Problem Statement, Purpose Statement, and Research Question Help

(adapted by Dr. Sherry Lowrance, Dr. Cynthia Akagi, and Dr. Eva Philpot)

NOTE: The Dissertation Proposal/Manuscript Template includes checklists for all sections of the document, including problem statement, purpose statement, and research questions. You should make sure you use these checklists and follow margin instructions. The present document is intended to provide additional help and examples, and explain the importance of *alignment*. Alignment indicates the degree to which the purpose of the study follows logically from the problem statement; and the degree to which the research questions help address the study's purpose. Alignment is important because it helps ensure that the research study is well-designed and based on logical arguments.

Resource:

Ellis, T., & Levy, Y. (2008). Framework of problem-based research: A guide for novice researchers on the development of a research-worthy problem. *Informing Science, 11*, 17-33. http://proxy1.ncu.edu/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=36030721&site=eds-live

Problem Statement

The dissertation problem needs to be very focused, because everything else from the dissertation research logically flows from the problem. You may say that the problem statement is the very core of the a dissertation research study. If the problem is too big or too vague, it will be difficult to scope out a purpose that is manageable for one person, given the time available to execute and finish the dissertation research study.

Through your research, your aim is to obtain information that helps address a problem so it can be resolved. Note that the researcher does not actually *solve* the problem him- or herself by conducting research but provides new knowledge that can be used toward a resolution. Typically, the problem is solved (or partially solved) by practioners in the field, using input from researchers.

Given the above, the problem statement should do three things:

- Specify and describe the problem (with appropriate citations)
- Explain the consequences of NOT solving the problem

Explain the knowledge needed to solve the problem (i.e., what is currently unknown about the problem and its resolution – also referred to as a *gap*)

What is a problem?

The world is full of problems! Not all problems make good dissertation research problems, however, because they are either too big, complex, or risky for doctorate candidates to solve. A proper research problem can be defined as *a specific, evidence-based, real-life issue faced*

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by certain people or organizations that have significant negative implications to the involved parties.

Example of a proper, specific, evidence-based, real-life dissertation research problem:

"Only 6% of CEOs in Fortune 500 companies are women" (Center for Leadership Studies, 2019).

Specific refers to the scope of the problem, which should be sufficiently manageable and focused to address with dissertation research. For example, the problem "terrorism kills thousands of people each year" is probably not specific enough in terms of who gets killed by which terrorists, to work for a doctorate candidate; or ""Social media use among call-center employees may be problematic because it could reduce productivity," which contains speculations about the magnitude of the problem and the possible negative effects.

Evidence-based here means that the problem is well-documented by recent research findings and/or statistics from credible sources. Anecdotal evidence does *not* quality in this regard. Quantitative evidence is generally preferred over qualitative ditto when establishing a problem because quantitative evidence (from a credible source) usually reflects generalizable facts, whereas qualitative evidence in the form of research conclusions tend to only apply to the study sample and may not be generalizable to a larger population. Example of a problem that isn't evidence-based: "Based on the researcher's experience, the problem is that people don't accept female leaders;" which is an opinion-based statement based on personal (anecdotal) experience.

Real-life means that a problem exists regardless of whether research is conducted or not. This means that "lack of knowledge" or "lack of research" *cannot* be used as the problem for a dissertation study because it's an academic issue or a gap; and not a real-life problem experienced by people or organizations. Example of a problem that doesn't exist in real life: "There is not enough research on the reasons why people distrust minority healthcare workers." This type of statement also reveals the assumption that people actually *do* mistrust minority healthcare workers; something that needs to be supported by actual, credible evidence to potentially work as an underlying research problem.

What are consequences?
Consequences are negative implications experienced by a group of people or organizations, as a result of the problem. The negative effects should be of a certain magnitude to warrant research. For example, if fewer than 1% of the stakeholders experience a negative consequence of a problem and that consequence only constitutes a minor inconvenience, research is probably not warranted. Negative consequences that can be measured weigh stronger than those that cannot be put on some kind of scale.

