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Case Study Research and Theory Building

Larry M. Dooley

The problem and the solution. This chapter overviews case study research and proposes a manner in which case study research can contribute to theory building in applied disciplines. Although theory building using case study research has been discussed previously in the literature, there is no clarity as to how case study research can be used to build theory. Moreover, it should not be assumed that there is clarity on the processes of case writing, case studies, or case study research. This chapter presents definitions, purposes, and elements of case study research for the purpose of understanding how case study research can be used to build theory in applied disciplines.

Over the past several decades, the process of theory building has been examined from a multitude of perspectives. The literature provides ample evidence of the work of the theory-building scholars who developed and refined a variety of theory-building methods and subprocesses. The unintentional, and not completely unexpected, result of such a diverse set of efforts has been varying degrees of advancement, confusion, and misunderstanding among researchers as they began to combine the different components and techniques of single paradigm and multiparadigm theory-building research methods. One important objective of this chapter is to clarify the differences between a case study, case study research, and the role of case study research in the process of theory building.

Case study research is one method that excels at bringing us to an understanding of a complex issue and can add strength to what is already known through previous research. Case study research emphasizes detailed contextual analysis of a limited number of events or conditions and their relationships. Researchers have used the case study research method for many years across a variety of disciplines. Pioneer work in this field is thought to be the works of William Thomas and Robert Parks from the University of Chicago in the early 1900s (Hamel, Dufour, & Fortin, 1993). However, as Herling, Weinberger, and Harris (2000) noted, the concepts of a case, case study, and case study research are often used interchangeably in the literature. For the purpose of this chapter, case study research is defined as “scholarly inquiry

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that investigates a contemporary phenomenon within its real-life context, when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used” (based on Yin, 1994, p. 33).

From the perspective of case study research, theory building is an arduous process. Case study research generally does not lend itself well to generalization or prediction. The researcher who embarks on case study research is usually interested in a specific phenomenon and wishes to understand it completely, not by controlling variables but rather by observing all of the variables and their interacting relationships. From this single observation, the start of a theory may be formed, and this may provoke the researcher to study the same phenomenon within the boundaries of another case, and then another, and another (single cases studied independently), or between individual cases (cross-case analysis) as the theory begins to take shape. In relation to grounded theory, Glaser (1978) submitted that what differentiated grounded theory research from most other research was that it was explicitly emergent without the tight focus on phenomena. That is why grounded theory research is generally more useful in the conceptual development phase of theory building than case study research.

Theory building requires the ongoing comparison of data and theory (Glaser & Strauss, 1967) and the continuous refinement between theory and practice (Lynham, 2000). Case study research has the ability to embrace multiple cases, to embrace quantitative and qualitative data, and to embrace multiple research paradigms. Thus, case study research can contribute in a holistic way to all phases of theory development. Table 1 lists the perspectives on case study research required to accept these assumptions.

New theory does not emerge quickly but will be developed over time as the research is extended from one case to the next and more and more data are collected and analyzed. This form of reiteration and continuous refinement, more commonly referred to as the multiple case study, occurs over an extended period of time. The point being that it is only after the researcher has observed similar phenomena in multiple settings will confirmation or disconfirmation of the new theory begin to take shape and gain substance. As Kuhn (1996) noted,

New theory, however special its range of application, is seldom or never just an increment to what is already known. Its assimilation requires the reconstruction of prior theory and the reevaluation of prior fact, an intrinsically revolutionary process that is seldom completed by a single man and never over night. (p. 7)

Similarly, the conduct of case study research can be expanded to engage multiple and simultaneous studies using multiple research paradigms (e.g., inductive-to-deductive and deductive-to-inductive strategies). This chapter examines case study and case study research and the role of case study research in theory-building research for applied disciplines.

TABLE 1: Perspectives on the Nature of Case Study Research

Yes	No	Perspective on Case Study Research
X		Case study research is a legitimate type of research.
X		Case study research can embrace one or more cases.
X		Case study research can rely on quantitative data, qualitative data, or both.
X		Case study research can embrace multiple research paradigms (e.g., inductive-to-deductive and deductive-to-inductive strategies) on a single or multiple cases.
X		Case study research can be applied to theory building.

Note: It is important to note that there is not consensus on these five perspectives and that the affirmation of all five helps distinguish this chapter.

The Concept of a Case

Cases (sometimes referred to as case writing) and case study differ in many ways and resemble each other in other ways. We will look at them both individually. The case itself is an account of an activity, event, or problem. The case usually describes a series of events that reflect the activity or problem as it happened. As a matter of point, the case writer should be nonbiased so the readers can have access to all the information and draw their own conclusions. A good case is generally taken from real life and includes the following components: setting, individuals involved, the events, the problems, and the conflicts. Because cases reflect real-life situations, cases must represent good and bad practices, failures as well as successes. Facts must not be changed to expose how the situation should have been handled (Kardos & Smith, 1979).

