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Case Study Design Essentials: Definition, Research Questions, Propositions

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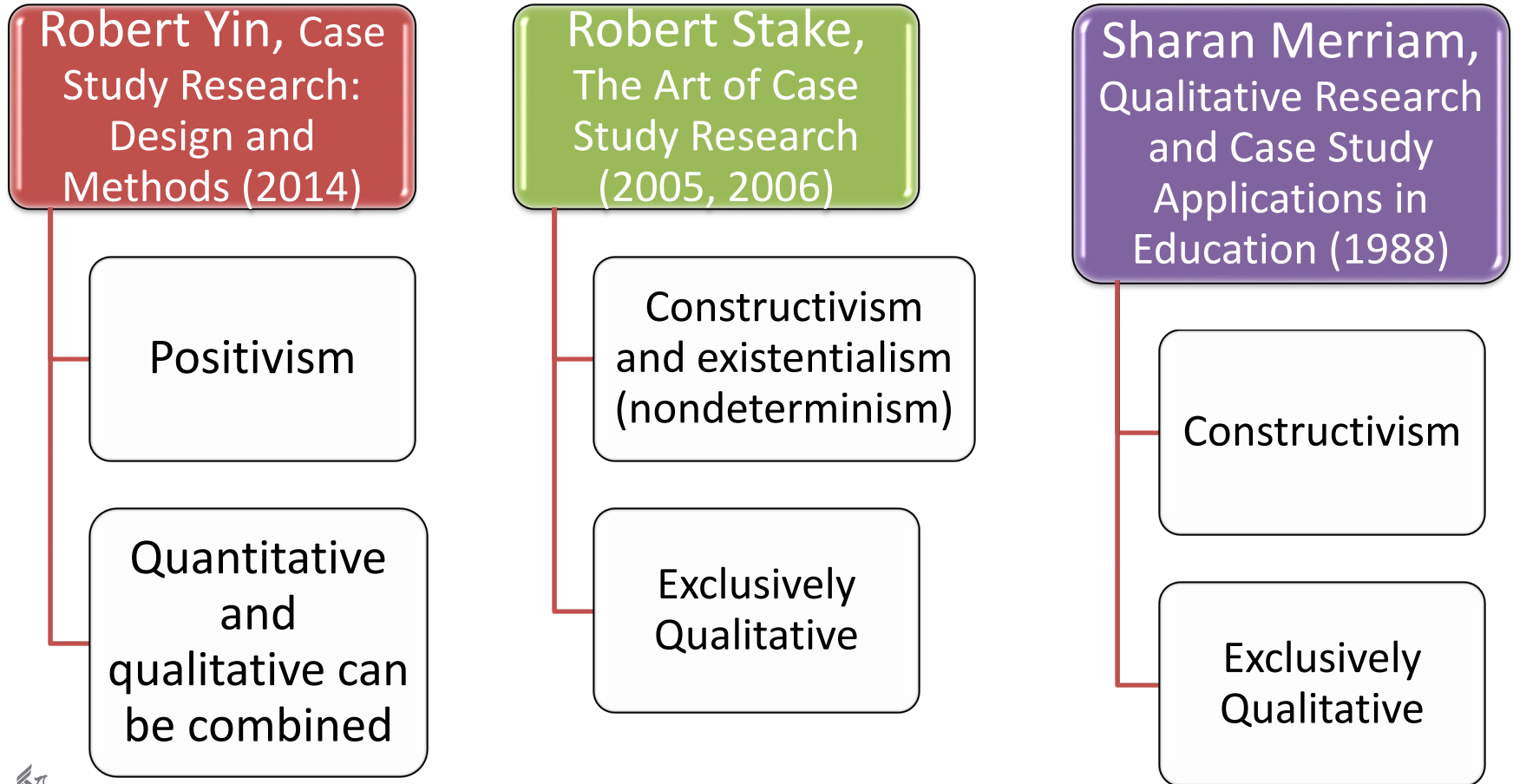
Agenda

Focus on case study
design essential
components

Provide examples

Answer your
questions

Case Study Prominent Methodologists



Definition of the Case Study

“An empirical inquiry that investigates a contemporary phenomenon (e.g., a “case”) within its real-life context; when the boundaries between phenomenon and context are not clearly evident” (Yin, 2014, p.16)

“A case study is an in-depth description and analysis of a bounded system” (Merriam, 2015, p.37).

