

Case studies

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OVERVIEW

Case studies are common, but also commonly misunderstood. So, for this first Methods Moment column, let's take an introductory look at the case study methodology. A case study is an approach that takes a wide view of a narrowly-defined circumstance. Like all methods, there are many disciplinary variations and complexities to making a great case study. To keep an introductory focus, I will discuss three core elements of case studies: the case, the situation, and the triangulation of data. Regardless of variations in jargon, these concepts are good starting places.

Consider a diagram of how these core elements might look in a research question:

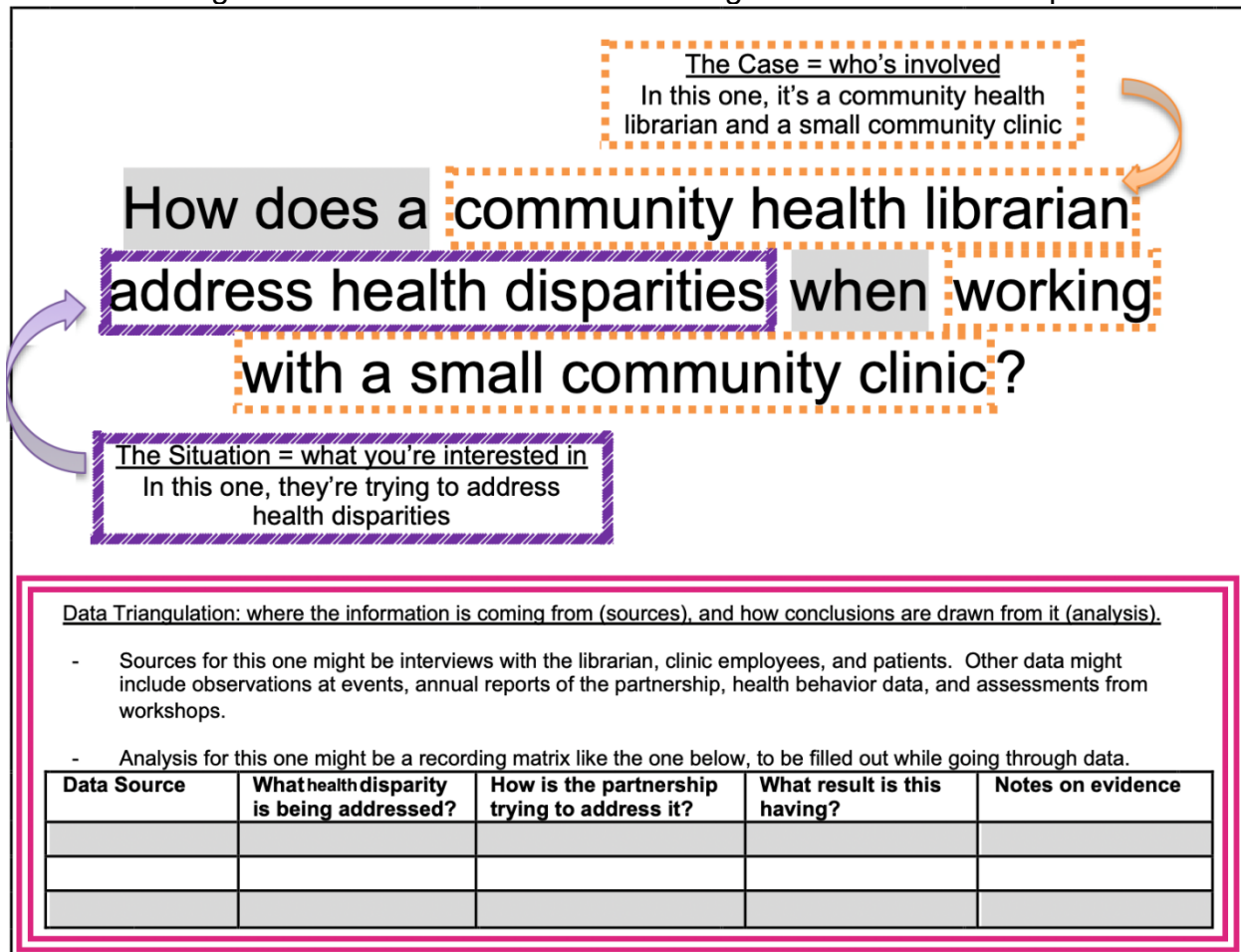


Figure 1: Diagram of the case, situation, and triangulation in a research question

The “case” refers to the setting of a case study. A case is usually a single environment with clear boundaries where the research topic of interest is happening. It defines the people, places, and things that a researcher might consider (or not consider) to be part of the case. So, in the example above, we would only consider data to be in the case when that data interacts with the librarian/clinic partnership. A community member who visited the clinic and used resources recommended by the librarian is definitely relevant to the “case.” On the other hand, a peer librarian is probably not part of the “case,” because they are not involved with the librarian-clinic partnership. Cases are often a specific place or organization. We often think of typical cases being a library or health center, but a case could also be a professional association, conference, or class.

The “situation” refers to what is happening at that case. This is what case study research question(s) are trying to understand. Research questions for case studies usually focus on *what* and *how* questions – *what* actually happened, and/or *how* it occurred. The situation might be a specific event, like a program or change in leadership, or ongoing situations. Examples of ongoing situations for a case study might be the implementation of a particular team structure or information desk process. Like the case, the best situations for a case study are ones that can be clearly defined.

