



Key Point Chapter Summaries
for
John Creswell's Research Design Textbook
on
Qualitative, Quantitative, & Mixed Methods Approaches

*This resource is **not intended** to replace the Creswell textbook or chapter readings for the Creswell textbook, but rather to provide key takeaways and a chapter-by-chapter synopsis. If your enrolled course syllabus requires the purchase of this textbook, you will need to purchase the textbook.*



Table of Contents

Chapter One Key Points: The Selection of a Research Design.....	3
Chapter Two Key Points: Review of the Literature.....	6
Chapter Three Key Points: The Use of Theory.....	11
Chapter Four Key Points: Writing Strategies and Ethical Considerations.....	14
Chapter Five Key Points: The Introduction.....	22
Chapter Six Key Points: The Purpose Statement.....	24
Chapter Seven Key Points: Research Questions and Hypotheses.....	26
Chapter Eight Key Points: Quantitative Methods.....	28
Chapter Nine Key Points: Qualitative Procedures.....	31
Chapter Ten Key Points: Mixed Methods Procedures.....	36

Chapter One Key Points: The Selection of a Research Design

The three types of research designs:

Qualitative Research

Research is framed in terms using *words*, open-ended questions and responses, and data collection using instruments to explore and understand the meaning individuals or groups ascribe to a social or human problem.

Quantitative Research

Research is framed in terms using *numbers*, closed-ended questions and responses, and data collection through observation of a setting to test objective theories by examining the relationship among variables.

Mixed Methods Research

Research approach to inquiry involves collecting *both* qualitative and quantitative data, integrating the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks.

Three components to be considered when determining a research design:

Philosophical Worldview Assumptions*

Postpositivist, Constructivist, Transformative, Pragmatic

A Research Design Related to the Worldview

Examples: Quantitative (Experiments), Qualitative (Ethnographies), Mixed Methods (Explanatory Sequential)

Research Methods (and Procedures of Research) Translating the Approach into Practice

Such as through questions, data collection, data analysis, interpretation, validation

*The term *worldview* is a basic set of beliefs (about the world and the nature of research that a researcher brings to a study) that guide action. The table below provides insight into the four worldviews presented by Creswell (2018).

Table 1
Four Worldviews

Postpositivism	Constructivism
*Determinism	*Understanding
*Reductionism	*Multiple participant meanings
*Empirical observation and measurement	*Social and historical construction
*Statistical analysis	*Theory generation
*Theory verification	
Transformative	Pragmatism
*Political	*Consequences of actions
*Power- and justice-oriented	*Problem-centered
*Collaborative	*Pluralistic
*Change-oriented	Real-world practice oriented

Adapted from Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.

Strategies of Inquiry Available to Researchers:

Table 1.2

Alternative Strategies of Inquiry

Quantitative Methods	Qualitative Methods	Mixed Methods
*Experimental designs	*Narrative research	*Sequential
*Non-experimental designs such as surveys	*Phenomenology	*Concurrent
	*Ethnographies	*Transformative
	*Grounded theory studies	
	*Case study	

Adapted from Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.

Differing Research Methods Among the Three Designs:

Table 1.3

Quantitative, Mixed, and Qualitative Methods

Quantitative Methods	Mixed Methods	Qualitative Methods
*Pre-determined	*Both pre-determined and emerging methods	*Emerging methods
*Instrument-based emerging methods	*Both open-and closed-ended questions	*Open-ended questions
*Performance data, attitude data, observational data, and census data	*Multiple forms of data drawing on all possibilities	*Interview data, observation data, document data, and audio-visual data
*Statistical analysis	*Statistical and text analysis	*Text and image analysis
*Statistical interpretation	*Across databases interpretation	*Themes, patterns interpretation

Adapted from Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.

Distinguishing the Three Types of Designs for Research:

Table 1.4

Qualitative, Quantitative, and Mixed Methods Approaches

Tend to or Typically...	Qualitative Approaches	Quantitative Approaches	Mixed-Methods Approaches
*Use these philosophical assumptions	*Constructivist/advocacy/participatory knowledge claims	*Post-positivist knowledge claims	*Pragmatic knowledge claims
*Employ these strategies of inquiry	*Phenomenology, grounded theory, ethnography, case study, and narrative	*Surveys and experiments	*Sequential, concurrent, and transformative
*Employ these methods	*Open-ended questions, emerging approaches, text or image data	*Closed-ended questions, predetermined approaches, numeric data	*Both open- and closed-ended questions, both emerging and predetermined approaches and both quantitative and qualitative data and analysis
*Use these practices of research as a researcher	*Positions him- or herself	*Tests or verifies theories or explanation	*Collects both quantitative and qualitative data
	*Collects participants meanings	*Identifies variables to study	*Develops a rationale for mixing
	*Focuses on a single concept or phenomenon	*Relates variables in questions or hypotheses	*Integrates the data at different stages of inquiry
	*Brings personal values into the study	*Uses standards of validity and reliability	*Presents visual pictures of the procedures in the study
	*Studies the context or setting of participants	*Observes and measures information numerically	*Employs the practices of both qualitative and quantitative research
	*Validates the accuracy of findings	*Uses unbiased approaches	
	*Makes interpretations of the data	*Employs statistical procedures	
	*Creates an agenda for change or reform		
	*Collaboration with the participants		

Adapted from Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.

Chapter Two Key Points: Review of the Literature

Assessing a Topic that is Researchable:

- Just because it *can* be researched, does not mean it *should be* researched. Will it add to the existing pool of knowledge? Will it replicate past studies? Will it allow for an underrepresented population's representation? Will it address social justice, or transform the ideas/beliefs of the researcher?
- Ask yourself, "How will this contribute to the literature?" It should have wide appeal to a broad audience.

How do Researchers Use Literature?

- The literature review relates a study to the larger, existing literature, filling in gaps and extending prior studies.
- The literature review should have 20-30 pages.
- Most dissertations should serve to integrate the literature, organize it into a series of related topics, and summarize the literature by pointing out the central issues.

Literature Review for a Qualitative Study:

- The literature is used to frame the problem in the introduction of the study (ALL studies)
- The literature is presented in a separate section as a review of the literature (ethnographies, case studies, critical theory studies)
- The literature is presented in the study at the end; it becomes a basis for comparing and contrasting findings of the qualitative study (grounded theory)

Planning a Literature Review for Qualitative, Quantitative, and Mixed Methods Studies:

- In a qualitative study, use the literature sparingly in the beginning in order to convey an inductive design unless the design type requires a substantial literature orientation at the outset.
- Consider the most appropriate place for the literature in a qualitative study, and base the decision on the audience for the dissertation. Keep in mind the options: placing it at the beginning to frame the problem, placing it in a separate section, and using it at the end to compare and contrast with the findings.
- Use the literature in a quantitative study deductively- as a basis for advancing research questions or hypotheses.
- In a mixed methods study, use the literature in a way that is consistent with the major type of strategy and the qualitative or quantitative approach most prevalent in the design.
- Regardless of the type of study, consider the type of literature review to conduct, such as an integrative, critical, building bridges among topics or the identification of central issues.