Merseth (1994) defined a case as a descriptive research document, often presented in narrative form, based on a real-life situation or event. Moreover, it attempts to convey a balanced, multidimensional representation of the context, participants, and reality of the situation. Cases are created explicitly for discussion and seek to include sufficient detail and information to elicit active analysis and interpretation by users with differing perspectives. This definition reaffirms three essential elements of cases: (a) They are real, (b) they rely on careful research and study, and (c) they foster the development of multiple perspectives by users (Merseth, 1994).

Case studies then emphasize the study and contextual analysis of a limited number of events or conditions and their relationships. Stake (1994) noted that case studies can be either simple or complex. Yin (1994) noted that case studies can also be used for both theory testing or theory building. Yet he made no distinction in describing the process steps even though the theory tester and the theory builder start from different points in the general method of theory-building research in applied disciplines (Lynham, 2002).

Case Study Research

Case study research, as defined by Yin (1994), Eisenhardt (1989), and others, has well-defined steps. It is important to note, however, that case study research does not imply the use of a particular type of evidence. And this is important to note: Case study research can be accomplished using quantitative and/or qualitative methodologies. A common misconception is that case studies are solely the result of ethnographies or of participant observation (Yin, 1981). Case study research can employ various data-collection processes such as participant observation, document analysis, surveys, questionnaires, interviews, Delphi processes, and others. The power of case study research is the ability to use all methodologies within the data-collection process and to compare within case and across case for research validity.

This unique characteristic—the ability of the researcher to use the observations of a single unit or subject, or contextual case, as the focal point of a study, along with its plurality as a research method—has enabled case study research to transcend the boundaries of traditional research paradigms. However, this uniqueness of case study research has also borne an uneasiness with the methodology as well. Unfortunately, the perception that has been created is that as a research methodology, the case study research has become, as the old saying goes, a jack-of-all-trades and a master of none (Herling et al., 2000).

Case study research is an essential research methodology for applied disciplines. Regardless of how it is used, for either theory building or theory testing, it is a process of scholarly inquiry and exploration whose underlying purpose is to create new knowledge (Herling et al., 2000). Case study can also be thought of as a research strategy. As a strategy, case study research attempts to examine a contemporary phenomenon and the associated contexts that are not clearly evident. For example, experiments differ in that they isolate the phenomenon from its context; histories also differ in that they are limited to phenomena of the past. These distinctions among types of evidence, data-collection method, and research strategy are critical in defining case study research.

Case study research, like all other forms of research, must be concerned with issues such as methodological rigor, validity, and reliability. This is accomplished through the six elements below.

- Determine and define the research questions
- Select the cases and determine data-gathering and analysis techniques
- Prepare to collect data
- Collect data in the field

- Evaluate and analyze the data
- Prepare the report

In the following sections, each of these elements is defined and discussed in more detail. Following the discussion of the elements, the role of case study research in theory building is presented.

Determine and Define the Research Questions

The first step in case study research is not that different from any other research study: to establish the focus or the intent of the project. Or as Sherran Merriam (1998) has stated, "To raise a question about something that perplexes and challenges the mind" (p. 57). The focus or intent is established once an intensive literature review has been completed and the problem has been well identified. This should be something that the research can refer to as grounding during the process of the study. The research object of the case is often a program, a group, or team, or may even be a person. Each object is usually associated with political, social, historical, and personal issues, making the case much more complicated than at first glance. The researcher then investigates this subject using varying data-gathering techniques, both qualitative and quantitative in nature, all intended to supply the necessary information to address the research questions.

The purpose of most case study research is to answer the why and how questions. Clardy (1997) defined a case study to be a richly detailed story about a specific situation or event in the workplace, describing who, what, where, when, and how. Moreover, these questions are usually targeted to a small number of events to study how the relationships are formed and why. As mentioned previously, a literature review is also conducted in this step to further refine the research questions and also to discover if past research has been done that will add to the study. A literature review can also add face validity to the project.

Select the Cases and Determine Data-Gathering and Analysis Techniques

This is a very important phase and sets the tone for the rest of the study. The researcher must select single or multiple cases that reflect the research questions in Step 1. Moreover, this step also involves selecting the instruments and other data-gathering strategies that will be used. It is very important to realize in this step that if multiple cases are selected, each case must be treated as a single case. The conclusion of each case can be considered in

light of the multiple-case phenomenon; however, each case must be examined on its own.

