

## 9 Research Alignment

### Achieving Research Alignment in the Study

#### Objective

- Readers will be able to:
  1. Attain research alignment in their studies

#### Introduction

Many doctoral students and novice researchers have considerable trouble with the concept of alignment. They have trouble getting their study in alignment. The reasons stem from not having the knowledge of aligning the problem statements, purpose statement and research questions. Based on my experience of working with doctoral students, most of their dissertations or research projects are misaligned.

Alignment is a rather new development with dissertations, emerging probably within the last five years. So, a considerable number of professors that work with doctoral students are not familiar with it. If they are not familiar with it, they cannot possibly assist doctoral students with it. We hope to address this and enlighten doctoral students (and chairs, if possible). This chapter illustrates how to achieve research alignment with the research study and dissertation. It is based on a workshop we conducted at a conference in Atlanta, GA, for doctoral students in 2017.

#### Research Alignment: Definition and Meaning

*Alignment* refers to the logical progression of ideas between the structural elements of your dissertation proposal (Booton, 2014). One of the most important factors to keep in mind is that alignment between your problem statement, purpose statement and research questions is critical. The researcher must actively create a nexus between the problem, purpose and methodology through the process of the research. Many times, when your chair or dissertation committee talks about your proposal's lack of "alignment," they are referring to the logical progression from the introduction to the problem statement, then to the purpose statement, the research questions and hypotheses (if applicable), and finally the methodology.

Alignment is key to a good dissertation (Weintraub, 2017; Booton, 2020; *Alignment of problem*, 2020).

Alignment has gained increasing popularity in research and implementation studies. Although alignment is frequently suggested as important for successful implementation, it has rarely been the centerpiece of studies. Our study systematically collected evidence related to alignment from implementation studies in different healthcare settings (Lundmark et al., 2021). The practice of alignment also helps us be sure we are collecting the right data to answer our research questions (Fan et al., 2017).

### **The Importance of Alignment**

Good alignment across the components in your study 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 (“Aligning the problem,” n.d.).

In contrast, poor alignment across a study’s components is problematic. Here are the key issues with a poorly aligned study:

- 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.

The merits of having alignment in a study is critical. The researcher must consider the various components of the study (general problem, specific problem, knowledge gap, research objective, research question, hypotheses, research method and research design). In addition, the researcher must make sure these components

align well. The researcher must be aware of incongruence and inconsistencies throughout the descriptions (“Aligning the problem,” n.d.).

Another perspective on alignment, in terms of quantitative methodology and validity, is by Hoadley (2004). Hoadley asserts the notion that alignment is essential to our understanding of research validity. Usually, when people discuss validity, they are referring to *measurement validity*, or the ability to ensure that our measurements accurately reflect the constructs that we are trying to measure. However, validity has a larger sense: The validity of a study is the likelihood that our interpretation of the results accurately reflects the truth of the theory and hypotheses under examination. In this sense, we need to be concerned with two other kinds of validity in research. We need to ensure that we have *treatment validity* – that is, that the treatments we create accurately align with the theories they are representing – and we need *systemic validity* – that is, the whole research endeavor must not only create a fair test of the theories, but those theories must be communicated in a way that is true to the inferences used to prove them (Hoadley, 2004).

In broader terms of alignment in a study, the research task consists of alignment between all elements of the process: literature review, theories, research paradigms, research questions, research methods, data analysis and findings. Furthermore, there should be alignment between the research paradigm and the theory selected. There should be a strong relationship between the theory and research questions; these two aspects should align (McCuaig et al., 2022).

The differences between quantitative and qualitative research methodology is striking. Quantitative research is applied to describe current conditions, investigate relationships and study cause-effect phenomena. Qualitative research, in contrast, is suited to promoting a deep understanding of a social setting or activity as viewed from the perspective of the research participants (Bloomberg, 2019; Bloomberg & Volpe, 2019).

### The Rules of Alignment in a Study

Many times when working with doctoral students, I was surprised to find that they are completely unaware of research alignment. Below are three basic rules for achieving alignment:

- **Rule #1:** If you have three problem statement issues as a basis for the study, you must have three purpose statement objectives and three research questions. This is the first step in achieving alignment. This is important.
- **Rule #2:** You cannot achieve alignment if the elements are misaligned with an incompatible number of problem statement issues, purpose statement objectives and research statement questions (e.g., three issues, two objectives or four research questions). This is important.
- **Rule #3:** You must have an equal number of statements. This means you must have an equal number of problem statement issues, purpose statement objectives and research statement questions to properly achieve alignment (Miles, 2020).

