

5-6-2018

Collecting Sufficient Evidence When Conducting a Case Study

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Recommended APA Citation

Smith, P. R. (2018). Collecting Sufficient Evidence When Conducting a Case Study. *The Qualitative Report*, 23(5), 1054-1048. <https://doi.org/10.46743/2160-3715/2018.3188>

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Abstract

Case study is a popular research design within the social sciences despite concerns of its credibility. Case studies provide an in-depth exploration of the unit of analysis (case). Hence, data triangulation is a key characteristic of the design whose purpose is to provide a thick, rich, and contextual description. Data for varied sources enhances credibility of the study. However, studies involving only one source of evidence exist in peer reviewed publications. This paper reviews the nature of case studies and discusses the importance of data triangulation. Further, three published case studies involving a single source of data are reviewed and suggestions of more appropriate designs are provided.

Keywords

Case Study, Sources of Evidence, Interviews

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Collecting Sufficient Evidence When Conducting a Case Study

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Case study is a popular research design within the social sciences despite concerns of its credibility. Case studies provide an in-depth exploration of the unit of analysis (case). Hence, data triangulation is a key characteristic of the design whose purpose is to provide a thick, rich, and contextual description. Data for varied sources enhances credibility of the study. However, studies involving only one source of evidence exist in peer reviewed publications. This paper reviews the nature of case studies and discusses the importance of data triangulation. Further, three published case studies involving a single source of data are reviewed and suggestions of more appropriate designs are provided.

Keywords: Case Study, Sources of Evidence, Interviews

Serving as the chair or member of dissertation committees, I frequently encounter doctoral students who want to conduct a case study involving only interviews. When I inform them case study entails data triangulation they often report seeing many published case studies supported by only interviews and ask for permission to do likewise. When this occurs, the mother in me wants to utter the age-old retort, “If you see everyone jumping off a bridge do you want to follow them!” However, the researcher in me instructs them on the importance of using a variety of data to enhance the credibility of their study, and I refer them authoritative literature on case study design.

The popularity of case study design is growing in the social sciences (Thomas, 2011). At the same time the credibility of the design is being questioned (Tight, 2010). Despite concerns regarding credibility and limitations, researchers continue to gravitate toward the design (Hyett, Kenney, & Dickson-Swift, 2014). Like my students, I also encounter many published case studies built on a single type of data, and it troubles me. Equally disturbing are studies in which the researcher purport using varied data sources in addition to interviews, but neglects to fully describe the sources or analyze the data. Hence, a need exists to elaborate on the importance of data triangulation in case studies to help promote proper use of the design.

This paper addresses the need for data triangulation in case studies, particularly as it relates to qualitative studies. My purpose is not to make a case for using case study, but rather to convey the importance of correctly employing the design. After discussing the nature of case study design and the data triangulation requirement, I assess three case studies that involve a single source of evidence and suggest alternative designs that may be more appropriate.

What is a Case Study?

Extant literature provides several definitions of case study. Stake (1995) defined it as the study of an “integrated system” a “specific, complex, functioning thing” (p. 2). To Yin (2009), it is a method used to understand a real-life phenomenon considering relevant contextual conditions. Merriam (1998) wrote a qualitative case study is a particularistic, descriptive, and heuristic study of a bounded system. The descriptive nature entails examining the interaction of multiple variables presented via documents, quotes, samples, and artifacts. A case can be a person, program, an organization, or a group (Yin, 2009).

Several factors must be considered when deciding whether case study is the appropriate design. First the research question (Tetnowski, 2015). Yin (2009) explained a case study is appropriate to answer “how” or “why” questions about a current event beyond the researcher’s

control. A second factor is the specific design. Yin discussed three primary designs (exploratory, explanatory, and descriptive. Stake (1995) offered two: intrinsic and instrumental. Gerring (2004) emphasized, “case studies may be small- or large, qualitative or quantitative, experimental or observational, synchronic or diachronic” (p. 353). Case studies can involve one or multiple cases, requiring researchers to identify the suitable case(s) to study.

Another consideration is ability to obtain sufficient data. Despite its form, case studies are data rich to enable a “thick description” (Hyett, Kenny, & Dickson-Swift, 2014) and in-depth understanding (Creswell, 2013) of the case under investigation. Merriam (1998) explained what makes a case study is the end, which should be a “holistic,” thickly descriptive, and contextualized examination of the case. As such, a case study necessitates “deep and varied sources of information” (Hancock & Algozzine, 2011, p. 16).