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In the example above, a significant negative consequence is that women face much larger barriers than men when attempting to get promoted to executive jobs; or are 94% less likely than men to get to that level in Corporate America.

What is a gap?

To establish a complete basis for a dissertation research study, *the problem has to be accompanied by a gap*. A gap is missing knowledge or insights about a particular issue that contributes to the persistence of the problem. We use gaps to "situate" new research in the existing literature by adding to the knowledge base in the business research field, in a specific manner (determined by the purpose of the research). Identifying gaps requires you to review the literature in a thorough fashion, to establish a complete understanding of what is known and what isn't known about a certain problem. In the example from above about the underrepresentation of female CEOs, a gap may be that male-dominated boards have not been studied extensively in terms of their CEO hiring decisions, which might then warrant a study of such boards, to uncover implicit biases and discriminatory practices against female candidates.

How to write the problem statement

1. Here is one way to construct a problem section (keep in mind you have a 250-300 word limit, but you can write first and edit later):

   It is helpful to begin the problem statement with a sentence*: "The problem to be addressed through this study is…*" Then, fill out the rest of the paragraph with elaboration of that specific problem, making sure to "document" it, as NCU reviewers will look for research-based evidence that it is indeed a problem (emphasis also on timeliness of the problem, supported by citations within the last 5 years).

   Next, write a paragraph explaining the consequences of NOT solving the problem. Who will be affected? How will they be affected? How important is it to fix the problem? Again, NCU reviewers will want to see research-based citations and statistics that indicate the negative implications are significant.

   In the final paragraph, you will explain what information (research) is needed in order to fix the problem. This paragraph shows that the problem is worthy of doctoral-level research. What isn't known about the problem? Ie, what is the gap? Presumably, if your problem and purpose are aligned, your research will try to close or minimize this gap by investigatingthe problem. Have other researchers investigated the issue? What has their research left unanswered?

2. Another way to tackle the Statement of the Problem:

   The Statement of the Problem section is a very clear, concise identification of the problem. It must stay within the template guidelines of 250-300 words but more

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importantly, must contain four elements as outlined below. A dissertation worthy problem should be able to address all of the following points:

-->identification of the problem itself--what is "going wrong" (Ellis & Levy, 2008)
-->who is affected by the problem
-->the consequences that will result from a continuation of the problem
-->a brief discussion of 1) at least 3 authors' research related to the problem; and 2) their stated suggestion/recommendation for further research related to the problem

Use the following to work on the Statement of the Problem by first outlining the section as follows:
1. One clear, concise statement that tells the reader what is not working, what is "going wrong". Be specific and support it with current studies.
2. Tell who is affected by the problem identified in #1.
3. Briefly tell what will happen if the problem isn't addressed.
4. Find at least 3 current studies and write a sentence or two for each study that
i. briefly discusses the author(s)' work, what they studied, and
ii. state their recommendation for further research about the problem

3. Finally, you can follow this simple 3-part outline when writing the statement of the problem section:

Your problem statement is a short (250-300 words), 3 paragraph section, in which you
1. Explain context and state problem ("the problem is XYZ"), supported by statistics and/or recent research findings
2. Explain the negative consequences of the problem to stakeholders, supported by statistics and/or recent research findings
3. Explain the gap in the literature.

