8 Aligning the Problem, Research Objectives, Research Questions, and Research Design

Learning Outcomes

As you read this chapter, think about:

- What elements constitute good alignment.
- How it will affect your study if any element is misaligned.
- How you would test your study for misalignment.
- How you would remedy the misalignment.

Introduction

In Chapter 8, we will discuss alignment issues, which are a common problem identified in preliminary dissertation descriptions (such as a Letter of Intent, prospectus, or concept paper) and dissertation proposals. Alignment refers to the congruency and consistency among all components of the study, from the topic to the research methodology and everything in between—research objectives, research questions, hypotheses (if appropriate), research method, and research design.

In Chapter 8, we will discuss:

- why alignment is important,
- what problems may result from misalignment,
- how to avoid misalignment,
- how to recognize misalignment (the telltale signs and symptoms), and
- how to correct misalignment.

8.1 Why Alignment Is Important

Good alignment across your study components is critical for several reasons.

- A well-aligned study will have **methodological rigor**. Your research will be of higher scholarly quality, and the knowledge to be generated will be of more value to your discipline.
- A well-designed study will reflect that you have a solid understanding of the nature of the proposed research and the application of a given research method and research design to your topic.
- A well-aligned study will support implementing the research plan with fidelity to the research design, helping you to achieve your research objectives and answer your research questions.
- A well-aligned Letter of Intent, prospectus, concept paper, or proposal is much more likely to be approved by your chair, committee, or research review board, allowing you to move forward with your dissertation research.

Before getting into detail about the characteristics of a well-aligned study, let's take a look at Kim's study on m-learning. Consider the various components of her study (general problem, specific problem, knowledge gap, research objectives, research questions, research method, and research design) and how well they align with each other. Note the congruence and consistency throughout the descriptions.

Tutorial

Example of a Well-Aligned Study

M-learning (learning with the use of mobile devices such as smart phones and tablet computers) is an innovative and rapidly emerging field, with promising applications within the higher education system (Park, 2011; Rosman, 2008; Solvberg & Rismark, 2012). The general problem is that the rate of innovation relative to mobile learning technology and m-learning applications is outpacing the research necessary to understand the effectiveness of m-learning embedded in higher education environments (James, 2011; Koszalka & Ntloedibe-Kuswani, 2010; Rajasingham, 2011). James (2011) underscored this concern, explaining that demand from tech-savvy students pressures institutions to implement m-learning programs before sound theoretical frameworks and pedagogy are in place.

The specific problem is that leaders in many universities have created or adopted m-learning applications without a research basis regarding who is using these m-learning applications, to what extent, and for what purpose or objectives. Published research has focused largely on the technological aspects of m-learning, such as the mobile devices and mobile applications themselves (Elias, 2011). A heavy emphasis on m-learning technology at the expense of a sound understanding of the m-learner, user experience, teacher/learner interaction, and learning outcome has resulted in a healthy skepticism with regard to the effectiveness of m-learning as a long-term strategy for higher educational institutions (Rajasingham, 2011). Continuing to innovate technologically in the absence of such an understanding results in institutions of higher education expending considerable amounts of time, effort, and funding without fully harnessing the power of m-learning (Koszalka & Ntloedibe-Kuswani, 2010) with regard to either the learner or the institution.

Bridging the gap between the acceptance of m-learning technology and the acceptance of m-learning as a viable and valuable means of educating students is an essential step forward if use of m-learning is to become widespread in higher education over the long term (Liu et al., 2010). Higher education leaders may use the knowledge gained from the current study to inform the creation and effective use of m-learning applications in their institutions. Understanding who is using m-learning applications, to what extent, and for what purposes or objectives will generate information to address a knowledge gap in the scholarly literature about m-learning.

The research objectives of this qualitative case study are to understand (a) who is using m-learning technology in the classroom, (b) the frequency and degree of usage of m-learning, (c) how faculty are using the technology, and (d) for which purposes or learning objectives. The sample will include 30 tenured and nontenured full-time instructors from business, social sciences, science, and humanities. Data sources will include interviews, classroom observations, and review of course syllabi and lesson plans.

