific pronouns). For any member of a small group, some hypotheses are:

1. The higher her rank, the greater her centrality.
2. The greater his centrality, the greater his observability.
3. The higher her rank, the greater her observability.
4. The greater his centrality, the greater his conformity.
5. The higher her rank, the greater her conformity.

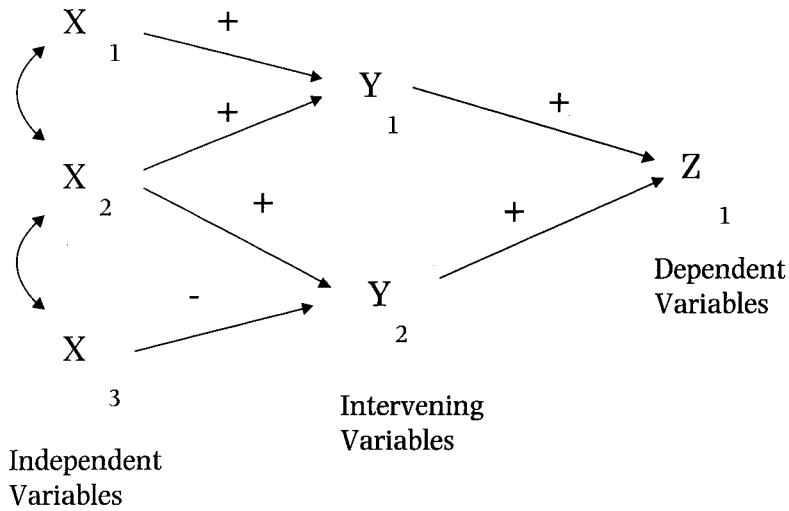


Figure 7.1 Three Independent Variables Influencing a Single Dependent Variable Mediated by Two Intervening Variables

6. The greater his observability, the greater his conformity.
7. The greater her conformity, the greater her observability. (p. 51)

A second form is to state a theory as a series of “if . . . then” statements that explain why one would expect the independent variables to influence or cause the dependent variables. For example, Homans (1950) explains a theory of interaction:

If the frequency of interaction between two or more persons increases, the degree of their liking for one another will increase, and vice versa . . . persons who feel sentiments of liking for one another will express those sentiments in activities over and above the activities of the external system, and these activities may further strengthen the sentiments of liking. The more frequently persons interact with one another, the more alike in some respects both their activities and their sentiments tend to become. (pp. 112, 118, 120)

Third, an author may present a theory as a visual model. It is useful to translate variables into a visual picture. Blalock (1969, 1985, 1991) advocates causal modeling and recasts verbal theories into causal models so that a reader can visualize the interconnections of variables.

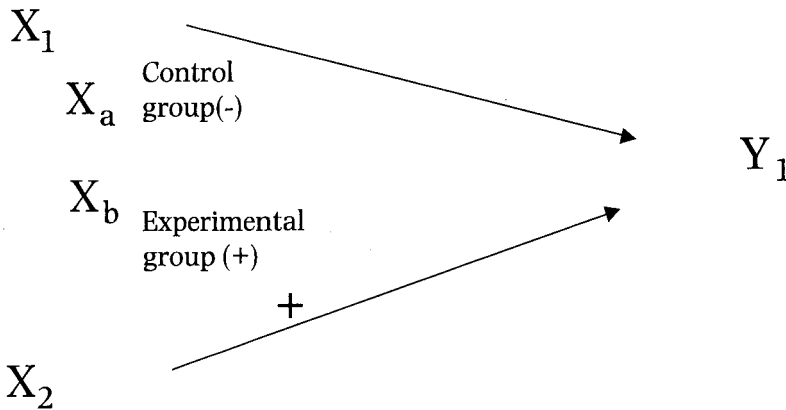


Figure 7.2 Two Groups Given Different Treatments on X_1 Are Compared in Terms of Y_1 Controlling for X_2

Two simplified examples are presented here. As shown in Figure 7.1, three independent variables influence a single dependent variable mediated by the influence of two intervening variables. Setting up a diagram such as this one shows the possible causal sequence among variables, leading to path analytic modeling and more advanced analyses using multiple measures of variables as found in structural equation modeling (see Kline, 1998). At an introductory level, Duncan (1985) provides useful suggestions about the notation for constructing these visual, causal diagrams:

- Position the dependent variables on the right in the diagram and the independent variables on the left.
- Use one-way arrows leading from each determining variable to each variable dependent on it.
- Indicate the "strength" of the relationship among variables by inserting valence signs on the paths. Use positive or negative valences that postulate or infer relationships.
- Use two-headed arrows connected to show unanalyzed relationships between variables not dependent upon other relationships in the model.

