

CASE STUDY METHOD OF RESEARCH – A CRITICAL REVIEW

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ABSTRACT

Research methods are in general categorized as quantitative, qualitative and mixed (hybrid). Experts often take different standpoints about case studies; some attribute qualitative nature to them while others consider them quantitative. But case studies do not fall into any of these. The uniqueness of case study method and its different forms are briefly presented in this article with a critical approach to the different views found in the scientific literature. The value of case study method in establishing evidence for theorization is established through this study of expert views from various disciplines.

KEYWORDS: *Case Studies, Embedded Case Studies, Research Methods, Data Collection*

INTRODUCTION

Case study method which is used in various disciplines of science, such as Psychology, Medicine, Nursing, Social Work and in research with its educational theory and building values survives even decades after its emergence in a 'curious methodological limbo' (Whitley.1932, Gerring.2004). It needs much clarity and deeper understanding to use case study as a research method.

Definition and Concept

Experts from various disciplines defined case studies according to their purpose. But a generic definition is given by Robert K Yin (2003): "*Case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident*". The Phenomenon may be a particular event, situation, program or activity (Hancock and Algozzine 2006). The context of the case is the real situation in which it becomes a reality. Hence the case setting is emphasized by Yin, while Gerring (2004) also defined it in a similar fashion, but with a lens of its application: *A case study is an intensive study of a single unit for the purpose of understanding a large class of similar units.* (A unit can be a nation, a political party, person, etc.). Through case study, researchers hope to gain an in-depth understanding of situations and meaning for those involved and such insights directly influence policies, procedures and future research (Hancock and Algozzine 2006)

Qualitative or Quantitative

The nomenclature of case study method has been dubious. Traditionalists understand research as qualitative and quantitative and raise the question of the category under which case study research falls. One cannot substitute case study for qualitative, ethnographic, or process-tracing without feeling that something has been lost in translation (Gerring 2004). Many of such methods are attributed to be the case study method. But Case study research is not exclusively concerned

with qualitative method nor is it a quantitative method. As in any form of research, all evidence is of some value for the researcher irrespective of being qualitative or quantitative. Quantitative data, both descriptive and inferential statistics may also be used in this method. Gillham (2000) uses the allegory of a judge in the court who cannot turn away any evidence placed before him, to say that a case researcher also looks at the truth in the data whether it be qualitative or quantitative and relates it to other evidence in hand. Often what people say is far from what they do. Numbers always do not speak unless someone speaks for them. The contextual explanations also are required to get a fuller sense of the truth. Each case setting may have its own culture, values and ways of thinking and judging and talking about living experiences. All these contribute to make evidences in a case study research which is the basis for theorizing. According to Gillham (2000), *“Case study method uses both objectivity and subjectivity in its pursuit to understand the underlying reasons. It has its own dynamics”*.

Characteristics of Case Study

- Case study research always takes into consideration the case in its total setting whether it is single case or multiple cases.
- It is neither qualitative nor quantitative in approach. It goes beyond the limits of both the methods. Formal statistical methods cannot be applied in concrete cases when the number of possible configurations becomes so large that no sample is large enough to provide an experience table.
- Use of multiple sources of evidence, each with its strength and weakness, is a key characteristic of case study research.
- The case study typically presents original research which often tackles subjects about which little is previously known or about which the existing knowledge is fundamentally flawed.
- Each case can be studied independently and in comparison with other cases considered for the research.
- Case studies copy with a technically distinctive situation in which there will be many more variables of interest than data points and as one result.

Classification of Case Studies

Gillham (2000) classified the basic term ‘case’ into two: (1) Single an individual, a group, an organization, a hospital ward, a children’s home, a factory or a community, and (2) Multiple number of single parents, several schools, two different professions etc. Hence his definition that case study is one which investigates a single case or multiple cases to investigate the above to answer specific research questions and which seeks a range of different kinds of evidence which is there in the case setting. The early notion of case studies in remedial social work and those in social research distinguished them by saying, “In remedial case, immediate treatment is required; whereas in research one is at the leisure to study the case in its *totality*” (Whitley.1932). According to Gerring (2004), when mentioning about case study as a method, one is referring to three methods. The primary is Type I case study which examines variation in a single unit over time, the second is Type II which does the covariational analysis synchronically and the third does both synchronically and diachronically (Type III). The complex nature of case studies made Yin (2003) to classify them into four. Single case designs are used in cases of testing a theory on a critical case or when the case is extremely unique. The reliability and rigor of the study can be better supported with multiple-case design. Holistic cases will have only a single unit of analysis while embedded case studies have multiple units of analysis.