“The “what” is a bounded system (Smith, 1978), a single entity, a unit around which there are boundaries” (Merriam, 2015, p.38)/(Stake, 2005).

When to use the Case Study

The focus is on answering “How” and “Why” questions

You cannot manipulate the behavior of those involved in the study (Yin, 2014)

When to Use a Case Study

Data collection in a “natural setting” not “derived” data (Bromley, 1986, p. 23); you want to cover contextual conditions relevant to the phenomenon (Yin, 2014)

- Examples:
 - How and why a high school principal did an exceptionally good job
 - What are the dynamics of a successful negotiation with severe consequences
- Not responses to just one survey/instrument
- Incorporate fieldnotes to better understand the situations

When to Use a Case Study

Conducting program evaluations, Examples:

- U.S. Government Accountability Office (e.g., 1990, 2008)
 - Case Studies from Ongoing Work Show Examples in Which Wage and Hour Division Did Not Adequately Pursue Labor Violations (2008) (https://www.gao.gov/special.pubs/10_1_9.pdf)
 - Case Studies of U.S and Chinese Economic Engagement in Angola, Ghana, and Kenya (2013) (<https://www.gao.gov/products/GAO-08-973T>)
 - K-12 EDUCATION: Better Use of Information Could Help Agencies Identify Disparities and Address Racial Discrimination (2016) (<https://www.gao.gov/products/GAO-16-345>)
- Yin (1997, 2009)

Steps in Designing Case Studies: Blueprint (Yin, 2014)

Proposal Method Components

1. Research questions

2. Propositions (Not for exploratory case) - Optional

3. Defining a “case”/unit of analysis

- Select one of the four designs
- Data collection

4. The logic linking the data to the propositions (Data analysis)

5. The criteria for interpreting the findings

The criteria for Judging the quality of research design (Validity & Reliability)

Note: Use theory in design work

The Most Challenging Steps in Designing a Case Study

Defining a “case”/unit of analysis

Select one of the four designs

Data Collection

Data Analysis

- Yin (2013)

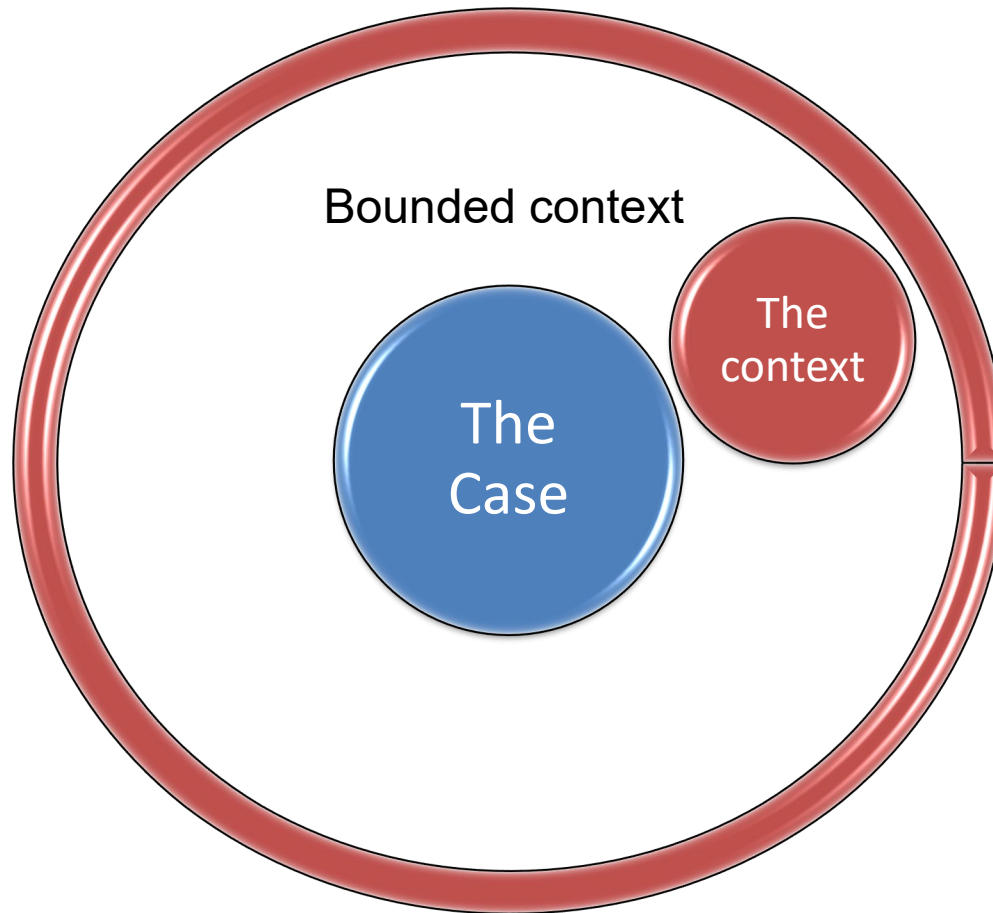
Defining the “case”