Though more complicated causal diagrams can be constructed with additional notation, the model presented here portrays a basic model of limited variables, such as typically found in a survey research study.

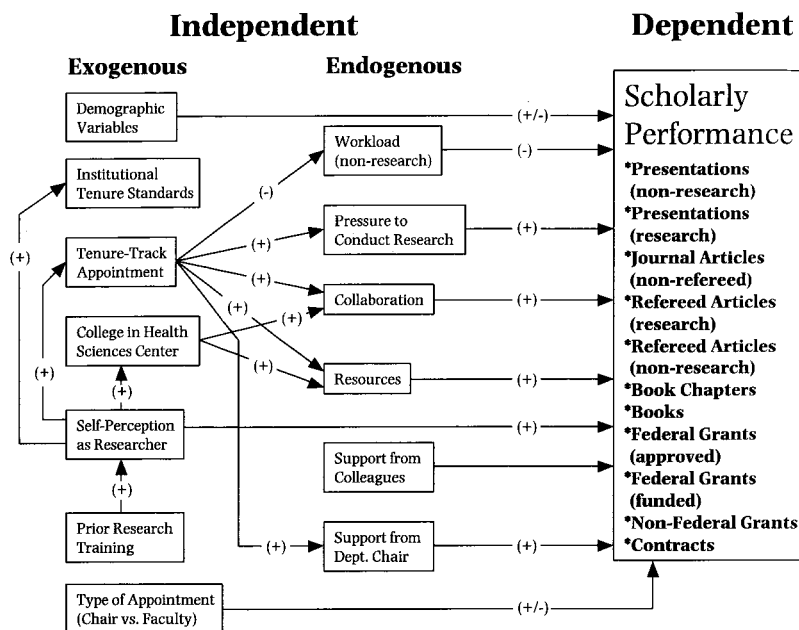


Figure 7.3 A Visual Model of Faculty Scholarly Performance

SOURCE: From P. W. Jungnickel (1990), *Workplace Correlates and Scholarly Performance of Pharmacy Clinical Faculty Members*, unpublished proposal, University of Nebraska-Lincoln. Used with permission.

A variation on this theme is to have two independent variables in which one variable compares a control and experimental group and a second variable simply measures an attribute or characteristic. As shown in Figure 7.2, two groups on variable X_1 (X_a and X_b) are compared, along with variable X_2 (a control variable) as they influence Y_1 , the dependent variable. This design is a between-groups experimental design. The same rules of notation discussed above apply.

These two visual models are meant only to introduce possibilities for connecting independent and dependent variables to build theories. More complicated designs employ multiple independent and dependent variables in elaborate models of causation (Blalock, 1969, 1985). For example, Jungnickel (1990), in a doctoral dissertation proposal about research productivity among faculty in pharmacy schools, presented a complex visual model as shown in Figure 7.3. Jungnickel asked what factors influence a faculty member's scholarly research performance.

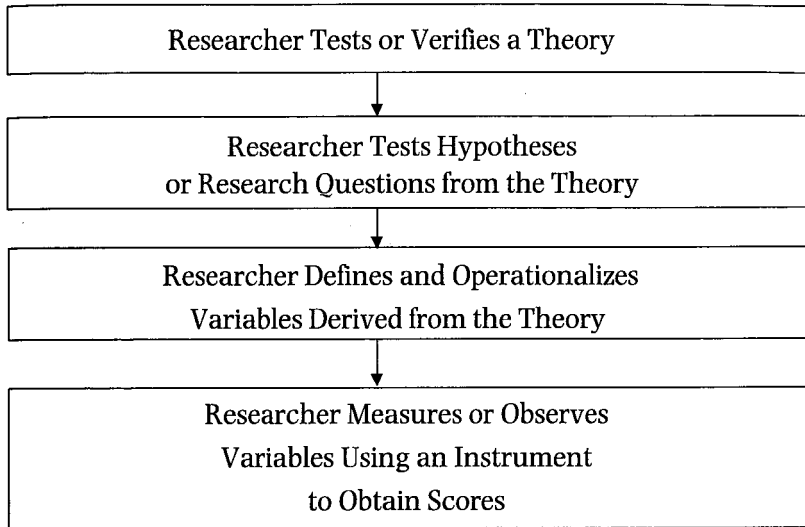


Figure 7.4 The Deductive Approach Typically Used in Quantitative Research

After identifying these factors in the literature, he adapted a theoretical framework found in nursing research (Megel, Langston, & Creswell, 1988). He developed a visual model portraying the relationship among these factors. The model follows the rules for constructing a visual model introduced earlier. He listed the independent variables on the far left, the intervening variables in the middle, and the dependent variables on the right. The direction of influence flowed from the left to the right, and he used “+” and “-” valences to indicate the hypothesized direction.