The research questions that will guide the study are:

> **RQ1:** *What categories of faculty are using m-learning technology in the classroom, by discipline, subject matter, and demographic groups?*

> **RQ2:** *How often and to what extent do the faculty use m-learning technology?*

> **RQ3:** *How do faculty use the technology to support learning?*

> **RQ4:** *What are the different purposes and types of learning objectives targeted through use of m-learning technology?*

Andersen, K. (2013). Perceived user experience associated with m-learning: An exploratory case study at a graduate university *(Unpublished doctoral dissertation). Denver, CO: University of the Rockies.*

The specific problem of leaders creating or adopting m-learning applications without a research basis aligns with the general problem regarding the rate of innovation: m-learning is outpacing research knowledge about its effectiveness.

The research objectives focus on generating information that will contribute to addressing the identified knowledge gap.

The research method and research design are appropriate to achieve the research objectives. The proposed population has appropriate knowledge about the phenomenon of interest to contribute meaningful data.

The use of multiple data sources is consistent with case study research.

8.2 Problems That May Result From Misalignment

Poor alignment across your study components is problematic in several ways.

- A poorly aligned study will lack methodological rigor and reflect a lack of understanding of the nature of your research and of the application of a given research method and research design to your topic.
- A poorly aligned study will not generate valuable information to achieve your research objectives or answer your research questions.
- A poorly aligned Letter of Intent, prospectus, concept paper, or proposal will not be approved by your chair, committee, and/or research review board, leading to delays in moving forward with your dissertation research.

Before exploring poorly aligned studies further, take a look at Barb's study on high recidivism rates for youth in juvenile justice settings. Consider the various components of Barb's study (general problem, specific problem, knowledge gap, research objective, research question, hypotheses, research method, and research design) and where they do not align well with each other. Note the incongruence and inconsistencies throughout the descriptions.

Tutorial

Example of a Poorly Aligned Study

The research objective and the research question do not align with the specific problem regarding either the effectiveness of occupational training or life skills training, and instead focus on therapy.

Experimental studies typically involve between-group (treatment and control) or within-group (pre-test and post-test) comparisons to examine the effectiveness of an intervention. Barb's study is not comparative and lacks an intervention; instead, Barb is focusing on existing relationships between variables.

Barb's specific problem pertains to ineffective efforts to reduce recidivism through occupational training and a lack of published research on the effectiveness of a promising curriculum. However, Barb's research objective is to examine the correlation between hours of therapy and recidivism.

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The general problem is the high recidivism rates for youth in juvenile
justice settings, meaning that too many youth do not make a successful
transition back into their community and school, instead ending up
reoffending and returning to the juvenile justice system or becoming
incarcerated adults. The specific problem is that efforts to reduce
recidivism through occupational training have been ineffective in
achieving that goal. No research has been published to date on the
effectiveness of a promising life skills curriculum, leaving leaders
hesitant to adopt it.

The objective of this quantitative experiment is to examine the
correlation between hours of therapy per week and recidivism among
juvenile offenders. Teachers at juvenile justice programs in
Massachusetts will be asked to complete a web-based survey to indicate
the number of hours a week their students receive therapy and the number
of times they have been committed to a juvenile detention setting.

The research question is,

        What is the relationship between the type of therapy
        and recidivism for juvenile and adult offenders?
```

Barb's research objective and research question do not pertain to examining the effect of an intervention on recidivism; instead they focus on the association between two variables.

The comparative research question, while aligned with an experimental design, does not align with examining the effectiveness of a life skills curriculum on recidivism of youth.

The variables in her research objective and research question are not consistent; in the research objective, she refers to hours of therapy, whereas in the research question, she focuses on the type of therapy.

(continued)

Example of a Poorly Aligned Study *(continued)*

The alternative hypothesis is associative, not comparative, and pertains to a new variable, participating in group therapy, which is not part of the proposed study.

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The hypotheses are:

    H₀: There is no difference between juveniles and adults
    in the hours of therapy received and recidivism, as
    measured by number of jail terms.

    Hₐ: Being in group therapy is related to lower
    recidivism.
```

Barb's null hypothesis pertains to differences between juveniles and adults, whereas the study focus is on juveniles.