The researcher must also decide how to select the cases: Will they cover similar or different geographic regions? Will they be the same size or different? Once the general description of the cases has been decided, Merriam (1998) noted that case study research requires the identification of two units of analysis. The first unit of analysis that must be identified is the case to be studied. Then, unless the plan is to interview all participants in an organization, one would need to decide on a sampling technique to be representative of the entire organization. Finally, Yin (1994) advocated that each case study "should either be similar to those previously studied by others or should deviate in clear, operationally defined ways" (p. 25). In this way, the previous literature can be used as a guide for defining the new case and its representative units of analyses.

A major strength of case study research is the ability to use multiple sources and techniques. Case study research is viewed by many to be qualitative; however, and this is very important, it can also be quantitative. Tools used in this type of data collection are usually surveys, interviews, document analysis, and observation, although standard quantitative measures such as questionnaires are also used.

It is important that the researcher use specific tools for specific data collection. The study must be well constructed to ensure construct validity, internal validity, external validity, and reliability. To pass these tests of validity and reliability, explicit attention must be paid to the design of the research study and to the processes used in the collection of the data, the analysis of the data, and the reporting of the findings (Herling et al., 2000).

Construct validity requires the researcher to select the correct tool or method for the concepts being studied. Internal validity demonstrates that the conditions being observed will necessarily lead to other conditions and is discovered by triangulating various pieces of evidence. The researcher must establish a credible line of evidence that can be followed to these conclusions. External validity usually determines if the findings can be generalized beyond the one or multiple cases being studied. The more individuals one can interview, the more and different observations that can be made and still yield the same results, and the more external validity that can be demonstrated. Relating findings back to the literature also helps in external validity. Reliability refers to how well the procedures are documented to ensure that the research can be replicated.

Prepare to Collect the Data

Case study researchers will typically begin a study using only one method of data collection and will add others as the situation warrants it.

The added benefit of this process is that it can enhance the validity of case study findings through triangulation. Preparation for the vast amounts of data prior to collection will save the researcher much time and frustration later. Due to the nature of case study research, the researcher will generate large amounts of data from multiple sources. Time taken to plan prior to the research will allow one to organize multiple databases and set categories for sorting and managing the data.

It is also important to train individuals if people other than the researcher will be doing fieldwork, collecting data, and performing document analyses. Qualifications also include being able to ask good questions and the ability to interpret answers; document analysis includes the ability to read between the lines to ascertain hidden meanings. When using other individuals for your fieldwork, it is a good idea to conduct a pilot test using some of the same data-gathering techniques that will be used in the case study. In this manner, problematic areas can be corrected.

Finally, it is important to acknowledge the personal involvement of the researcher in case study research data collection. A question of validity will always arise if the reader considers the researcher too close to the content to be subjective. One solution, as proposed by Gall, Borg, and Gall (1996), is a subjectivity audit. This audit consists of taking notes about situations connected to one's research that brought about strong positive or negative feelings. The outcome could be a list of different aspects of the researcher that describe areas in which the researcher's own beliefs and background influenced his or her perceptions and actions in the research setting (Gall et al., 1996).

There are really no firm rules about how much personal involvement or disclosure by the researcher is appropriate. If self-disclosure passes a certain point, case study participants and readers of the report will view it as a distraction, or worse, they may begin to question the researcher's qualifications and validity of the study's findings. On the other hand, brief comments by the researcher about his or her background and experiences relevant to the case study may facilitate data collection and the reader's ability to better understand the findings (Gall et al., 1996).

Collect Data in the Field

Data collection is emergent in case study research. That means what the researcher learns from the data collected at one point in time often is used to determine subsequent data collection. The researcher therefore must collect and store multiple sources of data, in a systematic manner. The storing of the data is critical so as to allow for patterns and themes to emerge. One must always keep the original object in mind and observe causal factors associated with the observed phenomenon. It is important to make formative eval-

uation checks so arrangements can be made in the event that factors arise causing the manner in which the case is evaluated to change. Case study research is flexible, but when changes are made, they must be documented systematically. Field notes document this process; they record feelings and hunches, pose questions, and document the work of the case.

The decision when to end the data-collection stage of case study research involves both practical and theoretical considerations. Time and budgetary constraints, or the observation that the participants' patience is running out, are among the practical considerations that can prompt a decision to end data collection (Gall et al., 1996).

Yvonna Lincoln and Egon Guba (1985) have identified four criteria for determining when it is appropriate to end data collection.