Placement of Quantitative Theories

In *quantitative* studies, one uses theory deductively and places it toward the beginning of the plan for a study. With the objective of testing or verifying a theory rather than developing it, the researcher advances a theory, collects data to test it, and reflects on the confirmation or disconfirmation of the theory by the results. The theory becomes a framework for the entire study, an organizing model for the research questions or hypotheses and for the data collection procedure. The deductive model of thinking used in a quantitative study is shown in Figure 7.4. The researcher tests or verifies a theory by examining

Table 7.1 Options for Placing Theory in a Quantitative Study

<i>Placement</i>	<i>Advantages</i>	<i>Disadvantages</i>
In the introduction	An approach often found in journal articles, it will be familiar to readers. It conveys a deductive approach	It is difficult for a reader to isolate and separate theory base from other components of the research process
In the literature review	Theories are found in the literature, and their inclusion in a literature review is a logical extension or part of the literature	It is difficult for a reader to see the theory in isolation from the scholarly review of the literature
After hypotheses or research questions	The theory discussion is a logical extension of hypotheses or research questions because it explains how and why variables are related	A writer may include a theoretical rationale after hypotheses and question, and leave out an extended discussion about the origin and use of the theory
In a separate section	This approach clearly separates the theory from other components of the research process, and it enables a reader to better identify and to understand the theory-base for the study	The theory discussion stands in isolation from other components of the research process and, as such, a reader may not easily connect it with other components of the research process

hypotheses or questions derived from the theory. These hypotheses or questions contain variables (or constructs) that the researcher needs to define. Alternatively, an acceptable definition might be found in the literature. From here, the investigator locates an instrument to use in measuring or observing attitudes or behaviors of participants in a study. Then the investigator collects scores on these instruments to confirm or disconfirm the theory.

This deductive approach to research in the quantitative approach has implications for the *placement of a theory* in a quantitative research study (see Table 7.1). A general guide is to introduce the theory early in a plan

or study. This means that the researcher presents it in the introduction, in the literature review section, immediately after hypotheses or research questions (as a rationale for the connections among the variables), or in a separate section of the study. Each placement has its advantages and disadvantages.

I prefer to write the theory into a separate section so that readers can clearly identify the theory from other components of the research process. Such a separate passage provides a complete explication of the theory section, its use, and how it relates to the study I am proposing.

A Model for Writing a Quantitative Theoretical Perspective

Using these ideas, the following presents a model for writing a quantitative theoretical perspective section into a research plan. Assume that the task is to identify a theory that explains the relationship between independent and dependent variables. The following procedure might be used:

1. Look in the discipline-based literature for a theory. If the unit of analysis for variables is individuals, look in the psychology literature; to study groups or organizations, look in the sociological literature. If the project examines individuals and groups, consider the social psychology literature. Of course, theories from other discipline theories may be useful, too (e.g., to study an economic issue, the theory may be found in economics).
2. Look also at prior studies that address the topic or a closely related topic. What theories were used by other authors? Limit the number of theories and try to identify *one overarching theory* that explains the central hypothesis or research question in the study.
3. As mentioned earlier, ask the *rainbow* question that bridges the independent and dependent variables: Why would the independent variable(s) influence the dependent variables?
4. Script out the theory section. Follow these lead sentences: "The theory that I will use will be ____ (name the theory). It was developed by ____ (identify the origin or source for the theory), and it was used to study ____ (identify the topics where one finds the theory being applied). This theory indicates that ____ (identify the propositions or hypotheses in the theory). As

applied to my study, this theory holds that I would expect my independent variable(s) _____ (state independent variables) to influence or explain the dependent variable(s) _____ (state dependent variables) because _____ (provide a rationale based on the logic of the theory)."

Thus, the topics to include in a quantitative theory discussion are the theory to be used, the central hypotheses or propositions of the theory, information about past use of the theory and its application, and statements that reflect how the theory relates to a proposed study. This model is illustrated in the example by Crutchfield (1986) below.

Example 7.1 *A Quantitative Theory Section*

Crutchfield (1986) wrote a doctoral dissertation titled *Locus of Control, Interpersonal Trust, and Scholarly Productivity*. Surveying nursing educators, her intent was to determine if locus of control and interpersonal trust affected the levels of publications of the faculty. Her dissertation included a separate section in the introductory chapter titled "Theoretical Perspective." What follows is this section, including the following points:

- The theory she planned to use
- The central hypotheses of the theory
- Information about who has used the theory and its applicability
- An adaptation of the theory to variables in her study using the "if . . . then" logic

Here is a section of her study, reproduced in its entirety. I added annotations (in bold type) to mark key passages.