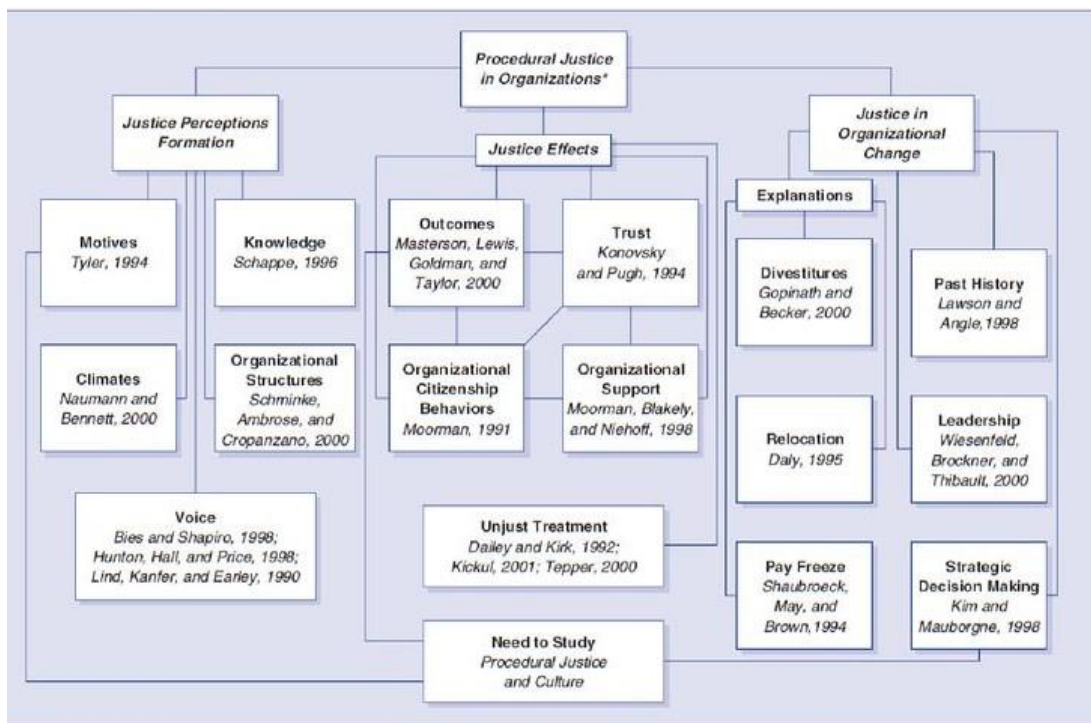
Steps in Conducting a Literature Review:

1. Identify key words to aid in locating materials; the words may emerge when identifying a topic or you may discover them in preliminary readings.

2. Using these keywords, search databases, like ProQuest, JSTOR, and Google Scholar, for journals and books.
3. Initially, locate 50 reports of research in books/journals related to your topic.
4. Skim these initial books/articles to assess whether the article will be a useful contribution to your understanding.
5. Once you've begun identifying useful articles, begin designing a literature map (a visual picture), based on the topic, illustrating how your study will add to existing literature and place your study within the larger body of research.

Table 2.1

Literature Map Example



Adapted from Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.

6. Next, draft summaries of the most relevant articles. These summaries will be combined into the final literature review, so be sure to use APA 7th.
7. Assemble your literature review thematically, or by important concepts. End with a summary of the major themes and discuss how your study adds to and addresses the gaps in existing literature. This summary should point towards methods (data collection and data analysis) that need to be completed to add to the literature. This is also where you can critique past literature and show deficiencies in it and in its methods.



Computerized Databases Available for Reviewing Literature:

ERIC (free online digital library of education research and sponsored by the USDOE; eric.gov)

Google Scholar- free

PubMed- free

ProQuest

EBSCO

Priority for Types of Literature to Review:

1. Begin with a broad synthesis of the literature (read overviews and abstracts)
2. Look in respected national journals, especially those reporting research studies
3. Locate books related to the topic
4. Find recent conference papers from major national conferences
5. If time allows, scan entries in dissertation abstracts- *but* dissertations vary immensely in quality, so be careful.
6. Internet- screen carefully to ensure the content is suitable for a literature review

Designing a Literature Map:

A literature map is utilized to organize the literature. It is a visual summary of the research conducted by others, typically represented as a figure. It may be organized several ways: hierarchical (top-down structure with the bottom being the proposed study), flow chart (left to right, with right being the proposed study), or a series of circles, with each circle representing a body of literature and the intersections as the place where future research is needed.

Writing an Introduction:

An abstract is a brief review of the literature (typically a short paragraph.) A good summary may include:

- Mention of the problem being addressed
- State the purpose (focus) of the study
- Briefly state information on a sample, population, or subjects
- Review key results relating to the proposed study (add after completion of chapters 4 & 5)
- Identify the gap or critique of other technical and methodological flaws in prior studies

Important APA 7th Style Elements:

Ensure APA 7th manual is adhered to, especially references, headings, and tables.

Types of Terms to be Defined in a Dissertation:

Define terms that individuals outside the field of study may not understand and that may extend beyond common language. Define terms introduced in ALL sections of the research plan, including title, problem statement, purpose statement, research questions, hypotheses/objectives, literature review, theory, and methods sections.



Model for Writing a Literature Review:

Explore aspects of the central phenomenon and divide into topic areas; however, for qualitative studies, it can be placed in a proposal multiple ways: as a rationale for the research problem, as a separate section, as something threaded throughout the study (as compared with the results of your study.)

Chapter Three Key Points: The Use of Theory

Types of Variables Used in Quantitative Studies:

A variable in quantitative research refers to a characteristic or attribute of an individual or organization that can be measured and observed and that varies among the people or organization studied.

Examples are gender, age, socioeconomic status, attitudes and behaviors (i.e. racism, social control, political powers, or leadership). Variables are distinguished by two characteristics: temporal order and their measurement (or observation) Temporal order means one variable precedes another in time, from left to right. *Types of variables include: independent variables, dependent variables, predictor (antecedent) variables, outcome variables (criterion/response), intervening/mediating variables, and moderating variables.*

Quantitative Theory

A theory in quantitative research is an interrelated set of variables formed into hypotheses, that specify the relationship among variables (typically in terms of magnitude or direction) and it helps to explain or predict phenomena occurring in the world.