The “triangulation of data” has two parts: data sources and data analysis. The goal is to identify sources which can be combined (triangulated) to understand the situation. A rigorous case study requires a systematic approach to comparing multiple data sources in the case. We usually use the word triangulation to talk about the analysis phase, but it has implications for data collection, too. Data collection and analysis must be planned together.

Data collection in a case study looks at how the situation is experienced from multiple perspectives in the case. Because of the experience element, case studies predominantly should include qualitative data and may also include quantitative data. Case study data sources can be any sources that tell us something about the situation. We call it triangulation because we are looking for common directions in perspectives on the situation, which is why it is crucial to include/pull from multiple data sources to improve perspective on the situation.

Thus, data analysis for case studies (which I am focusing on as “triangulation,” but you might also search for the related term “data integration”) organizes what the data sources have to say and then seeks commonalities. While case studies may also highlight data that contradict majority perceptions in the case, most of the analysis should focus on identifying commonalities or areas of agreement from the multiple data sources. Qualitative coding approaches are a common way to do this, which involves extracting pieces of text or other data and giving them labels relevant to the research question. Tables or spreadsheets are good ways to organize the analysis. Analytical

approaches should list pieces of text and add labels that can be compared between the data sources.

When planning a case study, it is good to think about several issues:

- What situation does the research question ask about? Research questions appropriate to case study methods tend to start with the words how or what, such as, “How does an academic library experience adding a community health satellite location?”
- What is the case? The case should have clear boundaries, so that researchers can clearly determine participants and documents that are or are not part of the case. Examples might be specific locations experiencing the situation (“How do Baz University and Quux College libraries experience adding community health satellites?”), or a definable event (“How did The Wubble Center’s 2020 Wubble Institute experience receiving and addressing Code of Conduct violation reports?”).
- How does the study triangulate meaningful findings? To triangulate, the case will need to cross the perspectives of multiple data sources that all have useful but different perspectives on the situation.

Keep in mind that case studies as a methodological approach are different from (a) clinical case studies, in which clinicians analyze how a patient’s symptoms typify or contrast with the textbook expectation of the presentation of symptoms; (b) teaching case studies, which are real or mock summaries of a situation written to encourage discussion and enable learning; or (c) assessment case reports, which report assessment data and lessons learned from a program in order to measure personal effectiveness rather than rigorously study the situation or program (see also Alpi & Evans, 2019, in resource articles list, to understand more specifically JMLA’s case reports format). If you decide to read further on case studies methodologically, be sure to look for the triangulation or integration of data.

EXAMPLE OF (MOCK) APPLICATION

Reyes wants to understand the effect of a new interprofessional training institute at their hospital. They consider personal biases and (being a librarian) decide that evaluating impacts of librarian-related interprofessional projects might be a separate case report topic. Nevertheless, they are still interested in a more rigorous study of the wider effects and experiences happening because of the institute. A case study fits this broader interest in studying a range of perspectives on a focused event. Reyes decides to scope the case to clinician-trainees in the interprofessional institute who are piloting interprofessional teams. They decide that their research question is, “How do clinicians

learning to work on interprofessional teams incorporate interprofessional work in patient care planning?”

Reyes then has to look for sources of information. They start with observing the institute’s training sessions. To understand the experiences of the interprofessional teams, Reyes wants to interview trainees and ask about care planning. They initially try to interview everyone who is piloting interprofessional projects. Reyes quickly finds that it is too hard to schedule interviews with everyone. They change to a short survey of Institute trainees and their teams, plus two coffee-hour focus groups. Reyes wants more perspectives in their data, so they decide to incorporate content analyses (looking at documents and identifying and categorizing text relevant to the research question, as mentioned above) of the project summaries that the trainees submitted to the institute. Thus, their data sources are (1) training observation notes; (2) surveys; (3) focus groups; and (4) project documents.

The data is collected into a series of files, and the files are numbered for anonymity. A key to the file numbers is stored separately. For analysis, Reyes creates a triangulation spreadsheet. In the literature, they find a typology that says interprofessional education has outcomes on three levels: the individual’s learning, team dynamics, and patient-focused outcomes. Another article suggests common categories of outcomes. Therefore, for each datum of interest, Reyes decides to have a space for personal, team, and care outcomes. They have a master list of terms from the literature to assign (technically, “code”) each event with an outcome category.

The spreadsheet headers look like this:

	A	B	C	D	E	F	G
1	File #	What happened?	Personal outcome	Team outcome	Care outcome	Supporting data	Notes
2							
3							
4							

Figure 2: Headers of Reyes’ data triangulation matrix

When Reyes writes up their article, they decide to take a storytelling approach that describes the context of the hospital and the training institute in detail. They decide to organize the writing of codes in a story-like flow from personal outcomes to team outcomes to patient outcomes, to give the reader a sense of the impacts flowing from learning to action. There are many other ways they could choose to write the case study; storytelling is simply what comes most comfortably to their personal writing style.

RESOURCES

Web content

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<https://youtu.be/6Sg0M8Fn99E>

2. Gibbs, Graham. Types of Case Study. Part 1 of 3 on Case Studies. <https://youtu.be/gQfoq7c4UE4>. In playlist *Social Research Methods and Design*, <https://www.youtube.com/playlist?list=PLirEzjoHKvxaX8zZuFUSAi4jdukeexwx>
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5. Whitaker, Evans. Case Studies, UCSF Guides at University of California, San Francisco. <https://guides.ucsf.edu/c.php?q=100971&p=655222>

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