Theoretical Perspective

In formulation of a theoretical perspective for studying the scholarly productivity of faculty, social learning theory provides a useful prototype. This conception of behavior attempts to achieve a balanced synthesis of cognitive psychology with the principles of behavior modification (Bower & Hilgard, 1981). Basically, this unified theoretical framework "approaches the explanation of human behavior in terms of a continuous (reciprocal) interaction

between cognitive, behavioral, and environmental determinants" (Bandura, 1977, p. vii). **(Author identifies the theory for the study.)**

While social learning theory accepts the application of reinforcements such as shaping principles, it tends to see the role of rewards as both conveying information about the optimal response and providing incentive motivation for a given act because of the anticipated reward. In addition, the learning principles of this theory place special emphasis on the important roles played by vicarious, symbolic, and self-regulating processes (Bandura, 1971).

Social learning theory not only deals with learning, but seeks to describe how a group of social and personal competencies (so-called personality) could evolve out of social conditions within which the learning occurs. It also addresses techniques of personality assessment (Mischel, 1968), and behavior modification in clinical and educational settings (Bandura, 1977; Bower & Hilgard, 1981; Rotter, 1954). **(Author describes social learning theory.)**

Further, the principles of social learning theory have been applied to a wide range of social behavior such as competitiveness, aggressiveness, sex roles, deviance, and pathological behavior (Bandura & Walters, 1963; Bandura, 1977; Mischel, 1968; Miller & Dollard, 1941; Rotter, 1954; Staats, 1975). **(Author describes the use of the theory.)**

Explaining social learning theory, Rotter (1954) indicated that four classes of variables must be considered: behavior, expectancies, reinforcement, and psychological situations. A general formula for behavior was proposed which states: "the potential for a behavior to occur in any specific psychological situation is the function of the expectancy that the behavior will lead to a particular reinforcement in that situation and the value of that reinforcement" (Rotter, 1975, p. 57).

Expectancy within the formula refers to the perceived degree of certainty (or probability) that a causal relationship generally exists between behavior and rewards. This construct of generalized expectancy has been defined as *internal* locus of control when an individual believes that reinforcements are a function of specific behavior, or as *external* locus of control when the effects are attributed to luck, fate, or powerful others. The perceptions of causal relationships need not be absolute positions, but rather tend to vary in degree along a continuum depending upon previous

experiences and situational complexities (Rotter, 1966). **(Author explains variables in the theory.)**

In the application of social learning theory to this study of scholarly productivity, the four classes of variables identified by Rotter (1954) will be defined in the following manner.

1. Scholarly productivity is the desired behavior or activity.
2. Locus of control is the generalized expectancy that rewards are or are not dependent upon specific behaviors.
3. Reinforcements are the rewards from scholarly work and the value attached to these rewards.
4. The educational institution is the psychological situation which furnishes many of the rewards for scholarly productivity.

With these specific variables, the formula for behavior which was developed by Rotter (1975) would be adapted to read: The potential for scholarly behavior to occur within an educational institution is a function of the expectancy that this activity will lead to specific rewards and of the value that the faculty member places on these rewards. In addition, the interaction of interpersonal trust with locus of control must be considered in relation to the expectancy of attaining rewards through behaviors as recommended in subsequent statements by Rotter (1967). Finally, certain characteristics, such as educational preparation, chronological age, post-doctoral fellowships, tenure, or full-time versus part-time employment may be associated with the scholarly productivity of nurse faculty in a manner similar to that seen within other disciplines. **(Author applied the concepts to her study.)**

The following statement represents the underlying logic for designing and conducting this study. If faculty believe that: (a) their efforts and actions in producing scholarly works will lead to rewards (locus of control), (b) others can be relied upon to follow through on their promises (interpersonal trust), (c) the rewards for scholarly activity are worthwhile (reward values), and (d) the rewards are available within their discipline or institution (institutional setting), then they will attain high levels of scholarly productivity (pp. 12-16). **(Author concluded with the "if . . . then" logic to relate the independent variables to the dependent variables.)**

QUALITATIVE THEORY-USE

Variation in Theory-Use in Qualitative Research

Qualitative inquirers use theory in their studies in several ways. They employ theory as a broad explanation, much like in *quantitative* research. This theory provides an *explanation* for behavior and attitudes, and it may be complete with variables, constructs, and hypotheses. For example, ethnographers employ cultural themes or "aspects of culture" (Wolcott, 1999, p. 113) to study in their qualitative projects. These might be themes such as social control, language, stability and change, or social organization such as kinship or families (see Wolcott's 1999 discussion about texts that address cultural topics in anthropology). Themes in this context provide a ready-made series of hypotheses to be tested from the literature. Although researchers might not refer to them as theories, they provide broad explanations that anthropologists use to study the culture-sharing behavior and attitudes of people.