Forms of Quantitative Theory

Researchers state their theories in research proposals in several forms, such as a series of hypotheses, logic statements, or visual models. *If-then* statements are another way to explain causal reactions. Visual models are useful in translating variables into a smaller picture.

Writing a Theoretical Perspective into a Quantitative Study

In quantitative studies, the researcher uses theory deductively and introduces it towards the beginning of the proposed study. The researcher tests or verifies a theory by examining hypotheses or questions derived from it. See Table 5 below.

Table 3

Theories in Quantitative Studies

Assumption	Question	Characteristics	Implications for Research
Ontology	What is the nature of reality?	The worldviews and assumptions in which researchers operate in their search for new knowledge	Use participants' quotes and themes in words Provide evidence of different perspectives
Epistemology	What is the relationship between the researcher and those being researched?	The process of thinking. The relationship between what we know and what we see	Researcher spends time in the field with participants
Axiology	What is the role of the values?	How researchers act based on the research they produce- also the criteria of values and value judgments, especially in ethics	Researcher openly discusses values that shape research
Methodology	What is the process of research?	The process of how we seek out new knowledge. The principles of our inquiry should proceed.	Work with particular details before generalizations. Describe in detail the context of the study. Continually revise questions from experiences in the field.
Rhetorical Structure	What is the language or research?	The language is personal, literary, and based on definitions that evolve during the study	Use an engaging style of narrative. May use first-person pronoun

Adapted from Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.

After analyzing the empirical literature, examine prior studies to see what theories the authors used - limit to **one** overarching theory. Then ask yourself, "What explains why the independent variable(s) would influence the dependent variables?" Script out the theory section by following these lead sentences:

"The theory that I will use is ____ (name the theory). It was developed by ____ (identify the origin, source, or developer of the theory), and it was used to study ____ (identify the topics where one finds the theory to be applied). This theory indicates that ____ (identify propositions or hypotheses in the theory). As applied to my study, this theory holds that I would expect my independent variable (s) ____ (state independent variables) to influence or explain the dependent variable(s) ____ (state dependent variables) because ____ (provide rationale based on the logic of the theory)."

Type of Theory Used in Qualitative Research

Qualitative research theories are used as a broad explanation for behavior/attitudes and may be complete with variables, hypotheses, and constructs. Next, researchers use a theoretical lens in qualitative research to guide the researcher as to what issues are important to examine and who should be studied. Examples of qualitative theoretical perspectives are feminist perspective, critical theory, disability inquiry, etc.

Options for Placing Theories into Qualitative Studies

How theory is used affects its placement in the qualitative study. In studies using a cultural theme or theoretical lens, the theory lens, the theory occurs in the opening passages of the study. Typically, in qualitative inquiry, the theory appears at the beginning and may be modified based on participant views

Placing a Theoretical Lens into a Mixed Methods Study

Theory use in mixed methods studies may include using theory deductively, in quantitative theory testing, or in using it deductively as in an emerging qualitative theory or pattern. More uniquely, in a mixed methods study, researchers collect, analyze, and integrate both quantitative and qualitative data using diverse mixed methods designs. This occurs in one of two frameworks: the use of a social science framework and/or the use of a participatory-social justice framework.

Chapter Four Key Points: Writing Strategies and Ethical Considerations

Differing Structures in a Proposal Using Qualitative, Quantitative, and Mixed Methods Designs

Prior to designing a proposal, it is important to have an idea of the general structure of the topics. The structure/order will differ depending on whether you write a quantitative, qualitative, or mixed methods study. Answer the following questions in your proposal:

1. What do readers need to better understand your topic?
2. What do readers need to know about your topic?
3. What do you propose to study?
4. What is the setting and who are the people you will study?
5. What methods do you plan to use to collect data?
6. How will you analyze the data?
7. How will you validate your findings?
8. What ethical issues will your study present?
9. What do preliminary results show about the practicability and value of the proposed study?

Strategies to Employ When Drafting a Proposal

Table 4.1

Format for a Qualitative Constructivist/Interpretive Study

-
- Introduction
 - Statement of the problem (including deficiencies in the literature, and relevance of the study for audiences)
 - Purpose of the study
 - The research questions
 - Procedures
 - Philosophical assumptions about qualitative research
 - Qualitative design
 - Role of the researcher
 - Data collection procedures
 - Strategies for validating findings
 - Proposed narrative structure
 - Anticipated ethical issues
 - Significance of the study
 - Preliminary pilot findings
 - Expected outcomes
 - References
 - Appendices:
 - Interview questions
 - Observational forms
 - Timeline
 - Proposed budget
-

Adapted from Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.

Table 4.2

Format for a Qualitative Transformative Study

- Introduction
 - Statement of the problem (including issues to be addressed, existing literature about the problem, deficiencies in the literature, and relevance of the study for the audiences)
- Procedures
 - Philosophical assumptions or worldview
 - Qualitative research strategy
 - Role of the researcher
 - Data collection procedure
 - Data analysis procedure
 - Strategies for validating findings
 - Proposed narrative structure
 - Anticipated ethical issues
- Preliminary pilot findings
- Significance of the study and transformative changes likely
- References
- Appendices
 - Interview Questions
 - Observational forms
 - Timeline
 - Proposed budget

Adapted from Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.

Table 4.3

Format for a Qualitative Quantitative Study

- Introduction
 - Statement of the problem (issue, existing literature about the problem, deficiencies in the literature, relevance of the study for audiences)
 - Purpose of the study
 - Research questions or hypotheses
 - Theoretical Perspective
- Review of the Literature
- Methods
 - Type of research design
 - Population, sample, and participants
 - Data collection instruments, variables, and materials
 - Data analysis procedures
- Anticipated ethical issues
- Preliminary studies or pilot tests
- Appendices
 - Instruments
 - Timeline
 - Proposed budget

Adapted from Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.

Table 4.4*Format for a Mixed Methods Study*

- Introduction
 - The research problem
 - Existing research on the problem
 - Deficiencies in the literature
 - Relevance of the study to audiences
- Purpose
- Research questions and hypotheses
 - Quantitative questions or hypothesis
 - Qualitative questions
 - Mixed Methods questions
- Philosophical foundations for using mixed methods research
- Literature review
- Methods
 - Definition of mixed methods
 - Type of design and its definition
 - Challenges in using design and how they will be addressed
 - Examples of this design
 - Reference and inclusion of a visual diagram
 - Quantitative data collection
 - Quantitative data analysis
 - Qualitative data collection
 - Qualitative data analysis
 - Mixed methods data analysis procedures
 - Validity approaches
- Researcher's resources and skills
- Potential ethical issues
- References
- Appendices
 - Instruments
 - Protocols
 - Diagram
 - Timeline
 - Budget

Adapted from Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.