Data Sources

Yin (2009) espoused case studies rely on data triangulation and provided three principles relative to data collection: (a) gather multiple sources of evidence to make findings more convincing, (b) create a case study data base to house the raw data separate from the research report, and (c) maintain a chain of evidence linking data from the research question to the conclusions. In refuting assertions, case studies lack the rigor and objectivity of quantitative studies. Flyvbjerg (2006) regarded the requirement to view the case through multiple lenses strength of case study design. Such examination is required for the contextual understanding necessary when examining the case (Cavaye, 1996). Snyder (2012) is an excellent example of how the researcher’s need for data may grow during the data collection process. Hence, an aspect of deciding if case study design is a fit is to ascertain whether sufficient data is obtainable to support findings and conclusions.

Six sources of data typically are used in qualitative case studies: documentation, archival records, interviews, direct observation, participant observation, and physical artifacts (Stake, 1995; Yin, 2009). In general, interviews are the foundational data with other sources used to validate information obtained from the interviewees (Hancock & Algozzine, 2011). Hamilton and Corbett-Whittie (2013) advised using two or more sources or perspective that will enhance understanding of the phenomenon. Although each type of data has strengths and weaknesses (Hamilton & Corbett-Whittier, 2013; Hancock & Algozzine, 2011; Stake, 1995), combined they are essential to the establishing the internal validity of a case study (Tetnowski, 2015).

Despite the requirement for data triangulation being prevalent in the literature (Gerring, 2004; Hamilton & Corbett-Whittier, 2013; Hancock & Algozzine, 2011; Stake, 1995; Yin, 2009) some researchers overlook this important aspect of conducting a case study, arguably minimizing the quality of their work. I selected three single sourced case studies published in peer reviewed publications to review. I had no involvement in these studies.

Case Analysis

Saldivar (2016) sought to identify factors causing Latino immigrants to leave or remain in their places of employment in the California Central Valley to address four research questions.

1. How do Latino immigrants in the California Central Valley understand and describe the factors that cause them to remain at their places of employment?

2. How do Latino immigrants in the California Central Valley understand and describe the factors that cause them to leave their places of employment?
3. How do current immigration and employment policies in the United States affect a Latino immigrant's employment status in the California Central Valley?
4. How do Latino immigrants understand and describe their struggles or obstacles they face in their search for employment in the California Central Valley? (p. 12)

Data collected for the study comprised information from four focus group interviews. Twenty-five workers participated, with four to 10 workers in each group. Participants included permanent resident aliens and undocumented workers and represented two of the agricultural and manufacturing industries. However, the participants were not separated by these distinctions. Such a separation would have enabled data analysis from multiple perspectives. In addition, using focus groups may have influenced completeness or accuracy of information. Saldivar reported some interviewees did not respond to questions, requiring him to draw conclusions from reading their body language.

In addition, although the participants were given time off and "received support" from their company to participate in the interviews, no data were gathered from the companies. Since many of the interviewees' comments dealt with policies and hiring practices, documents such as company policy statements and hiring records may have been helpful to validate interviewees' claims. Interviews with supervisors and HR managers would also have provided additional perspectives and much needed contextualization to fully understand the work environment.

Two research questions guided Han, Kakabadse, and Kakabadse's (2010) study which explored the meaning of servant leader in among workers in China.

Would the concept of servant leadership have the same meaning in China, or, is there an alternative term in the Chinese language that closely relates to the concept of servant leadership? How do people construe the notion of servant leadership in the public sector of the PRC? (p. 266)

Completing an open ended questionnaire designed using the critical incident technique, 99 informants described workplace incidents they viewed as embodying servant leadership. The researchers decided against using established case study tools of interviews and observations, determining the survey alone was more culturally appropriate and would enhance participant anonymity, honesty, and diversity of responses.

In this study designed to elicit workers' perceptions, 85% of the respondents did not provide stories of personal interactions with supervisors they felt reflected servant leadership but rather provided abstract accounts. Because of this, the authors were unable to compare dyadic leadership between managerial civil servants and non-managerial civil servants, which Han et al. (2010) noted as a limitation of their study.