Alternatively, qualitative researchers increasingly use a *theoretical lens or perspective* to guide their study and raise the questions of gender, class, and race (or some combination) they would like to address. The case could easily be made that qualitative research of the 1980s underwent a transformation to broaden its scope of inquiry to include these theoretical lenses. These are the theories mentioned earlier in this book, contained in Chapter 1. They provide a lens (even a theory) to guide the researchers as to what issues are important to examine (e.g., marginalization, empowerment) and the people that need to be studied (e.g., women, homeless, minority groups). They also indicate how the researcher positions himself or herself in the qualitative study (e.g., up front or biased from personal, cultural, and historical contexts) and how the final written accounts need to be written (e.g., without further marginalizing individuals, by collaborating with participants). In critical ethnography studies, researchers begin with a theory that informs their studies. This causal theory might be a theory of emancipation or repression (J. Thomas, 1993). Rossman and Rallis (1998) capture, in a few words, the sense of theory as critical and postmodern perspectives in qualitative inquiry:

As the 20th century draws to a close, traditional social science has come under increasing scrutiny and attack as those espousing critical and postmodern perspectives challenge objectivist

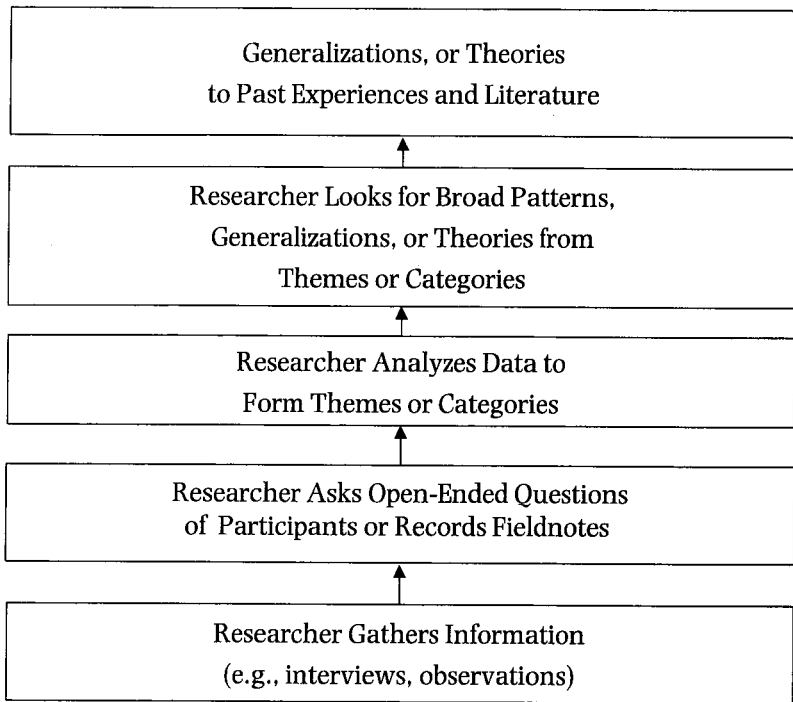


Figure 7.5 The Inductive Logic of Research in a Qualitative Study

assumptions and traditional norms for the conduct of research. Central to this attack are four interrelated notions: (a) Research fundamentally involves issues of power; (b) the research report is not transparent but rather it is authored by a raced, gendered, classed, and politically oriented individual; (c) race, class, and gender are crucial for understanding experience; and (d) historic, traditional research has silenced members of oppressed and marginalized groups. (p. 66)

Distinct from this theoretical orientation are qualitative studies in which theory (or some other broad explanation) becomes the *end point* for a study. It is an inductive process of building from the data to broad themes to a generalized model or theory (see Punch, 1998). The logic of this inductive approach is shown in Figure 7.5. The researcher

begins by gathering detailed information from participants and forms this information into categories or themes. These themes or categories are developed into broad patterns, theories, or generalizations that are then compared with personal experiences or with existing literature on the topic.