Table 9.1    *The research alignment model*

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**Problem Statement:**

Issue (subproblem) 1:	Issue (subproblem) 2:	Issue (subproblem) 3:

**Purpose Statement:**

Objective 1:	Objective 2:	Objective 3:

**Research Statement:**

Research Question 1:	Research Question 2:	Research Question 3:

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Lack of alignment between the dissertation elements is one of the most common reasons why a dissertation proposal does not get approval from the committee. The researcher must consider these three points when developing the problem statement, purpose statement and research questions. Research alignment is necessary to manage the dissertation. To achieve alignment, you must align the problem statement, purpose statement and research questions. It is imperative that these three components align properly. This chapter provides an alignment model and template for developing research alignment in a study (see Table 9.1).

**Developing Alignment in a Research Study**

The basis of the researcher’s problem is the foundation for the research: the problem statement, purpose statement and research statement. Once the researcher has identified the problem as a basis for the study, the researcher is ready to develop the

Table 9.2 Example: The Statement Grid for problem statement development

Problem Statement:		
Issue (subproblem) 1:	Issue (subproblem) 2:	Issue (subproblem) 3:

purpose statement and the research statement (and questions). All three components are important.

These are the three core components that form the foundation of your study. The problem statement provides the background and context of the research problem as a basis for the study. The purpose statement provides the objective of the study. It is also an extension of the research problem. Lastly, the research statement (and research questions) is an extension of the purpose of the study. These three core components must align.

### ***Phase 1: Writing up the Problem Statement***

First, before you can achieve alignment, you have to develop the problem statement. The tool that I use when working with doctoral students is the **Statement Grid** (Miles & Scott, 2017). This helps doctoral students develop the problem statement with supporting statements. I use this to help doctoral students when they have trouble coming up with their problem statement. It helps them with their thought process, describing three possible subproblems as a basis for the research. It also helps with the **rule of three** (three plausible reasons to support your argument and position with three points) (Miles & Scott, 2017) (see Table 9.2).

**First**, write the overall problem statement. **Second**, divide the problem to be investigated into two or three parts (or subproblems or issues) that are compelling. Please note, use the word *issue* when writing the subproblem. This is so it does not cause readers to misinterpret the issues as four separate problem statements (Table 9.3).

### ***Phase 2: Writing up the Purpose Statement***

In the next step, you must complete the purpose statement. **First**, write the overall purpose statement. **Second**, divide the purpose to be investigated into two or three parts (or objectives) that are compelling. Please note, use the word *objectives* when writing the purpose. This is so it does not cause readers to misinterpret them as four separate purpose statements (see Table 9.4).

Table 9.3    *Example: The Statement Grid for problem statement development*

<b>Problem Statement:</b> <i>The central problem to be researched by the proposed study is the shortage in the nursing field. This has a lot to do with the current nursing shortage and the need for more nurses in the field. There is a huge problem with this shortage and the availability of nurses. As a basis for this study, the researcher identified the problem to be threefold.</i>		
<b>Issue (subproblem) 1:</b> The first issue is that the education of new nurses is the responsibility of institutions of higher education, but there is a national shortage of nursing faculty (McSherry et al., 2012, Rosseter, 2015), which is limiting the enrollment, education and graduation of new nurses from institutions of higher learning.	<b>Issue (subproblem) 2:</b> The second issue is that, in the United States, 75% of the nursing faculty will reach retirement age in 2017 (Brett et al., 2014). This is alongside the existing problem that 6.9% of nursing faculty positions remain unfilled due to a lack of qualified nursing educators (Rosseter, 2015).	<b>Issue (subproblem) 3:</b> Last, the issue is that the current nursing faculty express low job satisfaction (Bittner & O'Connor, 2012) due to complexities of the nursing educator role making the retention and recruitment of qualified faculty difficult (Byrne & Martine, 2014). The current problems include a shortage of qualified nursing faculty to educate new nurses, the complexity of nursing education and current faculty complaints of poor job satisfaction (Cook, 2017).

Note: In-text citations included for illustrative purposes only.

Table 9.4    *Example: The Statement Grid for purpose statement development*

<b>Purpose Statement:</b> <i>The purpose of this study is to investigate the issues affecting job satisfaction by nursing faculty members in metropolitan New York. Interviewing and questioning nursing faculty living in metropolitan New York provides insight into their personal experiences of job satisfaction while working in the nurse educator role. The researcher has identified three primary objectives as a basis for this study.</i>		
<b>Objective 1:</b> First, the objective of this study is to examine the issue of job satisfaction among nursing faculty.	<b>Objective 2:</b> Second, the objective of this study is to investigate the impact of low wages on the nursing faculty.	<b>Objective 3:</b> Lastly, the objective of this study is to examine the complexities of the nursing faculty role (Cook, 2017).