Research Tips for Designing the Structure of the Proposal:

1. Specify sections early and develop an outline with something written under each section and refine/go into detail for each.
2. Seek other proposals from your university or chair and study the topics addressed, their order, and level of detail.
3. If your university offers a course on proposal development, take it.
4. Sit down and discuss with your chair and request a proposal to serve as a guide.

Developing a Habit of Writing

A start-stop process interrupts the flow of work, so establish a habit of writing in a regular and continuous way. You should avoid being a “weekend writer” and instead write or engage daily in the process of thinking, collecting information, and reviewing your proposal. Select a time of day, free of distractions. Perhaps write in small, regular amounts, plan beyond daily goals, and share your writing with supportive, constructive friends.

Differences Among Umbrella Thoughts, Big Thoughts, Little Thoughts, and Attention Thoughts in Writing

Consider how your narrative thoughts will enhance readability and guide your reader. There are four types of narrative thought for segments of text:

1. ***Umbrella Thoughts***: general or core ideas one is trying to get across.
2. **Big Thoughts**: - specific ideas or images that fall within the realm of umbrella thoughts and reinforce, clarify, and elaborate on them.
3. ***Little Thoughts***: ideas or images whose chief function is to reinforce big thoughts.
4. ***Attention or Interest Thoughts***: ideas whose purpose is to keep the reader on track, organize ideas, and keep an individual’s attention. Understanding the various types of narrative thoughts will allow for greater clarity and readability for the reader.

Use the hook-and-eye technique to connect words and sentences in your proposal to connect key ideas from sentence to sentence. This allows for coherence, starting on the first page. If sentences do not connect, transition words are needed.

Using the Hook-and-Eye Technique to Assess Consistency in Writing

Example 4.5 *An Illustration of the Hook-and-Eye Technique*

They sit in the back of the room not because they want to but because it was the place designated to them. Invisible barriers that exist in most classrooms divide the room and separate the students. At the front of the room are the "good" students who wait with their hands poised ready to fly into the air at a moment's notice. Slouched down like giant insects caught in educational traps, the athletes and their following occupy the center of the room. Those less sure of themselves and their position within the room sit in the back and around the edge of the student body.

The students seated in the outer circle make up a population whom for a variety of reasons are not succeeding in the American public education system. They have always been part of the student population. In the past they have been called disadvantaged, low achieving, retards, impoverished, laggards and a variety of other titles (Cuban, 1989; Presseisen, 1988). Today they are called students-at-risk. Their faces are changing and in urban settings their numbers are growing (Hodgkinson, 1985).

In the past eight years there has been an unprecedented amount of research on the need for excellence in education and the at-risk student. In 1983 the government released a document entitled A Nation At-Risk that identified problems within the American education system and called for major reform. Much of the early reform focused on more vigorous courses of study and higher standards of student achievement (Barber, 1987). In the midst of attention to excellence, it became apparent the needs of the marginal student were not being met. The question of what it would take to guarantee that all students have a fair chance at a quality education was receiving little attention (Hamilton, 1987; Toch, 1984). As the push for excellence in education increased, the needs of the at-risk student became more apparent.

Adapted from Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.

Principles of Good Writing Prose:

Some basic principles of good prose are:

- Use active voice in scholarly writing (as much as possible)
- Use strong action verbs appropriate for the passage. Lazy verbs lack action, such as "is" or "was."
- Pay close attention to your verb tense and ensure consistency throughout. Prior to IRB approval, all verbs will be future tense.
- Expect to edit and revise drafts and remove any unnecessary words.

* In good writing, the eye does not pause, and the mind does not stumble*

Ethical Issues in the Research Process

Table 4.6

Ethical Issues in Qualitative Research

Where in the Process of Research the Ethical Issue Occurs	Type of Ethical Issue	How to Address the Issue
Prior to Conducting the Study	*Seek university approval	*Submit for institutional review board approval (IRB)
	*Examine professional association standards	*Consult types of ethical standards that are needed in professional areas
	*Gain local permission from site and participants	Identify and go through local approvals; find gatekeeper to help
	*Select a site without a vested interest in outcome of study	*Select sites that will not raise power issues with researchers
	*Negotiate authorship for publication	*Give credit for work done on project; decide on author order
Beginning to Conduct Study	*Disclose purpose of the study	*Contact participants and inform them of the general purpose of the study
	*Do not pressure participants into signing consent forms	*Tell participants that they do not have to sign form
	*Respect norms and charters of indigenous societies	*Find out about cultural, religious, gender and other differences that need to be respected
	*Be sensitive to needs of vulnerable populations	*Obtain appropriate consent
Collecting Data	*Respect the site and disrupt as little as possible	*Build trust, convey extent of anticipated disruption in gaining access
	*Avoid deceiving participants	*Discuss purpose of study and how data will be used
	*Respect potential power imbalances and exploitation of participants	*Avoid leading questions; withhold sharing personal impressions; avoid disclosing sensitive information
	*Do not “use” participants by gathering data and leaving site without giving back	*Provide rewards for participating

Adapted from Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications



Writing about these anticipated ethical issues is required in making an argument for a study as well as being an important topic in the format for proposals. Researchers need to protect their research participants; develop a trust with them; promote the integrity of the research; guard against misconduct and impropriety that might reflect on their organizations or institutions; and cope with new, challenging problems.

Chapter Five Key Points: The Introduction

The Purpose of the Introduction in the Research Study

The introduction is the first passage in a dissertation and sets the stage for the entire project. It establishes the issue or concern leading to the research by conveying information about a problem. Make a good first impression by writing a quality introduction.

5 Components of a Good Introduction:

1. Establishing the problem leading to the study
2. Reviewing the literature about the problem
3. Identifying deficiencies in the literature about the problem
4. Targeting an audience and noting the significance of the problem for this audience.
5. Identifying the purpose of the proposed study

Differences among Introductions for Quantitative, Qualitative, and Mixed Methods Studies

Some differences among quantitative, qualitative, and mixed methods introductions include:

- **Quantitative:** the problem is best addressed by understanding what factors or variables influence an outcome. *For example, in response to worker cutbacks (a problem for all employees), an investigator may seek to discover what factors influence businesses to downsize.*
- **Qualitative:** author describes a research problem that can be best understood by exploring a concept or phenomenon. *For example, urban sprawl (a problem), needs to be explored because it has not been examined in certain areas of the state.*
- **Mixed Methods:** can employ a qualitative or quantitative approach, or a combination, but will lean towards one or the other and the introduction will mirror that emphasis.