The most defining characteristics of case study is delimiting the object of the study: the case (Merriam, 2015)

- The goal is to understand one thing well: a person, a program, a group, or specific policy; examples: one playground, one band.
- Research question must be aligned/define the case/unit of analysis.

A noun, seldom a verb, a functioning (Stake, 2006). Real things to visualize. Examples: not training, managing , giving birth but training modules, managers, labor rooms.

The “Case”



Example

A study of how older adults learn to use computers. The case/unit of analysis: learners' experience. Indefinite number of adult leaders can be selected for this study.

- Not a case study but a qualitative study

One particular program, or classroom of learners (a bounded system), or one particular learners selected based on success uniqueness, etc.

- A case study

Defining the “case”

Practical considerations

- Availability, quality, relevance of data

Substantive considerations

- Special case: distinctive event/condition such as creation/change of an organization, the discovery of a new way of reducing bullying in schools, or the occurrence of a natural disaster

What if you don't have a distinctive condition?

Define compelling framework to make your case unique

- Review literature: generate a new knowledge/perspectives about organizations, communities, other social processes and outcome
- Example: An average American city, but the framework highlights a significant development in American history—the transition from an agricultural to an industrial economy and how it occurred in the average American city (Lynd & Lynd, 1957).

Types of Case Studies (Yin, 2014)

Descriptive; to describe an intervention or phenomenon at the real-life context

- Example: How do women with Parkinson cope with their needs in a community? Tolson, Fleming, & Sehartau (2002). Coping with menstruation: Understanding the needs of women with Parkinson's disease, *Journal of advanced Nursing*

Exploratory; to explore those situations in which the intervention being evaluated has no clear, single set of outcome

- Example: How does a nurse-patient relation develop in a cancer treatment unit? Lotzkar & Bottoorff (2001). An observational study of development of a nurse-patient relationship. *Clinical Nursing Research*

Explanatory; to explain the presumed causal link in real life intervention that are too complex for the survey or experimental strategies.

- Example: Why is a web-based e-commerce effective in a company? Joia (2002). Analyzing a web-based e-commerce learning community: A case study in Brazil. *Internet Research*

Research Questions for Case Study

Type of Research Questions relevant to the Case Study

- Explanatory/exploratory/descriptive questions
 - How or why did something happen?
 - E.g.: How do two organizations have a collaborative relationship?
 - E.g.: Why do programmers fail to document their codes?

Not Appropriate Questions

- Cause and effect questions (experimental/quasi-experimental design)
- How often something has happened (survey design)

Developing Case Study Research Questions

(Baxter P. & Jack, 2008, p. 546)

Case Examples	The Research Questions
1. The decision making process of women between the age of 30 and 40 years	How do women between the ages of 30 and 40 years <i>decide</i> whether or not to have reconstructive surgery after a radical mastectomy? What factors influence their <i>decision</i> ?
2. The experiences of 30-40 year old women following radical mastectomy faced with the decision of whether or not to undergo reconstructive surgery Binding the case	How women (30-40 years of age) describe their post-op (first 6 months) <i>experiences</i> following a radical mastectomy? Do these <i>experiences</i> influence their decisions making related to breast reconstructive surgery?
3. The decision making process (related to breast reconstruction post-radical mastectomy) of women between the age of 30 and 40 years attending four cancer centers in Ontario.	How do women (ages 30-40) attending four different cancer centers in Ontario describe their decision making related to breast reconstructive surgery following a radical mastectomy?