That's it. All other content belongs in the introduction, the purpose statement, or somewhere else. Example of a problem statement that follows this 3-part outline (295 words):

> The problem to be addressed by this study is the decline of employee well-being for followers of novice mid-level managers and the corresponding rise in employee turnover faced by business leaders across the financial services industry (Oh et al., 2014). Low levels of employee well-being are toxic for morale and result in expensive turnover costs, dysfunctional work environments, anemic corporate cultures, and poor customer service (Compdata, 2018; Oh et al., 2014). According to Ufer (2017), the financial services industry suffers from one of the highest turnover rates among millennial-aged employees in all industries in the developed world, at 18.6% annually. Starkman (2015) reported that 50% of those surveyed in financial

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services were not satisfied with a single one of the four key workplace aspects: job, firm, pay or career path. Low levels of employee well-being interrupt a financial services' company's ability to deliver outstanding customer service in a world increasingly dependent on that commodity (Wladawsky-Berger, 2018).
Mid-level managers play an essential role in support of the success of many of top businesses today (Anicich & Hirsh, 2017). The current body of literature does not adequately address the well-being issue in the financial services industry from the follower's perspective (Uhl-Bien, Riggio, Lowe, & Carsten, 2014). Strategic direction flows top-down from senior executives and passes through mid-level leadership to individual contributors at more junior grades. The mid-level managers' teams are tasked with the achievement of core tasks and the managers themselves are expected to maintain the workforce's morale, motivation and welfare (Anicich & Hirsh, 2017). Unless industry leaders better understand the phenomenon of employee well-being from the follower perspective and its role in positioning employees to provide a premium client experience, they may be handicapped from preserving their most significant principal market differentiator: customer service (Wladawsky-Berger, 2018).

Purpose Statement

The purpose statement succinctly explains (on no more than 1 page) the objectives of the research study. These objectives must directly address the problem and help close the stated gap. Expressed as a formula:

Problem + Gap -> Purpose

In PhD studies, the purpose usually involves applying a theory to solve the problem. In other words, the purpose tells the reader what the goal of the study is, and what your study will accomplish, through which theoretical lens. The purpose statement also includes brief information about direction, scope, and where the data will come from.

A problem and gap in combination can lead to different research objectives, and hence, different purpose statements. In the example from above where the problem was severe underrepresentation of female CEOs in Fortune 500 compainies and the identified gap related to lack of research of male-dominated boards; one purpose might be to explore implicit biases in male-dominated boards through the lens of feminist theory. Another purpose may be to determine how board members rated female and male candidates on scales of competency, professionalism, and experience to predict which candidate will be selected for the CEO position. The first purpose may involve a qualitative ethnographic study in which the rsearcher observes board meetings and hiring interviews; the second may involve a quantitative regression analysis. The outcomes will be very different, so it's important that you find out exactly how you want to address a problem and help close a gap!

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The purpose of the study must not only align with the problem and address a gap; it must also align with the chosen research method. In fact, the DP/DM template requires you to name the

research method at the very beginning of the purpose statement. The research verb must match the chosen method. In general, quantitative studies involve "closed-ended" research verbs such as *determine*, *measure*, *correlate*, *explain*, *compare*, *validate*, *identify*, or *examine*; whereas qualitative studies involve "open-ended" research verbs such as *explore*, *understand*, *narrate*, *articulate* [meanings], *discover*, or *develop*.

A *qualitative* purpose statement following the color-coded problem statement (assumed here to be low well-being among financial sector employees) + gap (lack of research on followers of mid-level managers), might start like this:

> In response to declining levels of employee well-being, the purpose of the qualitative phenomenology was to explore and understand the lived experiences related to the well-being of the followers of novice mid-level managers in the financial services industry. The levels of follower well-being have been shown to correlate to employee morale, turnover intention, and customer orientation (Eren et al., 2013). A combined framework of Leader-Member Exchange (LMX) Theory and the employee well-being concept informed the research questions and supported the inquiry, analysis, and interpretation of the experiences of followers of novice managers in the financial services industry.

A *quantitative* purpose statement for the same problem and gap might start like this:

> In response to declining levels of employee well-being, the purpose of the quantitative correlational study was to determine which leadership factors predict employee well-being of the followers of novice mid-level managers in the financial services industry. Leadership factors were measured by the Leader-Member Exchange (LMX) assessment framework by Mantlekow (2015), and employee well-being was conceptualized as a compound variable consisting of self-reported turnover-intent and psychological test scores from the Mental Health Survey (MHS) developed by Johns Hopkins University researchers.