8.3 Avoiding Misalignment

The best way to avoid misalignment is to make sure that you align the choices you make in each step in the development of your study with decisions you've already made about your study (see Figure 8.1). In order to avoid misalignment:

- Your *research objectives* must be aligned with (i.e., consistent with) the *specific problem* you've identified that drives the need for your study, and the *knowledge gap* that your research is intended to address.
- Your *research questions* must be aligned with your *research objectives*.
- Your *hypotheses* (if used) must be aligned with your *research questions*.
- Your *research method* must be appropriate to and consistent with your *research objectives* and the nature of your *research questions*.
- Your *research design* must be appropriate to and consistent with your *research method*.
- Your *research methodology* must be appropriate to and consistent with your *research design*.

In Chapter 7, we discussed how to differentiate between different methods and designs, and how to determine which method and design is appropriate to a given research study. We also provided an overview of which research methodologies aligned with which types of research. The best way to ensure alignment of your research methodology to your chosen research design is to become deeply familiar with that specific research design and its application by reading major and foundational works using that research design.
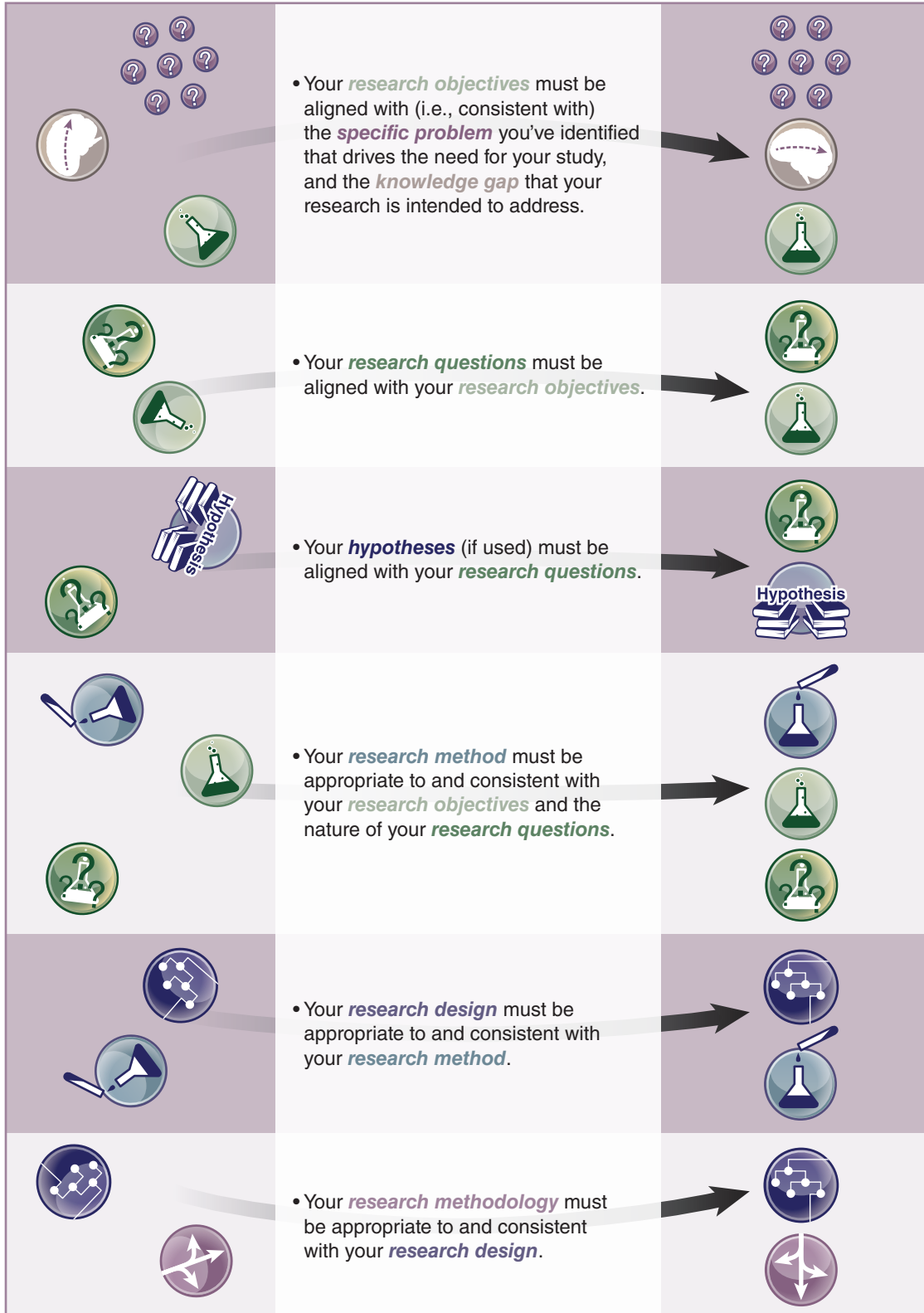
TIP An alignment table such as that in the following Tutorial is one tool you can use to ensure the various elements of your study align.