Propositions

Increase the likelihood that the researcher place limit on the scope of the study

Increase feasibility of completing the study

Developed based on literature, personal/professional experiences, theories, generalization based on empirical data

Example: Staff is promoted based on their skills in an organization.



Case Study Proposition Examples

(Baxter P. & Jack, 2008, p. 551)

Case Study Propositions

Potential Propositions	Source
	<p>**These are only examples of literature and do not reflect a full literature review.</p>
Women in their 30s most often decide not to have reconstructive surgery	<p>Professional experience and Literature</p> <p>Handel, Silverstein, Waisman, Waisman, & Gierson (1990). Reasons why mastectomy patients do not have breast reconstruction. <i>Plastic Reconstruction Surgery</i>, 86(6), 1118-22.</p> <p>Morrow, Scott, Menck, Mustoe, & Winchester (2001). Factors influencing the use of breast reconstruction postmastectomy: a National Cancer Database Study. <i>Journal of American College of Surgeons</i>, 192(1), 69-70.</p>
Women choose not to have reconstructive surgery post mastectomy due to the issues related to acute pain	<p>Literature- Wallace, Wallace, Lee, & Dobke (1996). Pain after breast surgery: A survey of 282 women. <i>Pain</i>, 66(2-3), 195-205.</p>

Defining a unit of analysis

The major entity that is being studied, the “what” or “who”

What unit of analysis to use depends on the research questions/design

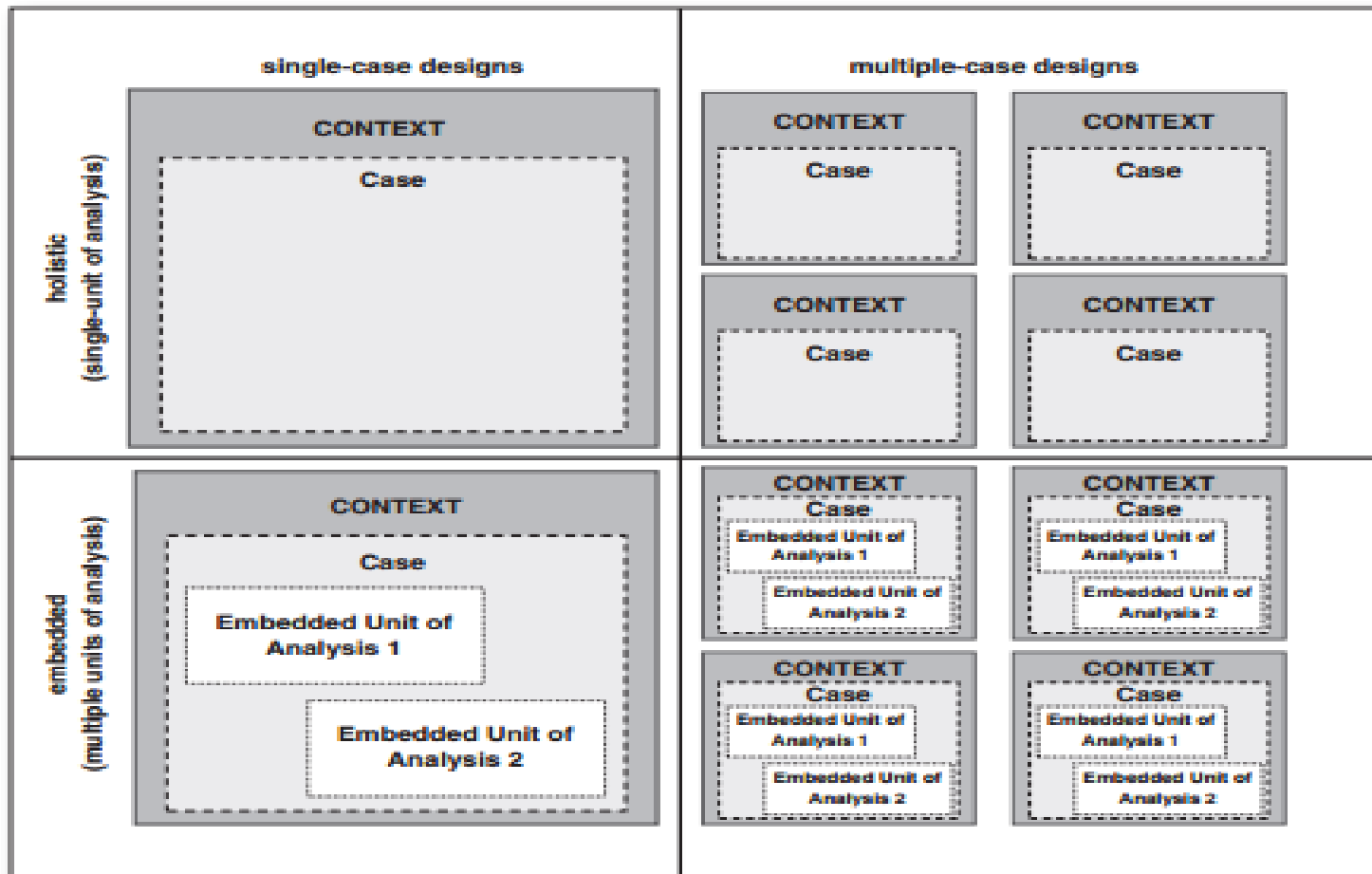
Can be the same as “case” in holistic single and multiple case study