Armstrong (2015) studied how 25 project managers perceive the value of project manager certification they had obtained. The researcher posed two research questions to understand why the participants obtained the certification and how they felt about the decision.

1. Why do project managers who are volunteer participants of the research study who are working as project manager in the new products and innovation area of the consumer products industry decided to obtain a PMP Certification?

2. Once project managers' volunteer participants who are working as project manager in the new products and innovation area of the consumer products industry obtained a PMP certification, did the research participant believe the certification resulted in improved project management success; as evaluated by the most recent project management success standards of cost, time, quality, scope, stakeholder expectations and strategic alignment? (p. 30).

In addition to interviews, Armstrong stated using “researcher observations and any other documentation that the case study participants were willing to share in support of the research” (2015, p. 148). The researcher also purported maintaining a data base to ensure a chain of evidence. However, data analysis entailed a thematic analysis based solely on the interview responses. The researcher did not discuss what was observed, in what organization(s) these observations occurred, what, if any, documents were provided; and how this data supported accounts from the interviewees.

Agreement a case study entails data triangulation to promote contextual understanding of the phenomenon is widely held. To this end researcher must have access into the organization or environment where the phenomenon is occurring (Hancock & Algozzine, 2011) to obtain needed evidence. When these conditions cannot be met researchers should consider other qualitative designs.

Possible Alternative Designs

A case study is ideal for studying a process Merriam (1998) and for generating descriptive inferences, which is important in social science research (Gerring, 2004). However, other designs are more appropriate for studying participants' perceptions. For example, narrative inquiry may have been a better design for Saldivar (2016) whose research questions focused identifying factors causing the participants to stay on or leave a job and the obstacles they faced finding employment. One could argue these are separate topics, making the study lack boundedness, which is a characteristic of case study (Merriam, 1998; Stake, 1995; Yin, 2009). In narrative studies participants share stories depicting their view of the world (Connelly & Clandinin, 1990). Using this design would likely enhance participation because participants could answer questions verbally or in writing if they found doing so uncomfortable. In addition, although multiple tools can be used to gather data, triangulation is not required. Finally, narrative inquiry engenders stories solely reflecting the participants' perspective, without regard of context.

Another design that may have been a better fit for Saldivar (2016) is phenomenology. The design, which involves one-one-one interviews, enables a study of appearances through participants' perspective taking (Moran & Mooney, 2002). Like narrative inquiry, there is no requirement to contextualize or triangulate the data because the intention is to draw conclusions and themes from participants' perceptions. To Husserl, the father of phenomenology, perception alone is evidence of one's experience (Moran & Mooney, 2002).

Similarly, narrative inquiry or phenomenology may be a better fit for Armstrong (2015) whose interview-based study lacked an “appreciation of context” characteristic of case studies (McLeod & Elliot, 2011). As stated, narrative inquiry is an exploration of a person's lifeworld through participant storytelling. Moustakas (1994) explained phenomenology focuses on participants' reflections, and “is concerned with ideas and essences” (p. 5). That design may align with Armstrong's goal to explore the participants' perceptions and feelings about obtaining project management certification.

Given the political and social conditions in China, Han et al.'s (2010) use of a survey questionnaire was prudent to minimize risk to the participants. However, calling the study a

case study is a misnomer because it lacked context and varied data sources. Yin (2009) stressed an in-depth understanding of a phenomenon requires considering important contextual conditions, and surveys alone cannot provide contextual understanding. Han et al. (2010) is better described as a survey study.

Narrative inquiry and phenomenology both have nuances researchers must consider in their design selection. However, neither requires data triangulation associated with case study. Further, Yin (2009) explained a survey questionnaire is a single data source, and a survey is a distinct form of qualitative inquiry.

Conclusion

Although critics question the credibility of case studies, the design still has wide appeal for social science researchers. Case studies are data rich, contextual, and involve multiple sources of evidence. Advocates of the design acknowledge analyzing so much qualitative data is laborious (Cavaye, 1996; Hancock & Algozzine, 2011). However, data triangulation is widely regarded as a means to enhance the credibility of case studies. When researchers are limited to obtaining a single source of data choosing another qualitative design is recommended.

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Article Citation

Smith, P. R. (2018). Collecting sufficient evidence when conducting a case study. *The Qualitative Report*, 23(5), 1054-1048. Retrieved from <https://nsuworks.nova.edu/tqr/vol23/iss5/2>