The development of themes and categories into patterns, theories, or generalizations suggests a varied end point for qualitative studies. For example, in case study research, Stake (1995) refers to an assertion as a propositional generalization—the researcher's summary of interpretations and claims—to which is added the researcher's own personal experiences, called "naturalistic generalizations" (p. 86). As another example, grounded theory provides a different end point. Inquirers hope to discover a theory that is grounded in information from participants (Strauss & Corbin, 1998). Lincoln and Guba (1985) refer to "pattern theories" as an explanation that develops during naturalistic or qualitative research. Rather than the deductive form found in quantitative studies, these "pattern theories" or "generalizations" represent interconnected thoughts or parts linked to a whole. W. L. Neuman (1991) provides additional information about "pattern theories":

Pattern theory does not emphasize logical deductive reasoning. Like causal theory, it contains an interconnected set of concepts and relationships, but it does not require causal statements. Instead, pattern theory uses metaphor or analogies so that relationship "makes sense." Pattern theories are systems of ideas that inform. The concepts and relations within them form a mutually reinforcing, closed system. They specify a sequence of phases or link parts to a whole. (p. 38)

Finally, some qualitative studies *do not employ any explicit theory*. However, the case can be made that no qualitative study begins from pure observation and that prior conceptual structure composed of theory and method provides the starting point for all observations (Schwandt, 1993). Still, one sees qualitative studies that contain no *explicit* theoretical orientation, such as in phenomenology, in which inquirers attempt to build the essence of experience from participants (e.g., see Riemen, 1986). In these studies, the inquirer constructs a rich, detailed description of a central phenomenon.

My advice on theory-use in a qualitative proposal is this:

- Decide if theory is to be used in the qualitative proposal.
- If it is used, then identify how the theory will be used in the study, such as an up-front explanation, as an end point, or as an advocacy lens.
- Locate the theory in the proposal in a manner consistent with its use.

Locating the Theory or Pattern in Qualitative Research

How theory is used affects its placement in a qualitative study. In those studies with a cultural theme or a theoretical lens, the theory occurs in the opening passages of the study. Consistent with the emerging design of qualitative inquiry, the theory may appear at the beginning and be modified or adjusted based on participant views. Even in the most theory-oriented qualitative design, such as critical ethnography, Lather (1986) qualifies the use of theory:

Building empirically grounded theory requires a reciprocal relationship between data and theory. Data must be allowed to generate propositions in a dialectical manner that permits use of *a priori* theoretical frameworks, but which keeps a particular framework from becoming the container into which the data must be poured. (p. 267)

Example 7.2 *An Example of Theory-Use Early in a Qualitative Study*

Murguia, Padilla, and Pavel (1991) studied the integration of 24 Hispanic and Native American students into the social system of a college campus. They were curious about how ethnicity influenced social integration, and they began by relating the participants' experiences to a theoretical model, the Tinto model of social integration. They felt that the model had been "incompletely conceptualized and, as a consequence, only imprecisely understood and measured" (p. 433).

Thus, the model was not being tested in the study as one would find in a quantitative project, but modified in the study. At the end of the study, the authors refined Tinto's model and advanced their modification that described the rootedness and functions of ethnicity. In contrast to this approach, in qualitative studies with an end point of a theory (e.g., a grounded theory), a pattern, or a generalization, the theory emerges at the end of the study. This theory might be presented as a logic diagram, a visual representation of relationships among concepts.

Example 7.3 *A Theory at the End
of a Qualitative Study*

Using a national database of 33 interviews with academic department chairpersons, we (Creswell & Brown, 1992) developed a grounded theory interrelating variables (or categories) of chair influence on scholarly performance of faculty. The theory section came into the article as the last section, where the authors presented a visual model of the theory developed inductively from categories of information supplied by interviewees. In addition, the authors also advanced directional hypotheses that logically followed from the model. Moreover, in the section on the model and the hypotheses, the authors compared their results with findings from other studies and theoretical speculations in the literature. For example, the authors stated:

This proposition and its sub-propositions represent unusual, even contrary evidence, to our expectations. Contrary to proposition 2.1, we expected that the career stages would be similar not in type of issue but in the range of issues. Instead we found that the issues for post-tenure faculty covered almost all the possible problems on the list. Why would this group's needs be more extensive? The research productivity literature suggests that one's research performance does not decline with the award of tenure (Holley 1977). Perhaps diffuse career goals of post-tenure faculty expand the possibilities for "types" of issues. In any case, this sub-proposition focuses attention on the understudied career group that Furniss (1981) reminds us needs to be examined in more detail. (p. 58)

As this example shows, we developed a visual model that interrelated variables, derived this model inductively from informant comments, and placed the model at the end of the study, where the central propositions in it could be contrasted with the existing theories and literature.