The rationale for using single case design, as explained by Yin (2003) is to test a theory in a ‘critical’ case, to study an extreme or unique case (often in Psychology), a revelatory case which was previously inaccessible, a typical or representative case from among different cases and a longitudinal study of a case. The caution in doing single case studies is that it may not turn out to be a case as it might have been expected to be. Embedded case studies use more than one unit of analysis. Yin (2003) explains with the example of a hospital being considered as a case and considers its sub units like clinical outcomes and public programmes. Irrespective of the sampling method adopted to select the clinical outcomes and public programmes, the case is considered embedded. The study is holistic if it selects only one of the sub-units.

METHODOLOGY OF CASE STUDY

Yin (2003) says case study research uses a ‘chain of evidences’, while Gillham (2000) says it uses ‘multiple sources of evidences’. However case study uses evidence and leads to theory formulation which is the ultimate aim of any research. Case study research is naturalistic in style and is the richest form of descriptive research (Gillham 2000). At some point the researcher is a participant of the phenomena and also remains detached to question the evidences. The researcher becomes part of it to ‘get under the skin of a group of organizations’ to find out what really happens the informal reality which can only be perceived from the inside. Case study is a main method with its sub-methods like interviews, observation (detached and participant), records and document analysis, work samples and even physical artifacts. This multi-method approach uses triangulation as the test to verify the convergence of its various evidences to get a true picture of the case. According to Gillham (2000), the researcher works inductively from what is there in the research setting and develops grounded theory. The broad strategy is to go for data collection as if you are in a foreign land with as open a mind as possible. A paradigm shift by reorganizing your knowledge framework is necessary for a good case study data collection.

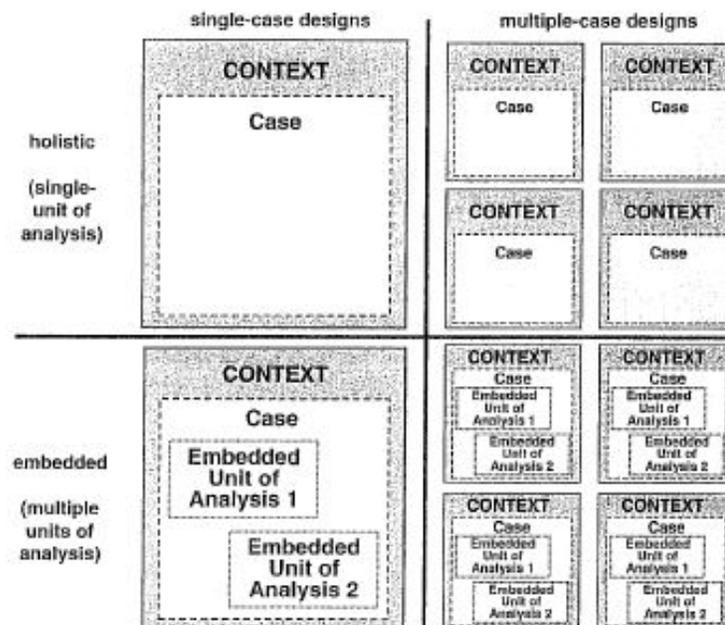


Figure 1: Matrix of Case Study Types (Yin. 2003).

The researcher does not start out with a priori theoretical notions until he gets in there and gets hold of the data. Review of literature is also not done exhaustively prior to the data collection as in other traditional research methods. A general review of the research setting is done and certain key questions are prepared beforehand. While being in the research setting, the researcher does a review of literature, published and unpublished, available in the setting or elsewhere and develops thoughtful discussion between his observations in the setting and the literature. Learning from the literature will sensitize the perceptions of the researcher and goes even to revisit his research objectives and questions. Thus questions emerge and get refined as one knows the setting more. Good research questions are those enable us to answer our questions in the setting and achieve the research aim, while maintaining a balance between what we want to find out and what the setting will allow us to do. Important data is not readily available and accessible. Most important is not what people tell you, but what they avoid telling you. Gillham (2000) writes: “*Thus case study research is very much like a detective work. Nothing is disregarded: Everything is weighed and sifted; and checked or corroborated*”.

Methodological Value

The methodological value of case study method is challenged often with the question whether generalization from a single case is scientifically permissible. Yin (2003) gives the example of the book “*The Death and Life of Great American Cities*” by Jane Jacob which was based on her experiences in New York City. Her reflections of the single case of NYC built theories on urban planning. Her book became controversial in the profession of urban planning and compelled them to make empirical inquiries in other cities. Dooley (2002) has acknowledged that case study method is legitimate research, it can embrace one or more cases and multiple paradigms and can be used for theory building. Gillham (2004) argues that theory can be built from any single case, once strong evidence is obtained, as in the case of investigative journalism and judicial inquiries. However Yin (2003) recommends multiple case study over single case study because the analytic conclusions coming from at least two cases will be more powerful than that from a single case.