The Deficiency Model for Writing an Introduction

The deficiency model of an introduction is an approach to writing an introduction to a research study that builds on gaps existing in the literature. It studies the elements of stating the research problem, reviewing past studies about the problem, indicating deficiencies in these studies, and advancing the significance of the study. It is a good template for writing a quality introduction.

Designing a Good Narrative Hook

To design a good narrative hook, the researcher should use words that draw, engage, or hook the reader to the study. To write a good narrative hook, study first sentences in leading journals in different fields of study. They should include information easily understood by many readers and will stimulate interest and convey an issue relatable to a broad audience.

Identifying a Research Problem

The research problem becomes clear when the researcher asks, “What is the need for this study?” or “What problem influenced the need to undertake this study?”

Writing About the Research Problem in the Introduction

To write about a research problem in the introduction, look at and summarize broad categories/themes, rather than a complete literature review, which will be completed for Chapter Two. This is not meant to be a thorough review of the literature (in the introduction).



Summarizing the Literature about the Research Problem in the Introduction

To summarize the literature about a research problem in the introduction, summarize groups of studies, not individual ones, and make summary points about several studies. Review research studies that use all three approaches and find recent literature from within the last 10 years.

Different Types of Deficiencies that May be Found in Past Literature

Deficiencies in past literature may exist because topics have not been explored with a particular group, sample or population; the literature may need to be replicated or repeated to see if the findings hold, due to mixed results, or voices of underrepresented groups have not been heard in published literature.

Considering Groups Who May Profit or Benefit from the Study

In dissertations, writers often include a specific section describing the significance of the study for select audiences in order to convey the importance of the problem for different groups that may profit from reading and using the study. By including this section, the writer creates a clear rationale for the importance of the study.

Chapter Six Key Points: The Purpose Statement

The Significance of the Purpose Statement in a Research Study

The purpose statement establishes the intent of the entire research study and is the most important statement in the study. It should be clear, specific, and informative. It indicates why you want to conduct the study and what you intend to accomplish.

Elements to be Written into a Qualitative Purpose Statement

A good qualitative purpose statement contains information about the central phenomenon explored in the study, participants in the study, and the research site. It also conveys an emerging design and uses research words from the language of qualitative inquiry. It should: use words such as purpose, intent, study aim, or objective; focus on a single phenomenon; use action words like understand, develop, explore, discover, etc.; use neutral words/phrases ie. “self-expression experiences of individuals” as opposed to “successful self-expression of individuals” ; avoid “useful,” “positive,” and “informing”; provide a general working definition of the central phenomenon; include words denoting the strategy of the inquiry to be used in the data collection/analysis (ethnography, grounded theory, case study, phenomenological, etc.); mention participants in the study; identify the site for the study; as a final thought in the purpose statement, include language that delimits the scope of participation or research sites in the study ie., the study may be limited to women only or the site may be limited to one city. A sample script for drafting a completed purpose statement is as follows:

The purpose (or study aim) of this _____ (strategy of inquiry, such as ethnography, case study, or other type) study is _____ (was? will be?) to _____ (understand? explore? develop? generate? discover?) the _____ (central phenomenon being studied) for _____ (the participants, such as individual, groups, organization) at _____ (research site). At this stage on the research, the _____ (central phenomenon being studied) will generally be defined as _____ (provide general definition).

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A Qualitative Purpose Statement Depends on the Qualitative Strategy of Inquiry

A qualitative purpose statement depends on the qualitative strategy of inquiry due to the associated terms relating the specific strategies...

- Phenomenological Study- “lived experiences,” “portray”
- Case Study- “explore, “factors”
- Ethnography- “participation,” “genre”
- Grounded Theory- “authors plan to explore a phenomenon”

Elements to be Included in Quantitative Purpose Statement

A good quantitative purpose statement includes the variables in the study and their relationship, participants, and research site. A quantitative purpose statement begins with identifying the proposed major variables in a study (independent, intervening, dependent), accompanied by a visual model to clearly identify this sequence, and locating and specifying how the variables will be measured and observed. Finally, the intent of using the variables quantitatively will either be to relate variables or compose samples/groups. It should: include words to signal the intent of the study (purpose, intent, objective); identify the theory, model, or framework; identify independent and dependent variables; use words that connect the independent and dependent variables ie. “the relationship between” or “a

comparison of”; order variables from left to right in the purpose statement, mention the specific type of strategy used in the study (survey, experimental research); reference the participants and site; generally define each key variable, using set and accepted established definitions found in the literature. A sample script for drafting a completed purpose statement is as follows:

The purpose of this _____ (experiment? survey?) study is (was? will be?) to test the theory of _____ that _____ (describes outcomes) or _____ (compares? relates?) the _____ (independent variable) to the _____ (dependent variable), controlling for _____ (mediating or moderating variables) for _____ (participants) at _____ (the research site). The independent variable(s) _____ will be defined as _____ (provide a definition), and the intervening variable(s) _____ (identify the intervening variables) will be defined as _____ (provide a definition).

Adapted from Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.

A Quantitative Purpose Statement Depends on the Quantitative Strategy of Inquiry

A quantitative purpose statement depends on the quantitative strategy of inquiry due to associated terms relating the specific strategies...identification of variables and linking them to establish a connection, terms defined, sample is specified, and type of study is mentioned (experimental, dissertation survey, published survey, etc.)

Elements to be Written into a Mixed Methods Purpose Statement

A good mixed methods purpose statement contains the overall intent of the study, information about both quantitative and qualitative strands of the study, and a rationale of incorporating both strands to study the research problem. It should: begin with words that signal the intent (“The purpose of,” “The study aim is,” or “The intent of”); indicate the overall purpose of the study from a content perspective before mentioning/dividing into qualitative and quantitative; indicate the type of mixed methods design (convergent, explanatory sequential, exploratory sequential, or complex design); and discuss reasons for combining both quantitative and qualitative data. A sample script for drafting a completed purpose statement is as follows:

This mixed methods study will address _____ (overall content aim). A convergent mixed methods design will be used, and it is a type of design in which qualitative and quantitative data are collected in parallel, analyzed separately, and then merged. In this study, _____ (quantitative data) will be used to test the theory of _____ (the theory) that predicts the _____ (independent variables) will _____ (positively, negatively) influence the _____ (dependent variables) for _____ (participants) at _____ (the site). The _____ (type of qualitative data) will explore _____ (the central phenomenon) for _____ (participants) at _____ (the site). The reason for collecting both quantitative and qualitative data is to _____ (the mixing reason).

Adapted from Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.