To help avoid misalignment in your own study, complete the Tutorial "Alignment Check."

Figure 8.1: Aligning your study

Making sure the different aspects of your study are in alignment with each other is like putting together a puzzle. Each step must be in alignment with the decisions you've already made about your study.

- Your *research objectives* must be aligned with (i.e., consistent with) the *specific problem* you've identified that drives the need for your study, and the *knowledge gap* that your research is intended to address.

- Your *research questions* must be aligned with your *research objectives*.

- Your *hypotheses* (if used) must be aligned with your *research questions*.

- Your *research method* must be appropriate to and consistent with your *research objectives* and the nature of your *research questions*.

- Your *research design* must be appropriate to and consistent with your *research method*.

- Your *research methodology* must be appropriate to and consistent with your *research design*.

Tutorial

Alignment Check

The alignment table provided here is a tool you can use to help you avoid misalignment of the elements in your study. (Go to your eBook to access a blank alignment table that you can fill in.) As demonstrated in the table, enter the components (elements) of your proposed study into the cells, along with a description of each. Then analyze and evaluate the alignment of each of the components with the other elements of your study. Save your work on this table—we will return to it in Section 8.5.

Element	Description	Alignment analysis: aligned?	Explanation
Problem statement	*The problem statement*	*Are the general and specific problems you identified related to the knowledge gap?*	*Describe any issues with alignment.*
		Are the general and specific problems you identified addressed by the research objectives and research questions?	*Describe any issues with alignment.*
Knowledge gap	*Description of the knowledge gap*	*Is the knowledge gap identified related to the specific problem?*	*Describe any issues with alignment.*
Research objectives	*List of the research objectives*	*Will completing the research objectives help solve the specific problem?*	*Describe any issues with alignment.*
		Will completing the research objectives help fill the knowledge gap?	*Describe any issues with alignment.*
Research questions	*List of the research questions*	*Will answering the research questions help solve the specific problem?*	*Describe any issues with alignment.*
		Will answering the research questions help fill the knowledge gap?	*Describe any issues with alignment.*
		Will answering the research questions help complete the research objectives?	*Describe any issues with alignment.*
Research method	*Description of the research method*	*Can this research method be used to answer the research questions?*	*Describe any issues with alignment.*
		Can this research method be used to complete the research objectives?	*Describe any issues with alignment.*
Research design	*Description of the research design*	*Can this research design be used to answer the research questions?*	*Describe any issues with alignment.*
		Can this research design be used to complete the research objectives?	*Describe any issues with alignment.*

Alignment Check *(continued)*

Element	Description	Alignment analysis: aligned?	Explanation
Research methodology	*Description of the research methodology*	*Can the research methodology be used for this type of method and design?*	*Describe any issues with alignment.*

8.4 Recognizing Misalignment

Students often struggle at first to recognize misalignment among the various study components.

For example, Francisco's specific problem pertains to the prevalence of self-injury behaviors, such as cutting, and how they interfere with first-year college students' adjustment to college. He identified a literature gap regarding effective treatments for eating disorders for young adults transitioning to college. Francisco's research objective is to determine if a new type of group therapy decreases the frequency of depressive symptoms for first-year college students. His research question pertains to whether a new type of therapy for first-year students with eating disorders leads to better adjustment to school. Francisco included a null and alternative hypothesis pair pertaining to decreases in depressive symptoms for college students who attend a new group therapy compared to students who receive traditional individual therapy. The proposed research method is qualitative, and the research design is quasi-experimental. The research methodology is as follows: The proposed population and sample size is 20 students, 10 of whom are attending group therapy and 10 of whom are in individual sessions. Francisco proposes using an interview guide to collect and analyze narrative data about students' reflections on how therapy is helping them to adjust to school. The data analysis plan focuses on discovering patterns and themes in the data.