1. Exhaustion of sources: Data sources (e.g., key informants, document analysis) can be recycled and tapped many times, but at some point, it should become clear that little more information or relevance will be gained from further engagement with them.
2. Saturation of categories: Eventually, the categories used to code data appear to be definitively established. When continuing data collection produces only tiny increments of new information about categories in comparison to the effort expended to get them, the researcher can feel confident about ending data collection.
3. Emergence of regularities: At some point, the researcher encounters sufficient consistencies in the data that allows the researcher to develop a sense of whether the phenomena represented by each construct occur regularly or only occasionally.
4. Overextension: Even if new information is still coming in, the researcher might develop a sense that the new information is far removed from the central core of viable categories that have emerged and does not contribute usefully to the emergence of additional viable categories.

Evaluate and Analyze the Data

The researcher now evaluates the data using an array of interpretations to find any and all relationships that may exist with reference to the research questions. The discovery of constructs in qualitative data can be a significant outcome to a case study. The case study method, with its many different data-collection and analyzing techniques, allows researchers opportunities to triangulate data to strengthen the findings.

If the researcher used a multiple-case design, the generalizability of constructs and themes across cases can be checked. This could include whether a particular theme observed in one case was also present in other cases. Multiple-case data can also be analyzed to detect rational or causal patterns. The researcher's constructs can be thought of as variables. Each case can be given a score on each variable, say 0 = absent and 1 = present, or 0 = absent and 1 = present, to a moderate degree. If the scores on one variable

across all cases systematically covary with scores on another variable, the researcher can infer a relational or causal pattern (Gall et al., 1996).

The two popular types of analysis used in case study research are structural analysis and reflective analysis. Structural analysis is the process of examining case study data for the purpose of identifying patterns inherent in discourse, text, events, or other phenomena. Structural analysis is used in conversation analysis, ethno-science, and other qualitative research methods.

Reflective analysis is associated with several other qualitative methods such as critical science and phenomenology. Reflective analysis could be used in case studies to draw on other qualitative research traditions. Its use involves a decision by the researcher to rely on his or her own intuition and personal judgment to analyze the data rather than on technical procedures involving explicit category classification systems (Gall et al., 1996).

It is important to sort data in as many ways as possible to seek unintended outcomes that may not be apparent in the beginning. Additional interviews, short and pointed, may be necessary at this point to dig deeper into a finding. Another method is to use different investigators than the first time to gain a different perspective. When multiple observations converge, strength in the conclusions increases and confidence is established.

Prepare the Report

The goal of the report is to present the conclusions to the questions posed by the research in a way that the reader can understand. Two types of reports are popular for case study researchers. Reflective reporting, where the writer will use literary devices to bring the case alive for the reader and the strong presence of the researcher's voice is apparent, and analytic reporting, which notes an objective writing style (the researcher's voice is either silent or subdued). In the analytic style, the report generally has a conventional organization: introduction, review of the literature, methodology, results, and discussion (Gall et al., 1996).

In whatever style one chooses, the report should be presented so that the reader could apply the same experience in his or her setting. It is important to display enough evidence to convince the reader of the conclusions, to ensure the reader that "no stone was left unturned." As was the case in preparing for data collection, it is advisable to have other individuals review the report to ensure clarity and completeness.

Case studies are complex because they generally involve multiple sources of data, may include multiple cases within a study, and produce large amounts of data for analysis. Researchers from many disciplines use the case study method of research to build on theory, to produce new theory, to dispute or challenge theory, to explain a situation, to provide a basis to

apply solutions to situations, to explore, or to describe an object or phenomenon. The advantages of the case study method are its applicability to real-life, contemporary, human situations and its public accessibility through written reports. Case study results relate directly to the common reader's everyday experience and facilitate an understanding of complex real-life situations (Soy, 1996).

Using Case Study Research for Theory Building

Case study research differs from other methods in its ability to expand and contract. Using basic case study research methodology, a researcher can take a contracted approach and conduct a single study in a single-case setting and could rely on just quantitative or qualitative data. When viewed this way, case study research is seen as a rival or alternative to other methods to meet the requirements of the specific theory-building phases set forth in the general method of theory-building research in applied disciplines (see Lynham, 2002).

An expanded view of case study research is to see it as a strategy for holding together a multicase and multiparadigm research effort. Such an effort would most likely collect qualitative and quantitative data and would most likely involve a research team instead of a single investigator. Once the prerequisites of the case setting(s) are established in an expanded case study research effort, component studies will likely turn to procedures of a specific method employed (e.g., meta-analysis or social constructivist methods).

The unique potential of case study research resides in the opportunity it offers the researcher as a mixed methodology—an opportunity that allows the researcher to observe the phenomenon from multiple perspectives. Although additional care and rigor are required when using mixed evidence, “the combination of data types can be highly synergistic” (Eisenhardt, 1989, p. 538). Mintzberg (1979) described synergy in this manner:

While systematic data creates the foundation for our theories it is the anecdotal data that enable us to do the building. Theory building requires rich description. We uncover all kinds of relationships in our hard data, but it is only through the use of soft data that we are able to explain them. (p. 587)

This does not in any way lessen the importance of using quantitative data sources.