Table 9.5 Example: The Statement Grid for research statement development

**Research Statement:**

*The central problem to be researched is the shortage in the nursing field. As a basis for this study, three research questions will guide this research.*

Research Question 1:	Research Question 2:	Research Question 3:
RQ1: How do nurses describe their experiences with job satisfaction on the nursing faculty?	RQ2: How do nurses describe their experiences with the impact of low wages on nursing faculty?	RQ3: How do nurses describe their experiences with the complexities of the faculty role (Cook, 2017)?

**Phase 3: Writing up the Research Statement**

In the last step, you must complete the research questions. **First**, rewrite the problem statement as the overall research statement. **Second**, divide the research questions into separate parts. This will help align your research questions with (a) the problem statement and issues, and (b) the purpose statement and objectives (see Table 9.5).

**Introducing the Alignment Matrix: Achieving Alignment in the Dissertation**

First, before you achieve research alignment, you must develop the problem statement. The tool that I use when working with doctoral students is the **Alignment Matrix** (Miles, 2020). The *Alignment Matrix* helps doctoral students align the problem statement, purpose statement and research questions. This is a tremendous help with providing structure for the dissertation and study (see Tables 9.6 and 9.7).

See the following formula:

$$\text{RESEARCH ALIGNMENT} = \text{Problem} + \text{Purpose} + \text{Research Questions}$$

First and foremost, you must observe the key words in the problem statements, purpose statements and research statement and questions (see the key word examples in italics). This is the key to achieving alignment between the three statements. Once you coordinate this, you have achieved research alignment (see Table 9.7).





Table 9.7 (Continued)

<i>Problem Statement</i>	<i>Purpose Statement</i>	<i>Research Statement</i>
<b>Issue 2:</b> The second issue identified as the basis for this research study is the <i>impact of low wages</i> on the lived experiences of job satisfaction by current nursing faculty.	<b>Objective 2:</b> Second, the objective of this study is to investigate the <i>impact of low wages</i> on the nursing faculty	<b>Research Question 2:</b> RQ2: How do nurses describe their experiences with the <i>impact of low wages</i> on nursing faculty?
<b>Issue 3:</b> Lastly, the third issue identified affecting the job satisfaction of the nursing faculty is the <i>complexities of the faculty role</i> .	<b>Objective 3:</b> Lastly, the objective of this study is to examine the <i>complexities of the nursing faculty role</i> .	<b>Research Question 3:</b> RQ3: How do nurses describe their experiences with the <i>complexities of the faculty role</i> (Cook, 2017)?

**Example 9.1**

<i>Problem Statement</i>	<i>Purpose Statement</i>	<i>Research Statement</i>
The central problem identified in this study involves how principals manage job stress. The issue of how principals manage stress is threefold.	The purpose of this study is to investigate the experiences of 20 urban Central Texas school district K–12 principals in encountering job stress, coping with this stress and achieving work-life balance. The researcher has identified three primary objectives for this qualitative descriptive study.	The central problem to be researched involves how principals manage job stress. There are three research questions that will guide this research.

<i>Issues (subproblems)</i>	<i>Objectives (subpurposes)</i>	<i>Research Questions</i>
<b>Issue 1:</b> First, there is the prevailing issue concerning the effect of principals’ job stress level. Stressed workers are more likely to be unhealthy, less productive, unmotivated and not safe at work.	<b>Objective 1:</b> First, the objective of this study is to investigate the effect of principals’ job stress level on their subordinates and staff.	<b>Research Question 1:</b> RQ1: How do K–12 principals and administrators describe their experiences of job stress in an urban Central Texas school district environment?
<b>Issue 2:</b> Second, there is the prevailing issue concerning the lack of research on how the job stress level can affect the principals’ ability to use coping skills. Many authors have investigated how principals cope with stress.	<b>Objective 2:</b> The second objective is to investigate how job stress affects principals’ ability to use coping skills.	<b>Research Question 2:</b> RQ2: How do K–12 principals and administrators describe their experiences of using coping skills for job stress in an urban Central Texas school district environment?
<b>Issue 3:</b> Lastly, there is a prevailing issue concerning the impact that job stress can have on how principals balance their work and home life.	<b>Objective 3:</b> Lastly, the final purpose of the qualitative study is to investigate the impact that job stress can have on how principals balance their work and home life.	<b>Research Question 3:</b> RQ3: How do K–12 principals and administrators describe their experiences of coping with work-life balance and job stress in an urban Central Texas school district environment (Beltran, 2020)?