Here are some telltale signs and symptoms of misalignment in Francisco's study:

- Mismatch between the specific problem and the research objective.
- Mismatch between the knowledge gap to be addressed and the research objective to be achieved.
- Mismatch between the focus and intent of the research objective and the research question.
- Mismatch between the research question and the hypotheses (quantitative or mixed methods study).
- Mismatch between the type of research method and the nature of the research objective and the research question.
- Mismatch between the research method and the research design.
- Mismatch between the research methodology and the proposed research method and design.

More detail about these points is provided in Table 8.1.

Table 8.1: Alignment analysis of Francisco's study

Element	Description	Alignment analysis: aligned?	Explanation
Problem statement	Specific problem pertains to the prevalence of self-injury behaviors and how they interfere with first-year college students' adjustment to college.	No	Specific problem focuses on one topic, but the research objective focuses on a different but related topic.
Knowledge gap	Literature gap regarding effective treatments for eating disorders for young adults transitioning to college.	No	Achieving the research objective will not generate information to address the identified knowledge gap.
Research objective	*To determine if a new type of group therapy decreases the frequency of depressive symptoms for first-year college students.*	No	Achieving the research objective will not address the specific problem or the literature gap.
Research question	Pertains to whether a new type of therapy for first-year students with eating disorders leads to better adjustment to school.	No	Achieving the research objective would not generate an answer to the research question.
Hypotheses	Pertains to decreases in depressive symptoms for college students who attend a new group therapy compared to students who receive traditional individual therapy.	No	These hypotheses are not appropriate to or consistent with the research question in terms of the variables and their relationships or comparisons; testing the hypotheses will not generate answers to the research question.
Research method	Qualitative	No	The research objective and research question both pertain to examining the effect of an intervention on first-year college students. A qualitative method is not appropriate to examine the effect of an intervention on an outcome.
Research design	Quasi-experimental	No	A quasi-experimental research design is a type of quantitative research design that falls into the category of experimental research. A quantitative research design is not appropriate to or consistent with a qualitative research method. If the research method is switched to quantitative, a quasi-experimental design might be appropriate. A mismatch between the research method and the research design will prevent implementing a study using the appropriate methodology.

(continued)

Table 8.1: Alignment analysis of Francisco's study *(continued)*

Element	Description	Alignment analysis: aligned?	Explanation
Research methodology	Sample size is 20 students, 10 of whom are attending group therapy and 10 of whom are in individual sessions. An interview guide will be used to collect and analyze narrative data about students' reflections on how therapy is helping them to adjust to school. Data analysis plan focuses on discovering patterns and themes in the data.	No	The sample size, instrumentation, and data collection and analysis techniques are not appropriate to a quantitative experimental study. By using the proposed methodology, Francisco could not implement his study with fidelity to the quantitative method or the quasi-experimental design.

In Section 8.5, we will discuss how to correct misalignment. But before you can correct misalignment, you must first assess your study components, element by element, for congruence to identify where misalignment exists. Let's take a look at two more studies, one qualitative and one quantitative. (You may find that both of these study descriptions are hard to follow. The main reason for this difficulty is because so many of the elements are misaligned.)

Tutorial

Qualitative Study Example

The general problem is that athletes who fail to perform at their best consistently risk losing out on opportunities for the personal rewards of competitive success as well as the financial gains of the professional ranks of sport (Jackson & Wrigley, 2004; Jokela & Hanin, 1999). The failure of amateur athletes to attain professional rank is sometimes a matter of consistency in peak performance (Jokela & Hanin, 1999; MacNamara, Button, & Collins, 2010). Peak performance inconsistency results in a failure to capitalize on absolute potential through maximizing relative performance regularly (Gee, 2010). The specific problem is the limited amount of research assessments of idiosyncratic subjective emotional states of athletes' performances (Fletcher & Sarkar, 2012; Hanin, 2003). Deeper investigation into the distinguishing features of peak performance (such as temporal perception) may not only eliminate confusion between peak performance, peak experience, and flow in the current research, but could also lead to opportunities for improving interventions with athletes (Boes, Harung, Travis, & Pensgaard, 2012).