Case studies, according to Dul and Hak (2008) do not differ in research strategies and in terms of methods of measurements. Qualitative interview and multiple sources of evidence are used in other strategies also. Standardized questionnaires in surveys and quantitative measurements in experiments could also be used in case studies. Thus case study method is no way inferior to any other research method. Predictions and generalizations are done with solid evidence in case studies as in any other methods of research. The doubt in generalization is seen as delusion by Lundberg (1941) and it is because we necessarily respond to the universe selectively and in parts, these units represent actual division in nature. Petry (1931) says that case studies in nursing helps in making an understanding of the interrelationship of various factors which brought each patient to his present status and of their probable effect upon his future readjustments.

Objectivity in case studies is established by all researchers who note down their observations and views. The plan for probing, the questions for interviews, complementing and contradicting views and the reflections of the researcher form the part of the research documentation which are subject to verification by anyone for further research or audit. This praxis in case study method equates the objectivity and reliability of this method with any other research method (Yin 2003). This research data base is an ‘open accounting’ according to Gillham (2004) which is partly a demonstration of the ethical stance of the researcher.

In the words of Schramm, 1971 (Yin, 2003): “*The essence of case study, the central tendency among all types of case study, is that it tries to illuminate a decision or set of decisions: why they were taken, how they were implemented, and*

with what result”. Case study as a method is helpful in explaining path dependence of cases and linear and non-linear deviations from paths as well as closing of alternative paths. Because it invokes causal possibility, contingency, closure and constraint, statistical methods are incapable of addressing them. Historical sequences, rare events, unnoticed variables behind contingent events and study of interaction effects within a few cases are possible only with case studies (Bennet and Elman.2006).

Selection of Cases

Multiple cases poses the question of choice. A screening process may be adopted to identify the cases lest the researcher ends up in a situation where the case turns to be insignificant after the data collection has advanced. In the case of a small population of cases, consultation with knowledgeable people is a way forward. Verification of limited documentation also is suggested by Yin (2003) with caution to avoid the screening becoming a “mini case study”. Larger collection of cases requires a size reduction to about 30 as a first phase, using a set of minimum criteria identified by the researcher and the second phase may be a simple random sampling. There are also experts who say that even when a single case is studied, the researcher brings similar cases into analysis in a peripheral way, typically in introduction or conclusion, more superficially. The intense case remains as the ‘formal’ while the rest are termed ‘informal’ (Gerring, 2004). Experts like Perry (1998) and Grey (2017) consider this dichotomous choice of cases as exploratory (inductive) approach and confirmatory (deductive) approach. In confirmatory approach the researcher goes for multiple cases to confirm the theory originated in the first case, while in the exploratory approach each newer case contributes newer findings.

Ethics in Case Study Research

Gillham (2000) is of opinion that the ethics and rigor of case study research data can be established by making a presentation of your findings to the people in the research setting and asking them “this is what I find, how do you look at it?”, to get their view of it. A discussion followed by a presentation can lead to disclosure of their thoughts and satisfy their curiosity about what is going to be reported. It has the double benefit of being ethical and getting the facts and understanding verified.

Case Study Reports

The report of a case study follows a narrative style which may be presented chronologically or according to the research objectives or in any logical way the researcher finds it appropriate. The researcher’s integrity is in ‘decentre’ from the evidence and keep constantly challenging and scrutinizing them. Looking for negative, opposite or contradictory evidences, or evidence that complicates your emerging understanding is basic to research integrity.

“Each case study consists of a ‘whole’ study, in which convergent evidence is sought regarding the facts and conclusions for the case; each case’s conclusions are then considered to be the information needing replication by other individual cases. Both individual cases and the multiple case results can and should be the focus of a summary report. For each individual case, the report should indicate how and why a particular proposition was demonstrated (or not demonstrated). Across cases, the report should indicate the extent of the replication logic and why certain cases were predicted to have certain results, whereas other cases, if any, were predicted to have constraining results”. (Yin, 2003).

SUMMARY

The naturalistic research method of case study which relies on multiple sources of evidence and accepts qualitative and quantitative data has its unique nature when compared to other research methods. Single and multiple cases can be holistic or embedded, leaving a plurality of styles for the researcher to choose. However analysis of single cases study also considers similar other cases at least superficially. Selection of cases for multiple case study research may be done by screening or key informant discussions. Objectivity and reliability of case study method is at par with other methods that generalizations and predictions are acceptable. Evidence is captured in its context and verified with those involved. This assures its ethical stance and creates a launch floor for theorization.

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