- Example: case study of how was the life history of a person; Unit of analysis or case can be “the individual”

Different from “case” in embedded single and multiple case study

- Example: case study of how a group of software immigrants naturalize, Units of analysis: Individuals, development team, organization

Types of Designs for Case Studies



SOURCE: COSMOS Corporation.

Example

How does an organization implement certain staff promotion policies?

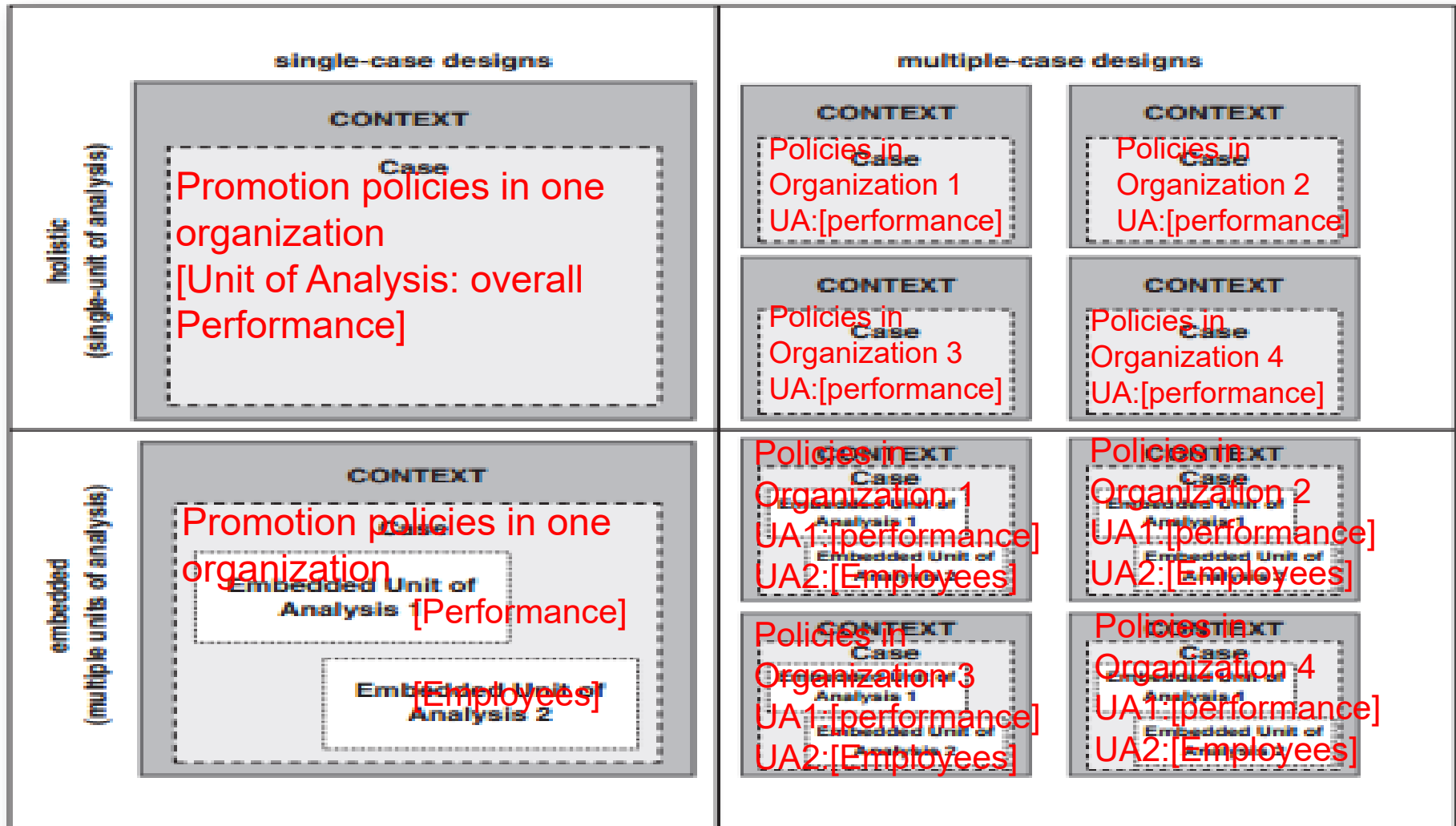
Policies in **one organization** with **one unit of analysis**, **holistic single** case study.