The objective of this qualitative phenomenological research study is to understand the essence of the meaning of temporal cognitive awareness among 20 combat sports athletes during peak performance periods. A phenomenological research methodology will be applied to the managers of 20 combat sport athletes or until saturation occurs from among a larger pool of randomly chosen managers of athletes having had a peak performance experience within the past 5 years. Understanding the essence of the meaning ascribed to temporal perception distortion among sports athletes may guide future investigations or enlighten current interventions into peak performance states. However, direct

(continued)

Qualitative Study Example *(continued)*

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access to the athletes would be difficult to obtain; therefore, their managers
will be interviewed since they have close personal knowledge of the athletes'
experiences.

The proposed research will focus on the essence of the temporal perception
distortion experience associated with peak performance experiences of combat
athletes. The research question is, what are the deep experiential elements
(cognitive, affective, and behavioral) of temporal perception distortion
during a peak performance episode by combat sport athletes as viewed by their
managers? Managers will be asked to share in detail through interview responses
and autobiographies their experience of the athletes' peak performances. This
questioning will form the basis of the phenomenological research method employed
to investigate the manager's perceptions of combat sport athletes' experiences
during peak performances. Interview answers may illuminate the realities and
meanings of the athletes' lived experiences. Analysis will be conducted on the
resulting transcripts to discover themes and key constructs of the meanings
associated with the experiences.