The Mixed Methods Purpose Statement Depends on the Mixed Methods Strategy of Inquiry

A mixed methods purpose statement depends on the mixed methods strategy of inquiry due to the associated terms relating the two methods...indicate use of both quantitative and qualitative data and identify the theory, specific variables to be analyzed, and the central phenomenon of the qualitative phase of the study.

Chapter Seven Key Points: Research Questions and Hypotheses

Two Forms for Writing Qualitative Research Questions

The two forms for writing qualitative research questions are the central research question and associated sub-questions. Ask one to two central research question(s)- a broad question that asks for an explanation of the central phenomenon or concept in the study. Ask no more than five to seven sub-questions to narrow the focus of the study.

Elements to be written into Qualitative Research Questions

Relate the central question to the specific qualitative strategy of inquiry. Begin the research questions with the words *what* or *how* to convey an open and emerging design. Focus on a single phenomenon or concept. Use exploratory verbs (report, reflect, describe, discover, seek, explore) and (affect, influence, impact, determine, cause, and relate). Expect the research questions to evolve and change during the study in a manner consistent with the assumptions of an emerging design. Use open-ended questions without reference to the literature or theory and specify the participants and research site.

A Qualitative Research Question's Reflection of the Qualitative Strategy of Inquiry

A qualitative research question reflects the qualitative strategy of inquiry by completing all of the elements listed in the preceding paragraph.

Difference between Quantitative Research Questions and Hypotheses

Quantitative research questions inquire about the relationships among variables that the investigator seeks to know, whereas quantitative hypotheses are predictions the researcher makes about the expected outcomes of relationships among variables.

Elements to be Written into Quantitative Research Questions and Hypotheses

A good quantitative research question and hypotheses should: use variables in the research question or hypotheses through either comparison, relation, or description; follow from a test of a theory, independent and dependent variables must be measured separately and not on the same concept; to eliminate redundancy, write only research questions or hypotheses- not both- unless the hypotheses build on the research questions.

Forms of Writing Quantitative Hypotheses

If hypotheses are used, there are two forms: (a) null approach and (b) alternative. A null hypothesis represents the traditional approach and makes a prediction that, in the general population, no relationship or significance exists between groups on a variable. The alternative or directional hypothesis has the researcher making a prediction about the expected outcome, based on prior literature and studies on the topic suggesting a potential outcome.

Forms of Writing Quantitative Research Questions

Typically, quantitative research questions begin with descriptive questions followed by the inferential questions that relate variables or compare groups.

Writing Mixed Methods Research Questions

Researchers write mixed methods research questions by including at least three research questions: the qualitative question, the quantitative question or hypotheses, and a mixed methods question. The mixed



methods question represents what the researcher needs to know about the integration or combination of the quantitative and qualitative data. It is best to present the questions into different sections to draw the reader's attention to the different strands coming together in a mixed methods study.

Chapter Eight Key Points: Quantitative Methods

Survey Design

A survey design provides a quantitative description of trends, attitudes, and opinions of a population, or tests for associations among variables of a population, by studying a sample of that population.

Components of a Survey Method Plan

Table 8.1

Checklist of Questions for Designing a Survey Method

-
1. Is the purpose of the survey stated?
 2. Are the reasons for choosing the design mentioned?
 3. Is the nature of the survey (cross-sectional vs. longitudinal) identified?
 4. Is the population and its size mentioned?
 5. Will the population be stratified? If so, how?
 6. How many people will be in the sample? On what basis was this size chosen?
 7. What will be the procedure for sampling these individuals (e.g. random, nonrandom?)
 8. What instrument will be used in the survey? Who developed the instrument?
 9. What are the content areas addressed in the survey? The scales?
 10. What procedure will be used to pilot or field-test the survey?
 11. What is the timeline for administering the survey?
 12. What are the variables in the study?
 13. How do these variables cross-reference with the research questions and items on the survey?
-

Adapted from Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.

Types of Survey Designs

The types of survey designs include longitudinal design and cross-sectional design.

Validity and Reliability Regarding Instrument Scores

In regards to validity in instrumentation in qualitative data if using an existing instrument, one must report the efforts by authors who have used the instrument and tell whether one can draw meaningful and useful inferences. In regards to reliability, one must ensure consistency and repeatability of an instrument.

Response Bias in Survey Designs

Response bias in survey research is the effect of nonresponses on survey instruments. Bias means that if nonrespondents had responded, their responses would have substantially changed the overall results.

Descriptive and Inferential Analysis

Descriptive analysis is provided for all independent and dependent variables in the study and should indicate the means, standard deviations, and range of scores. Inferential analysis relates variables or compares groups in terms of variables so that inferences can be drawn from the sample to a population.

Interpreting Results

An interpretation in quantitative research means that the researcher draws conclusions from the results for the research questions, hypotheses, and the larger meaning of the results. First, report how the results addressed the research question or hypotheses; next, report two forms of practical evidence of the results:

(a) the effect size and (b) the confidence interval; finally, draft a conclusion section and discuss implications of the results and determine if they are consistent with, refute, or extend previous studies' results.

Experimental Design

An experimental design follows a standard form: (a) participants and design (b) procedure, and (c) measures. To differentiate from a survey design, random assignment of participants to groups is critical in order to be a true experiment.

Components of an Experimental Method Plan

The components of an experimental method plan include: participants (selection of, assignment to, and number of), variables (with manipulation check measure), instrumentation and materials, experimental procedures, threats to validity, the procedure, data analysis, and interpreting results and writing a discussion section.

Types of Experimental Designs

- Pre-experimental
- Quasi-experiment
- True experiment

Random Sampling v. Random Assignment

The difference between random sampling and random assignment is that random assignment is a technique for placing participants into study conditions of a manipulated variable of interest and a random sampling, whereas a random sampling means each individual has an equal probability of being selected.

Drawing a Diagram for Experimental Procedures

To draw a diagram for an experimental procedure, first a standard notation system needs to be used in the figure. X represents an exposure of a group to an experimental variable/event to be measured, O represents an observation/measurement recorded on an instrument, and R represents random assignment.

Threats to Internal and External Validity

Threats to internal and external validity include: internal threats are experimental procedures, treatments, or experiences of the participants that threaten the researcher's ability to draw correct inferences from the data about population in an experiment. External validity threats arise when experimenters draw incorrect references from the sample data to other persons, other settings, and/or past or future situations.

Procedures for an Experiment

The procedure for an experiment is as follows:

Discuss a step-by-step approach for the procedure in the experiment.

1. Administer measures of the dependent variable or a variable closely correlated with the dependent variable to the research participants.
2. Assign participants to matched pairs on the basis of their scores on the measures in Step One.
3. Randomly assign one member of each pair to the experimental group and one to the control group.
4. Expose the experimental group to the experimental treatment and administer no treatment or an alternative treatment to the control group.
5. Administer measures of the dependent variables to the experimental and control groups.
6. Compare the performance of the experimental and control groups on the posttest(s) using tests of statistical significance.