Policies in two or **more organizations** with **one unit of analysis**, **holistic multiple** case study.

Policies in **one organization** with two or **more units of analysis**, **embedded single** case study.

Policies in two or **more organizations** with two or **more units of analysis**, **embedded multiple** case study.

Types of Designs for Case Studies



SOURCE: COSMOS Corporation.

Why do you need to use multiple case design?

In what ways might the companion case's findings augment those of the first case?

Could the data from the second case fill a gap left by the first case or respond better to some obvious shortcoming or criticism of the first case?

Would the two cases together comprise a stronger case study? Could yet a third case make the findings even more compelling?

Be mindful of amount of work and feasibility of the study before switching to multiple case study

Problem Statement, Purpose, and research questions: Example (Merriam & Tisdell, 2016)

EXHIBIT 4.1. PROBLEM STATEMENT: ENGAGING MOMENTS: ADULT EDUCATORS READING AND RESPONDING TO EMOTION IN THE CLASSROOM.

Statement of the Problem

Research in neuroscience indicates that emotional states are the starting point for all learning (Damasio, 1994a, 1999, 2003; LeDoux, 1996, 1999, 2002). There are thousands of states, each containing a unique mix of potential behaviors, feelings, and 16 emotions that can either enhance or impede learning. The literature in the fields of adult education and learning readily acknowledges that emotions influence the learning process (Argyris, Putnam, & Smith, 1985; Dirkx, 2001; Heron, 1999; Lovell, 1980; MacKeracher, 2004; Merriam et al., 2007; More, 1974), however there is surprisingly little research and/or literature on how this process plays out in the adult classroom. This study sought to understand and thickly describe the nature of the experiences of a group of adult educators and how they go about reading and responding to learners' emotional states in practice.

Context

Significance

Gap

Purpose Statement and Research Questions

The purpose of this study was to better understand the practices of adult educators in reading and responding to emotional states exhibited by learners. The study was guided by the following questions:

Purpose

1. What indicators do adult educators use to read and determine emotional states?
2. What actions do adult educators take in response to learners' emotional states?
3. What is the reasoning behind the actions taken?

Source: Buckner (2012). Reprinted with permission.

Problem Statement Worksheet

(Merriam & Tisdell, 2016)

In your field, what topic is of interest to you that you could shape into a research study?

What are some of the things we do know about this problem/topic from the literature?

What is the gap in our knowledge/understanding of this phenomenon? That is, what is missing from the literature on this topic? This is the problem of your study. (Although we know x, y, z about this phenomenon, we do not know...) Take the “gap” in our knowledge and turn it into a purpose statement.

Complete this sentence:

The purpose of this study is to

What are the specific research questions that elaborate your research purpose?

Next steps...

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- Review materials
- Recorded webinars
- Short burst learning Videos
- Office hours

Provide us with your feedback

- Complete this very brief [Survey](#) (less than 1 minute)

Next meeting: **Research problem, purpose, and questions for a content analysis design**

- Feb 2, 5-6 pm Arizona Time
- Access via [the Workshop site](#)

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Questions?

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