Both of these purpose statements reflect viable research strategies and both align with the problem and gap so it's up to the researcher to design a study in a manner that reflects personal preferences and desired study outcomes. Note that the quantitative research purpose incorporates *operationalized concepts*, or *variables*; that reflect the way the researcher intends to measure the key concepts under study; whereas the qualitative purpose statement isn't about translating the concepts under study as variables but instead aim to explore and understand the core research phenomenon.

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Research Questions

The research questions (RQs) drive data collection and must be derived directly from the purpose of the study. This means they will also have to align with the research method. Although it is recommended that a single, central research question be developed to guide

dissertation studies; this isn't always possible. However, you should limit your number of research questions to avoid scope creep and taking on too much with your dissertation research. It is possible to develop sub-questions, but a single or a few questions should be the foundation that can guide your data collection and analysis, and help you reach conclusions.

Some students confuse research questions with interview or survey questions. They are not the same! Interview and survey questions are the detailed questions you will ask participants in your study; whereas the RQs reflect the high-level purpose of the study. The research question can cover several concepts and aspects of the purpose that can then be hashed out in an interview, focus group, or survey.

Qualitative and quantitative research questions differ considerably. The research method identified in your purpose statement should guide how the RQs are stated. Quantitatve RQs must reflect testable relationships between variables; whereas qualitative RQs should indicate the exploratory and open-ended nature of the inquiry. Quantitative RQs are followed by hypotheses that reflect the researcher's predictions about the nature of the relationships under study. These predictions should be firmly rooted in the researcher's understanding of the literatyure and theory used to frame the study. Because qualitative research studies do not involve any testing of relationships between variable, qualitative RQs are *not* by hypotheses.

In the purpose statement examples above;

Qualitative RQ aligning with phenomenological inquiry:

> RQ1: "*What are the lived experiences of followers of mid-level managers in the financial services sector, regarding their well-being on the job?"*
>
> If the researcher wants to focus on a particular theory or aspects of the central RQ, the following sub-questions could be formulated:
>
> > RQ1a. *"How do followers perceive the quality and adequacy of the leader-follower exchanges between themselves and their novice leaders?"*
> >
> > RQ1b. *"Under what conditions does leader-member exchanges affect a follower's own level of well-being?"*

The researcher can now develop an interview proptocol with specific questions that he or she plans to ask the participants of the study; structured by the two sub RQs above.

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In the case of the quantitative purpose statement above, a quantitative RQ that aligns with the correlational inquiry might be:

> RQ1. *"What is the relationship between leadership competencies as measured by the Leader-Member Exchange (LMX) assessment framework and employee well-being?"*
>
> Associated hypotheses with this RQ include a *null hypothesis* (that proposes that no statistical significance exists among relationships between variables in the data); and an *alternative hypothesis* (that states there is a statistically significant relationship between two variables, based on the researcher's prediction).
>
> > $H1_0$. None of the five leadership competencies from the Leader-Member Exchange (LMX) assessment framework of (a) motivation, (b) professionalism, (c) business acumen, (d) communication and (e) relationship management are statistically significant predictors of follower well-being
> >
> > $H1_a$. At least one of the five leadership competencies from the Leader-Member Exchange (LMX) assessment framework of (a) motivation, (b) professionalism, (c) business acumen, (d) communication and (e) relationship management is a statistically significant predictor of follower well-being

In the above example, you and your committee may decide that in order to adequately test a theory or a set of relationships between variables, you have to develop sub-questions and specific hypotheses related to each of the leadership variables (which are combined here into one RQ). The key is that for every research question, there is a set of null and alternative hypotheses statements. It is not generally permissible to have quantitative research questions for which there are no hypotheses, nor is it okay to have hypotheses that don't connect to a research question.

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