Chapter Nine Key Points: Qualitative Procedures

Components of a Qualitative Procedure Plan

Table 9.1

Checklist of Questions for Designing a Qualitative Procedure

- Are the basic characteristics of qualitative studies mentioned?
- Is the specific type of qualitative design to be used in the study mentioned? Is the history of, and applications for the design mentioned?
- Does the reader gain an understanding of the researcher's role in the study (past historical, social, cultural experiences, personal connection to sites and people, steps in gaining entry, and sensitive ethical issues) and how they may shape interpretations made in the study?
- Is the purposeful sampling strategy for sites and individuals identified?
- Are the specific forms of data collection mentioned and a rationale given for their use?
- Are the procedures for recording information during the data collection detailed (such as protocols)?
- Are the data analysis steps identified?
- Is there evidence that the researcher has organized the data for analysis?
- Has the researcher generally reviewed the data to obtain a sense of the information?
- Has the researcher coded the data?
- Have the codes been developed to form a description and/or to identify themes?
- Are the themes interrelated to show a higher level of analysis and abstraction?
- Are the ways that the data will be represented mentioned- such as in tables, graphs, and figures?
- Have the bases for interpreting the analysis been specified (personal experiences, the literature, questions, action agenda?)
- Has the researcher mentioned the outcome of the study (developed a theory, provided a complex picture of themes?)
- Have multiple strategies been cited for validating the findings?

Adapted from Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.

Characteristics of Qualitative Research

Basic characteristics of qualitative research include:

- Natural setting
- Researcher as key instrument
- Multiple sources of data
- Inductive and deductive data analysis
- Participants' meanings
- Emergent design
- Reflexivity
- Holistic account

Five Popular Qualitative Strategies of Inquiry

- Narrative
- Phenomenology
- Ethnography
- Case Study
- Grounded Theory

Including Reflexivity in a Proposed Study

Researchers include reflexivity into a proposed study by writing notes about your personal experiences during the study as memos that may later become codes and themes.

Purposeful Selection

The idea behind purposeful selection of participants in qualitative research is that it will help the researcher understand the problem and research question.

Advantages and Limitations of Qualitative Data (see Table 9.2 on next page)

Table 9.2
Qualitative Data Collection Types, Options, Advantages, and Limitations

Data Collection Types	Options Within Types	Advantages of the Type	Limitations of the type
Observations	*Complete participant- researcher conceals role	*Researcher has a firsthand experience with participant	*Researcher may be seen as intrusive
	*Observer as participant-role of researcher is known	*Researcher can record information as it occurs	*Private information may be observed that the researcher cannot report
	*Participant as observer-observation role secondary	*Unusual aspects can be noticed during observation	*Researcher may not have good attending and observing skills
	*Complete observer- researcher observes without participating	*Useful in exploring topics that may be uncomfortable for participants to discuss	*Certain participants may present special problems in gaining rapport
Interviews	*Face-to-face-one-on-one, in-person interview	*Useful when participants cannot be directly observed	*Provides indirect information filtered through the views of interviewees
	*Telephone-researcher interviews by phone	*Participants can provide historical information	*Provides information in a designated place rather than the natural field setting
	*Focus group-researcher interviews participants in a group	*Allows researcher control over the line of questioning	*Researchers presence may bias responses
	*Virtual online interview	*Allows researcher control over the line of questioning	*Not all people are equally articulate and perspective *The documents may not be authentic or accurate

Table 9.2

Qualitative Data Collection Types, Options, Advantages, and Limitations Cont'd

Data Collection Types	Options Within Types	Advantages of the Type	Limitations of the Type
Documents	*Public documents-minutes of meetings or newspapers	*Enables a researcher to obtain the language and words of participants	*May be protected information unavailable to public or private access
	*Private documents-journals, diaries, or letters	*Can be accessed at a time convenient to researcher-an unobtrusive source of information *Represents data to which participants have given attention As written evidence, it saves a researcher time and expense of transcribing	*Requires the researcher to search out the information in hard-to-find places *Requires transcribing or optically scanning for computer entry *Materials may be incomplete *The documents may not be authentic or accurate
Audiovisual Digital Materials	*Photographs	*May be an unobtrusive method of collecting data	*May be difficult to interpret
	*Videotapes	*Provides an opportunity for participants to directly share their reality	*May not be accessible publicly or privately
	*Art objects		
	*Computer messages	*It is creative in that it captures attention visually	*The presence of an observer may be disruptive and affect responses
	*Sounds		
	*Film		

Adapted from Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.

Recording Qualitative Data

Qualitative researchers record their data following observation protocol or interview protocol. These include personal thoughts, demographic information, notes about the setting, etc.

Process of Qualitative Data Analysis

Step One: Organize and prepare the data for analysis

Step Two: Read or look at all the data

Step Three: Start coding all the data

Step Four: Generate a description and themes

Step Five: Represent the description and themes

Distinguishing Between Generic Forms of Data Analysis Within Strategies of Inquiry

The general form of data analysis follows the 5 steps listed above; however, analysis within strategies of inquiry are specific to the strategy selected. When implementing strategies specific to a selected strategy, explain the specific steps within the strategy in your data analysis section (ie. case study- detailed description of setting or individuals, followed by analysis of the data for themes).

Strategies for Establishing Validity for Qualitative Studies

Strategies for establishing validity in a qualitative study include: to establish trustworthiness, authenticity, and credibility

Use multiple validity procedures

- triangulate
- member checking
- rich, thick descriptions
- clarify bias the researcher brings to the study
- present negative or discrepant information
- spend prolonged time in the field
- peer debriefing
- external auditor

Writing Strategies Used with a Qualitative Approach

The basic procedure in reporting results of a qualitative study is to develop descriptions and themes from the data.

Narrative Research- chronological narrative of an individual's life

Phenomenology- a detailed description of participant experiences

Grounded Theory- a theory generated from the data

Ethnography- a detailed portrait of a culture-sharing group

Case Study- an in-depth analysis of one or more cases

Chapter Ten Key Points: Mixed Methods Procedures

Components of a Mixed Methods Procedure Plan

Table 10.1

Checklist for Designing Mixed Methods Procedure

-
- ___ Is a basic definition of mixed methods research provided?
 - ___ Are the reasons given for using both quantitative and qualitative data?
 - ___ Does the reader have a sense for the potential use of mixed methods research?
 - ___ Are the criteria identified for choosing a mixed methods design?
 - ___ Is the mixed methods design identified?
 - ___ Is a visual model presented that illustrates the research strategy?
 - ___ Is the proper notation used in presenting the visual model?
 - ___ Are procedures of data collection and analysis mentioned as they relate to the chosen design?
 - ___ Are the sampling strategies for both qualitative and quantitative data collection mentioned for the design?
 - ___ Are specific data analysis procedures indicated for the design?
 - ___ Are the procedures for validation mentioned for the design and for the quantitative and qualitative research?
 - ___ Is the narrative structure of the final dissertation mentioned, and does it relate to the type of mixed methods design being used?
-

Adapted from Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.