Answers to this research question may help researchers and applied sport
psychology professionals gain greater understanding of the subjective experience
during these temporal episodes of peak performance (as distinctive from peak
experiences and flow). This qualitative knowledge of temporal perception
distortion during combat sport competition may open doors to further research
investigation and potentially shed light on current applied methods of mental
skills training for peak performance.
```

An analysis and an evaluation of how well the elements are aligned in the example are provided in this alignment table.

Element	Description	Alignment analysis: aligned?	Explanation
Problem statement	Athletes who fail to perform at their best risk losing opportunities for personal and financial rewards. Confusion in research literature between peak performance, peak experience, and flow.	No	Problem does not support the research objective or the phenomenological research design.
Knowledge gap	Limited amount of research about idiosyncratic subjective emotional states of athletes' performances.	No	Research objective does not align with the knowledge gap.
Research objective	*To understand the essence of the meaning of temporal cognitive awareness among 20 combat sports athletes during peak performance periods.*	No	Will not generate knowledge needed to address the problem or the knowledge gap.

Qualitative Study Example *(continued)*

Element	Description	Alignment analysis: aligned?	Explanation
Research question	*What are the deep experiential elements (cognitive, affective, and behavioral) of temporal perception distortion during a peak performance episode by combat sport athletes as viewed by their managers?*	No	Will not guide the study in a way that will reveal new knowledge to address the problem, the knowledge gap, or the research objective. The focus does not align with a phenomenological research design. Managers cannot observe these elements in their athletes.
Research method	Qualitative	Yes	Appropriate to all elements.
Research design	Phenomenological	No	While aligned with the research objective, a phenomenological design will not generate the information needed to address the problem or the knowledge gap.
Research methodology	Random selection of managers of combat sport athletes who will be interviewed about the experiences of the athletes they manage. Analysis will reveal themes and key constructs of the meanings associated with the experiences.	No	Random selection is typically not used in qualitative research. The goal should not be representativeness of the sample, but rather obtaining a sample with direct experience with the phenomenon of interest. Managers do not have that firsthand experience. The data analysis plan, while aligned with phenomenological research, will not generate results that will address the problem or the research question.

Tutorial

Quantitative Study Example

Internal diversity staff and external consultants currently use a range of tools and approaches to measure the effectiveness of diversity efforts in the workplace. Although the research literature includes several studies on the effectiveness of diversity initiatives, the results are equivocal. What is missing is a clear and consistent definition of success for diversity initiatives that encompasses both tangible and intangible benefits. Such a definition would support creation of a metric to measure the extent to which an organization's diversity efforts are successful.

Empirical evidence in the literature is equivocal with respect to whether diversity practices are beneficial to the organization (Hartenian & Gudmundson, 2000; Jayne & Dipboye, 2004; Kochan et al., 2003; Wright, Ferris, Hiller, & Kroll, 1995). Disparities in research findings may be attributable to varied methodologies for assessing the effectiveness of diversity initiatives. Quantitative measures include productivity and financial metrics to assess organizational performance in a diverse workplace (Kochan et al., 2003) and descriptive affirmative action data (Hubbard, 2007; Svyantek & Bott, 2004). Effective diversity management programs are measured categorically in qualitative studies based upon perceptions of employees and organizational leaders relative to cultural responsiveness to change (Cox & Blake, 1991), responsiveness to customer needs (Kochan et al., 2003), and organization innovation, resilience, and creativity (Washington State Department of Personnel, 2011). Mixed findings from diversity studies imply the business case for benefits from diversity is inconclusive and the study of diversity is still a relatively new phenomenon (Tatli, 2010). Practitioner or organization models to measure the effectiveness of diversity initiatives reflect a similar and varied approach to the collection and analysis of diversity data (Lockwood, 2005), but no clear and consistent definition or multiple construct of success for diversity work.

The objective of the proposed quantitative descriptive correlational study is to compare opinions of experts on diversity on what definition constitutes success in terms of diversity initiatives. Internal diversity staff and external diversity consultants will complete a survey questionnaire designed to collect their opinions on different factors for measuring success. The results of the two groups will be correlated statistically to determine differences. The geographic location is the United States and Canada. The results of the proposed study will reveal consensus on the essential components of success in diversity work. Diversity researchers will be able to test this definition empirically through creation and validation of a new metric to measure the essential components of success in diversity work.

The proposed study is guided by one research question, to be answered through testing hypotheses.

> **RQ:** *What differences exist, if any, between internal and external experts on diversity on factors that define success in terms of diversity initiatives?*
>
> **H_0:** *There is no significant relationship between internal and external experts and the factors that define success in terms of diversity initiatives.*
>
> **H_A:** *There are significant differences between internal and external experts and the factors that define success in terms of diversity initiatives.*

Quantitative Study Example *(continued)*

An analysis and an evaluation of how well the elements are aligned in the example are provided in this alignment table.

Element	Description	Alignment analysis: aligned?	Explanation
Problem statement	No clear and consistent definition of success for diversity initiatives encompassing tangible and intangible benefits. Empirical evidence is equivocal with respect to whether diversity practices are beneficial to the organization. The results will reveal consensus on the essential components of success in diversity work.	No	Aligns somewhat with research objective and research question in terms of the topic, but examining differences in opinions will reinforce rather than address the problem and the knowledge gap.