MIXED METHODS THEORY-USE

Mixed methods studies may include theory deductively in theory testing and verification, or inductively as in an emerging theory or pattern. In either situation, the use of theory may be directed by the emphasis on either quantitative or qualitative approaches in the mixed methods research. Another way to think about theory in mixed methods research is the use of a *theoretical lens or perspective* to guide the study. Here we have limited information about the procedures involved in using a theoretical lens to study gender, race/ethnicity/disability, sexual orientation, and other bases of diversity (Mertens, 2003). Several authors, however, have begun the discussion.

The first were Greene and Caracelli (1997), who mentioned the use of a “transformative design” as a distinct form of mixed methods research. This design gave primacy to value-based, action-oriented research such as in participatory action research and empowerment approaches. In this design, they suggest mixing the value commitments of different traditions in research (e.g., bias-free from quantitative and bias-laden from qualitative), the use of diverse methods, and a focus on action solutions in research. Unfortunately, they do not specify the procedures involved in incorporating this theoretical perspective into the practice of research.

More information on procedures has appeared in a chapter written by Creswell, Plano Clark, Gutmann, and Hanson (2003). They identify the use of theoretical perspectives such as gendered, feminist perspectives; cultural/racial/ethnic perspectives, lifestyle perspectives, critical perspectives, and class and social status perspectives. In Creswell et al.’s view, these perspectives represent one of the major decisions to be made in the selection of mixed methods strategies. They further develop visual models of these strategies for both sequential and concurrent mixed methods approaches, and they indicate some of the strengths and weaknesses (e.g., it is appealing to those interested in change despite limited discussions about procedures (also see Chapter 11 of this book).

Mertens (2003) continues the discussion. As outlined in Box 7.1, she advocates for the importance of a theory-lens in mixed methods

Box 7.1 Transformative-Emancipatory Questions for Mixed Methods Researchers Throughout the Research Process

Defining the Problem and Searching the Literature

- Did you deliberately search the literature for concerns of diverse groups and issues of discrimination and oppression?
- Did the problem definition arise from the community of concern?
- Did your mixed methods approach arise from spending quality time with these communities? (i.e., building trust? using an appropriate theoretical framework other than a deficit model? developing balanced—positive and negative—questions? developing questions that lead to transformative answers, such as questions focused on authority and relations of power in institutions and communities?)

Identifying the Research Design

- Does your research design deny treatment to any groups and respect ethical considerations of participants?

Identifying Data Sources and Selecting Participants

- Are the participants of groups associated with discrimination and oppression?
- Are the participants appropriately labeled?
- Is there a recognition of diversity within the target population?
- What can be done to improve the inclusiveness of the sample to increase the probability that traditionally marginalized groups are adequately and accurately represented?

Identifying or Constructing Data Collection Instruments and Methods

- Will the data collection process and outcomes benefit the community being studied?
- Will the research findings be credible to that community?

- Will communication with that community be effective?
- Will the data collection open up avenues for participation in the social change process?

Analyzing, Interpreting, and Reporting and Using Results

- Will the results raise new hypotheses?
- Will the research examine subgroups (i.e., multilevel analyses) to analyze the differential impact on diverse groups?
- Will the results help understand and elucidate power relationships?
- Will the results facilitate social change?

SOURCE: Adapted from D. M. Mertens (2003), "Mixed Methods and the Politics of Human Research: The Transformative-Emancipatory Perspective," in A. Tashakkori & C. Teddlie (Eds.), *Handbook of Mixed Methods in the Social and Behavioral Sciences*. Adapted with permission.

research. In detailing a "transformative/emancipatory paradigm" and specific procedures, she emphasizes the role that values play in studying feminist, ethnic/racial, and disability issues. Her "transformative theory" is an umbrella term for research that is emancipatory, anti-discriminatory, participative, Freirian, feminist, racial/ethnic, for individuals with disabilities, and for all marginalized groups.

Mertens identifies the implication of these transformative theories for mixed methods research. These involve integration of the transformative-emancipatory methodology into all phases of the research process. Reading through the questions in Box 7.1, one gains a sense of the importance of studying issues of discrimination and oppression and of recognizing diversity among study participants. These questions also address treating individuals respectfully through gathering and communicating data collection and through reporting results that lead to changes in social processes and relationships.

In using theory in a mixed methods proposal

- Determine if theory is to be used.
- Identify its use in accord with quantitative or qualitative approaches.

- If theory is used as in a transformational strategy of inquiry, define this strategy and discuss the points in the proposed study in which the emancipatory ideas will be used.