Relating Timing, Weight, Mixing, and Theory to a Mixed Methods Design

Note the challenges of this design: the need for extensive data collection, the time-sensitive nature of analyzing both qualitative and quantitative data, and the requirement for the researcher to be familiar with both forms of research. Additionally, the complexity of the design calls for clear, visual models to understand the details and flow of research activities in this design.

Six Models for Mixed Methods Studies

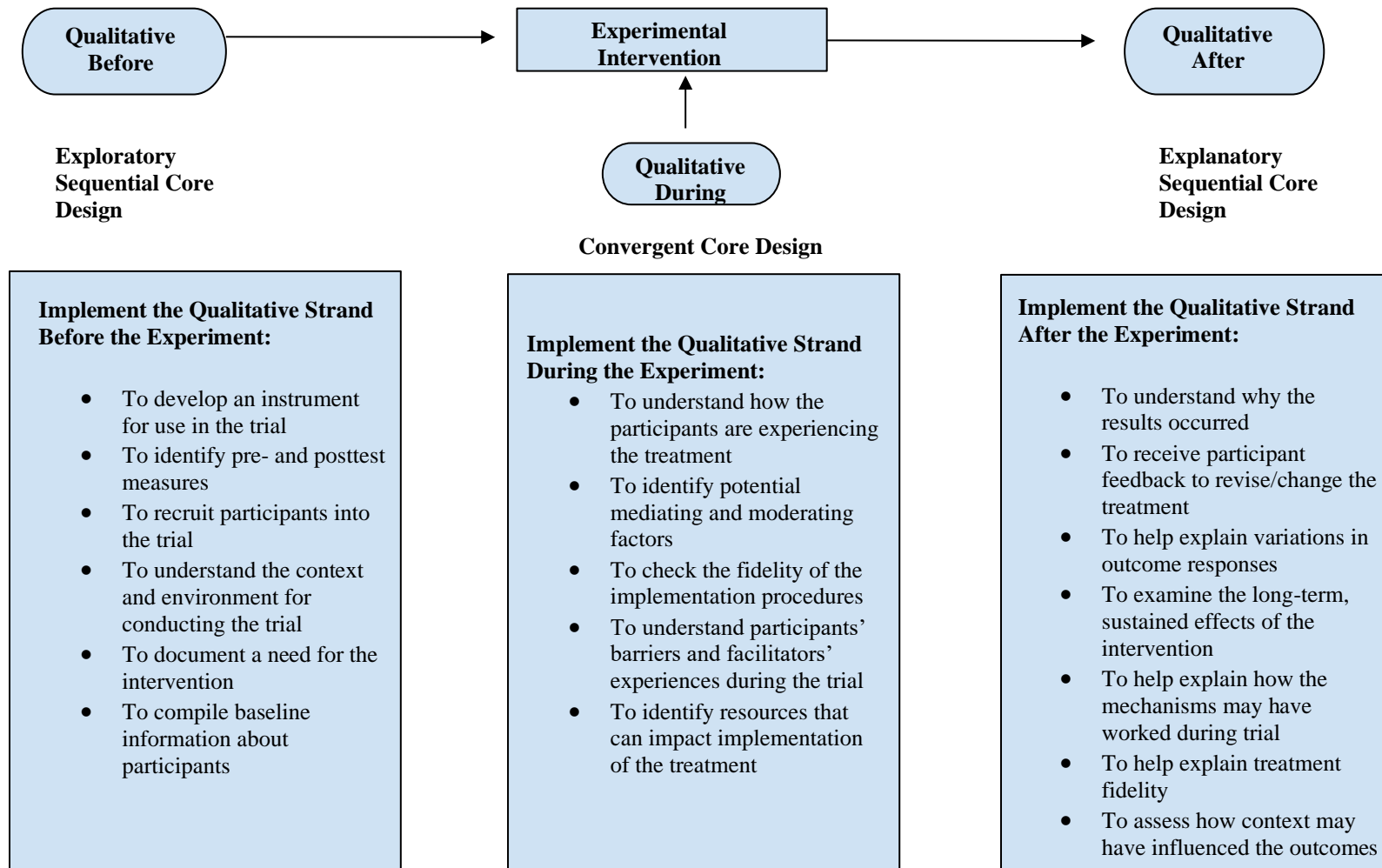
1. Convergent design
2. Explanatory design
3. Exploratory design
4. Intersecting mixed methods within a primary quantitative/quantitative research design
5. Intersecting mixed methods within another methodology
6. Intersecting mixed methods within a theoretical framework

Drawing a Visual Model of a Mixed Methods Procedure Using Proper Notation

Mixed method design studies require appropriate notation to be used in the visual model

Table 10.2

Mixed Methods Intervention Design





Procedures to Analyze Data in a Mixed Methods Study

One approach is the deductive approach, where researchers establish the cases at the outset of the study and document the differences in the cases through the qualitative and quantitative data. The other approach is the inductive approach, where the researcher collects and analyzes both quantitative and qualitative data and then forms cases- often multiple cases- and then makes comparisons among the cases.

Different Writing Structures Available for Mixed Methods Research

Table 10.3

Choosing a Mixed Methods Design

Reasons for Choosing Mixed Methods	Expected Outcomes	Recommended Mixed Methods Design
*Comparing different perspectives down from quantitative and qualitative data	*Merging the two databases to show how the data convergent or diverge	*Convergent parallel mixed design
*Explaining quantitative results with qualitative data	*A more in-depth understanding of the quantitative results	*Explanatory sequential mixed methods design
*Developing better measurement instruments	*A test of better measures for a sample of a population	*Exploratory sequential mixed methods
*Understanding experimental results by incorporating perspectives of individuals	*An understanding of participant views within the context of an experimental intervention	*Embedded mixed methods design
*Developing an understanding of needed changes for a marginalized group	*A call for action	*Transformative mixed methods design
*Understanding the need for an impact of an intervention program	*A formative and summative evaluation	*Multiphase mixed methods design

Adapted from Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.



References

Creswell, J. W., & Creswell, J. D. (2018). *Research design* (5th ed.). SAGE Publications.