Knowledge gap	No clear and consistent definition or multiple construct of success for diversity work.	No	Research objective and research question focusing on differences will not address a lack of consistency or clarity or the need to identify commonalities and build consensus.
Research objective	*To compare opinions of experts on diversity on what definition constitutes success in terms of diversity initiatives.*	No	Focuses on differences rather than on identifying commonalities regarding defining success.
Research question	*What differences exist, if any, between internal and external experts on diversity on factors that define success in terms of diversity initiatives?*	No	Research question aligns with the research objective but not with the problem or the knowledge gap, due to the focus on differences rather than commonalities and consensus.

(continued)

Quantitative Study Example *(continued)*

Element	Description	Alignment analysis: aligned?	Explanation
Hypotheses	H_0: *There is no significant relationship between internal and external experts and the factors that define success in terms of diversity initiatives.* H_A: *There are significant differences between internal and external experts and the factors that define success in terms of diversity initiatives.*	No	The null hypothesis does not align with the research question, as it focuses on relationships between people and factors. A relational-comparative research question would have a corresponding relational-comparative hypothesis pair. A descriptive-relational hypothesis is not appropriate to identify commonalities or consensus about definitions for success. A descriptive-relational hypothesis, where appropriate, should focus on the relationship between two or more variables. The alternative hypothesis does align with the research question, but pertains to comparisons between people and factors rather than comparing factors between the two groups. A research question pertaining to consensus would likely not have any corresponding hypotheses, as a hypothesis about consensus is not testable, as defined in Chapter 6.
Research method	Quantitative	No	A quantitative method is not appropriate to identify commonalities or generate consensus on what constitutes success in diversity initiatives, as the problem and the knowledge gap cannot be addressed through collection and analysis of numeric data to examine associations between variables.
Research design	Descriptive correlational	No	A descriptive correlational design is not appropriate to identify commonalities or generate consensus on what constitutes success in diversity initiatives, as the problem and the literature gap cannot be addressed through collection and analysis of numeric data to examine associations between variables.
Research methodology	Population: Internal diversity staff and external diversity consultants. Survey on different factors for measuring success. Between-group correlations to determine differences.	No	Correlations are not appropriate to compare opinions between groups, as a correlation is a measure of association, not difference. Comparisons and correlations cannot reveal consensus or agreement, only associations or differences.

8.5 Correcting Misalignment

In order to correct misalignment, you must first assess your study components, element by element, for congruence to identify where misalignment exists, as illustrated by the examples in Section 8.4.

Let's return to the alignment table you completed in Section 8.3. Based on your review, which components of your study are in good alignment? Which components need to be modified? Identify them with the following alignment assessment table. (Go to your eBook to access a blank table that you can fill in.)

Element	Alignment (1 = poor, 5 = excellent)	Modification needed
Problem statement		
Knowledge gap		
Research objectives		
Research questions		
Research method		
Research design		
Research methodology		

TIP Remember that if you revise any single element of your study, you will need to recheck the other elements to make sure they are still in alignment!

Now that you have assessed your study components element by element for congruence to identify where any misalignment exists, the next step is to bring the different aspects of your study back into alignment. Because all of the elements of a research study are interrelated, and earlier decisions affect later choices, bringing a study into alignment must start at the beginning, with the problem formulation. Any changes you make to the earlier elements will necessitate that you consider the alignment of that element with all of the other elements in the study. For example, if you modify your research questions to be better aligned with your research objectives, you may need to revise your research design and research methodology accordingly.

Here's an example. Sergei wants to find out how immigrants adapt to the language demands of their new country. Sergei's research objective is *to understand what it's like to be a Russian immigrant trying to communicate in English*. Sergei's research questions are:

RQ1: *What is it like to be a Russian immigrant who is trying to communicate in the language of his or her new country?*

RQ2: *How do Russian immigrants experience their challenges in learning to communicate in English?*

RQ3: *How do Russian immigrants experience their successes in learning to communicate in English?*

Sergei had originally intended to conduct a qualitative case study with adult ESL classroom observations and field notes, along with interviews of ESL teachers. He switched his focus to the shared central phenomenon of being a Russian immigrant trying to communicate in English. Because he wanted to understand what it's like to be a Russian immigrant trying to communicate in English in terms of their lived experiences of the central phenomenon, Sergei revised his research design to phenomenological, his population to Russian immigrants learning English, and his data collection technique to individual interviews.

Based on your assessment of the alignment of your own study components, use the following alignment modification table to go through each element in order, modifying the elements of your study that you identified as not being in good alignment. Start with the earliest component of your study that appears to be misaligned, based on the activities you completed earlier. (Go to your eBook to access a blank table that you can fill in.)

Element	Modification made
Problem statement	
Knowledge gap	
Research objectives	
Research questions	
Research method	
Research design	
Research methodology	

Now complete a new alignment table to assess the alignment of your modified study.

Element	Description	Alignment analysis: aligned?	Explanation
Problem statement			
Knowledge gap			
Research objectives			
Research questions			
Research method			
Research design			
Research methodology			

For a summary of the key concepts in this chapter, consult the appendix. These summaries are quick-guides that you can refer to for tips and reminders as you work through the dissertation process.

Key Term

methodological rigor A characteristic of research that has been subject to serious, strict academic judgment; results in studies that are of higher scholarly quality, are well aligned, and have higher value to the discipline.