### Example 9.2

<i>Problem Statement</i>	<i>Purpose Statement</i>	<i>Research Statement</i>
The central problem to be researched in the proposed study is the lack of intercultural competence within peer mentoring between international students and domestic students' relationships and the lack of personal accounts of students' experience in a peer-mentoring program. As a basis for this study, the researcher identified the problem to be threefold.	The purpose of this study is to investigate how international and domestic students perceive the effectiveness, if any, of peer mentoring on intercultural competence at a Western, private, Christian university in southern California. This study has three primary objectives.	The central problem to be researched is the lack of intercultural competence within peer mentoring between international students and domestic students' relationships and the lack of personal accounts of students' experience in a peer-mentoring program There are three research questions that will guide this research.
<i>Issues (subproblems)</i>	<i>Objectives (subpurposes)</i>	<i>Research Questions</i>
<b>Issue 1:</b> First, there is a lack of data regarding the cultural challenges with international students' experience at a Christian university in southern New York.	<b>Objective 1:</b> The first objective of this study is to identify whether there are cultural challenges that students face on a Christian university campus and what these challenges entail. This study will include 30 students.	<b>Research Question 1:</b> RQ1: What are the cultural challenges faced by students in Christian higher education?

<i>Problem Statement</i>	<i>Purpose Statement</i>	<i>Research Statement</i>
<b>Issue 2:</b> The second issue is the lack of research on the intercultural competence and peer mentoring skills of domestic students.	<b>Objective 2:</b> The second objective of this study is to examine and interpret peer-mentoring interactions between international and domestic undergraduate students and their influence on intercultural competence.	<b>Research Question 2:</b> RQ2: Does peer mentoring influence the intercultural competence of undergraduate, international and domestic students in a private Christian university and, if so, how?
<b>Issue 3:</b> Lastly, the researcher identified a lack of personal accounts from students about their experiences with a peer-mentoring program.	<b>Objective 3:</b> Lastly, the third objective of the study is to examine the actual lived experiences of international students through their own words on the effectiveness of the American International Mentoring program.	<b>Research Question 3:</b> RQ3: What are students' experiences during the American International Mentoring program (Kwapong, 2021)?

### Example 9.3

<i>Problem Statement</i>	<i>Purpose Statement</i>	<i>Research Statement</i>
The central problem identified by the researcher is the issue of organizational performance, leadership and employee empowerment. As a basis for this study, the researcher identified three key problems demanding this investigation.	The purpose of this study is to determine whether a relationship exists between customer and market focus, employee empowerment, leaders' openness to new business strategies and organizational performance in transportation companies located on the west side of Puerto Rico. The researcher has identified three primary objectives as a basis for this study.	The central problem identified by the researcher is the issue of organizational performance, leadership and employee empowerment. There are three research questions that will guide this research.
<i>Issues (subproblems)</i>	<i>Objectives (subpurposes)</i>	<i>Research Questions</i>
<b>Issue 1:</b> The first major problem identified as a basis for this study is the issue regarding customer and market focus and operational performance in air transportation organizations.	<b>Objective 1:</b> The first objective of this study is to determine if there is a relationship between customer and market focus and organizational performance in air transportation organizations.	<b>Research Question 1:</b> RQ1: To what extent does a relationship exist between customer and market focus and organizational performance?

<i>Problem Statement</i>	<i>Purpose Statement</i>	<i>Research Statement</i>
<b>Issue 2:</b> The second major problem as a basis for this study is the concerns with employee empowerment and organizational performance in air transportation organizations.	<b>Objective 2:</b> The second objective of this study is to determine if there is a relationship between employee empowerment and organizational performance in air transportation organizations.	<b>Research Question 2:</b> RQ2: To what extent does a relationship exist between employee empowerment and organizational performance?
<b>Issue 3:</b> The last major problem identified as a basis for this study is the issue relating to leaders' openness to new business strategies and organizational performance in air transportation organizations.	<b>Objective 3:</b> The last objective of this study is to determine if there is a relationship between leaders' openness to new business strategies and organizational performance in air transportation organizations.	<b>Research Question 3:</b> RQ3: To what extent does a relationship exist between leaders' openness to new business strategies and organizational performance (Morales, 2017)?

**Summary**

The concept of alignment is relatively new in the research community. The goal of achieving research alignment is important when it comes to research. This chapter discussed the concept of alignment. Research alignment is a necessary task to manage the dissertation. To achieve research alignment, it is imperative that it be taught to both novice and experienced researchers. The purpose of this chapter is to illustrate and discuss how to achieve research alignment in studies. This chapter provided a model and template for developing research alignment in a study.

The chapter discussed four key components. First, the chapter discussed the meaning and definition of alignment. Second, the chapter discussed the basic rules for alignment. Third, the chapter introduced two tools: the *Statement Grid*, for developing problem statements and purpose statements, and the *Alignment Matrix*, a tool used for aligning the problem statement, purpose statement and research questions. Last, the chapter provided examples of alignment with all three. It is

our expectation that our proposed conceptual models and frameworks will provide researchers with a template and a foundation for alignment in research projects and dissertations.

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