In promoting the use of mixed data for triangulation, Jik (1979) argued that quantitative data and qualitative data were equally important to the researcher, serving in a sense as a system of checks and balances. Quantita-

tive data, which can indicate relationships that may not be immediately evident to the researcher, can keep the researcher from being blinded by vivid but potentially misleading impressions presented in the form of qualitative data. At the same time, the qualitative data can be important in building an understanding of the theory underlying the relationships revealed in the quantitative data. It is important that the researcher consider both, although as the researcher will generally collect literature that may inform but may not be used, the same can be said of data collection.

The use of multiple-case and multiple-paradigm case study research generally requires a research team. Eisenhardt (1989) pointed out that the use of multiple investigators provides the researcher–theory builder with two advantages. First, multiple investigators

often have complementary insights which add to the richness of the data, and their different perspectives increase the likelihood of capitalizing on any novel insights which may be in the data. Second, the convergence of observations from multiple investigators enhances confidence in the findings, . . . while conflicting perceptions keep the group from premature closure. (p. 538)

In theory building, the case study researcher can leverage the advantage provided by a mixed-method approach by using one investigative team to collect qualitative data and a second team to collect quantitative data, keeping the activities of each team separate through the beginning data collection and initial analysis. Following the initial analysis, the separate teams then converge and exchange their data, analyze them, and compare their separate findings and preliminary conclusions. The reiterative process of theory building begins as each team, equipped with new insight, collects, analyzes, and shares more data.

Eisenhardt (1989) suggested, “Theory developed from case study research is likely to have important strengths like novelty, testability, and empirical validity” (p. 548). The possibility of generating new theory increases with case study research. This is because of the application context in which research is being conducted and because “creative insight often arises from the juxtaposition of contradictory or paradoxical evidence,” and “this constant juxtaposition of conflicting realities (differences across cases, different types of data, and different investigators) tends to unfreeze thinking” (p. 546).

Under the right conditions, factors that generate strength can alternatively be viewed as weaknesses. Although the empirical validity of theory generated from case study research is high because the process is intimately tied with the evidence (Eisenhardt, 1989), the extensive use of empirical evidence can also produce a high level of complexity. Parsimony is a recognized characteristic of good theory (Patterson, 1986), but theory builders working from the rich, voluminous data provided by case study research can lose this perspective and may be unable to recognize which relationships are the most important.

Beyond the Six Steps

This section concludes with two examples from the case study research literature. The first (Figure 1) is from Yin (1989, p. 56), and it is his process view of case study research.

This model illustrates that the case study research is being applied to questions grounded in existing theory that has minimally been conceptualized and operationalized. The model also illustrates the potential of multiple cases. Because this is not directly focused on theory building, the purpose could be to gain answers to the questions or, if it is for theory building, to further enhance the conceptualization and operationalization of the theory.

The second is a table by Eisenhardt (1989, p. 535), and it is her analysis of the steps, activities, and reasons for each when using case study research for theory building (see Table 2). The focal point of this table is specifically aimed at advancing the conceptualization and operationalization phases of theory building by going through the application phase using the case setting.

The Roles of Case Study Research for Building Theory in Applied Disciplines

Is case study research then a research method or a theory-building method? The contention is that case study research is a research methodology in its own right. When applied to theory building, case study research is a research method and not by itself a theory-building methodology. This is in contrast to the Dubin methodology presented in chapter 2 that is a theory-building research method that directly addresses all five of the theory-building phases. However, case study research is (a) a method for fulfilling specific phases of the general method of theory building in applied disciplines and (b) a strategy for holding together multiple methods for the purpose of fulfilling all the phases.

Theory building has been operationally defined as “the process of modelling real-world phenomena” (Torraco, 1997, p. 123). It has been argued that case study research has a unique contribution to understanding real-world phenomena in context of the case. The question remains as to how case study research and its methodology can be used within the framework of theory building. Although Eisenhardt, Yin, Soy, and others have attested to the utility of case study research as a means of building theories, there appears to be no clarity as to the role case study research plays within the process of theory building. A reiteration of the position being taken here is that case study research can be the following:

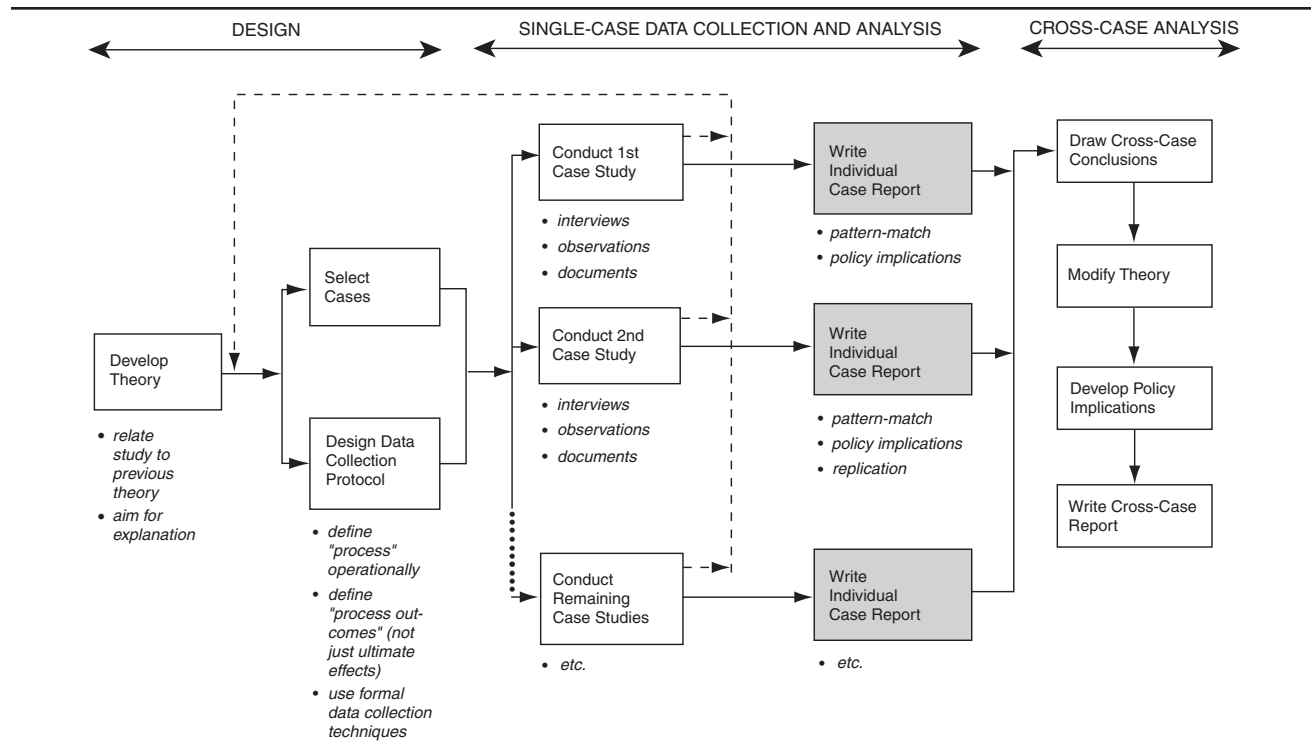


FIGURE 1: Case Study Method
 Source: Yin (1989, p. 56).

TABLE 2: Process of Building Theory From Case Study Research

Step	Activity	Reason
Getting started	Definition of research question Possibly a priori constructs	Focuses efforts Provides better grounding of construct measures
Selecting cases	Neither theory nor hypotheses Specified population Theoretical, not random, sampling	Retains theoretical flexibility Constrains extraneous variation and sharpens external validity Focuses efforts on theoretically useful cases, that is, those that replicate or extend theory by filling conceptual categories
Crafting instruments and protocols	Multiple data collection methods Qualitative and quantitative data combined Multiple investigators	Strengthens grounding of theory by triangulation of evidence Synergistic view of evidence Fosters divergent perspectives and strengthens grounding
Entering the field	Overlap data collection and analysis, including field notes Flexible and opportunistic data collection methods	Speeds analyses and reveals helpful adjustments to data collection Allows investigators to take advantage of emergent themes and unique case features
Analyzing data	Within-case analysis Cross-case pattern search using divergent techniques	Gains familiarity with data and preliminary theory generation Forces investigators to look beyond initial impressions and see evidence through multiple lenses
Shaping hypotheses	Iterative tabulation of evidence for each construct Replication, not sampling, logic across cases Search evidence for "why" behind relationships	Sharpens construct definition, validity, and measurability Confirms, extends, and sharpens theory Builds internal validity
Enfolding literature	Comparison with conflicting literature Comparison with similar literature	Builds internal validity, raises theoretical level, and sharpens construct definitions Sharpens generalizability, improves construct definition, and raises theoretical level
Reaching closure	Theoretical saturation when possible	Ends process when marginal improvement becomes small

Source: Eisenhardt (1989, p. 533). *Academy of Management Review* by Eisenhardt. Copyright 1989 by ACAD OF MGMT. Reproduced with permission of ACAD OF MGMT in the format Journal via Copyright Clearance Center.