Example 7.4 *A Transformative-Emancipatory
Mixed Methods Study*

Hopson, Lucas, and Peterson (2000) studied issues in a urban, predominantly African American HIV/AIDS community. Consistent with a transformative-emancipatory framework, they examined the language of participants with HIV/AIDS within the participants' social context. They first conducted 75 open-ended ethnographic interviews to identify "language themes" (p. 31), such as blame, ownership, and acceptance or non-acceptance. They also collected 40 semistructured interviews that addressed demographics, daily routine, drug use, knowledge of HIV/AIDS risks, and drug and sexual sociobehavioral characteristics. From this qualitative data, the authors used concepts and questions to refine follow-up questions, including the design of a quantitative postintervention instrument. The authors suggested that empowerment approaches in evaluation can be useful, with researchers listening to the voices of real people and acting on what program participants say.

The design in this study gave "primacy to the value-based and action-oriented dimensions of different inquiry traditions" (Greene & Caracelli, 1997, p. 24) in a mixed methods study. The authors used a theoretical lens for reconfiguring the language and dialogue of participants, and they advanced the importance of empowerment in research.

SUMMARY

Researchers use theory in a quantitative study to provide an explanation or prediction about the relationship among variables in the study. A theory explains how and why the variables are related, acting as a bridge between or among the variables. Theory may be broad or narrow in scope, and researchers state their theories in several ways, such as a series of hypotheses, "if . . . then" logic statements, or visual models. Using theories

deductively, investigators advance the theories at the beginning of the study in the literature review. They also include them with the hypotheses or research questions or place them in a separate section. A script can help design the theory section for a research proposal.

In qualitative research, inquirers employ theory as a broad explanation much like in quantitative research, such as in ethnographies. It may also be a theoretical lens or perspective that raises questions related to gender, class, or race, or some combination. Theory also appears as an end point of a qualitative study, a generated theory, a pattern, or a generalization that emerges inductively from data collection and analysis. Grounded theorists, for example, generate a theory “grounded” in the views of participants and place it as the conclusion of their studies. Some qualitative studies do not include an explicit theory and present descriptive research of the central phenomenon.

Mixed methods researchers use theory either deductively (as in quantitative research) or inductively (as in qualitative research). Writers also are beginning to identify the use of theoretical lenses or perspectives (e.g., related to gender, lifestyle, race/ethnicity, and class) in their mixed methods studies. A transformational-emancipatory design incorporates this perspective, and recent developments have identified procedures for incorporating this perspective into all phases of the research process.

Writing Exercises

1. Write a “theoretical perspective” section for your research plan following the script for a quantitative theory discussion presented in this chapter.
2. For a quantitative proposal you are planning, draw a visual model of the variables in the theory using the procedures for causal model design advanced in this chapter.
3. Locate qualitative journal articles that (a) use an a priori theory that is modified during the process of research, (b) generate or develop a theory at the end of the study, and (c) represent descriptive research without the use of an explicit theoretical model.
4. Locate a mixed methods study that uses a theoretical lens, such as a feminist, ethnic/racial, or class perspective. Identify specifically in the article how the lens shapes the steps taken in the research process using Box 7.1 as a guide.

ADDITIONAL READINGS

Flinders, D. J., & Mills, G. E. (Eds.). (1993). *Theory and concepts in qualitative research: Perspectives from the field*. New York: Teachers College Press, Teachers College, Columbia University.

David Flinders and Geoffrey Mills have edited a book about perspectives from the field—"theory at work"—as described by different qualitative researchers. The chapters illustrate little consensus about defining theory and whether it is a vice or virtue. Further, theory operates at many levels in research, such as formal theories, epistemological theories, methodological theories, and metatheories. Given this diversity, it is best to see actual theory at work in qualitative studies, and this volume illustrates practice from critical, personal, formal, and educational criticism.

Mertens, D. M. (1998). *Research methods in education and psychology: Integrating diversity with quantitative and qualitative approaches*. Thousand Oaks, CA: Sage.

Throughout this research methods text, Donna Mertens provides an integration of the "emancipatory paradigm" of research. Her brief overview of this paradigm or theoretical perspective is excellent. The paradigm, according to Mertens, places central importance on the lives of individuals who have been marginalized. It analyzes the inequities based on gender, race, ethnicity, or disability, and it is linked to social action. It uses an "emancipatory theory"—a set of beliefs about the ways a program works or why a problem occurs. It also relates theory to the questions asked and the recommendations for action.

Thomas, G. (1997). What's the use of theory? *Harvard Educational Review*, 67(1), 75-104.

Gary Thomas presents a reasoned critique of the use of theory in educational inquiry. He notes the various definitions of theory and maps out four broad uses of theory: as thinking and reflection, as tighter or looser hypotheses, as explanations for adding to knowledge in different fields, and as formally expressed statements in science. Having noted these uses, he then embraces the thesis that theory unnecessarily structures and constrains thought. Instead, ideas should be in a constant flux, and should be "ad hocery" as characterized by Toffler.