1. specific roles: case study research as a method for fulfilling specific phases of the general method of theory building in applied disciplines, and
2. overarching role: case study research as a strategy for bringing together multiple methods for the purpose of fulfilling all the phases of the general method of theory building in applied disciplines.

Specific Roles

Case study research can logically fulfill four specific roles in meeting the phase requirements of the general method of theory building in applied disciplines (Lynham, 2002). These roles are visualized in Figure 2 and discussed here.

Role 1. Case application of an already conceptualized and operationalized theory (single or multiple cases). As the title of this phase indicates, the purpose of this phase is to put the proposed theory into practice or application. This is where most would see case study research making the greatest contribution. An important outcome of this application phase is to enable the theorist to use the experience and learning from the real-world application of the theory to further inform, develop, and refine the theory (Lynham, 2002).

The application phase of the applied theory-building model really fits with both of the last two steps of the six-step case study research process. Although it may fit better with the last step, the final report, the application phase also could add relevance to Step 5, analysis and synthesis of data. In Step 5, the researcher will be observing the way the theory is used and, through field observation and thick description, be able to critique the application.

The application phase of theory building is presented in the text of the final report where the observed theory was noted in practice and the implications of that practice. It is also in this Step 6 where the multiple observations and multiple interviewers are taken into consideration.

Role 2. Confirmation or disconfirmation of an already conceptualized and operationalized theory (single or multiple cases). This phase of the applied theory-building model involves the planning, design, implementation, and evaluation of the research study to confirm or reject the theoretical framework central to the study (Lynham, 2002). This phase essentially is collecting the data, analyzing the data, reaching the conclusions, and evaluating the results and process.

This phase emphasizes two of the six steps in the case study research process: Step 4, collect data in the field, and Step 5, evaluate and analyze the data. Step 4 involves the collection of the data and observation of the patterns of the cases to refine the data-collection methods if necessary. This step also requires the researcher to document, classify, and cross-reference all data for retrieval in Step 5.

The environment in which we live, observe and experience the world.

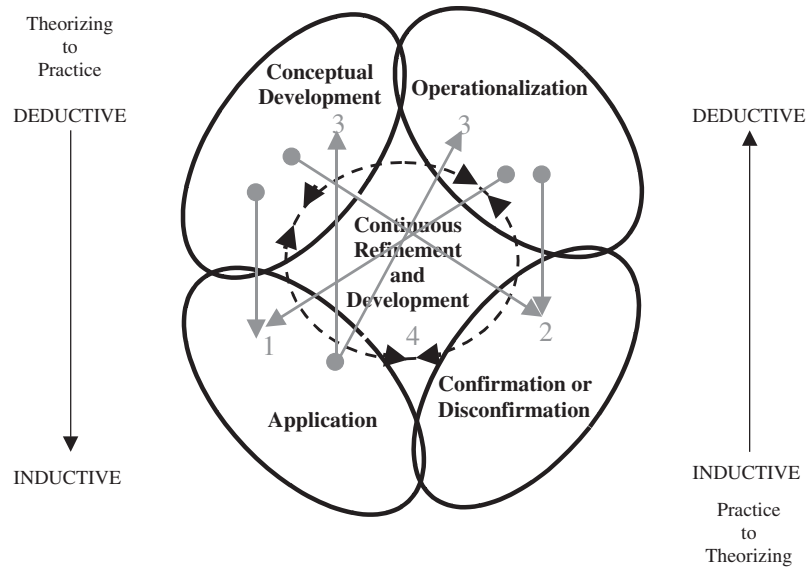


FIGURE 2: The Specific Roles of Case Study Research in Context of the General Method of Theory-Building Research in Applied Disciplines

Note: Specific roles: case study research as a method for fulfilling specific phases of theory building in applied disciplines. Role 1: application of an already conceptualized and operationalized theory (single or multiple cases), Role 2: confirmation or disconfirmation of a conceptualized or operationalized theory (single or multiple cases), Role 3: application for the purpose of creating or advancing conceptualizing and operationalizing of a theory (single or multiple cases), and Role 4: continuous refinement and development of a fully developed theory (single or multiple cases).

Step 5 has the researcher analyzing the data for linkages, insights, and other ways for connection with the research questions. This step also compares the data collected by quantitative as well as qualitative methods to discover if the findings are similar or different. Finally, the researcher will answer all the how and why questions to satisfaction.

Role 3. Case application for the purpose of creating or advancing the conceptualization and operationalization of a theory (single or multiple cases). In this role, case study research approaches the purpose and methodology of grounded study research—the conceptual development and operationalization of a new theory. The primary difference has to do with case study research being able to bring existing theory constructs to the inquiry as well as preplanned data-collection strategies.

Role 4. Continuous refinement and development of a fully developed theory (single or multiple cases). Case study research can be used, with any of many other research tools, to offer continued refinement and development. As most theory is tested and built beginning with the theoretical part and then moving to the research part later, case study research can be a testing bed for this theoretical phase of continuous refinement and development. This is also a time for multiple cases in similar and dissimilar settings for the purpose of extending the application and utility of the theory.

Overarching Role

As illustrated in Figure 3, within multiparadigm theory-building research, case study research can serve as a strategy for bringing together and complementing multiple research methods for the purpose of fulfilling the requirements of all the phases of the general method of theory building in applied disciplines (Lynham, 2002). However, case study research in itself is not a theory-building method and does not in itself represent all five theory-building phases. Yet a multiparadigm approach organized under the banner of case study research can easily embrace all five phases of applied theory building.

For example, having a theory that is conceptually developed and operationalized through quantitative research, meta-analysis research, grounded theory research, or social constructionist research methods could then be handed off for confirmation or disconfirmation and application using case study research and its six steps: (a) Determine and define the research questions, (b) select the cases and determine data-gathering and analysis techniques, (c) prepare to collect data, (d) collect data in the field, (e) evaluate and analyze the data, and (f) prepare the report. Other examples are presented in Figure 3.

Implications for Human Research Development Researchers, Practitioners, and Educators

Lynham (2000) outlined two key challenges for theory building in the human resource development profession. The first is coping with the researcher-practitioner partnership, and the second involves use of multiple research paradigms to enrich theories. Although these challenges are large, the use of case study research as an approach to building theory has some critical advantages for meeting these demands.

First, the case study research approach to theory building requires contextual application (Herling et al., 2000; Yin, 1994); thus, when conducting case study research, the researcher is almost always working with the practitioner. Case study research provides an excellent platform to nurture the

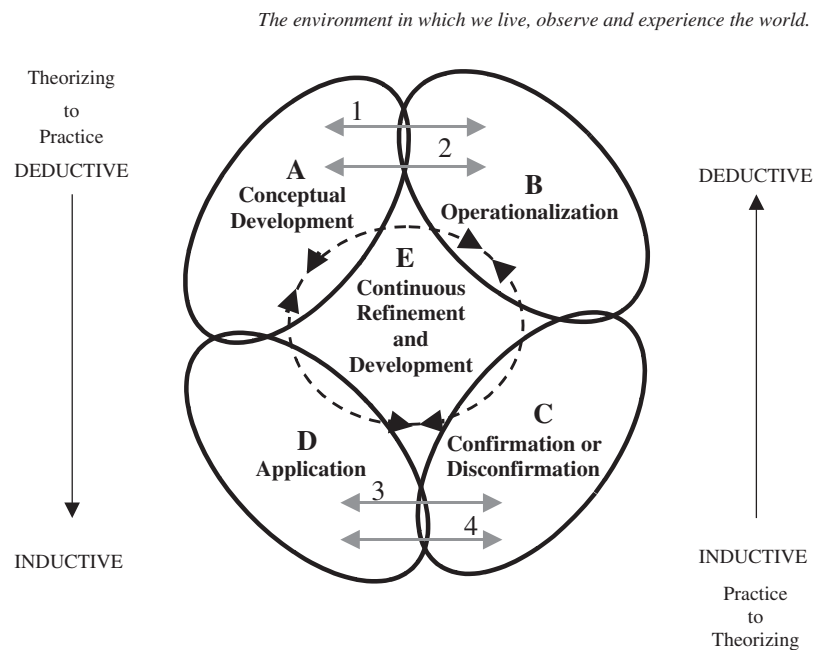


FIGURE 3: The Overarching Role of Case Study Research in Context of the General Method of Theory Building in Applied Disciplines

Note: Overarching role: case study research as a strategy for bringing together multiple methods for the purpose of fulfilling all the phases of the general method of theory building in applied disciplines. Multiparadigm team research (in one or more case settings): (1) Use grounded theory research for Phases A and B, (2) use meta-analysis research for Phases A and B, (3) synthesize multiple studies, (4) use standard case study research for Phases D and C, (5) use a series of quasi-experimental studies for Phases D and C, (6) synthesize findings, and (7) use multiple case studies for Phase E.

research-practitioner partnership. Second, theory building that relies on case study research advocates the use of both qualitative and quantitative data (Eisenhardt, 1989; Torracco, 1997) and can be adapted to use multiple paradigms of research and interpretation. Third, because the case study research approach often encompasses contradictory data when comparing cross-case and multiparadigm data, the resultant theory is often creative and novel (Eisenhardt, 1989).

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